

ABSTRACT

H. Evaluation Abstract (Do not exceed the space provided)

The Natural Resources Management (NRM) project has two objectives: a) to identify key policies and practices which constrain sustainable economic growth; and b) to design and implement improved policies and practices to address those constraints. The seven year project started in 1990, and has entered its fourth year of implementation. Significant progress has been made, but many problems have been encountered. To enable project personnel to review project progress, document significant achievements, and resolve problems, a mid-term evaluation was needed. Indicators in the logical framework were used to measure achievements. Results of the evaluation will be used as a basis for developing a strategy to implement "second-phase" project activities.

Overall achievements of the project have been notable. An effective technical assistance team is in place. Eight of twelve policy studies have been completed and the results widely disseminated. Follow-on steps have been taken by the Ministry of Forestry as a result of policy studies, and the Ministry has established task-forces around project activities, including logging waste minimization and traditional forest area management. Two draft management plans for protected areas, developed with full participation with local communities, are nearing completion. Eighteen students have been sent to the US for MSc degree training with provisions for some returning to Indonesia to conduct their thesis research; three ongoing PhD students have been supported to complete their programs; 522 person days of short-term international training has been provided for 289 participants, and over 4,000 person days of in-country training has been carried out. Pilot activities in industrial waste minimization have been conducted in factories, and new technologies have been adopted by some of the plants. Despite the project achievements described above, however, the evaluation team observed that project design was too ambitious -- trying to cover various complicated issues with the involvement of a wide range of key players with limited resources or project staff. In general, the team recommended that in the second phase of project implementation, the project staff should focus on priority issues achievable by the project, including developing appropriate policies for reducing logging wastes, and incorporating local communities into resource management planning activities.

The evaluation team was selected through a buy-in with the Environmental and Natural Resources Policy and Training (EPAT) project. The team carried out the tasks by reviewing project documents, visiting project sites, and interviewing project-related staff in Jakarta, as well as in Bogor, Pontianak, Bukit Baka - Bukit Raya National Park, Manado and Bunaken National Park, and visiting factories in Bandung, Jakarta and Surabaya.

Lessons learned:

- Need to consolidate and disseminate results of policy studies and field experiences to encourage discussions of critical resource issues, exchange information/experience, and coordinate activities.
- Need to continue developing constructive policy options by integrating field-tested pilot site activities with policy analysis at the national level.
- Need to develop management plans for protected areas through extensive consultations with stakeholders to achieve consensus on the purpose of the protected area, and by developing mechanisms for community participation in planning, implementing and monitoring management activities.

COSTS

I. Evaluation Costs

Name	1. Evaluation Team Affiliation	Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (U.S. \$)	Source of Funds
1. Evaluation Team			\$114,321	NRM Project
John Clark (Team Leader)	University of Miami	45 person-days		
Peter Burbridge	Independent Consultant	42 person-days		
M. Soerjani	University of Indonesia	42 person-days		
H. Soeparwadi	Bandung Inst. of Tech.	36 person-days		
Krisnawati Suryanata	University of California, Berkeley	36 person-days		
Richard Tobin	EPAT	15 person-days		
2. Mission/Office Professional Staff			\$7,800	Operating Expense (OE)
Dennis Cengel		21 person-days		
Ketut Djati		21 person-days		
Agus Widiyanto		10 person-days		
3. Borrower/Grantee Professional Staff			\$3,350	NRM counterpart budget
Indah Dianti (BAPPENAS)		7 person-days		
Ichwanuddin (BAPPENAS)		4 person-days		
Widarys Noer (MOFr)		5 person-days		
Afrizal (MOFr)		5 person-days		
2. Mission/Office Professional Staff Person-Days (Estimate) 51 person-days		3. Borrower/Grantee Professional Staff Person-Days (Estimate) 21 person-days		

b

A.I.D. EVALUATION SUMMARY - PART II

S U M M A R Y		
J. Summary of Evaluation Findings, Conclusions and Recommendations (Try not exceed three(3) pages provided) Address the following items: <ul style="list-style-type: none"> <li style="width: 50%;">• Purpose of Evaluation and methodology used <li style="width: 50%;">• Principal Recommendations <li style="width: 50%;">• Purpose of activity(ies) evaluated <li style="width: 50%;">• Lessons Learned <li style="width: 50%;">• Findings and conclusions (relate to questions) 		
Mission or Office: Office of Agro-Enterprise and Environment (AEE)	Date This Summary Prepared: May 9, 1995	Title And Date Of Full Evaluation Report: Mid-term Evaluation of USAID/Indonesia's NRM Project April 1995
<p>As the Natural Resources Management (NRM) project entered its fourth of seven years of implementation, a mid-term evaluation was conducted to evaluate progress towards achieving specified outputs in the logical framework (logframe) and to recommend improvements in project design and/or implementation to facilitate accomplishment of project outputs.</p> <p>The NRM project purpose stated in the logframe is: "To strengthen selected Indonesian institutions so that they can: a) identify natural resources management policies and practices which constrain economic growth; and b) design and implement improved policies and practices to address these constraints". The evaluation team assessed eight (8) key issues: 1) achievements of project purpose and outputs; 2) project design; 3) policy analysis; 4) technical assistance performed and future needs; 5) the cost-effectiveness of a management information system; 6) the role of community groups; NGOs, and private sector interactions; 7) women in development, and 8) two other concerns related to incorporation of environmental considerations into tourism development and implementation of an environmental action plan related to environmental assessments of the NRM project.</p> <p>The evaluation team reviewed available project documents and discussed and clarified the team's tasks with the USAID NRM Project Committee. The team then split into several sub-teams to cover policy analysis in Jakarta, field activities in Bukit Baka - Bukit Raya in West/Central Kalimantan, and Bunaken National Park in North Sulawesi. Two meetings were held to present progress and findings of the team. These were held in the middle of the evaluation and at a final presentation. Presentations were made to GOI and USAID staff.</p> <p>The following are issues assessed by the evaluation team, specific project accomplishments that were recognized, and constraints and recommendations that were made:</p> <p>I. POLICY SECRETARIAT</p> <p>I.1. Policy Secretariat. Eight of twelve planned macroeconomic studies have been completed and they all will soon have been presented to GOI officials and representatives of other groups and agencies. A series of seminars and workshops have been held to promote discussion of the issues that were raised in the studies and support dissemination of the results. One study has achieved results well beyond the analytical phase of the endeavor, focusing on the dynamic input-output modelling. Constraints that were identified included the need for more time and resources to support the complex process of catalyzing policy reforms. Recommendations are that: a) the project's NRM Policy Secretariat should continue to respond to critical demand-driven requests from BAPPENAS; b) the number of policy studies should be reduced from 15 to 12 by deleting the Marine Sector study (insufficient project resources), and combining studies on integrated development and community development; and c) the results and recommendations of studies that have been completed should be consolidated into summary documents highlighting prescriptive policies.</p> <p>I.2. Support Unit. The team assessed the Secretariat's tasks in supporting the Policy Working Group (PWG) in developing policy options for natural resources management. Support is provided by the contractor using a management information system designed and implemented to provide a link between information and project management, document impacts of project activities, and monitor impacts of project activities in achieving its purposes and goals. Constraints identified included lack of fulltime counterpart staffing within the Policy Secretariat. The evaluation team recommended that the project strengthen ongoing networking activities among natural resource policy analysts by reallocating resources to the policy task forces that have been organized around project activities by the Ministry of Forestry, enhancing training opportunities for research assistants in implementing the Secretariat's studies agenda, facilitating meetings of the policy network's members, expanding exchanges with policy groups in the United States, and initiating discussions of alternative means of providing policy advice to affected government ministries after the completion of the project.</p>		

C

S U M M A R Y (Continued)

1.3. Training. Training achievements under the NRM project include: 30 research assistants under in-service training in the Policy Secretariat; 18 students sent to the US for graduate degree training; 3 ongoing PhD students in the U.S. supported to complete their programs; 19 participants sent to Asia, and 23 to the US under the project's international short-term training program; and over 4,000 person days of in-country training provided. The team noted the opportunity to better integrate research conducted under the academic training component with project activities. The team recommended that the TA team, in consultation with the PWG and Project Coordinating Committee (PCC), expand the information currently provided to degree participants regarding project activities, and provided a potential list of research topics for consideration by degree participants.

1.4. Dissemination of results. NRM project short- and long-term advisors have presented their findings in open forum workshops. Supplementary publications have been prepared and disseminated, including: project brochures; abstract series of reports; newsletters; and policy briefs. The evaluation team recommended that issuance of policy briefs should be based on the audience that is being targeted and its format consistent with the purposes of reaching that audience.

II. BUKIT BAKA - BUKIT RAYA AND BUNAKEN FIELD SITES

II.1. National Park Management. A draft management plan was completed by the PHPA (Perlindungan Hutan dan Pelestarian Alam/Forest Protection and Nature Conservation) office assisted by project advisors, and discussed with the provincial Ministry of Forestry (MOFr) in West Kalimantan. Constraints include the lack of boundary delineation and zonation of the park. The team recommended that ARD (Associates in Rural Development) hire a park planner to be team leader and to revise and complete the draft management plan, including production of maps to establish management zones.

II.2. Management of natural production forests. Accomplishments include: short-term consultancies working with PT. Sari Bumi Kusuma (a collaborating concessionaire) in road construction and damage control logging; biodiversity conservation research in logging areas, including production of tree identification manual by Harvard University consultant; recommendations accepted by the MOFr to reduce the annual allowable cut from 31 to 22 million cubic meters/year, and to increase forest royalty charges; and support for development of specific forestry policies by studies and field activities on reduction of logging waste, regulation of harvesting plans, and guidelines for establishing biodiversity areas in natural production forests. The team recommended that the NRM Project strengthens ongoing donor collaboration even more, particularly with respect to applying the forest management planning documents prepared as part of the project to the permanent forest area management units being developed by the MOFr with the assistance of ODA.

II.3. Community Development and Participatory Management. The NRM Project has achieved measured progress in increasing the economic and social welfare of local communities in the Bukit Baka-Bukit Raya area. The project has provided water supply systems, started vegetable gardens and nursery programs, supported institutionalization of traditional laws and regulations by strengthening local community advisory councils, and developed a concept of and prepared initial plans for a Traditional Forest Area (TFA). A particular problem exists with respect to strengthening local institutional capability to carry out program activities after the project. The evaluation team recommended that the Institutional Development and Agroforestry Advisors help promote participation of local NGOs in three areas by: a) consolidating the strength of Village Advisory Councils through training programs and active participation in park planning and management activities; b) extending agroforestry techniques; and c) monitoring the progress of village-managed water supply systems.

II.4. Project Coordination. Implementation of project activities at the Bukit Baka - Bukit Raya site has been difficult because of its remoteness, and its status of a Class Two security zone. There have also been problems associated with the inappropriate choice of long-term technical advisors fielded at the site, and limited MOFr counterpart participation. The evaluation team is aware of significant progress made in managing/replacing technical advisors and coordinating project activities. However, the lack of counterpart support in the field has been a significant issue in coordinating project activities. Recommendations include continuing the *Forum Komunikasi* (Coordinating Forum) started under the project, and using this mechanism to address the need for the MOFr to allocate travel funds for counterpart staff to travel to field sites on a regular basis.

II.5. Training. As of April 1994, 748 persons in West and Central Kalimantan had received over 2,750 person-days training. Training programs included use of GPS, database management, and techniques for implementing biodiversity surveys.

S U M M A R Y (Continued)

I.6. Forestry Research and Training Station. Under the parallel Sustainable Forest Management Project, supported by the International Tropical Timber Organization (ITTO) and the MOFr, the Kaburai Biodiversity Research and Training station will be constructed at the site. USAID has provided a mini-hydroelectric power and potable water supply system (completed in May 1993), and plans to procure some research equipment for the station. Construction of the station has been delayed as a result of contracting problems. Accordingly, the evaluation team recommended that USAID provisions of project equipment be contingent upon completion of the station.

III. COMPETITIVE AWARDS SYSTEM (CAS)

A short-term consultant developed a conceptual framework for implementing the project's Competitive Awards System (CAS) for Applied Field Research in early 1993. Meetings and seminars were held to introduce and develop the concept. An agreement was reached that, in 1994, the CAS committee would solicit proposals from West and Central Kalimantan. As a result of delays in the timetable within the Ministry of Forestry, however, the team recommended that the efforts to initiate the awards should be intensified, and a smooth transition be made to help the MOFr maintain the system after completion of the NRM Project.

IV. BUNAKEN PILOT SITE

IV.1. National Park Management and Community Participation. The draft (in Bahasa Indonesia) of the twenty-five year Master Plan, five-year Development Plan, and one-year Operational Plan for the park have been completed and submitted to the MOFr/PHPA, Bogor for review. The accomplishments of the TA team and GOI counterparts in obtaining a consensus on the draft plan were thought by the team to be impressive. The consensus integrates dissimilar demands of various resource users into what the team called a cohesive and ecologically sound management plan. The project team is currently assessing the prospects for expanding the role of Manado-based NGOs as advocates for local community interests.

The evaluation team recommended: first, that the project should assist PHPA in developing specific guidelines and policies for marine protected areas by addressing the following issues: a) improving PHPA's Guidelines for National Park Management Plans by including marine areas; b) developing mechanisms for establishing a generic participatory planning process; and c) developing mechanisms for implementing the participatory management plan that allocates responsibilities for managing the park's resources, provides measures for the equitable distribution of benefits, and induces collective compliance with the park's regulations. Second, the team recommended that a short-term consultant be recruited to develop a strategic plan for sustainable use of mangrove forest resources in the park. A third recommendation suggested that PHPA designate Bunaken National Park as a pilot site for testing the effectiveness of the *Swadana* (self-supporting financing) mechanism for supplementing park funding, while invoking the principle of *Swakelola* (self-management). A fourth recommendation was to continue testing the effectiveness of the *Forum Komunikasi* (Communication Forum) to sort out competing interests of the various groups of users of the park's resources. A fifth recommendation was to incorporate environmental considerations into plans for developing ecotourism, by: a) establishing an understanding and a consensus opinion on the "acceptable levels of change" of the park's resources; b) cooperating with the certifying organization for diving instructors to train and certify dive guides in marine conservation issues; and c) coordinating compliance with "acceptable levels" of visitation.

IV.2. Training. As of July 1994, 194 participants had received training, much of it designed to support project implementation activities. The evaluation team applauded the training that was provided to field assistants, particularly in participatory rural appraisal techniques, and environmental education.

IV.3. Donor Collaboration. Ongoing collaboration with CIDA (Canadian International Development Agency) should be expanded to embrace the development of an integrated coastal zone management plan to control buffer zone activities adjacent to the park's boundary.

V. KEY ISSUES IN THE ENVIRONMENTAL ASSESSMENT

An environmental assessment was conducted for the NRM Project in late 1992. It produced nearly 50 recommendations designed to improve the project's implementation and to mitigate potentially adverse environmental impacts. The mid-term evaluation team, with USAID/I concurrence, concentrated attention on seven priority issues as part of the assessment team's recommendations. These included: 1) the possibility of NRM Project assistance to PT. Kurnia Kapuas Plywood (PT. KKP); 2) the possible exclusion of PT. Sari Bumi Kusuma (SBK) from the mandatory industrial timber plantation for transmigration (HTI-Trans) program; 3) the promotion of community participation at Bukit Baka - Bukit Raya National Park; 4) studies on the legal status of park residents; 5) the assessment environmental implications of the Bina Desa (Concessionaire Community Development) program, 6) the promotion of local management of natural resources by facilitating development of local skills; and 7) the promotion of a community-based fire control program.

The team's recommendations were to: 1) collaborate with the ITTO (International Tropical Timber Organization)-supported Sustainable Forest Management Project (SFMP) in activities related to community development, including communities receiving assistance from PT. KKP; 2) provide constructive inputs for policy changes in excluding PT. SBK from a HTI-Trans program at Bukit Baka - Bukit Raya; 3) include in the management plan for Bukit Baka - Bukit Raya the influence of outside forces on park management, and determine specific mechanisms to promote active participation of local communities; 4) conduct studies to clarify legal status of local residents; 5) document policy changes NRM Project has contributed for improving guidelines for the Bina Desa program, and decide whether NRM Project should be seriously involved in improving policies in that program; 6) expand the role of local NGOs in project implementation; and 7) include the fire control program in a broader agenda for community development, not as a fragmented activity.

VI. INDUSTRIAL WASTE MINIMIZATION PILOT ACTIVITIES

The rapid growth of Indonesia's industrial sector has resulted in serious pollution problems, including air and water pollution. Recognizing these problems, USAID/I signed a two-year cooperative agreement with the World Environmental Center (WEC) in June 1992 to undertake industrial waste minimization pilot activities. The pilot activities had two primary objectives: a) to strengthen the capability of the private sector to minimize the discharge of pollutants while maintaining or enhancing economic efficiency through improved technology and operating procedures; and b) to promote the formulation and enforcement of improved policies for waste minimization and pollution prevention.

The two most important lessons learned from the implementation of the pilot program were that: 1) the potential impact of minimizing pollution while enhancing industrial profitability in Indonesia is great; and 2) there is a strong demand for assistance in this area from both the public and private sectors of the economy. The team interviewed a sample of participating companies and noted that these companies obtained significant benefits from their participation in the project, including water consumption reduction, more efficient production processes, on-site recycling of raw materials, and reduction of waste. The evaluation also found that waste reduction assessments generated enthusiasm, and increased interest in industrial waste minimization in Indonesia. An industrial waste minimization seminar conducted in seven major cities revealed that a great majority of the participants believe that waste reduction assessments and clean technology information would be very useful to their companies.

While the evaluation team noted some deficiencies in the pilot program, including a lack of emphasis linking pilot activities with policy formulation, USAID/GOI have been encouraged by the positive results of the activities, and have agreed to amend the NRM Project to include an expanded industrial pollution reduction component. The emphases of the expansion will be on continuing to identify cost-effective pollution reduction strategies, in training host-country counterparts in environmental auditing procedures, and linking the project's pilot activities to remedial policy measures.

VII. CROSS-CUTTING ISSUES

VII.1. Women in Development. Considerable efforts are being made by the project to monitor the number of women who participate in and receive benefits from project activities. However, these numbers are not able to reflect the quality of these benefits. Accordingly, the team recommended that the project: a) incorporate increasing women participation as a cross-cutting theme in project implementation; b) review results of policy studies to determine gender implications of recommendations have been made, c) increase the emphasis on recruiting women staff for field and policy analysis positions; and d) increase the number of women participants in training programs.

VII.2. Collaboration with Other Donors. While communications with other donors have been reasonably good, the team recommended that USAID should seek ways to improve such communication even more by supporting the Consultative Group on Indonesia Forestry by: inviting other donor representatives to visit NRM Project sites, have other donors review terms of reference for policy studies to avoid redundancy, and continue inviting donor representatives to NRM Project presentations.

A T T A C H M E N T S

K. Attachments (List attachments submitted with this Evaluation Summary; always attach copy of full evaluation report, even if one was submitted earlier; attach studies, surveys, etc, from "on-going" evaluation, if relevant to the evaluation report.)

C O M M E N T S

L. Comments By Mission, AID/W Office and Borrower/Grantee On Full Report

1. The major recommendations of the evaluation, which are discussed in the PES, have all been addressed and are being incorporated as part of on-going project activities.

2. There was a considerable lapse of time before the midterm evaluation was completed, and approved by the Mission. An acceptable final report was not provided until April 1995, almost nine months after the evaluation team had left Indonesia. The principal reason for the delay was the intransigence of the team leader, who seemed to be unwilling to provide a reasonably well-structured draft of the team's findings, and was, indeed, reluctant to respond to Mission comments regarding unsubstantiated statements and factual errors that were incorporated in the original draft. In order to complete the evaluation, the policy team leader of the Environmental and Natural Resources Policy and Training Project (EPAT), and the Mission's natural resource policy advisor, together conducted additional in-country discussions, gathered supplementary information, and, rewrote the report. These additional activities required an extra level of effort of three-to-four person months.



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**Winrock International
Environmental Alliance**

**Midterm Evaluation of
USAID/Indonesia's
Natural Resources Management Project**

April 1995

Environmental & Natural Resources Policy & Training Project



Delivery Order No. 23
Project No. 936-5555
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**Midterm Evaluation of
USAID/Indonesia's
Natural Resources Management Project**

April 1995

Prepared for

USAID/Indonesia

by

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Acronyms

AFRD	Agency for Forestry Research and Development
ARD	Associates in Rural Development, Inc.
Bapedal	Environmental Impact Management Agency
Bappenas	National Development Planning Agency
DIP	<i>Daftar Isian Proyek</i> (Approved budget for a project)
DUP	<i>Daftar Usulan Proyek</i> (Budget proposal for a project)
EPAT	Environmental and Natural Resources Policy and Training Project (USAID)
EP3	Environmental Pollution Prevention Project (USAID)
GTZ	Gesellschaft für Technische Zusammenarbeit (German Agency for Technical Cooperation)
ITTO	International Tropical Timber Organization
JIP	Joint Implementation Plan
KKP	P.T. Kurnia Kapuas Plywood (forest concessionaire)
LH	State Ministry for the Environment
MoFr	Ministry of Forestry
NGO	Nongovernmental organization
NRMP	Natural Resources Management Project
ODA	Overseas Development Administration (United Kingdom)
PCC	Project Coordinating Committee
PH	Directorate General for Forest Utilization, Ministry of Forestry
PHPA	Directorate General for Forest Protection and Nature Conservation, Ministry of Forestry
PWG	Interministerial Environment and Natural Resources Policy Working Group
SBK	P.T. Sari Bumi Kusuma (forest concessionaire)
SFMP	Sustainable Forest Management and Human Resources Development Project
TFA	Traditional Forest Areas
TPTI	<i>Tebang Pilih Tanam Indonesia</i> (Indonesian Selective Cutting and Replanting System)
USAID	United States Agency for International Development
WEC	World Environment Center
WID	Women in Development

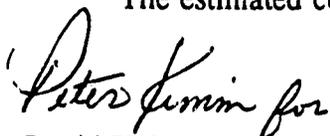
Foreword

This report provides a midterm evaluation of USAID/Indonesia's Natural Resources Management Project, which began in 1990. The project's goal is to assist Indonesia to sustain economic development through improved policies and practices for managing important natural resources. In accordance with USAID's statement of work for the evaluation, the report evaluates progress toward this goal and provides recommendations on how implementation can be improved during the remainder of the project.

The intended audience for this report is broad. It includes officials within USAID and the Government of Indonesia as well as the organizations with prime responsibility for providing assistance to the Government. These organizations include Associates in Rural Development and the World Environment Center. In addition, the report has potential interest to other readers as well. The project is ambitious, as environmental projects in developing countries often are, so other, lay readers can benefit from an improved understanding of the environmental problems and issues in Indonesia, a country with vast tracts of tropical forests and virtually unparalleled biological diversity. USAID's efforts thus represent a commitment to preserve these resources for future generations while improving the quality of life for the present generation.

The report indicates that there is much the Natural Resources Management Project has done well, but the report also provides specific recommendations to address perceived deficiencies. If the recommendations are implemented, the project should operate more effectively and, ideally, achieve its overall goal at a lower cost than otherwise would be the case. For example, the report recommends changes in how USAID's funds are used to support Indonesian activities on issues affecting tropical forestry and coastal resources. Likewise, the report suggests several ways in which USAID and its project staff can facilitate improved coordination with other donors, thus reducing potential duplication of effort while conserving scarce financial resources. Should such changes occur, they will provide evidence of the report's utility and demonstrate its effectiveness. USAID/Indonesia will monitor the implementation of the recommendations and, therefore, will be the best judge of the evaluation's effectiveness.

