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STRENGTHENING EIA CAPACITY IN ASIA:

Environmental Impact Assessment in
The Philippines, Indonesia, and Sri Lanka

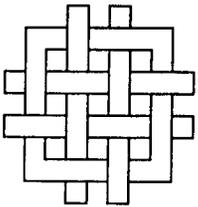
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This report represents a timely, scientific treatment of a subject of public concern. Its collaborating partners take responsibility for choosing the study topics and guaranteeing its authors and researchers freedom of inquiry. This report's authors have also solicited and responded to the guidance of advisory panels and expert reviewers. Unless otherwise stated, however, all the interpretation and findings set forth in WRI publications are those of the authors.

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Although the case studies have identified numerous problems and deficiencies in EIA processes, environmental agencies and other governmental authorities in the Philippines, Indonesia, and Sri Lanka have made exceptional progress over the past several years in instituting and expanding their EIA capabilities. This commitment to improving EIA and willingness to engage in a critical self-examination has been essential to our project's success. The support and cooperation of the respective EIA agencies in each of the three case-study countries are gratefully acknowledged.

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We have much appreciated the time and effort of the members of the Advisory Committee for providing guidance throughout this project and of Brian Clark and Jim Tarrant for reviewing the draft manuscript of this synthesis report.

Canada's Federal Environmental Assessment Review Office (FEARO), in collaboration with the International Association for Impact Assessment (IAIA), is leading an international study on the effectiveness of Environmental Assessment practice. Our efforts have benefitted from the collegial spirit of the FEARO study team, and this synthesis report may be viewed as a contribution to their study.

Our colleagues at WRI—Tom Fox, Walter Arensberg, Kirk Talbott, Owen Lynch, Dan Tunstall, Norbert Henninger, Aaron Zazueta, Chip Barber, Roger Dower, Oretta Tarkhani, Miwako Kurosaka, to name but a few—provided advice, support, and assistance in many ways, for which we thank them. As well, the authors would like to thank Kathleen Courrier for her editorial work, Catherine Veninga for preparation of text and graphics, and Hyacinth Billings for report production. The views and conclusions expressed in this report, as well as any errors or omissions, are, of course, the sole responsibility of the authors.

*D.B.S.
M.W.*

Preface

Environmental Impact Assessment was something new under the sun when the United States first mandated it twenty-five years ago, but the concept caught on fast in many other nations. Both the Philippines and Indonesia, for instance, have been conducting EIAs since the early 1970s, so they have nearly as much experience as any other country does.

Like the rest of the developing world, Asian nations now face new demographic and economic realities that require new development approaches. Economic growth is a necessity to meet the basic needs of burgeoning populations, but the conundrum for these nations—as for all others—is how to expand their economies in environmentally sustainable and therefore enduring ways.

Environmental Impact Assessment can help countries foresee the environmental repercussions of various development plans—and thereby choose the most sustainable ones—as Mieke van der Wansem, David Smith, and their collaborators point out in *Strengthening EIA Capacity in Asia*. In case studies of the Philippines, Indonesia, and Sri Lanka, the authors highlight issues, problems, and needs that may be left out of the usual analytical framework. What they recommend may be most useful in helping these three countries to fine-tune their approaches, but other countries with less EIA experience can also glean information that will help them improve their practices. Among the report's recommendations to governments undertaking EIAs, four especially stand out:

1. Facilitate public participation. Effective EIAs rest on the twin pillars of a strong analytic orientation and the involvement of nongovernmental organizations, affected communities, and individual citizens in the planning process. EIA agencies can engage the public by providing timely notice of pending decisions, access to EIA reports, opportunities to be heard before decisions are made, a written record of decisions and their underlying rationales, and an appeals mechanism for reviewing final decisions.

2. Clarify participants' responsibilities. Serious mistakes in administering an EIA are inevitable unless pro-

cedures are spelled out and clear responsibilities are assigned. The multi-tier U.S. model, in which the Council on Environmental Quality's regulations add precision to the National Environmental Policy Act's sometimes vague language, makes for a comprehensive, but flexible, national framework.

3. Make information available to the public. An EIA process can be needlessly confusing to lay people, so government agencies should make all the relevant data accessible. Besides requesting public comment when a project is first declared to be subject to EIA review, agencies should be sure that the dates for public hearings and comment periods are widely publicized.

4. Link EIAs to development planning, programming, and policy-making. Asian countries have a tradition of centralized long-range economic and development planning. EIAs should be conducted early in this planning process, rather than after key decisions have been made. Such timely consideration of issues and impacts is consistent both with sound professional practice and with donor preferences.