The estimated cost for writing, printing, and distributing this report is \$12,500.



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Executive Summary

The Natural Resources Management Project (NRMP), the subject of this midterm evaluation, is one of USAID's major environmental initiatives in Asia and USAID/Indonesia's first natural resources management project. The NRMP was initiated in 1990 as a broad program of assistance to support the Government of Indonesia's efforts to improve policymaking capacity related to the management of natural resources. The seven-year project thus supports one of USAID/Indonesia's strategic objectives, the "adoption of improved policies [and practices] in natural resources and urban/industrial environmental management."

The NRMP seeks to strengthen: a) the capacity of institutions with responsibility for the analysis and formulation of national policies related to the management of natural resources; b) the government's capacity to manage natural production forests for sustained yields through assistance to a private forest concessionaire; c) the government's ability to prepare and implement management plans for protected areas; and d) analytical and managerial capacity through graduate training. To assist USAID/Indonesia and the Government of Indonesia in addressing these issues, the former awarded a contract for technical assistance to Associates in Rural Development in late 1990. To assist the Government with a related effort to minimize the production of industrial wastes, USAID/Indonesia established a two-year Cooperative Agreement with the World Environment Center (WEC) in mid-1992. This evaluation assesses their collective efforts to achieve the project's overall goals.

The NRMP is an ambitious project, and success is not guaranteed. To USAID's credit, it has chosen an important set of environmental issues to address. As this report indicates (and as might be expected with any evaluation), there are instances of accomplishment and measurable progress toward anticipated outcomes as well as instances in which goals have yet to be achieved and where progress is less than might be reasonably anticipated. The evaluation attempts to identify the NRMP's successes while suggesting how perceived deficiencies can be addressed and remedied.

In an effort to establish an enhanced capacity to analyze policies related to the management of Indonesia's natural resources, the NRMP provides assistance for research studies and a related Policy Secretariat. Due to a wide range of constraints and delays in completing several studies, the evaluation team believes that the total number of studies should be reduced from 15 to 12.

The project's efforts to establish a permanent Policy Secretariat have not yet achieved success because of the lack of counterpart participation and limited demand for commissioned studies. There has been a related effort to establish a network of policy analysts, but this too has not met with the success originally anticipated. The evaluation thus recommends that Bappenas, participating ministries, and the contractor's technical assistance team should identify alternative means of providing policy advice and analysis to government ministries after the project's completion.

The NRMP's training element has enlarged the base of Indonesians' technical skills, but the evaluation team believes that an enhanced effort should be made to integrate the training of graduate students, which the NRMP finances, with the project's field activities or with those of the Policy Secretariat.

The project provides assistance to the Government of Indonesia to develop management plans for two national parks, Bunaken and Bukit Baka-Bukit Raya. Such plans have been developed for the parks. In both instances an emphasis has been placed on the participation of local communities. Despite the progress to date, the plan for Bukit Baka-Bukit Raya is not yet complete and would benefit from the skills of an experienced national park planner to raise it to the standards of the Bunaken plan.

To enhance the management of natural production forests, the project works with a private forest concessionaire in West and Central Kalimantan. Inadequate communication, inadequate travel funds for Indonesian counterparts, and understandable difficulties in establishing effective coordination between the technical assistance team and these counterparts (particularly at Bukit Baka-Bukit Raya) initially hampered the planned collaboration. To a large extent, these problems have been mitigated significantly in the past year.

The project's efforts to increase the welfare of local communities have led to the development of a Traditional Forest Area concept. Considerable information on local communities has been collected at Bukit Baka-Bukit Raya and will be used to establish a pilot site for a traditional forest area in West Kalimantan.

Through the Cooperative Agreement with the WEC, USAID seeks to encourage Indonesian industries in three sectors (i.e., textiles, pulp and paper, and metal finishing/electroplating) to reduce the production of industrial wastes through no-cost or low-cost changes in their manufacturing procedures. The WEC engaged industry experts to conduct factory-level assessments of 20 companies. In nearly every instance these assessments led to specific reductions in pollution. Related training workshops appear to have spread knowledge of pollution prevention. Despite identifiable successes, the industrial waste-minimization effort is criticized for an agenda that is far too ambitious. Similarly, not all of its goals were achieved, particularly in regard to an enhanced ability of Indonesians to conduct assessments. Due partially to such concerns, USAID decided not to renew its Cooperative Agreement with the WEC.

The local staffs of WEC and Associates in Rural Development have had opportunities and challenges associated with two cross-cutting issues, namely women in development and donor coordination. The evaluation team identified many instances in which the technical assistance contractor has furthered USAID's interests in promoting the role of women in development and in facilitating improved donor coordination, but much remains that the contractor can do to improve what is arguably an impressive range of accomplishments in these areas. In contrast, the WEC had a less impressive range of accomplishments in these areas. This situation is due in part to the fact that USAID did not impose specific requirements on the WEC in regard to either women in development or donor coordination. USAID/Indonesia should thus ensure that

future (or on-going) efforts to minimize industrial wastes contain explicit requirements in regard to the two topics.

1. Introduction

1.1. Background

Despite progress in expanding its manufacturing sector, Indonesia's economy remains dependent on the utilization of its natural resources. The country's outward-looking, growth strategy is export-led and highly dependent on expanding the key natural resource sectors of agriculture (including fisheries), forestry, and nonoil minerals. Tourism development is also promoted but to be linked closely to environmental management. Indonesia's current five-year development plan (Repelita VI) recognizes these factors.

The country's renewable natural resources suffer considerable degradation due largely to human activities and the poor functioning of markets. This degradation diminishes current economic development (through inefficient use and allocation of natural resources) as well as the foundation for future development (through the uneconomic depletion of otherwise sustainable sources of natural resource products). Recent studies estimate the cost of inefficiencies in the forestry sector to be more than \$2 billion per year.

The wise management of Indonesia's forest resources is important to the domestic economy and in international trade. Indonesia has 40 percent of Asia's remaining tropical forests, which provide irreplaceable habitats for much of the world's biological diversity. Furthermore, the forestry sector contributed approximately \$4 billion to export earnings in 1993, making it the largest nonoil export sector.

Improved policies and management practices are needed to sustain the output from production forests (approximately 65 million hectares), primarily through natural forest management. Much greater attention must also be given to improving the management of forested areas that have been designated as parks, reserves, and protected areas (approximately 50 million hectares) through innovative approaches that consider institutional constraints and enhance economic benefits without jeopardizing the conservation of Indonesia's rich biological heritage. Some needs for innovation are technical, but most advances must occur in the policy area. A recent report from the World Bank estimates that of all deforestation that occurs in Indonesia, two-thirds is due to programs that the Government of Indonesia sponsors or encourages.¹ As the Bank observed, this situation emphasizes the scope to improve policies related to the management of the country's vast and productive natural resources.

1.2. Purpose

The Natural Resources Management Project (NRMP), the subject of this midterm evaluation, is one of USAID's major environmental initiatives in Asia and USAID/Indonesia's

¹ World Bank, *Indonesia Environment and Development: Challenges for the Future*. World Bank, 1994.

first natural resources management project. The NRMP was initiated in 1990 as a broad program of assistance to support the Government of Indonesia's efforts to improve policymaking capacity related to the management of natural resources. The seven-year project thus supports one of USAID/Indonesia's strategic objectives, the "adoption of improved policies [and practices] in natural resources and urban/industrial environmental management."

In accordance with this strategic objective, the NRMP seeks to strengthen: a) the capacity of institutions with responsibility for the analysis and formulation of national policies related to the management of natural resources; b) the government's capacity to manage natural production forests for sustained yields through assistance to a private forest concessionaire; c) the government's ability to prepare and implement management plans for protected areas; and, d) analytical and managerial capacity through graduate training. One additional objective is to increase the transparency of the policymaking process as it relates to the management of natural resources.

1.3. Project Details

To achieve these objectives the NRMP supports policy analyses for sustainable economic development, field-based pilot implementation of management strategies for natural forests and protected areas, and industrial clean production activities. The NRMP's design was intended to be flexible and to allow the addition of related activities after its formal initiation.

The NRMP's policy analyses operate through a Policy Secretariat, which is designed to conduct policy analyses and studies of important natural resources issues relevant to Indonesia's sixth five-year development plan and the second twenty-five-year development plan for Bappenas, the National Development Planning Agency. Much of this effort examines the links between economic policy, management of the country's natural resource base, and sustainable growth that will improve social equity. In turn, a substantial portion of the project's policy analysis focuses on formulating implementable policy recommendations that policymakers can readily adopt.

The NRMP also involves pilot activities at two project sites in order to test and apply improved approaches for the management of forests and protected areas. The project is designed with the expectation that field activities will complement the first component and generate valuable information for the formulation of improved policies and demonstrate viable approaches for managing production forests and protected areas that can be replicated elsewhere. Innovative features of the field strategy include cooperation with the private sector and the participation of local communities in management planning. A training element complements the policy and field-testing components.

Finally, the NRMP attempts to demonstrate the importance of and opportunities associated with waste minimization in Indonesia's manufacturing sector.²

1.4. Institutional Responsibilities

Primary responsibility for the NRMP's implementation is divided among several Indonesian institutions and organizations. As originally designed, these include:

An Interministerial Environmental and Natural Resources Policy Working Group (PWG) and its Policy Secretariat.

The PWG serves as a policy forum for discussion of natural resources issues and represents a consolidation of four interagency committees (i.e., on forest rehabilitation, environmental management policy, marine resource management policy, and forestry concession policy). The PWG is supposed to make policy recommendations to senior officials within the Government of Indonesia. In addition to serving as the project's steering committee, the PWG is intended to:

- provide overall guidance for the project
- develop a policy agenda
- sponsor policy seminars and research
- organize evaluations of the project

Intended membership on the PWG includes senior officials from Bappenas, which convenes the PWG, the Ministries of Forestry, Finance, and the Environment (LH) and, when appropriate, representatives of line ministries, NGOs, and the private sector.

To assist the PWG in the implementation of its responsibilities, a **Secretariat** with a technical staff was formed. As part of its assistance to the Government of Indonesia, USAID provides the Secretariat with technical assistance, office space, equipment, and training for the first four years of the project. After that period, the initial expectation was that the Secretariat would be able to generate its own sources of support through grants and research contracts, thus allowing a reduction in USAID's contribution to less than half of the Secretariat's expenses by the end of the project. In contrast to USAID's support, the Government of Indonesia pays the expenses of its employees through normal budgeting processes.

² After the NRMP's initiation, USAID/Indonesia added an activity related to the creation of an Indonesian Biodiversity Foundation, an independent grant-making foundation. This represents a major policy improvement in promoting the participation of nongovernmental organizations (NGOs) and others in the protection of the country's biological diversity. The evaluation team was not asked to review or assess any facet of the foundation.

Among their implementation tasks, the Secretariat and Bappenas are to award contracts to university groups, local researchers, and domestic "think tanks" for relevant policy studies: a) with full funding from USAID; b) with shared funding from Bappenas and USAID; and c) with full funding from the Government of Indonesia

The **Project Coordinating Committee (PCC)** is responsible for coordinating the project's implementation and for reviewing annual work plans and budgets and progress in achieving goals. The PCC normally meets about every three months to review project implementation and to identify ways to facilitate implementation.

The PCC's members include representatives from Bappenas, the Ministry of Forestry, USAID, and the International Tropical Timber Organization (ITTO). Within Bappenas, the Assistant to the Minister for Increasing Community Participation and Integrated Development chairs the coordinating committee and directs the activities of the committee's executive secretary, who is the project coordinator.

In addition to staffing the PWG's secretariat, Bappenas is responsible for the implementation of activities related to policy analyses for sustainable economic development. A policy project implementation unit within Bappenas submits annual work plans and quarterly progress and financial reports to the PCC and the results of the policy analyses to the PWG.

The **Ministry of Forestry** is responsible, through a project implementation unit, for these activities:

a) through a subproject implementation unit in the **Directorate General for Forest Protection and Nature Conservation (PHPA)**, the implementation of the project element involving the design and implementation of multipurpose management plans for three protected areas (the Bunaken National Park in North Sulawesi, the Bukit Baka-Bukit Raya National Park in West and Central Kalimantan, and the Gunung Palung National Park in West Kalimantan).³

b) through a subproject implementation unit in the **Directorate General for Forest Utilization (PH)**, the implementation of the project element involving pilot management of natural production forests in conjunction with P.T. Sari Bumi Kusuma (SBK), a private company

³ USAID/Indonesia sponsored an environmental assessment of the NRMP in late 1992. The assessment team recommended that the NRMP not initiate activities at the Gunung Palung reserve unless long-term resident advisors could be fielded to ensure the social and environmental soundness of project-supported interventions. USAID/Indonesia accepted the recommendation and few, if any, relevant project activities have occurred there. For this reason, this evaluation contains no further discussion of Gunung Palung. Given the importance and magnitude of the other tasks associated with the NRMP, the evaluation teams concurs with the assessment team's recommendation.

holding a forest concession in an area adjacent to and west and north of Bukit Baka-Bukit Raya National Park.⁴

c) through a subproject implementation unit in the **Agency for Forestry Research and Development (Litbang)**, the implementation of applied research on the management of natural production forests and protected areas.

The management of natural resources in Indonesia is the primary responsibility of central ministries, and many of these ministries have a regional office (*Kanwil*) in each of the country's 27 provinces. Each province also has a governor that is appointed by the president. This information is relevant to the NRMP because of the need to work with national, provincial, and local officials. As noted just above, for example, Bukit Baka-Bukit Baka National park overlaps the provinces of West and Central Kalimantan, thus requiring collaboration and interchange with *Kanwils* and provincial officials in two provinces.

To assist all these institutions in the accomplishment of the project's goals related to policy analyses and pilot field activities, USAID/Indonesia awarded a three-year contract for technical assistance to Associates in Rural Development, Inc. (ARD) in August 1991. This contract was subsequently extended until August 1996. This contract supports project implementation through the provision of technical advisors and administrative support, the conduct and administration of policy studies, training, and the procurement of commodities.

In addition to these institutional arrangements, it is important to note the collaboration between the NRMP and the Sustainable Forest Management and Human Resources Development Project (SFMP), which the ITTO supports. The SFMP, which began its activities in April 1992, complements the NRMP's forestry-related activities and is designed to provide support (\$11 million over seven years) to the Ministry of Forestry for research, training, and management of protected areas and natural production forests. In several instances, the NRMP's activities are linked with those of the SFMP. For example, the latter will help fund implementation of the management plan for Bukit Baka-Bukit Raya National Park. The NRMP is providing assistance to the Ministry of Forestry for the plan's development.

The NRMP and the SFMP share a common administrative structure within the Ministry of Forestry. A *Joint Implementation Plan (JIP)* governs the related activities of the NRMP and the SFMP, but USAID is not responsible for monitoring the implementation of the SFMP's activities.

Bapedal, Indonesia's Environmental Impact Management Agency, is the host-government's counterpart agency for the project's pilot activities involving industrial waste

⁴ The Ministry of Forestry and SBK formalized this arrangement through joint approval of a memorandum of understanding on March 5, 1993. Representatives of USAID/Indonesia and the International Tropical Timber Organization also signed the memorandum as witnesses.

minimization and pollution reduction. To work with Bapedal, USAID/Indonesia established a two-year cooperative agreement with the World Environment Center (WEC) in June 1992.⁵

1.5. Relevant Reports and Documents

In addition to extensive interviews with officials within USAID/Indonesia, the Government of Indonesia, and the staff of ARD and WEC, this evaluation also reflects thorough consideration of a series of related documents. These include:

a. USAID/Indonesia's two-volume Project Paper for the NRMP. This document, which was approved in July 1990, outlines the project's background and rationale, describes its goals and purposes, and outlines plans for implementation, monitoring, and evaluation. An annex to the Project Paper includes a logical framework that links goals, purposes, and specific intended outputs. These outputs serve as a primary basis for this evaluation. The implicit assumption in any logical framework is that accomplishment of the intended outputs will contribute to achievement of a project's overall goals and purposes. Consequently, if required outputs are not produced (or if there is no progress toward their completion), a project cannot be rated a success.

b. The Statement of Work for the Midterm Evaluation (see Appendix 1). This Statement indicates the objective of the evaluation, which is "to evaluate progress towards achieving specified outputs in the logical framework...and to recommend improvements in project design and/or implementation approaches to facilitate accomplishment of project outputs." The Statement of Work identifies seven key issues (and a series of related questions) to be addressed. These include:

- Achievement of Purpose and Outputs
- Project Design
- Policy Analysis
- Technical Assistance and Future Needs
- The Project's Management Information System
- Role of Community Groups, the Private Sector, and NGOs
- Women in Development

Each of these issues is addressed in this evaluation.

c. The contract between USAID/Indonesia and ARD specifies the tasks and responsibilities of the technical assistance contractor. In many areas this contract amplifies

⁵ With the expiration of the cooperative agreement the mission initiated a buy-in the USAID's Environmental Pollution Prevention Project (EP3) to continue work on waste minimization. Although the EP3's involvement with the NRMP had not formally begun at the time of the evaluation, much of the discussion is relevant to its efforts, especially to the extent that the WEC's experiences are relevant to what EP3 is doing.

discussion contained in the Project Paper and indicates precisely what the contractor is expected or required to do during the life of the project.

d. Publications and periodic progress reports completed by ARD, including periodic progress reports and a multiyear progress report covering the period from August 1991 through March 1994.

e. *A Joint Implementation Plan for the Natural Resources Management (NRM) and the Sustainable Forest Management Projects.* This plan (dated March 1992) and subsequent revised, draft versions (dated April 1993, and May 1994) reflect the collective and participatory efforts of Bappenas, the Ministry of Forestry, USAID, ARD's technical advisors, and the ITTO's resident advisor with responsibility for the SFMP. Each draft version of the JIP, which the PCC is asked to review and approve, summarizes activities to date and anticipated activities for the forthcoming year. The JIP includes updated annual work plans covering both the NRMP and the SFMP, and the former's quarterly reports are keyed to the tasks outlined in the JIP. Finally, the JIP serves as the basis for the allocation of the Government of Indonesia's financial contribution to both projects.

f. *An Environmental Assessment of the Natural Resources Management Project,* which was completed in January 1993, after field work in Indonesia between September and November 1992. Under the auspices of USAID's Biodiversity Support Project and in accordance with the initial version of the JIP, an eight-person team was asked to identify and describe the project's potential social and environmental impacts and to contribute toward improvement in the project's technical design. Moreover, with USAID/Indonesia's approval, the assessment attempted to provide technical assistance to project staff and advisors in the formulation and revision of management plans for the protected areas included in the project's mandate.

The Assessment contains a series of recommendations related to policy issues, the three field sites, and institutional and management issues. In response to the assessment, USAID/Indonesia completed an Environmental Action Plan in June 1993. For each recommendation, the plan summarizes intended actions. The Statement of Work directs the evaluation team to review the assessment team's recommendations, to assess their appropriateness and progress in implementing the Action Plan, and to provide recommendations to improve the Action Plan's implementation. At the request of USAID/Indonesia, the evaluation team focused solely on seven key issues identified in the *Environmental Assessment*.

g. The Cooperative Agreement between USAID/Indonesia and the WEC that addresses the NRMP's waste-minimization component as well as periodic progress reports submitted to the mission. The cooperative agreement ended during the evaluation, so it was not possible to examine the WEC's final summary report to the mission.

1.6. The Evaluation Process

Through a buy-in, USAID/Indonesia contracted with USAID's Environmental and Natural Resources Policy and Training (EPAT) Project to conduct this midterm evaluation, which occurred in June and July 1994. To ensure that the evaluation is responsive to the statement of work, some additional information was collected after the team's visit to Indonesia. Nonetheless, this evaluation attempts to portray the project's status as of July 1994. The members of the evaluation team, who were recruited in Indonesia and the United States, included:

John R. Clark, team leader
Peter R. Burbridge, natural resources specialist
Dennis J. Cengel, resource economist
M. Soerjani, training, research, and institutional specialist
H. Soeparwadi, industrial pollution specialist
Krisnawati Suryanata, community development specialist

To complete the evaluation, various team members traveled to Bogor, Manado and Bunaken National Park, Bukit Baka-Bukit Raya National Park and SBK's adjacent forest concession, Pontianak to meet with the technical contractor's field staff and provincial government officials, and, for the waste-minimization component, to Bandung, Jakarta, and Surabaya. A list of people contacted can be found in Appendix 2.

Using material the evaluation team collected and compiled, Cengel and Richard J. Tobin (of the Institute for International Research and EPAT's core staff) prepared a first draft of this report. That draft was circulated for review and comment among the project's Indonesian counterparts, USAID/Indonesia's staff, and among employees of ARD and the WEC. The present report, which Cengel and Tobin completed, is responsive to all written comments received. Appendix 3 contains these comments and the authors' responses to them.

The team and the report's authors appreciate the considerable assistance that the staffs of ARD, the WEC, and USAID/Indonesia provided during the evaluation.

2. Policy Secretariat

2.1. Evaluation Criteria

The Policy Secretariat's progress in achieving logframe indicators was evaluated in terms of its ability to accomplish four tasks:

- Execute an approved agenda of macroeconomic and sectoral policy studies and use their recommendations to promote policy reform;
- Institutionalize an operational unit to support policy analysis;
- Provide training opportunities to upgrade analytical skills; and
- Disseminate the results of analyses to encourage active discussion and debate of critical policy issues.

2.2. Macroeconomic and Sectoral Policy Studies⁶

2.2.1. Logframe Indicators

The logframe indicators for macroeconomic and sectoral studies are 15 policy analyses of national relevance and recognized value that stimulate policy reform.

2.2.2. Agenda

The PWG developed general guidelines for the NRMP's policy analyses in March 1991. The areas of concentration and broad themes identified in those guidelines provide the framework within which several macroeconomic and sectoral policy studies have been developed within the Secretariat with the PWG's concurrence. The primary responsibility for identifying specific topics for the studies has resided with ARD's technical assistance team, working in close collaboration with the PWG and PCC. This procedure is in accord with the team's responsibility to assist the PWG in identifying policy issues for analysis. The PWG's members reviewed the initial list of approved studies on three occasions. The list was altered as policy constraints to more sustainable use of natural resources and opportunities to influence policy reform have been defined more clearly.

The Secretariat's current agenda for macroeconomic and sectoral studies is composed of two elements. The first underscores five demand-driven policy briefing papers that have been prepared for Bappenas for use in the country's Sixth Five-Year Development Plan, or Repelita VI, and Second Twenty-Five Year Development Plan. The second element encompasses 12 studies designed to provide comprehensive coverage of specific policy issues. The more pivotal of these studies embody a strategy that advances macroeconomic policy reform to address

⁶ The Secretariat's policy links to field studies are discussed in chapter 3, which details activities at the NRMP's field sites in Bunaken and Bukit Baka-Bukit Raya.

sensitive sectoral policy issues in a less confrontational manner. The preliminary recommendations of the trade rate study, which indirectly impact a number of sensitive restructuring issues in Indonesia's forest-products manufacturing sector, exemplify this strategy.

2.2.3. Accomplishments

Responsibility for completing the macroeconomic and sectoral policy studies resides with the contractor's technical assistance team. By the end of August 1994, eight of the twelve studies on the current agenda will have been completed and be ready for presentation to government officials and representatives of other groups and agencies. The studies that will be completed by that date address:

- Dynamic Input-Output Modelling for the Second Twenty-Five Year Plan and the Sixth Five-Year Plan;
- The Employment Effects of a Natural Resources Management Policy;
- The Natural Resource Impacts of Trade Rate Policy;
- The Natural Resource Impacts of Export Marketing Boards;
- The Natural Resource Impacts of Foreign Direct Investment;
- Viability of Ecolabelling and Other Initiatives to Ensure Sustainable Forest Management;
- Policy Incentives and Disincentives to Efficient and Equitable Production and Trade of Rattan; and
- Policies Toward Protected Areas.

The studies that will remain, although some may continue to be deferred, will provide assessments of:

- The Marine Sector;
- Integrated Development;
- Community Development; and
- Overall Development.

Of the three macroeconomic and sectoral studies that the evaluation team reviewed, the input-output study has had the greatest impact.⁷ Bappenas initially employed the study's methodology for incorporating environmental constraints into strategies for sustainable development in the preparation of Repelita VI and the country's Second Twenty-Five Year Development Plan. As a result of the rapid acceptance of the economic concepts and policy-

⁷ At the time of the evaluation, the studies on input-output modelling, employment effects, and protected areas' policies were the only ones that had been completed. No evaluation of the protected areas study is provided in this report, other than noting that it appeared to have been well received. The evaluation team concluded that insufficient time had passed to be able to assess properly the impacts of a study that had only recently been completed.

assessment applications of the methodology, several derivative activities were developed. The overall effort was supported by a series of seminars and workshops designed to disseminate the methodology and to facilitate the use of its policy-assessment applications among government officials. The culmination of those activities was a four-week training course, with an auxiliary goal of preparing future trainers, held in Jakarta for 20 participants selected from 14 government departments. Based on this collective body of evidence, the evaluation team concurs that support for the input-output study and its derivative activities extended well beyond the analytical phase of the endeavor and was instrumental in the practical implementation of the use of the study's results.

2.2.4. Constraints

The relative lack of impact of the macroeconomic study on unemployment can be attributed largely to the ineffectiveness of the long-term technical advisor who was hired to replace the contractor's first resource economist, who resigned in August 1993.⁸ The study contains a few interesting insights, but the analysis is uneven.

The evaluation team's belief that the number and scope of the studies that should be undertaken by the Secretariat should be reduced have been reinforced by the lack of continuity that the impending departure of a third long-term advisor, the Secretariat's macroeconomist, will engender at the end of the year. Based on an assessment of the Secretariat's current rate of progress, the evaluation team is concerned that sufficient resources may not be available for generating the necessary momentum for the complex process of catalyzing policy reform, which constitutes the ultimate purpose of the studies, if the Secretariat's number of targeted studies remains unaltered. The evaluation team is aware that a long gestation period often exists between the formulation and implementation of recommendations for policy change.

Recommendation: The Policy Secretariat should continue to respond to critical demand-driven requests from Bappenas but should reduce the logframe's output indicator for policy analyses of national significance and recognized value from 15 to 12 by:

- a) Deleting, as the contractor has recommended, the study on the Marine Sector, which has already been deferred once because of the excessive demand for resources required to complete a study of this size;
- b) Combining the studies on Integrated Development and Community Development, which have also been deferred once because of the backlog of uncompleted studies at the Secretariat, into a highly focused examination of practical means of securing local communities' access rights to forest resources in, or adjacent to, forest concessions and protected areas. This

⁸ The long-term advisor that is referred to also resigned from the project in June 1994. The turnover of long-term advisors has been a problem for the contractor, both in the Secretariat and at the field sites. This problem is discussed in chapter 3.

study would integrate all of the lessons learned from the traditional forest area (TFA) pilot activities that are planned at Bukit Baka-Bukit Raya; and

c) Consolidating the findings of the studies on logging wastes and plywood manufacturing, which have been initiated with the SBK concessionaire in West Kalimantan, into a set of specific remedial policy recommendations that address the issue of undervalued forest resources.

While one "slot" on the studies agenda would remain open to respond to the PWG's preferences, the reallocation of resources that would result from these modifications should be directed to advising the PWG on the applications of the analyses and promoting the recommendations gleaned from completed studies.

Recommendation: In order to catalyze active policy reform, ARD's technical assistance team and USAID/Indonesia's natural resources policy advisor should coordinate their efforts to consolidate the results and recommendations of each of the studies on the Secretariat's agenda into a terse and coherent document of prescriptive policies, which, if implemented, would remove some of the more egregious impediments to sustainable economic development. Each of the consolidations, which should be prepared in Bahasa Indonesia and English, should be accompanied by an abbreviated analytical review of the benefits of policy implementation to enhance the standing of the initiatives proposed. The technical assistance team should confer with Bappenas, which convenes both the PWG and PCC, to develop the most effective strategies for interfacing with the ministries in which the recommended policy transformations would occur.

2.3. Support Unit

2.3.1. Logframe Indicator

The logframe indicator for this segment of the Secretariat's tasks is an operational unit to support the PWG in developing policies for natural resources management planning.

2.3.2. Accomplishments

The contractor is responsible for providing office space and technical and administrative support for the Policy Secretariat's operation. The administrative support component is monitored, as are all project activities, with the aid of a management information system, which was stipulated in the project paper. The contractor commissioned a short-term consultant to design the system and train long-term advisors in its use. The system, which has been fully operational since August 1993, has been programmed to respond to three different types of managerial demands. The first links information to project management and compliance responsibilities. A structured format for preparing annual work plans and monthly reports generates a chronological summary of project activities that can be compared with the project's logical framework.

The second demand was to document the impacts of project activities in fields of special interest to USAID that have not been specifically addressed in the logical framework, such as the role of women in development. Relevant information on these topics can be keyed to project activities and summarized prior to evaluation.

The third demand is the most difficult to systematize. It requires access to information on monitoring and evaluating the impacts of the project on its final goals. The difficulties in responding to this requirement, while confounded to some extent by the intractability of identifying causal relationships and the prolonged period of time that elapses before project activities are realized, appear to have been solved in the most cost-effective manner available.⁹

The evaluation team believes that the design of the management information system, which permits users to input information quickly in a variety of formats and produces a systematized record of output, has facilitated project management and improved project coordination. Indeed, on the basis of the team's assessment of the design consultant's reports, deliberations with members of ARD's in-country staff, and personal observations of the system's use, the evaluation team agrees that the system's design and its use have resulted in considerable savings of time and effort in administering the project. The evaluation team has no substantive comment about improving the system or its operation.

2.3.3. Constraints

A lack of counterpart participation within the Secretariat and the dearth of markets in which the Secretariat's studies could be commissioned have constrained the contractor's efforts to establish the kind of project support unit envisioned in the project paper. Indeed, the sustainability of a self-financing Policy Secretariat was based on two premises: a) that Secretariat counterparts seconded from participating ministries would form a cadre of trained policy analysts to replace the contractor's team at the end of the project; and b) that the development of a national market for policy studies would emerge to reduce the cost-sharing burden of operating the Secretariat.

The failure to second government counterparts prompted the contractor, with the PCC's concurrence, to pursue alternative methods for creating a network of policy analysts. The establishment of the network was engineered on several fronts, by: a) initiating contacts and meeting with individuals engaged in policy-related pursuits in think tanks (e.g., the Center for Policy and Implementation Studies in the Ministry of Finance), institutes (e.g., the Economic and Social Research Institute of the University of Indonesia), development projects (e.g., the Development Studies Project, funded by USAID), and within the NGO community (e.g., Pelangi, Walhi, and Latin); b) commissioning policy studies by national consultants; c) recruiting and training research assistants within the Secretariat; d) encouraging the creation of a task force for

⁹ This assessment is based on the alternative solutions identified in the design consultant's reports.

policy analysis and development within the Ministry of Forestry; and e) establishing linkages with an existing high-level task force in the ministry.

The efforts to extend the network of analysts have met with mixed success with respect to the commissioning of policy studies by national consultants. Of the 15 original studies managed by the Ministry of Forestry that were to be subcontracted, only five were completed. A government-appointed committee convened to evaluate the studies concluded that funds earmarked for additional contracts would be better utilized within the Secretariat. Even with the reduction in the number of studies, however, the Ministry of Forestry apparently considered the exercise to be a success. The evaluation team understands that officials in the Ministry of Forestry have indicated that the studies not only provided unique opportunities for national consultants to develop their capacity to undertake contract research but also to enhance the Ministry's sense of ownership of the results.

The evaluation team recognizes the difficulties that have constrained collaboration with counterparts in the Policy Secretariat but is concerned that the inability to form a permanent secretariat will dampen participating government agencies' policy assessment efforts after the NRMP ends.

Recommendation: Representatives from Bappenas, participating government ministries, and the technical assistance team should meet in an open forum to discuss alternative means of providing policy advice and assistance to affected government ministries after the NRMP's completion. Based on these discussions, collective plans should be developed and implemented to ensure that the level of advice and assistance that will be required can be made available.

The evaluation team has no illusion that the network of policy analysts being formed will be able to assume the role that the government counterparts were projected to play in the Policy Secretariat after the NRMP's completion. The team is aware that the aspirations to maintain a semblance of institutional continuity will have to reside with the Policy Task Forces in the Ministry of Forestry that are now being mobilized with the aid of the contractor's long-term forestry advisor.¹⁰

This should not, however, impair the resolve to strengthen the network of analysts. Indeed, the effort to expand the network will not only contribute to a broadening of the base of domestic policy analysts but will also facilitate the transfer of information among them. The evaluation team supports this effort but believes that it should be complemented by a comparable effort to increase collective exchanges among the network's members.

¹⁰ These task forces, which are intended to link field activities with priorities established by the Ministry of Forestry, are incorporated into the discussions of field activities at Bunaken and Bukit Baka-Bukit Raya.

Recommendation: The contractor should continue to foster the expansion of a network of policy analysts, but the expansion should be accompanied by a parallel effort to increase group cohesion and collective participation among the domestic members of the network. The evaluation team recommends that the contractor's staff inaugurate a series of regularly scheduled group meetings. The gatherings should not duplicate technical training initiatives that already exist but should rather be used to increase interpersonal exchanges and instill a common sense of purpose among the members of the network who are able to attend the meetings. The contractor's staff should develop an appropriate format to contribute to the achievement of these goals.

2.4. Training

2.4.1. Logframe Indicators

The logframe indicators for training are 22 analysts provided Master's training in the United States; 40 analysts supported for short-term international training; and 60 analysts trained in Indonesia.

2.4.2. Accomplishments

The NRMP's training has four principal elements:

- In-service training in the Policy Secretariat, where 30 research assistants have been recruited and trained to work on policy studies. Eight of these analysts had moved on to upwardly mobile jobs in the public and private sectors of the economy as of May 1994. Despite their advancement, they still maintain their association with the network of policy analysts.

- Graduate degree training in natural resources fields in the United States. As of July 1994, 18 students have been sent to the United States for M.S. degree training. Four more will be leaving for their M.S. degree training in September 1994. Two students have received their Ph.D. degrees, and a third is currently studying for his Ph.D. degree.¹¹ The major fields of study of the M.S. students are forestry, wildlife management, marine management, and natural resources management. The major field of study of the Ph.D. students is resource economics. The Institute for International Education is responsible for administering the placement of candidates and monitoring their progress at American universities.

- International short-term training programs, workshops, seminars, and study tours. As of July 1994, 19 participants had taken part in programs based in Asia, and 23 others had taken part in programs in the United States.

¹¹ The number of students that are being sent for graduate training in the United States will exceed the number specified in the logframe indicator. At the PCC's request, the NRMP provided supplementary funding to three Ph.D. students whose funding from other sources had expired. The funds were reallocated from the budget for international short-term training.

- Jakarta-based, in-country, training courses. As of April 1994, 24 training activities had been completed, which provided 289 participants with 522 person-days of training in subjects encompassing research methodologies, data analysis and manipulation, input-output modelling, planning for sustainability, and remedial English.

Although formal evaluation of these programs will not be forthcoming until the end of the project, the evaluation team believes the training initiatives are contributing in a substantial sense to a strengthening of the development of human resources in Indonesia. The singular opportunities that the training activities afford participants can only enlarge the base of technical skills of host-country nationals that still remains small.

2.4.3. Constraints

The evaluation team believes that an opportunity to integrate graduate degree training with the project's field activities could have been better utilized in the NRMP. The team concurs that a number of sectoral studies and field analyses could have been developed to supplement more formally commissioned project studies. While the evaluation team is aware of the difficulties in selecting and processing prospective candidates for graduate training, it believes that acceptance of the following principle would enhance the contributions of graduate training programs in forthcoming projects.

Recommendation: USAID, in collaboration with the PWG and participating government ministries, should agree in principle to the following addendum to forthcoming project papers that might be developed between them.

The technical assistance team, in consultation with the PWG and PCC, will make concerted effort to identify and revise periodically a list of research topics that can be addressed by Indonesian Master of Science students that the project supports. Prior to the student departure from Indonesia, the team will meet with each student and provide them with a current list of topics that have been identified. The team will discuss the topics with each student and if the student's graduate research approves the topic, the students will coordinate their field work at a project site and link the results of the study to the project's logframe. An equally attractive alternative, which the contractor has suggested, would have the project support returning students to conduct follow-on work on the NRMP before returning to their duties.

Whatever option is chosen, the evaluation team believes that more effort is needed to integrate project-funded trainees into project-related activities at the field sites or with the Poli Secretariat.

2.5. Dissemination of Results

2.5.1. Logframe Indicators

The logframe indicators for this component include seminars, workshops, media presentations, newsletters, and policy briefs to encourage active discussion and debate of critical policy issues.

2.5.2. Accomplishments

The evaluation team believes that the NRMP is unique in that it may be the only donor-funded project in Indonesia that requires all of its short-term consultants and long-term advisors to present the results of their studies in an open-forum workshop to government officials and other interested parties. There have been more than 40 such presentations at local, provincial, and national levels. Technical papers associated with project activities have also been presented at six international conferences in Asia, Australia, and the United States.

A series of Bappenas Seminars, which the Policy Secretariat initiated, continue to be convened. As of July 1994, seven of these seminars had been held, covering a variety of natural resource-related issues, including forest sector policy, the role of natural resource management, input-output modelling, ecolabelling, international trade, planning for sustainability, and employment effects of natural resources policies.

The presentation of the study results and the Bappenas Seminars are supplemented by publications produced by the Policy Secretariat to disseminate information about the project. These include:

- A project brochure, produced in Bahasa Indonesia and English, which is distributed throughout the NRMP and counterpart offices;
- An NRMP Abstract Series, which is produced in Bahasa Indonesia and English, that summarize the results of short-term consultancy reports. The series is revised every quarter.
- An NRMP Newsletter, which is produced and distributed on a quarterly basis to government counterparts, universities, NGOs, and other interested parties. The newsletter intersperses articles about the project in Bahasa Indonesia with articles in English. Its scope has been broadened considerably since its first issue in September 1993, and now incorporates a greater number of articles in Bahasa Indonesia. The demand for the inaugural issues of the newsletter was so great that its first two issues had to be reprinted.
- Policy Briefs, which are occasional papers produced in Bahasa Indonesia and English, summarizing policy recommendations from pivotal project studies. Seven Policy Briefs had been published and distributed widely as of July 1994.

2.5.3. Constraints

There is an important limitation in what otherwise appears to the evaluation team to be a rather effective effort to disseminate project results. The team perceives an inconsistency in the format of the Policy Briefs. The Briefs were initiated as one- or two-page summary reports to highlight project accomplishments. They have subsequently become longer and less focused summaries of the original reports on which they are based. The sequence of the number of pages in succeeding issues of the publication is: 1,1,1,3,4,6,4. The evaluation team's concern is not so much with the length of the Briefs as with the consistency of their purpose.

Recommendation: The technical assistance team, in consultation with the PCC, should assess the purpose of the Policy Briefs and the audience that is to be targeted with their publication. Based on this assessment, the team should develop consistent guidelines that correspond to that purpose in subsequent Policy Briefs.

3. Bukit Baka-Bukit Raya and Bunaken Pilot Sites

3.1. Evaluation Criteria

Four measures are used to gauge the collective progress in achieving logframe indicators associated with activities at the project sites at Bunaken (in North Sulawesi) and at Bukit Baka-Bukit Raya (in West and Central Kalimantan). The outputs embodied in those measures encompass:

- The design of Ministry of Forestry-approved management plans for two national parks, Bunaken and Bukit Baka-Bukit Raya, and the development of improved procedures for formulating management plans for terrestrial and marine-protected areas, with guidelines provided for incorporating local communities and NGOs in park management and planning activities, and the Ministry of Forestry's adoption of new policies for managing protected areas sustainably;
- The Ministry of Forestry's adoption of improved policies for the sustainable management of natural production forests and the acceptance of management practices in these forests by private concessionaires;
- Guidance in operating a forestry research and training station at Bukit Baka-Bukit Raya; and
- Development of a Competitive Awards System for applied field research.

3.2. Bukit Baka-Bukit Raya Pilot Site

3.2.1. National Park Management

3.2.1.1. Accomplishments

In order to support the proposed activities at Bukit Baka-Bukit Raya, the Ministry of Forestry established Bukit Baka-Bukit Raya National Park in February 1992. The decree establishing the park consolidated two contiguous nature reserves, or *cagar alams*, in West and Central Kalimantan. Responsibility for developing the management plan for the park resides with PHPA; the technical assistance team provides assistance to the PHPA in this regard. Drafts of the twenty-five year Master Plan, five-year Development Plan, and one-year Operational Plan, which collectively comprise the planning document for the park, have been prepared and integrated with provincial and *kabupaten*, or regency, planning initiatives identified by a short-term consultant commissioned by the NRMP's technical assistance team. The documentation was formally submitted to the regional office, or *Kanwil*, of the Ministry of Forestry in West Kalimantan, with an accompanying Executive Summary prepared in Bahasa Indonesia, in December 1993. Three months later it was decided that the *Kanwil* would submit the draft plan to PHPA in Bogor. Responding to the *Kanwil's* request, an executive summary was prepared in Bahasa Indonesia and submitted to PHPA.

3.2.1.2. Constraints

The draft plan for the park was still being held in the Ministry of Forestry's regional office at the time of the evaluation team's arrival in Indonesia. The *Kanwil's* representative informed the evaluation team of their concerns about the plan's inclusion of:

- Delineated park boundaries. The boundary survey, which is the Ministry of Forestry's responsibility in West Kalimantan, was to be initiated in July 1992, but was incomplete at the time of the evaluation team's arrival in Indonesia;

- A comprehensive zonation plan for the park. The completion of the zonation initiative awaits the results of the survey of biological diversity and the delineation of the park boundaries. The biodiversity survey is the PHPA's responsibility. As a result of a series of delays in processing counterpart budgets, the commissioning of the field studies was delayed for two years. Work begun in April 1994 by the Indonesian Institute of Science is scheduled to be completed in the third quarter of 1994.

After discussion with the evaluation team, the *Kanwil* appeared to be undecided about transmitting the draft plan to the PHPA's headquarters in Bogor. It is not clear whether the plan should be forwarded with or without the boundary delineation and zonation elements, which have not yet been completed. If the plan is submitted before these elements are completed, they can be appended subsequent to the management plan's approval. There is concern, too, on the part of the evaluation team, that the basis of the short-term Operational Plan that has been prepared needs to be strengthened. The team concurs that the services of an experienced national park planner are required to facilitate the successful integration of these elements into an effective management plan for the park.

Recommendation: The contractor should hire a national park planner with extensive management experience to replace the nature conservation advisor who is currently being withdrawn from Kalimantan. The national park planner should be appointed team leader, with assigned responsibility for: a) consolidating the management plan for Bukit Baka-Bukit Raya National Park; and b) guiding the activities of the Indonesian advisors on institutional development and agroforestry extension who will be hired to strengthen the participation of local communities in resource-management activities.¹² The national park planner should work in the PHPA's office in Bogor but should be prepared to allocate at least a quarter of his or her time to oversee pilot activities at the field site.

¹² USAID has already approved the budget for the institutional development and agroforestry extension advisors. It is expected that they will be recruited in the third quarter of 1994.

3.2.2. Management of Natural Production Forests

The legal basis for the NRMP's activities to improve the management of natural production forests is provided in the Grant Agreement that USAID and the Minister of Forestry signed in May 1991. The Ministry of Forestry, SBK, USAID, and the ITTO agreed to a subsequent Memorandum of Understanding in March 1993.

3.2.2.1. Accomplishments

The initial efforts of the contractor's team to improve natural forest management practices were confined to providing support for several short-term consultancies that: a) reviewed the practices for constructing roads in SBK's concession area; and b) identified remedial strategies to reduce environmental damage affiliated with the company's forest operations. Supplemental assistance consisted of a training program that the U.S. Forest Service conducted on engineering techniques for logging roads. As a result of these early efforts, SBK was induced to purchase a heavy equipment excavator that reduces soil erosion associated with road construction and moderates environmental damage that stems from forest-harvesting operations in its concession area.

There have been several direct transfers of technical expertise as a result of the project's forest-production activities. The field investigations of the biodiversity resources of the Bukit Baka-Bukit Raya area that were contracted to a consultant from Harvard University's Arboretum led to the production of several local tree-identification manuals. These manuals have had a significant impact on improving the capabilities of SBK's timber cruisers to differentiate forest species as they tally commercial timber volumes on which the company's annual allowable cut is based. The evaluation team understands that representative samples of these species will be maintained permanently as part of a herbarium collection that is being founded in the forestry faculty of the University of Tanjung Pura in Pontianak. Several faculty members have received specialized training in botanical and herbarium maintenance techniques from the consultant as a result of the NRMP's funding.

The biodiversity activities have also spurred considerable interest within the Ministry of Forestry's Directorate of Forest Utilization in developing more pragmatic methodologies for linking logging management plans of forest concessionaires with procedures for conserving biological diversity. This interest has intensified since the Ministry of Forestry received detailed operational guidelines for establishing germ plasm tracts in forest concession areas from the Harvard consultant.

Project activities can also claim a measure of influence in impacting the Ministry of Forestry's decisions to implement recommendations advanced by a number of donor-funded projects to reduce Indonesia's annual allowable cut and to increase forest royalty charges.

Current project efforts to promote policy reform in natural production forests are linked to field studies that PH has prioritized. The studies the ministry has approved address policies

associated with: a) the reduction of logging wastes and the improvement of standards for the utilization of logs for the production of plywood; b) the reformulation of the twenty-five-year, five-year, and one-year forest management planning documents, which concessionaires are required to complete prior to initiating harvesting operations; c) the integration of the results of the biodiversity studies associated with the establishment of germ plasm tracts with the new document for planning forest management; d) the improvement of guidelines for the *Tebang Pilih Tanam Indonesia* (TPTI), which is a selective cutting and replanting system; and e) Traditional Forest Areas, which seek to increase the participation of local communities in the management of forests.

The quality of communication exchanges with counterparts associated with pilot activities at Bukit Baka-Bukit Raya have also been improved in the past six months because of the development of a quarterly information forum, or *Forum Informasi*, at which project activities and work plans of the technical assistance team are discussed and coordinated with regional counterparts in the Ministry of Forestry.