The authors call for creating an EIA network to give practitioners an informal arena for sharing what they've learned and conducting EIA demonstration projects. Three principles culled from experiences in the Philippines, Indonesia, and Sri Lanka can help countries match EIA means to ends elsewhere; the authors stress that planners should focus on ends that can be achieved soon, should strengthen existing institutions instead of creating new ones, and should encourage multi-disciplinary and broad-based approaches over narrow sectoral ones.

Strengthening EIA Capacity in Asia complements the analyses set forth in other reports by WRI's Center for International Development and Environment, such as *A Matter of Interest: Environment, Equity, and Participation in Policy-making*; and *Local-Level Natural Resource Management: Lessons Learned from the Ground Up*.

We would like to express our appreciation to the United States Agency for International Development,

the Japan International Cooperation Agency, and the Netherlands Ministry of Foreign Affairs for their financial support of this study. To all three agencies, we are deeply grateful.

Walter V. Reid
Vice President for Program
World Resources Institute

Acronyms

ADB	Asian Development Bank	EFL	Environmental Foundation Ltd., Sri Lanka
AID	United States Agency for International Development	EIA	Environmental Impact Assessment
AIDAB	Australian International Development Assistance Bureau	EIS	Environmental Impact Statement
AIT	Asian Institute of Technology, Bangkok	EMB	Environmental Management Bureau (EIA agency, the Philippines)
AMDAL	Environmental Impact Analysis Process, or System (Analisis Mengenai Dampak Lingkungan)	EMC	Environmental Management Centre (Serpong, Indonesia)
ANDAL	Environmental Impact Analysis Report (Analisis Dampak Lingkungan)	EMDI	Environmental Management Development in Indonesia (a CIDA program in cooperation with BAPEDAL)
ANGOC	Asian NGO Coalition for Agrarian Reform and Rural Development	EMPAS	Environmental Management and Protected Areas Sector
ASEAN	Association of Southeast Asian Nations	EPA	United States Environmental Protection Agency
BAPEDAL	Indonesia's Environmental Impact Management Agency (Badan Pengendalian Dampak Lingkungan)	ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
BKPM	Indonesia's Investment Board (Badan Koordinasi Penanaman Modal)	GIS	Geographic Information System
CEA	Central Environmental Authority	IEC	Information, Education, Communication activities
CEPR	Center for Economic Policy Research, the Philippines	IEMP	Industrial Environmental Management Program
CEQ	United States Council on Environmental Quality	IIED	International Institute for Environment and Development
CIDA	Canadian International Development Agency	IUCN	The World Conservation Union
DENR	Department of Environment and Natural Resources (the Philippines)	JICA	Japan International Cooperation Agency
ECC	Environmental Compliance Certificate	LH	Indonesia's Environment Ministry (Lingkungan Hidup)
EDI	Economic Development Institute of the World Bank	MEIP	Metropolitan Environmental Improvement Programme

MEPA	Ministry of Environment and Parliamentary Affairs (Sri Lanka)	RKL	Environmental Management Plan (Rencana Pengelolaan Lingkungan)
NAREPP	Natural Resources and Environmental Policy Project (a USAID program in cooperation with the Government of Sri Lanka)	RPL	Environmental Monitoring Plan (Rencana Pemantauan Lingkungan)
NEPA	National Environmental Policy Act (United States EIA legislation)	SEMDAL	Environmental Impact Analysis of an Existing Project (Studi Evaluasi Dampak Lingkungan)
NGO	Non-governmental Organization	UNDP	United Nations Development Programme
NRMP	Natural Resources Management Program	UNEP	United Nations Environment Programme
ODA	Overseas Development Administration	US-AEP	United States-Asia Environmental Partnership
OECD	Organisation for Economic Co-operation and Development	USAID	United States Agency for International Development
PEL	Preliminary Environmental Evaluation (Penyajian Evaluasi Lingkungan)	WALHI	Environmental Forum of Indonesia (Wahana Lingkungan Hidup Indonesia)
PIL	Preliminary Environmental Information (Penyajian Informasi Lingkungan)	WRI	World Resources Institute

1. Comparative Assessment

A. OVERVIEW

Over the past twenty years, Asia's population and Gross National Product (GNP) have grown markedly. During most of the 1980s, GNP in the region increased by 5 percent annually on average. Great strides have been made throughout much of the area in addressing poverty and under-development.