The evaluation team supports a continuation of the field studies that the PH has approved and that the contractor has initiated in order to improve the sustainability of forest management practices for natural production. The team believes it is essential to link these activities with the operations of the Ministry of Forestry's Policy Task Forces that have been mobilized recently with the support of the contractor's long-term forest advisor, and the Ministry of Forestry's acceptance of the need to create a number of focused policy teams. The establishment of these linkages will: a) provide a means for improving the integration of the results of pilot studies with policy formulation; and b) encourage the institutionalization of a more sustainable policy unit within the Ministry of Forestry.¹³

Recommendation: The technical assistance team's efforts to improve the management of natural production forests should continue to be directed to extending the results of on-going studies to a) develop remedial policies for reducing logging wastes and inefficiencies in manufacturing plywood; b) reformulate planning requirements for forest management; and c) develop more pragmatic methodologies for linking the need to conserve biological diversity with logging activities in forest concession areas. In order to augment the studies' policy linkages and encourage continuity with a more sustainable policy unit after the project's completion, it is crucial that the long-term forestry advisor should channel project activities through the Ministry of Forestry's emerging Policy Task Forces that correspond to these fields of investigation. It is in these units where the lessons learned in the field can be translated more directly into practical policy directives.

¹³ The Ministry of Forestry's Policy Task Forces could absorb the functions of the NRMP's Policy Secretariat.

3.2.2.2. Constraints

The evaluation team believes that further opportunity exists to extend the impact of the forest management planning studies currently being conducted at the project site. Indeed, there is occasion to adapt the planning documents to the permanent forest area management units which the Ministry of Forestry is currently establishing with the assistance of the United Kingdom's Overseas Development Administration (ODA).

Recommendation: The technical assistance team, in collaboration with the ODA, should explore the feasibility of adapting the forest planning documents prepared by the project for forest areas delimited by concession boundaries to the modified configurations that will characterize permanent forest area management units. These units, which will eventually replace the existing system of forest concessions, are being formed by merging contiguous blocks of land under a variety of uses into integrated watersheds.

3.2.3. Community Development and Participatory Management

3.2.3.1. Accomplishments

The technical assistance team, with counterpart collaboration from the PHPA and SBK, has achieved measured progress in increasing the economic and social welfare of local communities living in close proximity to Bukit Baka-Bukit Raya National Park and SBK's forest concession area. The construction of six gravity-fed, community-controlled potable water supply and hygienic systems designed by a short-term consultant and supervised by an Indonesian engineer provides an immediate benefit to local villagers. SBK provided the equipment and materials. Recipients in six villages contributed local materials and labor during construction and, after formal transfer of the system's ownership, agreed to assume full responsibility for the system's maintenance.

The attempts to diversify agricultural resources and extend agroforestry technologies in local communities have been more limited in scope and less dispersed among villagers. The primary emphases of these activities have been the development of vegetable crops that could be grown in village gardens tended by local women and the establishment of a local nursery for producing grafted rubber trees and other varieties of tree crops. Efforts to market the vegetable crops through SBK are reasonably successful.

Of less immediate benefit, but of greater long-term significance in the prevailing debate on the role of local communities living in and around protected areas, has been the compilation of a body of knowledge about the social, economic, political, and cultural mores of local Dayak communities, including a compendium of maps that sketch traditional patterns of community use of natural resources. The information has been amassed as a result of a number of short-term consultancies that the contractor initiated and through the efforts of the contractor's social forestry extension advisor to compile and codify elements of traditional, or *Adat*, law. As part of the effort, a Village Advisory Council has been formed to mobilize the interests of local

villagers in managing and planning the development of the park's resources. The Council's recognized right among local villagers to administer *Adat* law provides a unique opportunity for funnelling community-based fire control programs, which the U.S. Forest Service will conduct in late 1994, through the Council.

Adat principles have also been incorporated into a technical paper that identifies three possible sites for the creation of TFAs. The paper, which the Ministry of Forestry prepared with the help of USAID and the technical assistance team, was presented at the International Conference on Community Management of Forests, which was convened in Hawaii in March 1994. A subsequent project report outlining the procedures for implementing TFA activities at pilot sites has generated considerable support within the Ministry of Forestry.

The evaluation team concurs with Bappenas, the Ministry of Forestry, and USAID that the development of pilot activities for TFAs should be the focus of community development efforts at Bukit Baka-Bukit Raya during the extension period of the project. The evaluation team agrees that this is an issue that no other project has properly addressed and that the ramifications of the testing of the concept could provide the foundation for the establishment of imaginative policies for improving the management of natural resources while concurrently hastening the economic development of local communities.

Recommendation: The evaluation team endorses the efforts of Bappenas, the Ministry of Forestry, and USAID to develop TFA activities at a pilot site in or around Bukit Baka-Bukit Raya first through the submission of a proposal to the ministry and local government follow by a pilot-implementation phase. The activities associated with the testing of the concept should be directed through the Ministry of Forestry's Policy Task Force on TFAs. The initiative should be coordinated with efforts to strengthen the institutional structure of the Village Advisory Council through: a) a collaborative agenda with SBK to develop practical guidelines for applying the Ministry of Forestry's recent decree to provide local communities access to secondary forest resources in forest concession areas; b) supplementary sketch-mapping studies to determine the areal extent and nature of utilization patterns for secondary forest resources at the pilot site; and c) agroforestry studies to determine sustainable levels of extraction of secondary forest resources.

3.2.3.2. Constraints

A particularly nettlesome problem at Bukit Baka-Bukit Raya is the shortage of local NGOs with the technical skills and staff that could play a prominent role in supporting the project's activities. The lack of expertise was identified in a short-term consultant's report on the use of NGOs in the environmental awareness and education program that the consultant developed to enhance local communities' understanding of the project's resource conservation initiatives in Bukit Baka-Bukit Raya National Park. While the environmental awareness program was well received by local communities, especially parents, who were particularly gratified that their children's artistic representations of environmental themes would appear in a national park calendar produced by the project, an inability to expand NGO participation has inhibited supportive activities for the program.

The project team's perception of the local NGO community was subsequently reinforced in two of the contractor's studies. The evaluation team has concluded that the contractor should redouble its efforts to upgrade the technical skills of local NGOs and expand the utilization of those skills in selected community development and participatory resource management project activities.

Recommendation: The contractor, and in particular its advisors for institutional development and agroforestry who will be based in West Kalimantan, should seek to increase the participation of local NGOs in three areas of project activities: a) strengthening the Village Advisory Council's role in defining resource utilization patterns of local communities around Bukit Baka-Bukit Raya National Park; b) extending agroforestry techniques developed by the team's agroforestry advisor to local communities living in close proximity to the park; and c) monitoring the progress of village maintenance of the gravity-fed, community-controlled potable water supply and hygienic systems that were installed in six villages as a part of the project's community development initiatives. The efforts should be accompanied by intensive training programs to develop technical and interpersonal skills to effect constructive interchanges between NGOs and local communities. The results of the field activities should be summarized for the PH and used by the Ministry of Forestry to improve its guidelines for implementing its *Bina Desa* program, which is discussed in chapter 4.

3.2.4. Project Coordination

The evaluation team acknowledges the difficulties of implementing field activities at Bukit Baka-Bukit Raya. The national park and the adjacent concession area are in a remote location, which sprawls across two provincial boundaries within a Class Two security zone (i.e., an area adjacent to a national border). Despite these potential impediments, project activities were initially hampered not so much by these difficulties as by those associated with: a) the inappropriate choice of some long-term technical advisors who did not possess the requisite skills to provide effective team leadership or organize the selection, timing, and sequencing of integrated project tasks; and b) restricted counterpart participation, which was weakened by the technical assistance team's inability to communicate effectively with government officials and SBK's field employees, the relatively frequent turnover of Indonesian counterpart staff, and inadequate funds for travel for this counterpart staff.

Impediments to effective project coordination initially surfaced when the contractor was unable to: a) field a long-term technical advisor who could concurrently assist PH in improving management practices in natural production forests and SBK in developing its *Bina Desa* program; or b) enlist the services of an experienced long-term forestry advisor. The contractor's efforts were subsequently focused on agroforestry activities. Short-term consultants were also hired to study SBK's forest management operations. The initial agroforestry advisor resigned shortly after beginning his assignment. Likewise, his successor was unable to develop a productive working relationship with the staffs of SBK and the Ministry of Forestry, and he too resigned. There were subsequent delays in fielding the team leader/forestry research advisor, who also resigned after a year-and-a-half. Moreover, the Policy Secretariat's first forest economist,

who helped to direct activities in production forests at the project site, also had difficulty in communicating effectively with ministry officials. This advisor also resigned. The current forestry advisor in the Policy Secretariat was hired in mid-1993.

These events created fragmentation rather than integration of project activities, which caused confusion within the Ministry of Forestry about the NRMP's objectives and the technical assistance team's role. The ensuing lack of project coordination, either through the efforts of the technical assistance team or the Ministry of Forestry, retarded the development of an integrated approach to the planning and implementation of field activities at Bukit Baka-Bukit Raya. The interplay of these factors diminished counterpart support and reduced the linkages that could be established between pilot activities and policy formulation. The contractor's inability to integrate project activities effectively with government support in the project's first two years contributed, at least in part, to a lack of sense of ownership over field activities by officials in the Ministry of Forestry.

The evaluation team is aware of the significant progress that has been made in assigning technical advisors and coordinating project activities at Bukit Baka-Bukit Raya in the past year. The team believes, however, that further corrective actions are required. Indeed, the lack of counterpart support in the field has been an especially troublesome issue in coordinating project activities. The evaluation team is not indifferent to the imposing number of donor-funded projects to which the Ministry of Forestry must respond and to the lack of financial and promotional incentives that accompany counterpart participation in USAID's donor-funded field activities. Nonetheless, the team believes that many of the delays in government contracting, and especially in transferring counterpart funding for travel and per-diem field expenses, that have beset the project at Bukit Baka-Bukit Raya can be averted if the focus and function of project activities recommended by the evaluation team are more clearly enunciated to the Ministry of Forestry's Project Implementation Unit and subsequently incorporated into the project's JIP. These initiatives would facilitate project requests for, and government approval and disbursement of, funds for approved project activities through the Indonesian systems for budget allocations (i.e., the *Daftar Usulan Proyek*, or DUP, and the *Daftar Isian Proyek*, or DIP).

Recommendation: The contractor's chief of party and forestry advisor, in collaboration with USAID's NRMP staff, should convene a meeting of the Ministry of Forestry's Project Implementation Unit. The goals would be: a) to agree on the focus and function of project activities that the evaluation team has recommended; b) to merge the activities that are approved into the JIP; and c) to consolidate funding for these activities through the government's DUP and DIP. Achieving these goals would aid the crystallization of efforts to overcome government-imposed constraints to efficient implementation of NRMP activities at Bukit Baka-Bukit Raya during the remaining two years of the project. The Project Implementation Unit should specifically rededicate its efforts to ensure that counterpart funding for travel and per-diem field expenses that have been previously incorporated into the project's budget is promptly transferred, on request, from the Ministry of Forestry in Jakarta to project counterparts participating in field activities.

The turnover of the contractor's long-term technical advisors at Bukit Baka-Bukit Raya and in the Policy Secretariat have also impaired project coordination. With the social forestry extension advisor's impending departure from Kalimantan, nine long-term technical advisors assigned either to Bukit Baka-Bukit Raya or the Policy Secretariat will have been replaced during the project's first three years.

2.5. Training

As of April 1994, 748 individuals in West and Central Kalimantan had received over 750 person-days of training from the technical assistance team and from short-term consultants. The majority of the training activities were directed to agricultural and agroforestry extension activities intended to increase the economic opportunities of local villagers.

Training programs for government counterparts, which have been more limited, have focused on the transfer of technical skills concentrating on the use of global positioning systems, database management, and techniques for implementing biological surveys. At the time of the evaluation team's assessment, training was being extended to procedures for engaging local community support. The use of techniques for rapid rural appraisal to assess the condition of local communities was discussed more formally in a report that the social forestry extension advisor prepared for the Ministry of Forestry.

2.6. Forestry Research and Training Station

The construction and operation of a Forestry Research and Training Station at Bukit Baka-Bukit Raya is planned as part of an agreement between USAID and the International Tropical Timber Organization (ITTO). With Japanese funding, the ITTO is responsible for funding the construction of the station; USAID has agreed to provide support for the station's infrastructure and to purchase limited amounts of research equipment after the station has been built.

2.6.1. Accomplishments

In anticipation of the construction of the Forestry Research and Training Station at Bukit Baka-Bukit Raya, the technical assistance team and several short-term consultants have prepared several project reports. The reports encompass procurement plans and research priorities for the station, a station protocol, and designs for a minihydroelectric system to generate power at the site. The minihydroelectric system was installed in May 1993.

2.6.2. Constraints

There have been a number of delays in arranging for the construction of the station, and discussions with ITTO suggest that these will continue as a result of the contractual difficulties currently encountered. Indeed, as of July 1994, the Ministry of Forestry had not been able to mobilize more than a small part of the US\$11 million of ITTO funding that is available for constructing the station. The minihydroelectric system that has been installed at the site is now

in a state of disrepair, and the evaluation team is skeptical that the station will be complete during the remaining two years of the project's life.

Recommendation: The NRMP's support for the Forestry Research and Training Station at Buk Baka-Bukit Raya should be curtailed until construction is completed. If construction is completed, procurement plans, station protocol, and research priorities can be resurrected and long-term operational plan for the station developed.

3.3. Competitive Awards System

A short-term consultant developed a conceptual framework similar to that of the World Bank-Overseas Economic Cooperation Fund for implementing the project's Competitive Award System for Applied Field Research, in early 1993. Two planning meetings were subsequently held with the Ministry of Forestry's Research and Development Agency, which is responsible for implementing the Awards System. The first workshop was held in March 1994, in collaboration with provincial government counterparts in Pontianak. The workshop produced suggestions from different regional institutions about the forestry-related research needs of West and Central Kalimantan. A second meeting will be held in Manado in late 1994. An agreement was reached at the Pontianak meeting that the previously established Competitive Awards System committee would restrict solicitations for research proposals to West and Central Kalimantan in 1994. A suggestion that was introduced at the meeting stressed that the NRMP should support a training course on the preparation of research proposals. This was agreed to in principle.

Recommendation: The evaluation team supports the efforts of the contractor and the Ministry of Forestry's Research and Development Agency to implement a Competitive Awards System for Applied Field Research. The efforts to initiate the awards should be intensified, however, in order to attain a critical threshold of operational experience and to ensure a smooth transition period for maintaining the system after the NRMP ends.

3.4. Bunaken Pilot Site

Bunaken is a national marine park that the Ministry of Forestry established in October 1991 to protect the extraordinary resources and scenic beauty of the marine system of islands, coral reefs, mangrove forests, intertidal flats, canyons, coral walls, and deep blue waters that characterize the northeastern tip of Sulawesi.

3.4.1. National Park Management and Community Participation

3.4.1.1. Accomplishments

PHPA's Suboffice of Natural Resources Conservation in Manado, with support from the contractor, is responsible for developing the management plan for Bunaken National Park. Drafts, in Bahasa Indonesia, of the twenty-five year Master Plan, five-year Development Plan, and one-year Operational Plan for the park have been completed. The Master Plan, which

establishes a long-term strategy for developing the park's resources, was submitted to the PHPA in Bogor in March 1993. A workshop to discuss the plan has been postponed twice but has been rescheduled for the third quarter of 1994. Pending the plan's approval, a Technical Implementation Unit from the PHPA will be assigned to the park to administer the plan.

The accomplishments of the technical assistance team and its Indonesian counterparts in obtaining a consensus on the draft management plan for the park are impressive. Indeed, the efforts of the project team in developing and implementing a participatory process for integrating dissimilar demands of a variety of resource users into a cohesive and ecologically sound management plan for the park are unparalleled among Indonesia's marine-protected areas. Excursions to marine national parks in Thailand and the Philippines, funded through the project, were instrumental in obtaining local government support for the participatory process, but factoring deliberations with each of the groups of stakeholders with an interest in the development of the park's resources were required before a consensus could be achieved.

The process of fostering accord, especially with respect to the zonation plan, which provides the cornerstone of planned resource utilization patterns in the park, was facilitated by introducing a loose-leaf notebook, containing targeted pages of the management plan that were currently under mediation, into each of the discussions with user groups.¹⁴ The format expedited provisional text modifications of sensitive issues that required the intervention from the contractor and its government counterparts.

A number of accompanying activities that the project team initiated bolstered the negotiating process with local communities. These activities produced socioeconomic profiles of local communities, which two short-term consultants compiled, and resulted in several meetings with village leaders to encourage increased community participation in the development and subsequent implementation of the park's management plan. A significant output of the meetings was that four communities were chosen to be "lead villages" and authorized to act as intermediaries in communicating local communities' concerns about their role in managing the park to the project team.

The technical assistance team provided supplemental information on local communities' attitudes toward resource management plans in the park in several working papers and research studies. These enquiries explored: local community perceptions of tourism development; community-proposed zonation plans; traditional mangrove management practices; traditional fishing areas; and the marketing of local communities' outputs. The technical assistance team made a presentation of prototype methods of integrating local communities into park planning

The zonation plan includes the following types of structures: traditional-use zones, which are under the control of local communities; "savings," or replenishment, zones, where resource extraction is prohibited; extensive-use zones, where community-based tourist facilities are allowed; recreational diving zones; artisanal fishing zones; maritime restriction zones; and mangrove forest zones, with individual areas allocated to conservation and utilization.

and management processes at a conference in Manado, which the Minister of Environment chaired.

The project team is assessing the prospects for expanding the role of Manado-based NGOs as advocates for local community interests. The NGO community has some experience in that capacity, especially when brokering discussions among local communities and other groups of resource users.¹⁵ Other collaborative efforts with NGOs are symbolized by the support the project provides for a local NGO newsletter, which focuses on project activities in the park.

Local acceptance of the park and efforts to develop its resources have begun to congeal, at least in part, as a result of the environmental awareness and education program that the contractor's staff and its government counterparts inaugurated in late 1993. In cooperation with the project team, several short-term consultants developed a variety of public awareness materials, including brochures, user questionnaires, signboards, and information. The program is intended to supplement earlier efforts of a local NGO prior to the initiation of the contract. A series of color photomosaics of each of the park's islands will soon be available to strengthen the effects of the exhibits. Further support for the program has been provided in a series of lectures on marine biology by the contractor's local staff. The local news media's coverage of the program has been good.

3.4.1.2. Constraints

The evaluation team supports the efforts of the contractor and its government counterparts at Bunaken: a) to consolidate the achievements of the project team in developing and implementing a participatory planning mechanism for integrating local communities and other interested parties into the management plan for Bunaken National Park during the first three years of the project; and b) to extend the lessons that have been learned in that process to implementing the participatory management plan that has been developed during the remaining period of the project's extension.

The evaluation team believes that there are several critical policy issues that the Bunaken project team should be prepared to address, and make significant contributions to, in the implementation stages of the management plan. Indeed, the channels that link field activities with policy formulation have been much more clearly enunciated at Bunaken than in Kalimantan. There are a number of reasons for this, not the least of which are Bunaken's relative accessibility and the long-term presence of a capable technical assistance team there. The location of the project in the Ministry of Forestry's PHPA Suboffice of Natural Resources Conservation in Manado, moreover, provides an important link between field activities in Bunaken and the ministry's policymakers in Bogor.

¹⁵ A local NGO has been utilized to explore potential areas of mutual cooperation between local communities and dive shop operators, including the development of beachside meal services for chartered diving parties and the production and sale of tourist souvenirs.

- strive to develop a consensus on the "acceptable levels of change" of marine resources among users in the *Forum Koordinasi* and institutionalize a mechanism for monitoring resource change that can be utilized to guide the level of visitation to the park;

- continue to cooperate with the Certifying Organization for Diving Instructors to train and certify dive guides in subjects of reef conservation, biological taxonomy, nature interpretation, visitor safety, and technical English; and

- coordinate compliance with "acceptable levels" of visitation through the Governor of Northern Sulawesi's recently established Agency for Tourism Development.

3.4.2. Training

3.4.2.1. Accomplishments

As of July 1994, 194 participants had received 1873 person-days of training, much of it designed to support project implementation activities, from the contractor's team at Bunaken. Modules in seaweed management, sloping agricultural land techniques, and the organization of village youth groups have been prepared for local communities. Methodologies for installing and using mooring blocks and utilizing global positioning systems have been presented to a broader audience, including government counterparts.

The evaluation team applauds the training afforded four of the technical assistance team's field assistants. Training programs were provided in participatory rural-appraisal methodology and techniques for the extension environmental education. Field activities designed to reinforce the group's newly acquired skills followed. Since each member of the group has ties with the local NGOs, which might provide a source of employment after the close of the project, the evaluation team recognizes the potential transfer of accumulated skills that could occur as a result of project activities at Bunaken.

3.4.3. Donor Collaboration¹⁸

3.4.3.1. Accomplishments

The project team has established what could be beneficial collaborative ties with a project of the Canadian International Development Agency. The primary thrusts of the Canadian activities are to assess the potential of coastal zone management initiatives; identify methodologies for stabilizing beach erosion; and support studies of oceanographic processes. The collaboration currently extends to analyses utilizing aerial photography and geographic information systems but could be enlarged to embrace the development of an integrated coastal zone management plan to control buffer-zone activities adjacent to the park's boundaries.

¹⁸ This subject is discussed in greater detail in chapter 6.

4. Key Issues in the *Environmental Assessment*

4.1. Background

USAID/Indonesia commissioned an environmental assessment of the NRMP in late 1992. The resulting report, *Environmental Assessment of the Natural Resources Management Project* (Final Draft, January 21, 1993), for which USAID's Biodiversity Support Project had responsibility, produced nearly 50 recommendations designed to improve the project's implementation and to mitigate potentially adverse environmental impacts. In response to these recommendations, USAID/Indonesia prepared an *Environmental Action Plan* (June 1993) that summarizes intended responses to the assessment's key recommendations. The statement of work for the present evaluation requires the team to review these recommendations, to assess progress in implementing the *Action Plan*, and to provide its own recommendations relevant to the *Environmental Assessment* to improve project implementation.¹⁹ With USAID/Indonesia's concurrence, this evaluation concentrates attention on the seven priority issues that USAID's Bureau for Asia and the Near East identified in early 1994 after its review of the mission's *Environmental Action Plan*.²⁰ The Bureau listed its concerns in priority order, and the discussion that follows parallels that ordering.

4.2. NRMP Assistance to P.T. Kurnia Kapuas Plywood

Issue: As noted in Chapter 1, a *Joint Implementation Plan* links the NRMP with the Ministry of Forestry's Sustainable Forest Management Project (SFMP), which the ITTO is funding. Whereas the NRMP is working with one concessionaire (i.e., SBK) near Bukit Baka-Bukit Raya National Park, the SFMP is attempting to develop a similar relationship with P.T. Kurnia Kapuas Plywood (KKP). The assessment team identified several ways in which the NRMP's activities can mitigate the adverse impact of the SBK's logging activities. In contrast, the team "identified no significant potential for similar benefits to be derived from cooperation with KKP. The topography of the concession area, with slopes in excess of fifty percent, and its location sandwiched between a national park and a nature reserve (through which its access road must pass), guarantee that extractive activities will have severe environmental impacts under any circumstances."

Recommendation in *Environmental Assessment*: The NRMP's assistance to production forest activities in collaboration with KKP would not be in compliance with Section

¹⁹ The reader is reminded that the environmental assessment occurred in late 1992 and that this evaluation occurred in mid-1994. Consequently, much has changed in the interim. In several instances changes in the NRMP's activities have already addressed or mitigated some of assessment team's concerns.