Although the economies of such countries as Burma, Vietnam, Nepal, and Bangladesh remain predominantly low-income and agricultural, others are increasingly middle-class and industrial. Among these are the three countries addressed in the case study chapters of this report—Indonesia, the Philippines, and Sri Lanka—as well as others in the region, such as India, Thailand, and Malaysia.

Throughout Asia, however, economic growth and industrialization have been accompanied by increased urbanization, large-scale exploitation of the region's extensive but finite natural resource base, and the widespread despoliation of air, water, and soils by industrial and domestic wastes.

The region's most sensitive and productive natural resources—tropical forests, coastal zones, agricultural lands, etc.—number among those most endangered by inadequately planned development and poorly managed growth. Environmental degradation threatens the continued economic and social viability of farmers, fishers, and craftspeople, all of whom depend directly on the fragile natural resource base, and significantly reduces returns from the utilization of scarce resources.

These phenomena diminish real and anticipated gains from economic expansion. Nevertheless, the alleviation of poverty and the pursuit of economically sound societies will require continued aggressive development of the region's resources. Unless care is taken, however, the potential for sustaining environmentally sound growth is at risk.

Environmental Impact Assessment, or EIA, is one tool for predicting and addressing the potential impacts of

development policies, plans, projects, and activities. EIAs of projects and programs are already routine for local and national governments in many Asian countries, but they have great unused potential for helping environmental planners, decisionmakers, and managers achieve their sustainable development objectives.

What Do We Mean By "EIA"?

EIA, a fluid and still-evolving concept, means different things to different people. By almost any reckoning, it involves the study of human changes to the environment, and its purpose is to inform planning, design, and decisionmaking. But disagreement over the proper legal and technical definitions of "changes," "environment," "activities," and other key terms is considerable.

Although agreement on a single and precise definition of EIA is not essential to this study, it is useful to review two general definitions held by various stakeholders in the EIA process, even though both approaches are perforce artificial and most people's conception of EIA combines elements of each. Neither approach presented here is the "correct" approach; each can be viable and useful.

In the **technocratic/regulatory approach**, EIA has an important but highly focused purpose—namely to produce information to help agency staff and project sponsors identify the projects and activities that best satisfy pre-ordained policies and standards. Its ultimate objective is to improve project decisionmaking and to support related regulatory programs. Such an EIA process tends to be highly technical, precise in scope, internally oriented, and advisory. It also tends to be project-focussed and to concentrate more on physical environmental impacts than on social or economic issues. Depending on the stage of the planning/design cycle in which it is applied, it may or may not identify and evaluate alternative courses of action.

In the **consensus building/management approach**, EIA is a means of integrating environmental with social and economic planning processes and of improving project outcomes by broadening the range of values and

concerns taken into account in decisionmaking. Under this approach, EIA is a tool for identifying and exploring issues, as well as resolving them. It tends to be process-focussed, externally oriented, and open-ended. Public participation is seen as the heart of the process. Early consideration of basic alternatives, as well as of impact-mitigation measures, is a fundamental element of the search for broad-based support for proposed activities.

Like most decisionmaking tools, EIA can be shaped to serve disparate policy objectives. In each country, the EIA system must be structured to reflect local needs, goals, and historical imperatives. Any assessment of specific EIA institution-building and capacity strengthening needs must thus take into account the purposes to be served by the EIA process, so the structure will vary from country to country.

For example, advocates of a "technocratic" approach to EIA may put a high priority on developing "expert systems" techniques for impact analysis so as to simplify technical studies and to harmonize their results. By contrast, those with a "consensus building" orientation would be less bothered by a lack of consistency from study to study and perhaps more interested in developing the communications tools needed to obtain better local input into the impact study and evaluation.

The Need for Strengthened EIA Capacity

Strengthening a country's capacity to carry out EIA, broadly defined, can significantly improve environmental and natural resources management. Indeed, the procedures and technical studies needed to conduct an EIA effectively are also essential to sound environmental planning and management. Moreover, the most effective EIA systems are part of a well-developed and well-understood framework for consulting with all stakeholders—including local governments, NGOs, private sector interests, and the populations directly and indirectly affected by proposed projects or policies.