²⁰ Letter from Molly Kux, Environmental Coordinator, ANE/Asia/DR/TR, to Jerry Bisson, USAID/Indonesia, Mission Environmental Officer and Project Officer, NRMP, March 22, 1994.

of existing recommendations based on studies already completed.²¹ Consequently, USAID should bring the recommended changes to the Ministry of Forestry's attention and provide constructive assistance in changing the present policy. One alternative would be to eliminate the requirement; a less dramatic alternative would be to require an environmental assessment (and related mitigative measures) for all mandatory industrial timber plantations.

USAID/Indonesia's *Environmental Action Plan* notes that the Ministry of Forestry moved the proposed site of the industrial plantation to a grassland site within a different SBK concession in West Kalimantan. In fact, however, this information appears to have been superseded. SBK sought and received approval from the Ministry of Forestry for several actions that should minimize the environmental impact of the required plantation, which will be within SBK's concession at Bukit Baka. First, SBK plans to strip cut planting rows instead of clear cutting them. Second, instead of fast-growing exotic species, SBK will plant local *meranti* species. As ARD's staff has noted, SBK chose these alternatives independent of any pressure from the NRMP and "has again demonstrated its willingness to have minimal impact on the natural production forest."

These changes are commendable, but it is not clear that they would satisfy or allay the concerns outlined in the *Environmental Assessment*. For this reason the team recommends that the NRMP assist SBK in conducting a brief examination of the potential environmental impacts of the industrial plantation at Bukit Baka.²² SBK's actions to date suggest that it would be amenable to such an examination, and even a cursory review should be able to identify the most problematic potential environmental impacts. The NRMP's existing expertise can be used to develop appropriate remedial measures should they be needed.

4.4. Promoting Community Participation At Bukit Baka-Bukit Raya National Park

Issue: The NRMP advocates a participatory management strategy, but some local communities perceive the purpose of the proposed management plan for the national park as being to eradicate shifting cultivation and to minimize their interaction with the park and its resources. If this perception is not altered, the plan's implementation risks the alienation of local communities, whose support be essential to its success. Similarly, this success depends on consideration of the community's views and concerns in regard to managing the park's resources.

Recommendation in *Environmental Assessment*: The emphasis of the NRMP's interventions related to the management of protected areas should be placed on activities

²¹ The technical contractor is moving in this direction with the establishment of five policy teams within the Ministry of Forestry. These teams will focus on such issues as logging wastes, traditional forest areas, and Indonesia's selective cutting and replanting system.

²² This recommendation is consistent with that included in the Kux letter noted above (see footnote 17).

from the Bureau for Asia and the Near East. Such collaborate activities might focus on water systems and traditional forest areas.

One further issue deserves attention. Despite the assessment team's request for clarification of the NRMP's and SFMP's roles vis-à-vis KKP, the JIP has seemingly moved from clarity to confusion. The draft JIP produced in 1993 (Table B, p. 46) makes a distinction between the two projects' relationship to KKP and indicates that the NRMP's support will not be directed to KKP. In contrast, the draft JIP provided to the evaluation team in mid-1994 (Table D, p. 50) reflects just the opposite. The evaluation team assumes that this is a mistake, but both tables nonetheless suggest that the NRMP and the SFMP will focus on identical topics and possibly duplicate each other's efforts. There is a further lack of clarity in the latter 1994 draft JIP in regard to the NRMP's relation to KKP. As noted above, the mission's *Action Plan* indicates that assistance to KKP will be limited to information exchanges in three areas. As presently written, however, the draft JIP of mid-1994 (p. 51) suffers from some potential ambiguity because it discusses the development of "coordinated field activities" between the two projects and joint in-field training programs.

4.3. Mandatory Industrial Timber Plantations

Issue: In accordance with the Ministry of Forestry's existing policies and the Government's efforts to encourage transmigration, all forest concessionaires above a certain size are required to establish industrial timber plantations within their concessions. In response, SBK announced plans to establish a 3000-hectare plantation on a site that would require clear-cutting of primary and secondary forests and the settlement of transmigrants in close proximity to Bukit Baka-Bukit Raya National Park. In the words of the assessment team, this effort "could have severe social and ecological impacts" on the park, and concessionaires throughout Indonesia are experiencing such problems.

Recommendation in *Environmental Assessment*: The NRMP should: a) support national-level policy analyses of the Ministry of Forestry's policies mandating and current field experience with industrial timber plantations; and b) review the ministry's existing plans to require an industrial timber estate within the SBK's concession at Bukit Baka.

Evaluation Team's Response: As the environmental assessment team declared, the case of the proposed industrial estate in the SBK concession "raises questions about the soundness of current...policies mandating such plantations," which are required within *all* forest concessions in Indonesia. The team notes that two of the NRMP's analytic studies recommend that the requirement be repealed throughout Indonesia. Despite the recommendations, no concrete efforts are underway to implement the recommendations or to alter the relevant government mandate on industrial timber plantations. As an illustration, the 1993 draft JIP lists no relevant pending action in response to the assessment team's recommendation; the most recent draft JIP merely indicates that action is under review. This situation underscores a point made elsewhere in this report. Rather than initiating new policy studies, the project should focus on the implementation

of existing recommendations based on studies already completed.²¹ Consequently, USAID should bring the recommended changes to the Ministry of Forestry's attention and provide constructive assistance in changing the present policy. One alternative would be to eliminate the requirement; a less dramatic alternative would be to require an environmental assessment (and related mitigative measures) for all mandatory industrial timber plantations.

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²² This recommendation is consistent with that included in the Kux letter noted above (see footnote 17).

promoting the active participation of community members in park planning and preparation for roles in park management.

Evaluation Team's Response: Community participation is an integral part of park-related planning and implementation. The team favors a holistic approach, such as that which the NRMP is generating for Bunaken National Park. The park plan should be placed in a broad context and specific provisions should be made to synchronize management inside and outside park boundaries. Management areas for the "Areas of Influence" surrounding parks are most important. To address the team's concerns, the team recommends that: a) the management plan for Bukit Baka-Bukit Raya National Park include discussion of how forces outside of the park's boundaries potentially influence successful implementation of the plans; and b) that the plans include specific mechanisms to ensure active and effective participation of local residents whose traditional activities do not impose irreparable damage on the park's resources.

The latter recommendation is consistent with the NRMP's current approach to the park's management. As the technical contractor's staff has noted, initial steps have been taken to establish a local advisory council to assist with the park's management. Membership include village heads, representatives of political subdistricts, and *Adat* heads (community leaders according to traditional law). Attempts are being made to include NGOs, but they tend to be few in number. To increase the council's effectiveness, it will first focus on fire control, the issue that most members believe to be the single most important problem.

4.5. Legal Status of Park Residents

Issue: The Ministry of Forestry designated Bunaken as a national marine park in late 1991. This designation, according to the assessment team, "has intensified the anxiety of island residents over the possibility that they will be resettled to the mainland.... Island residents have already been alienated by marine police arrests related to violations of fishing regulations, and the heavy-handed enforcement by [the Ministry of Forestry], military, and local government officials of prohibitions against mangrove cutting....If local communities feel that conservation efforts that restrict their livelihood activities are for the benefit of outsiders...they will be unlikely to cooperate with the plans of park managers."

Recommendation in *Environmental Assessment*: The NRMP should support national-level policy analyses related to the legal status of communities within national parks, with special attention to the status of island residents within marine protected areas.

Evaluation Team's Response: Although the team generally believes that the initiation of new policy analyses should have a lower priority at this time than the implementation of recommendations included in many completed studies, increased attention to the legal status of park residents does deserve increased attention and analysis. The results of such analysis have the potential to influence national policy in a significant way.

In response to the concerns of USAID/Bureau for Asia and the Near East, the team recommends that the NRMP should be highly proactive on this issue and seize the initiative regarding other donors and the Government of Indonesia. Thus, the NRMP should emphasize appropriate concepts (e.g., traditional forests areas) during the remainder of the project by: a) trying to influence the government and other donors to adopt strong supporting positions for the protection of the traditional rights of indigenous communities; and b) exploring ways to ensure that communities within national parks have incentives to manage the parks' ecological assets in a sustainable manner.

To date, it appears that the project has devoted greater attention to the status of residents in and around Bukit Baka-Bukit Raya National Park than to residents in Bunaken National Park. For example, the 1994 draft JIP indicates that work on traditional forest areas has begun, but this issue is not of direct relevance to island residents. Clarity is thus needed in regard to how the NRMP is addressing the legal status of island residents. Furthermore, this draft JIP notes that the NRMP's advisors repeatedly express their opposition to resettlement alternatives for island residents. Such opposition is commendable, but to whom is this opposition expressed and with what specific results and reactions? The technical contractor should answer these questions, thus indicating whether further action is necessary to prevent unnecessary resettlement.

4.6. Environmental Implications of the *Bina Desa* Program

Issue: The Ministry of Forestry introduced a *Bina Desa* program in 1991 requiring forest concessionaires to initiate income-generating activities for rural communities dependent on the forests. One of the program's key objectives is to increase reliance on settled cultivation at the expense of shifting cultivation. Through the provision of subsidized agricultural inputs (i.e. seeds, fertilizers, and pesticides), SBK is currently assisting farmers in neighboring villages with rainfed ricefields. According to the *Environmental Assessment*, these farmers are now dependent on these inputs and "intensive fertilizer use has led to a proliferation of weeds in the dryland rice fields [and the] *Bina Desa* program in its current form is unlikely to achieve its objective of providing sustainable alternatives to shifting cultivation." More generally, the assessment team concluded that the program's "emphasis on sedentarizing shifting cultivators could lead to inappropriate resettlement efforts in the absence of close supervision."

Recommendation in *Environmental Assessment*: The NRMP should support national-level policy analyses of the *Bina Desa* program and current field experiences with it elsewhere in Kalimantan and Indonesia.

Evaluation Team's Response: To date, the technical contractor has focused most of its attention on site-specific issues relevant to the SBK's *Bina Desa* program near Bukit Baka. These activities are to be commended, although it would be useful for periodic progress reports to indicate results and accomplishments in addition to the current emphasis in these reports on descriptions of the activities.

More important, the NRMP has devoted only limited attention to national-level policy analyses of the *Bina Desa* program. The mission's *Environmental Action Plan* commits the project to appropriate policy studies on the program that will "build on project-funded activities in the field as well as other experiences, both in Indonesia and in Asia." Despite this assertion, the 1993 draft JIP noted that the PCC would review the assessment team's recommendation on the *Bina Desa* program in July 1993. The 1994 draft JIP does not note any change in status and again indicates that the PCC will review the issue, but does not specify when this review will occur. The technical contractor's progress report (covering August 1991 through March 1994) observes that the project has provided input to the Ministry of Forestry to improve its guidelines for the diagnostic studies that are now required prior to initiation of *Bina Desa* activities. Unfortunately, this progress report does not indicate what these improvements are, their magnitude or scope, and the consequences of their implementation. The Ministry appears to have been responsive to the suggested changes in its guidelines, so this provides an opportunity for the NRMP to document and substantiate its success in affecting a meaningful policy change, if that is actually the case.

Finally, although the evaluation team believes that the project's experience to date does offer some useful lessons for application elsewhere in Indonesia, the team recommends in this report that the NRMP limit the initiation of new policy studies. This is a recommendation with which the technical contractor agrees. Accordingly, the PCC should be asked to provide guidance. If the members of the PCC believe the *Bina Desa* program is a priority and will benefit from critical analysis of its environmental implications, then the NRMP is encouraged to provide such an analysis. At the Ministry of Forestry's request, the NRMP will analyze the agricultural technologies associated with the *Bina Desa* program and make recommendations for more appropriate initiatives (e.g., less concentration on irrigated rice, a technology alien to many local communities, and greater emphasis on crops that local communities favor for their shifting cultivation plots).

4.7. Local Management of Natural Resources

Issue: One of the NRMP's objectives is to increase the capacity of Indonesians, including NGOs and community groups, to manage their natural resources sustainably. To do so, however, these groups must have the necessary skills and motivation. The latter attribute is often linked to a sense of ownership and efficacy. To develop these attributes, responsibility for project implementation must be devolved to these groups. In the assessment team's opinion, the NRMP's advisors "are reaching the limits of their effectiveness working as direct implementors of project activities." A corollary issue focuses on the relation between the NRMP's advisors and SBK. The project's status as a long-term guest of the concessionaire may create an appearance of a conflict of interest, and this appearance impedes recognition of the NRMP as a separate entity.

Recommendation in *Environmental Assessment*: The roles of long-term, field-based advisors should be re-oriented from direct project implementation to the facilitation of the involvement of other institutions as planners and implementors of project activities, such as

community organization. In addition, the NRMP should establish an identity independent of SBK to avoid the appearance of a conflict of interest, which serves as a barrier to the participation of both governmental and NGO counterparts in field activities.

Evaluation Team's Response: The team agrees with this recommendation. The role of NGOs should be expanded to the extent that they can realistically accomplish important tasks, and the dedication of additional funds for the support of NGOs in the NRMP's extension is in line with the team's position. The team also recommends, however, that two more field assistants should be hired in addition to the advisor that the assessment team recommended.

Independence from the SBK forest concession is endorsed. The team notes that the project has temporary accommodations that are separate from those of SBK, but it is not clear that this situation alone will remove the appearance of a conflict of interest. Having noted this concern, it is equally valid to note that the project's success at Bukit Baka is dependent on close cooperation with the concessionaire. Collaboration does not necessarily imply a conflict of interest and, in the view of technical contractor's staff, villagers perceive a clear distinction between the SBK and the NRMP's advisors. While in the field, these advisors devote the overwhelming portion of their time to work in villages. Advisors working with SBK work primarily within the concession (and away from the villages).

4.8. Intentional Burning

Issue: Over the past several decades secondary forests have increasingly disappeared, to be replaced gradually by *alang alang* (*Imperata cylindrica*) grasslands, in much of West and Central Kalimantan due partly to intentional burning for cattle fodder and hunting. Intentional burning "continually exposes the soil, leading to erosion, depletion of nutrients, and decline in biodiversity....Effective fire control would also lift constraints on investments in tree crops."

Recommendation in *Environmental Assessment*: The "ecological and social impacts of a successful community-based fire control program would be positive...." The NRMP should commission a study of the social and ecological dynamics of the local cattle industry in West Kalimantan's villages to support project efforts at community organization for fire control.

Evaluation Team's Response: It would seem inappropriate to emphasize this issue in the project's future work. The team favors a broader, more holistic agenda for community development. Too much fragmentation of technical assistance for community development could be counterproductive, and the NRMP may not have a comparative advantage in assessing this problem.

5. Industrial Waste-Minimization Pilot Activities

5.1. Background

Like other nations in Southeast Asia, Indonesia is experiencing rapid growth in its industrial sector. Indeed, it is estimated that Indonesia's manufacturing output doubled in volume every six to seven years in the 1970s and 1980s.²³ This brisk pace is expected to continue for at least the next 25 years and to exceed the overall rate of growth in Indonesia's economy during that period. However desirable such growth may be, it brings with it the need to address real and potential problems with industrial effluents, including air and water pollution. Although ecosystems have inherent absorptive capacities, it would be foolish to overtax them or to test their limits, especially on Java, which has one of the highest population densities in the world. There is some evidence that these limits are already being approached. On Java, for example, domestic and industrial users are exceptionally dependent on groundwater, yet rates of withdrawal exceed natural rates of replenishment of this water. Moreover, once the water is used, much of it is disposed of in ways that leave rivers and near-shore areas seriously polluted with fecal contamination and toxic and hazardous materials. Although the most serious problems are found on Java, other areas are not exempt from concern. Future industrial growth in Indonesia is expected to be more rapid on the outer islands than on Java.

To the extent these problems are not addressed adequately, the quality of life will deteriorate for millions of people who will find their health and livelihoods imperiled. The challenge is to find ways to develop appropriate responses to industrial pollution while maintaining Indonesia's economic development and competitiveness in world and regional markets.

5.2. Attacking the Problem: Industrial Waste Minimization

In recognition of these problems, USAID/Indonesia established a two-year cooperative agreement with the World Environment Center in late June 1992. The agreement focused on industrial waste minimization and pilot activities related to pollution prevention. There were two primary objectives, which serve as the benchmarks for the evaluative comments that follow:

- a. strengthening the "capability of the private sector to minimize the discharge of pollutants while maintaining or enhancing economic efficiency through improved technology and operating procedures"; and
- b. promoting "the formulation and enforcement of improved policies for waste minimization and pollution prevention."

²³ World Bank, *Indonesia Environment and Development: Challenges and the Future*. Washington, D.C.: World Bank 1994.

To accomplish these objectives, the cooperative agreement required the WEC to initiate a wide range of related activities, including study tours, waste-minimization audits, related workshops for plant managers, assessments of air pollution from mobile and stationary sources, identification of sources of mercury pollution, training courses on environmental management for industrial estates, and one- to three-month internships on environmental management.

To assess the WEC's success in meeting the objectives in the cooperative agreement, the evaluation team reviewed the agreement, the WEC's revised project implementation plan of March 1993, several consultants' reports completed after their waste-minimization assessments (including follow-up assessments), summaries of activities and reports that the WEC prepared, and seven quarterly performance reports submitted to USAID through March 1994.²⁴ In addition, interviews were conducted with the WEC's staff in Jakarta and with relevant USAID staff who managed this component of the NRMP. Site visits were made to ten factories that had been the subject of waste-minimization assessments. Through this process the evaluation team addressed several questions: Did the WEC's efforts contribute to accomplishment of the intended goals? What is measurably different as a result of these efforts? Did the WEC relate its activities and inputs to desired outcomes? What lessons and recommendations are appropriate as a result of the WEC's experiences?

5.3. Context and Constraints to Success

Although it is possible to demonstrate the considerable attractiveness of waste-minimization activities, factors other than concern for the environment affect plant owners' decisions to change manufacturing processes, to install new technologies, or to change the composition of inputs. In the World Bank report referred to above, for example, there is a discussion of an industrial-pollution paradigm. This paradigm suggests that when industrial managers in developed nations were first confronted with the need to manufacture in an environmentally responsible fashion, they denied the existence of a problem and then of their companies' role in it. Half-hearted commitments to the idea of environmental protection followed but little effective action. There has eventually been a grudging acceptance of the need to act, but with a sense of "business as usual, plus a treatment plant." More recently, many industrial managers have become convinced that these traditional approaches no longer make sense--they can improve their public image and increase profits through waste minimization. "An increasing number of companies," the Bank concluded, "have sought comparative advantage in the market place by attempting to anticipate future environmental trends and concerns into their basic business strategy for the longer term."

This paradigm appears to have some relevance to Indonesia, or so the World Bank believes. The Bank indicates that the "issue for Indonesia is whether its business community

²⁴ The cooperative agreement required the WEC to complete and submit a final, comprehensive report within 90 days of the estimated completion date (i.e., July 31, 1994). This report had not been completed at the time of the evaluation, so it could not be reviewed.

could find a way to move from the 'denial and resistance' stage directly to the more progressive (and socially responsible) stage."

The evaluation team found evidence of both resistance and progress. On the one hand, visits to some factories revealed that industrial waste minimization represents a change that some managers are resistant to or oppose. Whereas it appears relatively easy to convince senior management in some companies of the advantages of waste minimization, significant effort is necessary to gain acceptance of most employees. During the evaluation, for example, the reluctance to accept change was evident by observing the conditions relevant to housekeeping and the usage of water, two subjects that each of the WEC's consultants noted. Some plant managers seem to have an erroneous perception of waste minimization. They appear to confuse it with waste treatment, and thus demonstrated the operation of their facilities for wastewater treatment to the evaluation team.²⁵ Similarly, a lack of communication was noticeable within some plants, with operation or production personnel concerned solely with production targets to the complete neglect of the wastes produced on the assumption that some other department should assume responsibility for them. Some of the WEC's experts observed the same problem.

Even when there is a commitment to change and to minimize waste, economic barriers can discourage action. The evaluation team found, for example, that managers of all four textile companies visited believe they can reduce wastes through the substitution of inputs without sacrificing the quality of their products. Unfortunately, most of the environmentally desirable dyes and detergents are not readily available in Indonesia whereas imported materials are expensive. To use the imported materials would increase the cost of manufacturing and limit the companies' domestic competitiveness.

On the other hand, clear and direct incentives for waste-minimization activities may be absent. Bapedal is a small and young agency with an uncertain legal mandate and limited experience with monitoring and enforcement. Many plant managers know that they can operate with little likelihood of inspection visits or the imposition of meaningful fines because of environmentally harmful activities. Linking a waste-minimization scheme to a government agency with responsibility for enforcement is potentially sensitive to companies that will be assessed. According to the WEC's country coordinator for Indonesia, industry perceives Bapedal to be a policeman and is thus reluctant to expose itself to scrutiny.

Despite these challenges and perceptions, the WEC did encounter several companies that welcomed the "intrusions" and that appear genuinely to be interested in the opportunities associated with the themes and goals enunciated in the cooperative agreement. For the WEC the test was to take advantage of these opportunities while finding ways to convince other companies that such opportunities exist.

²⁵ The cooperative agreement calls for waste-minimization audits, but this terminology proved to be unattractive to potential Indonesian participants. As a result, the WEC presented its efforts as assessments designed to identify potential "processing improvements."

5.4. Results and Accomplishments

5.4.1. Waste-Minimization Activities

During the two years of the cooperative agreement the WEC devoted most of its resources to waste-minimization assessments in which technical experts from Canada and the United States visited factories in several industries to recommend ways in which no-cost or low-cost improvements could be made in order to minimize pollution. With the assistance of Bapedal and the Ministry of Industry, these experts visited eight textile, eight metal-finishing/electroplating, and four pulp and paper facilities.²⁶ Once the initial assessments were completed, the experts completed summary reports that were provided to the companies' managers. Half of the facilities benefitted from follow-up visits within one year of the initial visits.²⁷ The purpose of the latter visits was to assess the extent to which the companies had initiated recommended changes and, if necessary, to provide additional guidance and assistance. In about one-third of the follow-up visits the same experts who conducted the initial assessments were used.

Based on a sampling of the assessment reports and consideration of the consultants' résumés, it appears that all are exceptionally well qualified and provided valuable information to the companies visited. For example, in a follow-up visit to P.T. Indah Kiat's pulp and paper facility in Riau, Sumatra, in April 1993, the WEC's consultants noted that the mill had "made considerable progress in assessing many of the recommendations" contained in the initial assessment report. A new log yard to store unbarked pulp logs was commissioned, and it facilitates improved inventory control and thus more efficient use of raw materials. Likewise, a bleach plant scrubber for reducing emissions of chlorine and chlorine dioxide had been installed. Due to changes in production processes, the company is also able to recover and recycle as much as 30 to 40 percent of its process water. As a further indication of its interest in environmental quality, Indah Kiat funded the travel of four employees to visit Weyerhaeuser facilities in Oregon and North Carolina. The WEC arranged the study tour in conjunction with Weyerhaeuser, which had provided one of the experts that had assessed Indah Kiat's mill.

Another company in the same industry, P.T. Surabaya Agung Pulp and Kertas Industri reported comparable successes. Within four months of receiving 35 recommendations, the company had retained a local consulting firm to consider the feasibility of implementing man

²⁶ Some of these visits occurred in May and June 1992, before the establishment of the cooperative agreement. Funding for these assessments was provided through a separate cooperative agreement the WEC has with USAID's Bureau for Asia.

²⁷ As best as can be determined from the WEC's performance reports, its activity/reports summaries, and discussions with its staff in Jakarta, follow-up visits did not occur in one of the companies in the pulp and paper sector, four of eight in the textile industry, and five of eight in the metal-finishing industry. The WEC evidently conducted a larger number of initial assessments than originally anticipated and thus had fewer funds left for follow-up visits.

of the recommendations. Some of the recommendations had already been implemented, and the company intended to follow others once existing boilers were relocated. A textile company, P.T. Tarumatex, separated acids from its main waste stream. This had two significant advantages. The total waste stream is now reduced, and the company is able to sell the waste acids. Through other process changes the company has reduced its consumption of water by almost 30 percent and has decided to upgrade its existing waste-treatment plant. Through an investment in a "moistering device," P.T. Badan Tekstil Nasional, another textile company found that it could reduce consumption of urea by as much as 80 percent.

P.T. Superex Raya, in the metal-finishing industry, followed the experts' advice and has been able to reduce its consumption of water by almost half. An effort is also being made to recycle caustic soda. A contract for the design and construction of a recovery unit has been negotiated with a Korean company, which claims that the unit will reduce waste by as much as 50 percent. The company is also considering the recovery and recycling of other chemicals, including copper, cyanide, nickel, and chromium. The former plating and manual-anodizing department has been replaced completely, and a decision to improve the quality of rinsewater prior to anodize sealing has resulted in an extension of the life of the sealing solution from one week to three to four months. Superex Raya has also purchased an ion-exchange system for removing aluminum contamination from the anodize solution, thereby eliminating the need for disposing of the solution. The evaluation team believes that the firm's successful implementation of the recommendations can be linked directly to top management's full commitment and involvement.

Other successes can be documented, but so also can some disappointments. Despite several potentially useful recommendations to one metal-finishing company, a follow-up visit a year after the initial assessment found that, with one exception, no significant improvements had been made. The company had hired a local consulting engineering firm to review the assessment report, but the firm had not taken any key actions almost nine months after it had been hired. The evaluation team's visit to this facility found a similar lack of responsiveness. During a follow-up visit to a paper and pulp factory, the WEC consultants were not allowed to visit one of the company's mills even though the consultants considered it to be a major source of pollution that could be minimized. Several companies were unwilling to host the evaluation team while others were hesitant to disclose information on the costs and benefits of their responses to the recommendations they had received.

After the completion of the assessments the WEC organized three industry-specific workshops that emphasized industry-wide technologies and training needs identified during the assessments as well as the interrelations between industry and government in the implementation of cost-effective waste-minimization programs. All three workshops were well attended, with participation ranging from 38 to 58 people. Attendees included representatives of each industry (i.e., 27 from pulp and paper, 39 from textiles, and 26 from metal finishing/electroplating), from government agencies, and NGOs. The original expectation was that companies that had benefitted from the assessments would make presentations to their colleagues in other companies. Representatives from three pulp and paper companies made presentations, but only one from a

textile company did so. The workshop on metal finishing did not have any presentations from the eight companies that were assessed. There is irony in this situation because several of the latter companies demonstrated successful responses to the assessments. Language may provide a possible explanation. In order to accommodate the needs of the WEC's expatriate experts, all three workshops were conducted in English.

In addition to the assessments and workshops, the WEC organized three study tours to the United States. Two, involving ten Indonesians, pertained to the pulp and paper industry. The third, involving six Indonesians, focused on metal finishing and electroplating. The U.S.-Asia Environmental Partnership, which USAID funds, financed the travel costs of eight of the twelve industry participants.

Having summarized the WEC's activities and site-specific accomplishments, it is now appropriate to draw some conclusions about the overall assessment process, the workshops, and the study tours. The WEC deserves credit for providing the *pro bono* assistance of its experts; it is clear that the individual companies in the three industries now have a full agenda of opportunities to minimize their wastes. Likewise, the assessments generated enthusiasm and support from many of the companies' managers and have demonstrated the feasibility and desirability of further attention to waste minimization in Indonesia, at least within most of the companies examined. From USAID's perspective, the activities associated with the cooperative agreement have provided convincing evidence that further waste-minimization activities are both wanted and needed in Indonesia.

Beyond the site-specific findings, however, there is cause for concern in a number of respects. The cooperative agreement required the WEC to provide quarterly performance reports that would: a) describe overall progress, including results and comparison of actual accomplishments with proposed goals; and b) indicate any current problems or favorable or unusual developments. The quarterly reports that the WEC submitted are uniformly poor and unresponsive to the agreement. They emphasize administrative issues (e.g., changes in personnel, rental of office space, and the travel of WEC staff and consultants). Some reports repeat verbatim material discussed in earlier reports (e.g., compare reports for the last quarter of 1992 and the first quarter of 1993). The reports indicate that eight textile plants were assessed, but only five are identified in the reports. For some of the findings/recommendations included in the reports, there is no follow-up or explanation in subsequent reports. As an illustration, after the completion of three assessments in the pulp and paper industry, one of the WEC's consultants recommended that at least five additional assessments in that industry "in order to obtain baseline information which can be used in developing a waste minimization workshop" for the industry" (first quarter report for 1993). Only one such additional assessment was completed, but no report indicates why the consultant's recommendation was rejected.

Most important, the reports are virtually silent about overall progress and movement toward the goals specified in the cooperative agreement (and repeated in the WEC's revised implementation plan). Except through extrapolation and a considerable leap of faith, readers of the performance reports are unable to determine whether the assessments have strengthened the

capability of the private sector (as opposed to the 20 assessed companies) to minimize the discharge of pollutants. The positive evidence that does exist is largely anecdotal, and there does not appear to have been any effort to collect baseline data that would allow an assessment of change. USAID employees were critical of this absence, noting the WEC's inability to detail the specific results of the assessments or to provide explicit success stories.

The WEC deemed the workshops to be successful (without specifying the criteria for success), but there has been no effort to address this issue empirically or otherwise.²⁸ What were the participants' reactions? Are attendees from the government, especially Bapedal, doing anything different because of the workshops? Have nonpilot companies initiated any waste-minimization activities because of what they learned at the workshops? Have company managers approached the WEC or other relevant organizations seeking assistance or waste-minimization assessments? As one respondent acknowledged, no effort has been made to determine the impact of the workshops on nonpilot companies or government officials.

Furthermore, there is no discussion in the performance reports about whether and how the pilot activities have promoted the formulation or enforcement of improved policies for waste minimization. Again, the evidence here is anecdotal. Some respondents thought that there might be some changes in government policies, but no concrete examples of actual, pending, or probable changes could be provided and linked to the WEC's three related waste-minimization activities discussed above. Likewise, the evaluation team was unable to identify any concerted, organized effort on the part of the WEC to develop policy alternatives or to encourage changes in existing policies as part of the cooperative agreement.

The strengthening of Indonesian capacity to conduct waste-minimization assessments was one of the explicit and anticipated outcomes identified in the cooperative agreement and the WEC's project implementation plan. The agreement specified that, during the assessments, the WEC's experts would train local personnel simultaneously so that they could eventually conduct assessments on their own. The implementation plan reiterated this point and emphasized that the WEC's consultants would conduct their assessments with counterpart team members, possibly including technical consultants for that industry sector. Some such counterpart training did occur during some assessments, but it is not documented in the performance reports. Moreover, there is no indication about what these counterparts have done since their involvement with the WEC's experts.

The plan also notes that after each of the three workshops, two participants would be "selected for further intensive training with the agreement that they will serve as waste minimization trainers for their respective industrial sectors." These trainers would go to the United States "for intensive training at counterpart industries." Upon their return to Indonesia, these trainers would be expected to complete follow-up plant assessments and then train another

²⁸ One performance report summarized the workshop for the pulp and paper industry in these words: "All in all the workshop turned out to be a successful event."

60 Indonesians, or so the plan indicates. The long-term result, the plan noted, would be the creation of a "permanent waste minimization training capability...in Indonesia, supported by mutually beneficial relationships with U.S. counterparts and resource suppliers." Despite these declarations of intent, little evidence exists to suggest that an effective training was applied, at least based on a reading of several consultants' reports and all the performance reports as well as what was found during the evaluation team's site visits and interviews. Every completed assessment and follow-up report bears the name of a foreign author. No respondent mentioned the existence of any permanent training capability as a result of the WEC's activities.

5.4.2. Related Activities

The cooperative agreement required the WEC to undertake other related activities. For some of these activities, the WEC can demonstrate an effort to comply. The agreement stipulated that the WEC should assess air pollution in Indonesia. With the mission's consent the WEC changed that focus slightly. It cosponsored a conference on "Megacities on the Pacific Rim and the Burden of Air Pollution" in Jakarta in early 1993. Beyond this single event, the performance reports do not indicate what other activities the WEC initiated in terms of this topic, although the WEC's revised implementation plan states that the conference would lead immediately to a: a) comparative study of the region's experiences in addressing air quality issues in urban areas; and b) a follow-on workshop and an opportunity for two Indonesians to observe U.S. technologies and expertise. Other issues mandated in the cooperative agreement but omitted with USAID's apparent approval include identification of sources of mercury pollution, training courses for industrial estates, and environmental management internships.

In contrast to these activities, the WEC did initiate activities involving responsible care and strategies for industrial disaster preparedness. These initiatives are discussed briefly in the WEC's performance reports, but it is again difficult to discern the results and accomplishments associated with the two activities. It is clear, however, that the activities have not produced most of the outputs and objectives the WEC specified for the activities in its revised implementation plan. In any event, the evaluation team did not examine these activities because they were beyond the tasks indicated in the statement of work for the present evaluation.

5.5. Programmatic Synergy

The statement of work asks the evaluation team to consider whether the NRMP's present project structure can provide the needed synergy and coordination for the project's three components (i.e., policy analysis, pilot activities in managing forests and protected areas, and industrial clean production). The team believes that there are many opportunities for synergy among the components, but there were few if any interactions or complementarities during the life of the cooperative agreement. The latter view is shared by the staffs of USAID, the WEC and ARD.

The most obvious potential linkage among components involves policy analysis and proposals for changes in policy. The policy secretariat could have been asked to address several

"brown" issues that were the focus of the WEC's efforts. Likewise, in selecting students for graduate training in the United States, a handful could have been selected with the intent of having them develop skills relevant to waste minimization (or, alternatively, having those with skills in waste minimization develop skills in policy analysis or management).²⁹

There is a natural relation among efforts to improve logging in production forests and the operations of paper and pulp mills, yet both ARD and the WEC appear to have neglected such a nexus in their work. ARD's in-country staff has developed considerable familiarity with and expertise on Indonesia's policy-making processes and institutions, yet this is exactly the area in which the WEC's effort was the weakest (especially to the extent that it relied on short-term consultants without competence in Bahasa Indonesian and with limited prior experience in Indonesia). This evaluation has the advantage of hindsight, but it does seem that more interchange among the components would have been desirable at the beginning of the cooperative agreement. Outlining the goals of the cooperative agreement and how the WEC intended to achieve them could have provided the ARD with a sense of how its policy studies and experiences might have assisted the WEC.

Likewise, the WEC might reasonably have asked for assistance in identifying "flawed" policies or opportunities to improve existing policies. One example involves the policy study on marketing boards. How do such boards influence the operations of pulp and paper companies? Are there opportunities to use these boards to encourage waste minimization through the creation of incentives or regulatory schemes? Are there increased opportunities for collaboration among owners of timber concessions and their counterparts in the pulp and paper industry? These are questions that collaboration might have addressed to the net gain of all parts of the NRMP.

One further area for enhanced cooperation involves environmental awareness. A major thrust of ARD's activities is to increase such awareness among local communities and to enhance the environmental consciousness of the firms it works with, both at Bunaken and Bukit Raya. As one USAID employee noted, a major lesson from the WEC's experience is the need to enhance awareness of the advantages of waste minimization. To the extent that ARD knows anything about raising awareness, its knowledge is thus relevant to the perceived needs of the NRMP's waste-minimization component.

5.6. Recommendations

Given the mission's decision to establish a working relationship with USAID's Environmental Pollution Prevention Project (EP3) and its Environmental Improvement Project

²⁹ USAID indicated to the evaluation team that efforts were made to interest three candidates from Bapedal in pursuing graduate training in the United States, but these efforts were unsuccessful due to a lack of suitable and available candidates.

(EIP), recommendations are in order.³⁰ Most of the recommendations logically follow the conclusions noted in the previous sections and can be related directly to the mission's forthcoming buy-in to EP3.

- As soon as the EP3 staff begins its work in Indonesia, one or more meetings should be arranged with ARD's Jakarta-based staff to discuss potential common activities or ways in which existing NRMP activities can contribute (or be modified) to assist EP3 achieve its goals, particularly if they involve potential changes in policy or the need for policy analyses. Likewise, ARD's staff should be asked to examine ways in which its expertise and responsibility for policy studies might contribute to the EP3's efforts. Bapedal has a potential role and interest in encouraging such interaction, and the agency might be asked to suggest one or two relevant policy studies to the NRMP's policy secretariat.

- EP3's staff should be asked to specify exactly how its efforts will contribute to the strengthening of Indonesians' capacity to conduct waste-minimization assessments. Proposed efforts should be linked explicitly to clear goals, and periodic progress reports should discuss results and accomplishments, not provide just summary descriptions of efforts or activities.

- The mission should request the WEC to address the issues raised in this chapter in its final report to USAID. At a minimum this report should summarize what the cooperative agreement required, what USAID and the WEC agreed to in the latter's implementation plan, discuss in detail the results and accomplishments (as opposed to inputs or measures of effort), provide an explanation of differences between expected and actual accomplishments, and provide lessons learned about companies' responsiveness to the WEC's recommendations. These lessons have not yet been "captured" or summarized in way that is useful or productive for the mission or EP3. The buy-in to EP3 will provide considerable flexibility to the mission, so there will be opportunities to remain flexible in defining goals and activities. This underscores the importance of benefitting from the WEC's experiences. One important issue deserving attention involves the variables that affect decisions to implement recommendations. Thus efforts should be made to identify those policy, economic, and technological factors that contribute to or inhibit adoption of new approaches to waste minimization and pollution prevention in Indonesia. The WEC's experience reveals that the nontechnical aspects of waste minimization may be as important as the technical ones, thus suggesting that waste minimization should not be viewed solely or primarily as an exercise requiring expertise only in engineering or plant design.

- If waste-minimization assessments are to be continued, then baseline data should be collected whenever possible. After the completion of initial assessment, frequent technical assistance should be made available to the companies to assist in the implementation of recommendations. The evaluation team acknowledges that follow-up visits occurred in about ten

³⁰ Although USAID/Indonesia will continue its emphasis on industrial waste-minimization activities, it has opted to do so with new partners. USAID/Indonesia chose not to extend the cooperative agreement with the WEC, but this decision was made before this evaluation began.

instances under the cooperative agreement, but a reading of several of the follow-up reports indicates that earlier recommendations are being repeated and, for whatever reason, that a fair number of recommendations have not been acted upon. Future assessment reports could usefully rank order consultants' recommendations in terms of estimated costs to the company and in terms of estimated impact on reducing waste. Such a ranking scheme, however rough, can provide plant managers with a means of maximizing reductions in waste at a minimum cost.³¹

- A related proposal involves the desirability of including no- and low-cost recommendations as well as medium-cost solutions in future waste assessments. A single medium-cost investment can have higher payoffs (and be less disruptive to production) than a combination of several low-cost changes. Moreover, success with low-cost changes may encourage a company to commit additional funds to more expensive improvements. (This appears to have been the case with one textile company that was assessed. The installation of a heat exchanger saved so much energy for the company that it is considering still further, but higher costs investments in order to recover most of the heat in its waste stream.)

- On-the-job training, training for potential trainers, and other training programs should be organized to meet the needs for follow-up services. Additional seminars and workshops should be organized, but with less emphasis on formal presentation and greater attention to dialogue and "constructive engagement" to encourage company managers to discuss their environmental problems openly with the understanding that the government will not penalize them for doing so. This recommendation reflects the team's belief that the WEC did not devote sufficient attention to the training of nonpilot company representatives (as opposed to the publicizing of opportunities).

- The cooperative agreement included provisions for the transfer of information (and the WEC produced a reference manual on waste-minimization practices in the U.S. pulp and paper industry and a bibliography on waste-minimization practices in the metal-finishing industry), but these efforts could be strengthened through the development, supply, and distribution of publications, education and training materials, data bases, software, video documentaries, and case studies. Indonesian case studies are desirable. With the WEC's experience there are now enough success stories to relate. The case studies could be in a form similar to the policy briefs that ARD produces. Furthermore, EP3 should be encouraged to solicit advice from USAID's GREENCOM project in regard to appropriate and attractive formats for these materials and in terms of publicizing successes and further opportunities in national and international media.

³¹ The team understands that the mission intends for EP3 to arrange for local technical assistance to participating companies after the initial assessments in order to assist the companies to develop corporate environmental programs, to implement consultants' recommendations, and to solve problems with implementation. If this is the case, then this recommendation and others along similar lines can be altered accordingly.

- USAID and EP3 should continue to work closely with government officials on waste minimization, but companies should be assured that their willingness to participate in assessments does not place them in jeopardy with enforcement officials.³² This suggests a preferred separation of responsibility among these officials--officials with responsibility for enforcement should not be involved directly with company assessments.

- Attention should be devoted to the nature of the consultation/assessment process. Expertise occasionally leads to a discounting of local managers' familiarity with their own plants and environmental problems. Expatriate consultants should thus be encouraged to remember that they are providing assistance to colleagues whose methods of operations may differ from those in the United States for reasons that may not be readily apparent to foreigners. Finally, these experts should avoid leaving the impression that their goal is to sell American technology.

- Finally, USAID/Indonesia may wish to seek relief from the administrative burden associated with the need to work with potentially overlapping agency projects (e.g., EP3, EIP, and the U.S.-Asia Environmental Partnership's Environmental Business Exchanges, which involve WEC) that have similar goals. However well intentioned these efforts are, they require staff to devote inordinate time to administration as opposed to implementation and oversight. Likewise, the NRMP staff within USAID should explore possible linkages with the mission's Urban Environmental Infrastructure Project. The evaluation team is aware of the latter's focus on municipal sources of pollution and end-of-pipe controls as contrasted with the NRMP's focus on industrial sources and the processes that create pollution, but both projects share common objectives. Opportunities to explore overlapping concerns should not be ignored. Possible topics include the use of economic incentives to discourage pollution and comparisons of the costs and benefits of various alternatives to pollution reduction.

³² The exception may involve instances in which a company's pollution is so egregious that human health is at considerable risk. In reality, such companies are not likely to volunteer for assessments.

6. Cross-Cutting Issues

6.1. Women in Development

As USAID's recent *Strategies for Sustainable Development* (1994) emphasize, the agency is committed to paying special attention to the role of women in the development process. Women bear many of the burdens associated with a lack of development, but they simultaneously represent an enormous source of untapped talent that can contribute to development. As USAID recognizes, the success of women is essential to development, and a "development process that fails to involve half of society is inherently unsustainable."

6.1.1. The NRMP and Women in Development

Evaluating the role of women in the NRMP has several facets, but the absence of specific requirements complicates the effort. For example, the Project Paper (July 1990) stipulates that "one-third of all overseas training provided by USAID will be reserved for women participants." In an analysis of the project's social soundness completed in conjunction with the project paper, the authors emphasized that an important aspect of the NRMP would be the ability of women to participate:

At project field sites, there are no significant barriers to female participation, and women and men are actively engaged in economic development activities. However, if barriers are identified during implementation, the project will investigate and address them accordingly (Project Paper, Volume I, p. 38).

Similarly, other parts of the social-soundness analysis discussed the potential role of women at both Bunaken and Bukit Baka. In each instance the analysis emphasized the need to make special efforts to ensure women's active involvement and to integrate local people into the project's planning and implementation, which would represent "an overt attempt to empower them" (Project Paper, Volume 2, Annex A.4., p. 22). These objectives presciently identified key issues identified in *Strategies for Sustainable Development*. That document suggests that answers to two questions can be used to assess a project's gender-related effectiveness: Does a project involve and empower the people who are supposed to benefit from it? Do they participate in planning, allocation of resources, selection of methods, management, oversight, and assessment of accomplishments?³³ If the answer to the latter question is affirmative, then the NRMP can rightfully claim that its efforts are leading to the empowerment of women.

³³ An argument can be made that these questions represent *ex post facto* evaluative criteria because they were developed after the NRMP began its operations. This is a reasonable position except to the extent that the project paper's discussion of gender issues is consistent with the themes and objectives included in *Strategies for Sustainable Development*.

For the NRMP, these questions do not have simple answers. Nonetheless, an examination of the NRMP's gender-related actions does provide some indication of sensitivities to women and development.

The WEC was apparently not asked to monitor or emphasize gender issues in any of its activities. Neither the cooperative agreement nor the WEC's revised implementation plan raises issues related to women and development. Consequently, it is not possible to determine the number of women who benefitted directly from or participated in any of the WEC's activities, including the waste-minimization assessments or the subsequent industry-specific workshops. Women represent a fair proportion of employees in the textile industry, so the absence of apparent attention to women in this industry suggests that an important opportunity may have been missed.

In contrast, the technical contractor's staff is to be applauded for the manner in which it monitors gender issues. The contractor's management information system, which is also discussed in chapter 2, is designed so that gender issues can be tracked and summary reports quickly produced. Similarly, ARD's summaries of assistance and training identify participants by gender. Of all students sent overseas for graduate training, 32 percent have been women. Women have fared somewhat less well in terms of other opportunities for participation. According to ARD's staff in Jakarta, women represented 21 percent of all participants in local training activities and 16 percent of participants in the international short-term training. Among the nearly 71 short-term foreign and Indonesian consultants that ARD used through July 1994, one-quarter were women.

The numbers of women in each category indicate little about the quality or consequences of their participation and involvement in the NRMP's activities. In the evaluation team's opinion, this is a weakness, and the team concludes that the NRMP has had limited impact in increasing the effective participation of women. Full-time professional involvement of women is limited to two field assistants, one at Bunaken National Park and the other at Bukit Baka. At the former site, the NRMP's only woman staff member has the primary task of being the project secretary. She is aware of the project's activities, but she has limited opportunities to work in the field. At Bukit Baka, a female agronomist works with village women. This situation has the advantage of improving communication with local women, but the agronomist finds her role limited to that of an extension agent.

The relative paucity of additional relevant information about women makes it difficult to draw any further conclusions about the NRMP and women in development. There is no doubt that the project has benefitted some local women, but have they found their opportunities to participate effectively in managing natural resources enhanced as the *Strategies* document suggests they should be? No definitive answer to this important question is possible. Likewise it is not possible to point to information suggesting which barriers to women's participation have been identified or resolved or that women have been full participants in all aspects of the project including oversight and assessment of accomplishments.

6.1.2. Recommendations on Women in Development

Are there suitable solutions to this situation? The social-soundness analysis suggests an appropriate starting point: "Working with women in projects almost always requires an explicit plan to do so--if for no other reason than project personnel are more likely to be men, and men most easily gravitate to other men" (Project Paper, Volume 2, Annex A.4., p. 25). The evaluation team thus recommends that the technical contractor and the staffs (i.e., of EP3 and EIP) associated with industrial waste-minimization activities develop such plans. These plans can be brief but should specify how the NRMP will involve and contribute to local women's empowerment, identify intended results and accomplishments (not just measures of effort), and initiate a process of data collection so that the relevant questions in *Strategies for Sustainable Development* noted above can be answered with some certainty at the project's end. In developing an appropriate plan, it may be worthwhile to seek the counsel and review of USAID's Office for Women in Development (WID).

Once a plan is developed, discussion of progress and results should be required in each periodic progress or annual report. Such discussion need not be long or detailed; several substantive paragraphs will suffice. Depending upon the mission's commitment to women and development, the mission may also consider a request to the contractors that they appoint someone to serve as a WID advocate who could monitor and encourage progress in achieving the objectives outlined in the plans.

Other actions to improve the status of women and attention to their concerns are also possible. First, in the current design of the competitive awards system, for example, the Ministry of Forestry can be asked to identify gender-related issues as being of interest. Applicants can be asked to discuss the potential relevance of their proposed research to gender issues and how women might benefit from the research to be conducted. Application forms and information about the awards can emphasize the Ministry's interest in encouraging applications from women and/or attention to their concerns. The evaluation team believes that the most meritorious proposals should be funded, but this need not discourage attention to gender-related issues. Furthermore, the Ministry can be asked to ensure that women are included on the panel reviewing proposals for the competitive awards. In this regard, one highly effective way to do so would be to include one or more women from Bunaken on this panel. As the social-soundness analysis noted, "There are a comparatively large number of reasonably well-educated women" in Bunaken. Their inclusion on the review panel would allow them to exercise some influence over the allocation of the project's resources, just as *Strategies for Sustainable Development* suggest is desirable.

Second, the evaluation team advocates that completed policy studies be reviewed to determine the gender-related implications of the recommendations included in these studies. As noted elsewhere in this evaluation, these studies have produced scores of recommendations, yet they seem to be oblivious to differences in gender. What recommendations if implemented, for example, would do the most to benefit women or to advance their status? Are there any recommendations that are particularly dependent on women's support or approval? Have these

studies ignored relevant gender-related issues and, if so, how can this deficiency be remedied? What will be done to ensure attention to gender-relevant issues in planned or forthcoming policy studies?

Third, the NRMP should make special efforts to recruit field and professional staff who are women in order to increase the meaningful participation of village women. If local women are to develop an enhanced sense of efficacy and a sense that their opinions on the management of natural resources are valued, they will benefit from effective role models who are perceived to be both competent and influential. Such recruitment efforts can be summarized in the periodic reporting on WID-related issues recommended above.

Are women well represented on the Project Coordinating Committee? If not, then it is appropriate to add them as members.

Fourth, renewed efforts should be made to increase the proportion of women in all training activities. Likewise, the relevance of this training to women can be enhanced to the extent that the contractors survey prospective women participants to determine what training best meets their needs and facilitates achievement of their project-related aspirations. If efficacious women represent valuable assets that can contribute to the NRMP's success, then all such training should have contain explicit objectives that relate to the process of empowering women.

In sum, while the NRMP can demonstrate concern for women and development, much remains that can and should be done. Given the project's environmental mandate and the desire to ensure effective local participation, increased attention to women can have only salutary effects on the project.

6.2. Donor Coordination

The advantages of coordination among donors are obvious. They include opportunities to avoid overlapping or redundant activities, to benefit from parallel policy and research initiatives, and to work together to promote desirable policy reforms. Moreover, from all donors' perspectives, effective coordination allows scarce resources to be targeted in a meaningful way. In contrast, the absence of coordination can cause confusion, ineffective use of these resources, and missed opportunities to achieve common objectives.

Coordination is especially important in Indonesia. Many donors are active there, particularly in the environmental sector. Indeed, interviews with representatives of the donor community and government officials suggest that there may be as many as 65 to 70 active projects in the forestry sector alone, with financing provided by as many as 35 donors. Among major donors, for example, the World Bank is funding a project on Integrated Conservation and Development, and the Asian Development Bank is sponsoring an Integrated Protected Area System. Both of these projects are being coordinated through PHPA in Bogor. The United Kingdom's ODA has a Tropical Forestry Management Project in Central Kalimantan, and the German Agency for Technical Cooperation (GTZ) works with Indonesia's Agency for

Community Self-reliance Development to address problems related to shifting cultivation. The GTZ also has a broader activity called the Living Environment Project, which the State Ministry for Environment sponsors. The project operates in all of Kalimantan's four provinces and focuses on the management of natural and environmental resources.

The size, objectives, and geographic scope of these donor projects vary considerably, and many represent potential opportunities for the NRMP. Is there evidence that USAID/Indonesia, the WEC, and ARD have promoted coordination among related projects and that unnecessary redundancy has been avoided as a result? The collaboration between USAID/Indonesia and the ITTO represents the best starting point in an effort to answer these questions.

6.2.1. The NRMP and the International Tropical Timber Organization (ITTO)

Once work began on the NRMP's design it became apparent that the Government of Japan had a parallel interest in funding a forestry-related project in Indonesia. The result was a decision to sponsor a seven-year, \$11-million Sustainable Forest Management and Human Resources Development Project (SFMP) through the ITTO and the Ministry of Forestry. In an effort to achieve compatibility among the objectives of the two projects, mission staff worked with the Japanese and the ITTO to design the SFMP, which began project activities in 1991. To implement the SFMP, the ITTO provides a resident advisor, whose office is located at the Ministry of Forestry. The SFMP has three components: a) research and development related to sustainable forest-management practices; b) multipurpose management of conservation and protection forests; and c) the development of human resources for sustainable forest management.

To ensure continuing cooperation during the life of both projects, USAID, ITTO, and the Ministry of Forestry agreed to develop a JIP and to revise it annually. At the time of evaluation, an initial plan had been completed and revised once; a second revised, draft version was available to the evaluation team. Each version of the plan discusses overall objectives, which, in turn, are supposed to provide guidance in developing annual work and financial plans, to describe outputs to be achieved, and to identify key indicators of progress.

Although the NRMP and the SFMP have similar objectives, there is only one major joint activity that requires the two projects to work together. It involves a research station adjacent to Bukit Baka-Bukit Raya National Park. The SFMP has responsibility for the station's construction whereas the NRMP has responsibility for providing some equipment and the development of research and station protocols. Once completed, the Ministry of Forestry and SBK would support the station's operations and research agenda.

In accordance with this distribution of responsibilities, the NRMP funded a topographical survey of the site and developed a procurement plan for research equipment in 1992. In addition, the NRMP paid for the installation of a minihydroelectric system to provide both water and electricity to the station and to SBK's camp. This work was completed in May 1993. Despite these investments, the research station has yet to be built. In fact, due both to human error and

to administrative problems, construction had not even started at the time of the evaluation.³⁴ Unless major changes occur in the near future, the evaluation team believes there is little prospect that the research station will be completed during the remaining life of the NRMP. Consequently, given the large amount of funding available through the SFMP (and its inability to spend much of it to date), there exists little need for the NRMP to make any further investments in the research station.³⁵

A more important issue involves the need for a station. With support from the ODA, the Ministry of Forestry has already built and equipped a research station at Samarinda, about 60 kilometers from the proposed station at Bukit Baka. The Samarinda facility is well-established and fully operational. Its purpose is to conduct studies on: a) growth and yield from forests that have been logged; b) botanical work that involve the identification of trees, a major problem in Indonesia; and c) the impact of logging on biological diversity. To staff the station, the ODA supports a full-time resident research director/coordinator, eight or nine short-term specialists, and several Indonesian graduate students. The ODA is amenable to joint use of the station. If this opportunity is pursued, this arrangement would allow students funded through the NRMP to conduct their field research at Samarinda rather than at a facility that does not yet exist.

If a research facility already exists, is it necessary to build another? The evaluation team has a mixed opinion. If the Bukit Baka station would duplicate research done elsewhere, then the justification for another station is weakened considerably. To avoid such duplication (and USAID's potential support of it), USAID should insure that a clearly distinguishable research agenda and emphasis exist before further funding is provided.

More generally, the issue of the desirability of continued reliance on a JIP is a contentious one. While acknowledging that the initial plan was too broad and ambitious, mission staff believes that the most recent version of the plan, which is more focused, is a useful planning tool that reflects considerable input from key actors. As a result of the original and first revised JIP, several studies were initiated, and the Government of Indonesia allocated its project-related resources in accordance with the plan. As the mission's project officer stated, the JIP "documents agreement on what is to be done."

In contrast to the mission's strong endorsement for a joint plan, the evaluation team is less enthusiastic. As already noted, the plan's primary purpose is to coordinate two related projects,

³⁴ According to the draft JIP of May 1994, the effort "experienced considerable bureaucratic and financial constraints due to the fact that all permits must be applied and issued in Central Kalimantan, however, the site is only accessible from West Kalimantan. Further, funds are being withheld because of administrative errors...."

³⁵ The evaluation team understands that USAID/Indonesia has given the SFMP a deadline. If the station is not completed by this deadline, the Ministry of Forestry will not receive approximately \$50,000 for additional equipment for the station. The team endorses this decision.

the NRMP and the SFMP. The two projects share only a single common activity, the research station, and that has not yet been built. In the absence of common activities, there is not much to coordinate.

Can the NRMP succeed without a JIP? At least some members of the contractor's staff believe so. Does the JIP make a positive contribution to coordination among donors and between USAID and the Government of Indonesia? Here the answer is in the affirmative. The JIP provides a tangible demonstration of coordination in a fragmented donor community, and there is considerable evidence that officials in the Government perceive the JIP to play an important role. In the words of one contractor employee, the Ministry of Forestry's representative in West Kalimantan uses the JIP as a guide and "wants to know how all [of the NRMP's] activities relate to the JIP."

Rather than eliminating the JIP, as some would advocate, the evaluation team suggests a middle ground. The most recent draft JIP approaches one-hundred pages in length and has taken many months to prepare and revise. Further revisions will occur, thus lengthening the amount of time and the number of people involved in preparation, reproduction, and dissemination. The team suggests that instead of revising the JIP each year that it be viewed as a strategic planning document that provides an overall vision for the NRMP and its future efforts. In lieu of frequent revisions of the JIP, the team believes that a considerably shorter document can achieve many of the same purposes. This document, which could replace (or be replaced by) an annual work plan, would be consistent with the JIP and would reflect efforts to work with the SFMP on activities of common interest. This approach would have the advantage of lightening the contractor's administrative burden while retaining the JIP's positive features.

This proposed alternative does not mean that collaboration with the SFMP should cease. To the contrary, such collaboration can bring significant benefits to the Ministry of Forestry. Thus, for example, the team concurs with the comment in the *Environmental Assessment* that the development of a program to certify wood from "sustainably managed production forests," as suggested in NRMP Report Number 4 (1992), would benefit from technical assistance that could be provided with the ITTO's funds. Technical assistance through the ITTO could also assist in the implementation of the management plan for the Bukit Baka-Bukit Raya National Park.

6.2.2. Collaboration with Other Donors

To assess the NRMP's effectiveness in working with other donors, the evaluation team met in Jakarta with representatives of the ODA, the World Bank, the Ford Foundation, and staff of an environmental project that the Canadian International Development Agency funds as well as with many representatives of the Government of Indonesia. These people were in overwhelming agreement that the contractor's staff has made a thorough and successful effort to work with them, to publicize the NRMP's activities, and to keep their professional colleagues

appraised of the NRMP's publications and presentations.³⁶ As an illustration, the head of the World Bank's Environment and Social Impact Unit in Jakarta demonstrated considerable familiarity with the NRMP's activities and several of its policy studies. He offered several examples of collaboration and "cross-fertilization" between the World Bank and the NRMP and indicated that he has worked closely with several of the contractor's staff. More important, when asked about the contractor's efforts to work with other donors, he declared that USAID and ARD's staff have "tried harder in some ways than any other donor," noting positively that the NRMP's newsletter "goes everywhere." Likewise, the director of the ODA's United Kingdom-Indonesia Tropical Forest Management Project stated that relations between his project and the NRMP "have been as good as practicable and possible."

These laudatory comments notwithstanding, there are several ways in which USAID's resources can promote enhanced collaboration with other donors, who are also seeking changes in the Government of Indonesia's forestry-related policies. USAID should continue to support the recently created Consultative Group on Indonesian Forestry, which has met three or four times to date. The group's explicit purpose is to coordinate donor activities in order to avoid conflicting recommendations to the Ministry of Forestry. USAID's support might be in the form of a "minisecretariat" that would assist with the announcement of and publicity for meetings as well as with arrangements of venues, agendas, and presentations.

In addition, to support for the consultative group, USAID and the contractor should consider the following ideas, all of which reflect suggestions from donor representatives:

- when developing terms of reference for the NRMP's policy studies, the contractor should consider donor representatives as a source of review, particularly because of their relevant expertise and in order to ensure consultants' awareness of related research and analyses.

- the contractor should consider how it might make use of the ODA's economic models that attempt to analyze the impact of changes in forest royalties on typical pulp, plywood, and sawnwood mills.

- the contractor should continue to invite donor representatives to project presentations and to ensure the fullest possible dissemination of the NRMP's reports. The evaluation team understands that the Ministry of Forestry extends invitations for the NRMP's presentations, and USAID should encourage the ministry to invite larger rather than smaller audiences. The NRMP should also consider consultants' presentations at several of the environmental centers associated with Indonesia's universities. Such presentations would increase the visibility of the findings and potentially increase the pool of Indonesian policy analysts with an interest in environmental issues.

³⁶ The evaluation team did not direct much attention to the issue of donor coordination in terms of the WEC's efforts and industrial waste minimization. Nonetheless, the team believes that there are many opportunities that can be pursued in this area.

Some respondents indicated that they have had to receive the NRMP's policy reports "under the table" because they were not publicly available until well after their completion. The evaluation team was informed that this situation exists because of the current review and approval process for draft reports. Peer and other professional review of all draft reports is strongly encouraged (and should be continued if already used), but this process should not delay unduly the timely publication and distribution of all reports.

During this review process, reports should be marked clearly as "draft." Such draft reports should then be circulated within the PCC and among those professionals whose comments will strengthen the final report. All the individuals or organizations wishing to provide comments should be given a deadline of perhaps 30 to 45 days. Only comments received within that time period need to be addressed; in the absence of comments the contractor should assume that none are forthcoming. There can be flexibility in this process, but the contractor, having made a good faith effort to produce a quality report and to be responsive to valid concerns, should then publish and distribute the report without the need for any further review or approval. This assumes, of course, that the contractor is satisfied with the quality of the report.

- USAID and the contractor should consider one or more informational presentations that focus not on a single report but rather on the totality of their efforts, accomplishments, and objectives. Such presentations could synthesize what the NRMP has done and provide a broad overview for donor representatives and senior government officials alike. USAID's initiative in this area might encourage other donors to do the same for their projects, thus informing USAID and the contractor of potential areas of overlap and collaboration.

Finally, to the extent that USAID considers donor coordination to be a priority, the contractor should be asked to develop a brief plan (i.e., no more than two to three pages) that identifies opportunities and that establishes goals and objectives for donor coordination. Annual reports should discuss briefly how these opportunities have been translated into accomplishments and how objectives have been realized. Such a plan is no less relevant or desirable for the EP3's activities, and its staff should also be required develop a plan for improving coordination with other donors.

Appendix 1. Statement of Work for the Midterm Evaluation of the NRMP

ARTICLE I: TITLE and BACKGROUND

A. Title: Natural Resources Management (NRM). Project No. 497 - 0362.

B. Background

The NRM project is aimed at helping Indonesia sustain its economic growth through the improved policies and practices for managing important natural resources. The Governments of Indonesia and the United States approved the seven-year NRM project in July 1990. The project design calls for a mid-term evaluation to assess implementation progress and to recommend improvements in project design and/or implementation approaches. This project is now in its third year, thus, it is an opportune time to conduct the evaluation. The evaluation is also meant to provide guidance on the programming of additional USAID assistance in the environmental area, e.g., possible amendment to the NRMP for industrial clean production activities. Furthermore, the evaluation is expected to provide valuable guidance on future technical assistance, training and equipment needs that USAID and the Government of Indonesia can consider in planning support for technical assistance, training, and equipment after the August 1994, completion date of the prime technical assistance contract with Associates in Rural Development.

Extensive documentation is available on project design and implementation progress, including: Project Paper with Annexes, annual implementation plans, quarterly progress reports, environmental assessment of planned field activities and corresponding environmental action plan, analysis and recommendations from a mid-1993 Director's Implementation Review, progress report (July, 1990 - December, 1993) based on logframe purpose level indicators, as well as numerous studies and reports.

ARTICLE II: OBJECTIVE

To evaluate progress towards achieving specified outputs in the logframe and to recommend improvements in project design and/or implementation approaches to facilitate accomplishment of project outputs.

ARTICLE III: STATEMENT OF WORK

The Evaluation Team or "Team" for the study will undertake the following tasks:

A. Review Background Information, Meet Key Contacts, and Visit Field Sites

The Team will review background reports provided by USAID and meet with key officials in the Government of Indonesia (e.g., Bappenas, the National Development Planning Agency, the

Ministry of Forestry, BAPEDAL, and the Ministry of Industry) and USAID officials, technical advisors, NGOs, and private sector firms involved with project activities, the resident expert for the International Tropical Timber Organization (ITTO) and others in order to understand the project design, approach, initial progress and implementation challenges. The Team or members of the Team will also visit the two sites with ongoing forestry/conservation pilot activities, Bukit Baka-Bukit Raya in West/Central Kalimantan and Bunaken National Park in Manado, North Sulawesi, and the industrial waste-minimization pilot activities in Jakarta, Bandung, and Surabaya. Thus, team members will meet with key contacts in the field (e.g., government officials, NGOs, community leaders, private sector firms, and university researchers).

B. Assess Key Issues

The Team will review the key issues to be assessed with officials of USAID and the Government of Indonesia and may suggest new issues or modifications for the concurrence of these officials. The USAID Project Officer must approve any significant changes or additions in writing. Key evaluation issues include the following:

1. Achievement of Purpose and Outputs. To what extent has the project achieved the outputs specified in the logframe, and is the present project approach likely to achieve these outputs? Should the logframe be modified to reflect a more current assessment of what can be accomplished by the project? In particular, is it still feasible to achieve the specified indicators linked to the project purpose and outputs?
2. Project Design. The project is evolving into three distinct components: policy analysis, pilot activities in managing natural production forests and protected areas, and industrial clean production activities. Can the present project structure provide the needed synergy and coordination for these three components, and in what ways can implementation of these activities be improved? A project amendment is envisioned to provide additional funds to support industrial clean production activities, what guidance can the evaluation team provide the Government of Indonesia and USAID in considering this amendment?
3. Policy Analysis. Project resources are allocated to support the analysis of policy issues under the agenda and direction of the Policy Working Group. To what extent have project resources effectively supported the analysis of these policy issues and in what ways can project-supported policy analysis be improved? In particular, what guidance can the team provide for strengthening a network of policy analysis or the establishment of a natural resource policy analysis "think tank." In addition, what guidance can the team provide on how USAID's resources can best promote collaboration with other donors in promoting improved policies. Key donors include: the World Bank, the Asian Development Bank, the Canadian International Development Agency, GTZ, the ODA, and the Ford Foundation.
4. Technical Assistance Performance and Future Needs. The present prime technical assistance contract ends in August 1994, and may be extended for an additional two years

without further competition. Assess the progress of the ARD team in meeting the team tasks specified in their contract (see attachment). Can the team suggest ways to improve the implementation performance of the ARD team? What guidance can the Team provide in identifying priority technical assistance needs from August 1994 through August 1996?

5. Management Information System. The TA team began implementing a formal Management Information System for the project in August 1993. Based upon the experience of the first few months, does this system appear to serve a useful purpose, is it cost-effective, and are there ways to improve the system's operation?
6. Role of Community Groups, NGOs, and Private Sector. A key output of the project is the development of new approaches for promoting the role of community groups, NGOs and private sector in managing natural resources. What guidance can the team provide in encouraging the participation of community groups, NGOs, and private sector under the project?
7. Women in Development. The team will assess the initial impact of project assistance on women and identify strategies to further increase the involvement of women, in training, policy analysis, and field activities.
8. Other Issues.
 - a. Incorporating Environmental Considerations into Tourism Development
One activity planned under the project is to help key decision makers in North Sulawesi understand the importance of incorporating environmental considerations into tourism development. Should the project consider expanding this type of assistance for other areas of Indonesian that have a strong tourism development potential, and if so, what guidance can the team provide? How?
 - b. Implementation of Environmental Action Plan
Review the recommendations of the Environmental Assessment and corresponding Environmental Action Plan and based on field observations and discussions, assess the appropriateness and progress in implementing the Environmental Assessment Action Plan.

C. Prepare Draft Report and Brief USAID and the Government of Indonesia

The Team will prepare a draft report and brief government and USAID officials on evaluation findings and recommendations. The Team will record their comments and suggestions provided during briefings and incorporate as appropriate. The team is expected to hold orientation meetings with key participants followed by a presentation of draft findings in each area (e.g., Pontianak and Manado) visited.

ARTICLE IV: REPORTS AND DELIVERABLES

The Team shall:

1. Develop, present, and submit in writing for USAID's concurrence, a detailed work plan for conducting the project evaluation, including a schedule and methodology for conducting evaluation visits and interviews.
2. Prepare and present a draft project evaluation report for officials in USAID and the Government of Indonesia that describes project status, including progress towards achieving project outputs, problems encountered, and recommendations to be taken to improve implementation performance or to modify project documents (e.g., logframe). The draft report will address all of the issues specified in the required tasks.
3. Submit a final report, incorporating comments from these officials, which describes analysis, project accomplishments, and recommended actions to improve implementation progress and impact.

ARTICLE V: ROLES AND RESPONSIBILITIES

The Team will receive technical direction from, and be responsible to, the Natural Resources Management (NRM) Project Officer, Office of Agro-Enterprise and Environment, USAID. The Team will also meet with key Indonesian counterparts to discuss the terms of reference and receive additional technical direction. The USAID Contracting Officer will be responsible for contractual matters and will provide related guidance. The Team will work closely with the technical advisors to coordinate logistics and gathering of information.

ARTICLE VI: PERFORMANCE PERIOD

The evaluation should begin on or about March 21, 1994.

ARTICLE VII: PERSONNEL and WORK DAYS ORDERED

A. Personnel

The Team will consist of three expatriate and two Indonesian experts. Their positions and qualifications follow:

1. Natural Resource Policy Specialist (expat) - team leader
 - Masters degree in natural resource management or related discipline.
 - At least five years' experience in natural resource policy analysis and demonstrated ability to work effectively in a developing country context.

2. **Resource Economist (expat)**
 - Masters degree in resource economics or related discipline.
 - At least five years' experience in resource economics, natural resource policy analysis and demonstrated ability to work effectively in a developing country context.

3. **Institutional Development Specialist (local)**
 - Masters degree in the social sciences; political science, public administration, sociology, or related discipline
 - At least five years' professional experience in natural resource related institutional development work and demonstrated expertise in evaluating donor-assisted projects.

4. **Natural Resource Management Specialist (expat)**
 - Masters degree in natural resource management or related discipline
 - At least five years' experience in the natural resource management field and demonstrated ability to work effectively in a developing country context.

5. **Social Scientist (local)**
 - Masters degree in the social sciences; anthropology, sociology, or related discipline
 - At least five years' experience in assessing the community participation aspects of natural resource development activities and demonstrated expertise in evaluating donor-assisted projects

B. Work Days Ordered

The required work days for individual expert are as follows:

Position	Work Days
Natural Resource Policy Specialist (Expat)	52 days
Resource Economist (Expat)	31 days
Natural Resource Mgt. Spec. (Expat)	31 days
Institutional Development Spec. (Local)	30 days
Industrial Pollution Spec. (Local)	24 days
T O T A L	168 days

ARTICLE VIII: ILLUSTRATIVE BUDGET

The illustrative budget for the evaluation is shown in Exhibit 1 of this PIO/T (Evaluation team's note: The budget is not included as an exhibit).

ARTICLE IX: SPECIAL PROVISION

A. Duty Post

The team will perform the work under this delivery order in Jakarta, West and Central Kalimantan, and North Sulawesi.

B. Language Requirements and Other Required Qualifications

No specific language capability is required under this delivery order.

C. Access to Classified Information

Contractor shall not have access to any Government classified materials.

D. Logistical Support

The Team will provide all administrative and secretarial support in close coordination with the project technical assistance team (Associates in Rural Development) and USAID Indonesia staff.

E. Work Week

A six-day work week is authorized.

Attachment: The Technical Contractor's Responsibilities

The team will undertake the following major tasks:

1. Assist the Policy Working Group (PWG) in identifying policy issues for analysis under the project, and advise the PWG on applications of analyses. Results of analysis should be suitable as inputs and/or recommendations for national economic development plans.
2. Work closely with counterparts in (a) conducting selected policy analysis; (b) competing, awarding and administering sub-contracts for policy studies (fully funded by USAID); (c) assisting counterparts to compete and award Host Country contracts (jointly funded by USAID and the Government of Indonesia) for policy analysis/pre-feasibility studies; and (d) assisting the Government of Indonesia to compete and award contracts (fully funded by the Government of Indonesia) for policy analysis/pre-feasibility studies.
3. Train counterparts in policy analysis techniques.

4. Provide office space and technical/administrative support for the operation of a policy Secretariat (comprised of approximately four to six policy analysts from key agencies) and assist in developing procedures aimed at generating income to cover the Secretariat's operating costs.
5. Train staff of the Government of Indonesia in Host Country contracting procedures.
6. Work closely with counterparts in MOFr and from the participating forest concessionaire to develop improved practices and policies for managing natural production forests, including: revising the management plan for the forest concession as appropriate, preparing training materials/case studies and training staff.
7. Assist MOFr staff in designing and implementing management plans for three protected areas, including the development of improved policies and practices which involve local communities in the design and implementation of management plans.
8. Assist and train MOFr staff in (a) identifying applied research needs for pilot management activities under the project, (b) developing procedures for competing and awarding applied research grants, and (c) evaluating the progress of research.
9. Work closely with MOFr and forest concession holder to establish operating procedures for a field research and training station and conduct applied research and training.
10. Train scientists in applied research techniques aimed at supporting the management of natural production forests and protected areas.
11. Assist MOFr and Bappenas to design and implementation activities aimed at promoting public awareness of sound natural resources management.
12. Install a project management information system.
13. Prepare training plan for degree and short-term training, and support/implement training accordingly.
14. Prepare a commodity procurement plan and procure commodities accordingly.
15. Support overall project implementation, including the preparation of annual work and financial plans by the Government of Indonesia and provide administrative support to the project implementation units in Bappenas and MOFr.
16. Prepare annual work plans for the technical assistance team and submit monthly (and annual summary) reports describing progress on implementing the above tasks.

Appendix 2. People Contacted

Note: The following list may not reflect all those people who were contacted. Not all members of the evaluation provided a list of their contacts to the report's editors. The team apologizes to those whose assistance or title is not recognized appropriately.

I. Jakarta and Bogor

A. Bappenas

Herman Haeruman Js.	Head of PCC and Assistant to the Minister of Bappenas on Community Participation and Development Integration
Dr. Sayuti Hasibuan	Deputy V Economic Affairs, Bappenas, PCC, Coordinator PWG
Dr. Ikhwanuddin Mawardi	Assistant to Herman Haeruman and member of PWG

B. Ministry of Forestry

Ir. Bambang Soekartiko	Head of Bureau, Foreign Cooperation and Investment
Ir. Gunarso	Staff of Bureau for Foreign Cooperation and Investment
Ir. M. Kuswanda	Resident advisor, ITTO
Ir. Effendy Sumardja	Director of Program Development, PHPA
Ir. Nana Supriana	Director of Nature Conservation Area Development, PHPA
Ir. Yaya Mulyana	Head of Subdirectorate of National Parks, PHPA
Ir. Waskito Suryodibroto	Secretary to the Director General of Forest Utilization
Ir. Soesatyo Ardjoyuwono	Director of Program Development, Ditjen PH
Ir. Sopari Wangsadidjaja	Head of Subdirectorate, Technical Cooperation
Ir. Harsono	Head of Bureau of Planning, Secretary General of Department of Forestry
Ir. Hartoyo W.	Secretary of AFRD

C. Ministry of Environment

S. Budhisantoso	Expert Staff to the Minister for Social Affairs
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- D. Indonesian Institute of Science
- Deddy Darmadi Team leader, Biological Survey at Bukit
Baka-Bukit Raya National Park
- Sudarsono Riswan Herbarium Bogoriensis
- Sutikno Wirjoatmodjo National Center for Biology
- E. USAID/Indonesia
- Benjamin Stoner Director, Agro-Enterprise and Environment
(AEE)
- Jerry Bisson Project Officer, AEE
- Adiwiyana Program Assistant, AEE
- Agus Widiyanto Program Assistant, AEE
- Ketut Djati Program Assistant, AEE
- Alfred Nakasuma Project Officer, AEE
- Samuel Tumiwa Project Development Specialist
- F. Associates in Rural Development
- Colin MacAndrews Chief of Party
- Chris Bennett Forestry Advisor
- Alix Flavelle Short-term consultant, Sketch mapping
- Esty Jonathan Office Manager
- Nike Sudarman Publication and Training Specialist
- G. World Environment Center
- Will Knowland Country Director, Indonesia
- R. Wiradiputra
- H. Others
- Suzanne Siskel Assistant Representative, Ford Foundation,
Jakarta
- Chip Fay Ford Foundation, Jakarta
- Benjamin Fisher Head, Environmental and Social Impact
Unit, World Bank, Jakarta
- Alastair Fraser ODA, UK-Indonesia Tropical Forest
Management Project
- Donald Fletcher ODA, UK-Indonesia Tropical Forest
Management Project

II. Kalimantan

A. Associates in Rural Development

Ali Hayat	Research Assistant
Mering Ngo	Social Forestry Extension Advisor
Ian Armitage	National Production Forest Management Advisor
Yuliatini	Administrative Assistant
Marcel De Brune	Field Coordinator
Imanul Huda	Research Assistant

B. Kanwil, West Kalimantan

Ir. Suhendar Wiradinata	Head of Development Programm
Achmad Sanusi	Staff
Nurpeni	Staff
Wiwiek NRM	Staff
Agus Wasir	Staff

Regional Office of Natural Resources Conservation

Drs. Sampurno Budi W.	Head
Drs. Erwin Effendi	Staff
Ina Kartini	Staff

Regional Office of Forest Research and Development

Ir. Darwis Syukur Dinas Kehutanan	Project Manager
Ir. Toyo Kosasih	Head

C. Local Government

Pak Manan	<i>Adat</i> leader, Sungkup
Pak Jahari	Hamlet head, Belaban Ella
Pak Hinong	Former hamlet head, Belaban Ella
Pak Sikius	Religion teacher, Belaban Ella
Pak Udat	Hamlet head, Nanga Juoi
Pak Pilang	Former hamlet head, Tumbang Kaburai
Pak Ranan Nango	Village head, Tumbang Kaburai
Pak Usman Sekeng	Sekretaris Kecamatan Menukung
Pak Ramli Doi	Staff, Kecamatan Munukung
Simbolon	Extension agent, Menukung

- | | | |
|------|--|---|
| | Al Dakhri | Extension agent, Menukung |
| D. | NGOs | |
| | Tambuk Bow
Marcell D. Lodo | Yayasan Dian Tama, Pontianak
Community Self-reliance Development Agency |
| | Yusman Syams
Ison Wahid | Yayasan Abdi Rasa
Yayasan MOW Hutan |
| E. | Forest concessionaires | |
| | Ir. Mamat Mulyana
Tri Hardjanto
Adlin
Mahendra | General Manager (SBK)
SBK staff
Camp Manager, SBK
KKP staff |
| F. | Others | |
| | Stepanus Djuweng

Dadan
Abdul Hamid
Syamsusi Arman | Institute of Dayakologi Research and Development, Pontianak
GTZ project manager, Pontianak
Universitas Tanjung Pura
Universitas Tanjung Pura |
| III. | Manado | |
| A. | Associates in Rural Development | |
| | Graham Usher | Marine Conservation Implementation Advisor |
| | Rizal Rompas | Marine Conservation Advisor |
| | Arief Wicaksono | Community Development Advisor |
| | Zulhan Harahap | Field Assistant |
| | Veriyanto Madjowa | Field Assistant |
| | Andre Wala | Field Assistant |
| B. | Government | |
| | Ir. Romon Palete | Head, Suboffice of Natural Resources Conservation |
| | N. Wasir | Staff, Suboffice of Natural Resources Conservation |
| | S. A. Kindangen | Staff, Bureau of Environment, Manado |

S. A. Kindangen
Wayan Lasia
A. K. Lapadengan

Staff, Bureau of Environment, Manado
Tourism Agency
Head, Bunaken Regional Tourist Body

C. NGOs

Winarni
Riswan Lapagu

Manado Working Children
Manado Working Children

D. Others

Loky Herlambang
Ricky Lasut
Suwiryono Ismail
Welson Wangke
Dolfie Mongoagouw
L. A. J. Wewengkang
Janny Kusen
Medy Ompy
Adi Loekito
Adri Waani

Nusantara Diving Center
Tirta Satwa Diving Club
Legal Aid Foundation
Univeritas Samratulangi, Manado
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Appendix 3. Responses to Reviewers' Comments on the NRMP Evaluation

Through the NRMP's Project Coordinating Committee a draft of this midterm evaluation was provided to host-country counterparts, to the staff of USAID/Indonesia, and to representatives of Associates in Rural Development and the World Environment Center. The chairman of the Policy Coordinating Committee solicited comments from these sources; USAID/Indonesia consolidated these comments and provided them to the evaluation team. All substantive comments received are noted below (as is the section and paragraph to which the comment pertains) as are the evaluation team's responses to each comment. In a few instances the comments have been edited to ensure clarity and to provide a context to assist the reader's understanding of the comment.

General Points

1 *Reviewer's comment:* The statement of work (page 6) identifies seven key issues that are to be addressed and notes that this is done. However the first two (the team's purpose, and outputs and then the project design) do not seem to be addressed in the report. This is an important omission. In the case of the first issue (achievement of purpose and outputs) there is also no evaluation of the logframe and no suggestions for modification. Perhaps the report should be revised to reflect a more systematic development of its findings particularly relating to these seven issues so that the reader can follow the logic of the report and its relation to the Terms of Reference.

Response: The evaluation team believes that the report is responsive to the statement of work and understands that USAID/Indonesia is satisfied with this responsiveness. Although the report could reflect a different organization, the present report is written in such a manner that similar topics are discussed in single chapters rather than dispersed throughout the report.

2. *Reviewer's comment:* Although recommendations are made at various stages throughout the report there is no summary of these. This makes it difficult for a reader to get a clear picture of what the evaluation team is actually recommending in its overall analysis. Therefore it would be better if a summary was put at the beginning of the report.

Response: The evaluation report provides recommendations that follow immediately the discussion of each relevant topic, and the table of contents directs the reader to those topics. There is also a desire to complete the report quickly, otherwise it will lose its value. Preparing an overall summary would extend the time needed to complete the evaluation. For these reasons a decision has been made not to repeat recommendations already made else in the report.

3. *Reviewer's comment:* There is no clear statement throughout the report of how NRMP would transfer its work and knowledge to Indonesian counterparts. While it is assumed that this should be done through training and other activities there is no analysis of whether this is a best way to do this and what exactly should be transferred by the end of the project.

Response: The statement of work does not ask the evaluation team to assess how the NRMP should transfer its work. USAID/Indonesia, ARD, and the project's Indonesian counterparts are in the best position to judge what should be transferred at the end of the project.

Executive Summary

4. *Reviewer's comment:* In general the executive summary needs rewriting as currently it is not a balanced summary of the report.

Response: The executive summary has been revised to address the reviewer's concerns.

5. *Reviewer's comment:* The word "disappointment" is very subjective. It might be better to talk about "instances of where the project has achieved its goals and others where those goals have yet (or have not been) to be achieved" (para. 3).

Response: The executive summary has been revised to address the reviewer's concern.

6. *Reviewer's comment:* This might be rephrased. Presently this gives the impression that the project has significantly failed here. The findings on page 10 indicates that three studies had been finished at the time the evaluation team was doing its work but by August 1994 a month or so later eight studies would have been finished. The question of impact needs a more balanced statement. The time lag between a study being completed and its policy recommendations being put into effect can be considerable and, therefore, the project should not be blamed at this stage for lack of impact (para. 4).

Response: The executive summary has been revised to address the reviewer's concerns; it does not include a statement about the number of studies completed. Section 2.2.3 indicates completion of eight studies through August 1994.

7. *Reviewer's comment:* It is unclear what is meant by project research activities as there has been little actual research done on the project. The majority of the MSc. students to date have done research on national parks and protected areas and in some cases research related to other policy studies (i.e. rattan) thus relating to the Policy Secretariat's work. Thus this paragraph needs reworking (para. 6).

Response: The executive summary has been revised to address the reviewer's concerns and to clarify the evaluation team's intent. No reference is made to project research activities.

8. *Reviewer's comment:* The reference to the poor communication skills of the TA team is not completely accurate. The problem was also coordination between the TA team and local counterparts due to the isolation of the site and inadequate counterpart funding for travel to Bukit Baka (para. 8).

Response: The executive summary has been revised to address the reviewer's concern.

Text

9. *Reviewer's comment:* The reference to "several project sites" should be corrected to "two project field sites" (Sec. 1.3., para. 3).

Response: The text has been revised to address the reviewer's concern.

10. *Reviewer's comment:* It would be useful for the evaluation team to indicate whether it agrees or disagrees with the recommendation on Gunung Palung (Sec. 1.4., footnote 3).

Response: The footnote has been revised to indicate agreement with the recommendation.

11. *Reviewer's comment:* The reference to a series of JIPs is incorrect. There has been only one JIP, which is then revised in a draft version for the period 1994-96. This misunderstanding of the project's documentation needs to be corrected throughout the report (Sec. 1.5., para. e).

Response: The text has been revised to address the reviewer's concern.

12. *Reviewer's comment:* The reference to the first resource economist's resignation seems to have no relevance here (Sec. 2.2.4., para. 1).

Response: The evaluation team disagrees with the comment. The resignation is relevant to the point that the project has had several people leave the project prematurely. The statement provides evidence to support the team's concern about turnover.

13. *Reviewer's comment:* The word "typically" should be added as there is never a quick turnaround between the formulation and acceptance of recommendations for policy change (Sec. 2.2.4., para. 2).

Response: The text has been revised to address the reviewer's concern.

14. *Reviewer's comment:* It should be noted that cancellation of the marine sector study was based on ARD's recommendation (Sec. 2.2.4., para. 4).

Response: The text has been revised to address the reviewer's comment.

15. *Reviewer's comment:* Is the team referring to the policy briefs and their future production? If so, this should be noted (Sec. 2.2.4., last para).

Response: The evaluation team is not referring to the policy briefs but to more substantive documents.

16. *Reviewer's comment:* The paragraph should add items to reflect: a) a task force for policy analysis and development at the Ministry of Forestry and b) to linkages to a high-level policy task force at the Ministry of Forestry (Sec 2.3.3, para. 2).

Response: The text has been revised to address the reviewer's concern.

17. *Reviewer's comment:* First, the NRMP has not developed research activities. Second, it would have been difficult to focus the students on Bukit Baka-Bukit Raya and Bunaken for different reasons, i.e., lack of development in Bukit Baka-Bukit Raya and the students' lack of background on the marine side. Four of the seven completed field research studies have focused on protected areas and a fifth was directly related to the Policy Secretariat's work on protected areas while the one on rattan supported the Policy Secretariat's rattan study (Sec. 2.4.3, para. 1).

Response: The text has been revised to address the reviewer's concerns.

18. *Reviewer's comment:* It might have been better if the evaluation team's recommendation had focused on suggesting that returning students should be supported to do the follow-on work on the NRMP areas before returning to their duties (Sec. 2.4.3., para. 3)

Response: The text has been revised to address the reviewer's suggestion.

19. *Reviewer's comment:* The bottom three lines should be corrected. After the words "December 1993," the following should be added: "at a formal presentation in March 1994 it was decided that the draft plan should be submitted by the Kanwil to PHPA in Bogor. In response to the Kanwil's request, an executive summary was prepared in Bahasa Indonesia and was submitted to PHPA" (Sec. 3.2.1.1.).

Response: The text has been revised to address the reviewer's concern.

20. *Reviewer's comment:* The evaluation team's reference to the Kanwil being undecided is incorrect. At the time the evaluation team met with the Kanwil, the draft management plan had not been sent through for bureaucratic reasons although it had been agreed at the presentation in March 1994 that it should be sent. As a result of the evaluation team's concerns, the Kanwil then became undecided and submission of the plan was delayed. This paragraph should be rewritten to reflect accuracy (Sec. 3.2.1.2., para. 2).

Response: The text has been revised to address the reviewer's concern.

21. *Reviewer's comment:* The discussion of accomplishments should be modified through mention of the contractor's efforts in regard to improved tree identification and a reduction in avoidable logging wastes (Sec. 3.2.2.1., para. 1).

Response: The evaluation team disagrees with this comment. Accomplishments associated with the contractor's efforts to improve tree identification are discussed in Sector

3.2.2.1, paragraph 2; efforts to reduce logging wastes are discussed in Section 3.2.2.1, paragraph 5.

22. *Reviewer's comment:* Two additional studies should be included, i.e., the study focused on improvements to guidelines for the selective logging system known as TPTI and another on increased participation of local communities in forest management (Sec. 3.2.2.1., para. 5).

Response: The text has been revised to incorporate reference to these studies.

23. *Reviewer's comment:* After the words "forest advisor" it would be more balanced to add the following: "this work has included the Ministry of Forestry's acceptance of the need to create focused policy teams (Sec. 3.2.2.1, para. 8).

Response: The text has been revised to incorporate reference to these studies.

24. *Reviewer's comment:* After the words "Bukit Raya area," the following should be added: "first through the preparation and submission of a formal proposal to the Ministry of Forestry and local government followed by a pilot implementation phase" (Sec. 3.2.3.1., para. 6).

Response: The report has been revised to address the reviewer's concern.

25. *Reviewer's comment:* To our knowledge it is incorrect for the evaluation report to state that "problems with local NGOs were initially exacerbated by the inability of resident long-term advisors who were responsible for integrating project activities at the site to interact in an effective manner with them." Did the evaluation team receive evidence from NGOs on this point? If the team did, did the team evaluate this evidence critically? (Sec. 3.2.3.2, para. 2).

Response: The text has been revised to address the reviewer's concern.

26. *Reviewer's comment:* "Inadequate support for travel budgets" should also be mentioned (Sec. 3.2.4., para. 1).

Response: The text has been revised to address the reviewer's concern.

27. *Reviewer's comment:* After the words "Ministry of Forestry," the following words should be added: "but this situation improved after July 1993 with the placement of a forest policy advisor within the Ministry of Forestry" (Sec. 3.2.4., para. 3).

Response: The text has been revised to address the reviewer's suggestion.

28. *Reviewer's comment:* There is no evidence that these factors discussed in this paragraph led to delays in the government's award of contracts or the transfer of operational funds. Thus, this is an incorrect statement unless supported by actual statements from the government to this effect (Sec. 3.2.4., para. 3).

Response: The text has been revised to address the reviewer's suggestion.

29. *Reviewer's comment:* The meaning of the following sentence is unclear: "The evaluation team acknowledges the contractor's efforts to improve recruitment procedures and to counsel newly contracted advisors but believes that there is an issue that supersedes the provision of technical assistance in the NRMP." What is the issue at stake? (Sec. 3.2.4, para. 6).

Response: The text has been revised to address the reviewer's concern; the sentence in question has been deleted.

30. *Reviewer's comment:* After the word "Pontianak," the following words should be added: "the workshop invited suggestions from different regional institutions covering the specific forest research needs of West and Central Kalimantan" (Sec. 3.3., para. 1).

Response: The text has been revised to address the reviewer's suggestion.

31. *Reviewer's comment:* What are "acceptance levels"? (Sec. 3.4.1.2, para. 11).

Response: The sentence in question has been clarified to address the reviewer's concern.

32. *Reviewer's comment:* The reference to the "two most recent JIPs" is incorrect. The text should refer to the "revised draft of the JIP" (Sec. 4.2., para. 5).

Response: The text has been revised to address the reviewer's concern.

33. *Reviewer's comment:* Again the reference to two different JIPs is incorrect. There is only one JIP, which is being revised. As to the draft, it is being revised. Thus the assumption that this is a final document is incorrect both here and throughout the report (Sec. 4.2., para. 7).

Response: The text has been revised to address the reviewer's concern.

34. *Reviewer's comment:* The reference to the "most recent JIP" should read, the "most recent draft JIP" (Sec. 4.3., para. 3).

Response: The text has been altered to address the reviewer's concern.

35. *Reviewer's comment:* The recommendation that the management plan include discussion of how forces inside the park effect the implementation plan has already been discussed in the plan in the park committee section. Therefore editing is needed to reflect this (Sec. 4.4., para. 3).

Response: The comment addresses forces *inside* the park. The draft evaluation discusses forces *outside* the park. Thus, the relevance of the comment to the discussion in the evaluation is not clear.

36. *Reviewer's comment:* The evaluation report does not define what is meant by "proactive" here or elsewhere in the report. Does proactive mean regular meetings with donors and presentations at the meetings of the Consultative Group on Indonesian Forestry? (Sec. 4.5., para. 4).

Response: Proactive means to seize the initiative. The evaluation team will leave it to the contractor to decide how best to do so. The evaluation report provides two examples of what can be done. The word "proactive" is not used elsewhere in the report.

37. *Reviewer's comment:* What does the evaluation team mean by less consulting and greater implementation? Consultants are linked to implementation and the project is meant to help with the government's implementation of the project (Sec. 4.7., para. 3).

Response: The sentence that prompted the reviewer's concern has been deleted.

38. *Reviewer's comment:* As the contractor's staff is "applauded" for its monitoring of gender issues, this should be mentioned in the executive summary (Sec. 6.1.1., para. 5).

Response: The executive summary already notes an "impressive array of accomplishments" in regard to women in development. The evaluation team believes that this wording already conveys the reviewer's concern appropriately.

39. *Reviewer's comment:* The evaluation report recommends that the contractor's staff should invite representatives of donors to project sites. This has been done regularly at individual meetings and at meetings of the Consultative Group on Indonesian Forestry (Sec. 6.2.2., para. 3).

Response: The recommendation has been deleted.

40. *Reviewer's comment:* It was explained clearly to the evaluation team that all reports have to be sent to the chairman of the PCC for clearance and that the contractor is not allowed to distribute any report formally until his clearance is received. In fact this has only been given in about four or five cases so that we have had to distribute reports "under the table." This is regrettable, but the fact remains we are prohibited from distributing reports officially unless cleared by the chairman of the PCC (Sec. 6.2.2., para. 4).

Response: The evaluation team did not mean to imply that the contractor is unduly delaying the distribution of reports. The evaluation team understands the reasons for the delays (as explained by the contractor's team). The paragraph has been revised to address the reviewer's concern and to suggest a way to insure timely publication of relevant reports.