Most Asian countries have enacted comprehensive environmental legislation. (See *Environmental Legislation and Administration: Briefing Profiles of Selected Developing Member Countries of the Asian Development Bank* (Asian Development Bank, Environment Division, Manila, 1992) and *Appendices C and D of this report*.) Typically, topics traditionally seen as public health or urban development matters, such as water quality, air quality, and land use, are addressed in detail in this legislation. Emerging issues, such as waste minimization and recycling, management of toxic and hazardous substances,

coastal areas protection, and the like, are generally accorded less attention than forest resources, fisheries, wildlife, and other natural resources exploited for economic purposes.

But laws alone are not enough. Even when clearly set forth in legislation, environmental enforcement is often deficient. A lack of political commitment for pursuing environmental policy goals, a lack of clear regulatory and performance standards, poorly defined permit requirements, a lack of inspection and monitoring activities to identify violators, and inadequate funding of enforcement agencies and tribunals all bedevil enforcement.

At the same time, many countries do not have accurate data on rural natural resource use and degradation, and few countries have established viable processes for consulting with community groups and other private sector interests—essential if an EIA system is to fulfill its potential as a powerful tool in environmental and natural resource management.

The last decade has seen tremendous growth in the application of EIA in the region, but at varying levels of sophistication. So far, the major focus has been on the techniques and tools of EIA at the project level. Policy, programmatic, and strategic EIAs remain largely untried. As well, only a few Asian countries have integrated social, cultural, and economic aspects into EIAs.

In some cases, EIA is a formal mandatory requirement; by law, it must be used during project decisionmaking. In others, it is seen as a useful but optional component of project review and appraisal. In still other countries in the region, EIA requirements have yet to be adopted.

The World Resources Institute (WRI) Study

This synthesis report covers the direct results of a project carried out by the World Resources Institute from November 1992 through December 1993. The WRI study explored the constraints and opportunities that influence Asian countries to develop effective environmental and natural resource planning and management programs. Ultimately, the study team sought to suggest ways to help decisionmakers understand the importance of EIA within sustainable development planning, environmental policy formulation, and project decision-making; increase public interest and participation in environmental policy-making and project planning, design, and decisionmaking; help EIA preparers and reviewers conduct better EIA studies; and improve the implementation of EIA findings and recommendations through

compliance monitoring, impact management, and enforcement programs.

Vital to this analysis are the three case studies, each headed up by an in-country NGO or policy-research organization. Working with WRI, each case-study team identified country-specific issues, problems, and needs that may not fit easily into a common analytical framework. Local social and political traditions, customs, and values were taken fully into account in developing an effective program for strengthening EIA capacity. (For issues and topics covered by the three case-study teams, see *Appendix E*.)

After the in-country studies were completed, a regional workshop was held in December 1993 to review the three study teams' findings and recommendations, to consider the reactions and input of participants from other Asian countries and from donor agencies, and to begin identifying alternative strategies for strengthening EIA systems and procedures. (See *Appendix F* and *Appendix G*.) During this workshop, participants were asked to respond to two questionnaires on EIA problems, practices, and prospects in their countries. (See *Appendix H*.) Participants were also asked to briefly describe projects that illustrate recent EIA and sustainable development

planning experiences. Many of these illustrative examples appear in 'boxes' throughout this report.

B. THE EIA PROCESS

Although Environmental Impact Assessment (EIA) procedures vary with each country's unique laws and local practices, the following key steps seem generic and public participation should be infused into each:

- ▶ Project identification and definition
- ▶ Screening and determination of clearance level
- ▶ Scoping
- ▶ Baseline data collection and analysis
- ▶ Impact prediction and analysis
- ▶ Identification of impact-mitigation measures and monitoring plans
- ▶ Circulation and review of EIA report (perhaps in conjunction with a public hearing)
- ▶ Publication of EIA report
- ▶ Formal approval (with or without conditions)
- ▶ Compliance monitoring and impact management.

During *project identification and definition*, the project proponent conducts feasibility studies, considers alternatives, files a notice of intent to seek EIA clearance, and, ideally, initiates an interagency and public consultation process.

In the *screening* stage, the EIA agency consults with the proponent and other agency and public participants to determine what further studies, if any, need to be undertaken before approval is given. At this stage, the EIA agency determines if the project may proceed as planned or if it needs to be subjected to an initial or complete EIA.

The *scoping* stage, often merged with screening, produces a more detailed plan of study for the project to follow. Key concerns may be defining the study area, identifying key impact issues or concerns, figuring out what assessment methods and models to use, etc. Often, agency and public representatives interested in the project or the project area are consulted.

Baseline data collection and analysis involves assembling data from existing sources and from new fieldwork.

Box A. Case Study Team Leaders and Organizational Affiliations

Indonesia

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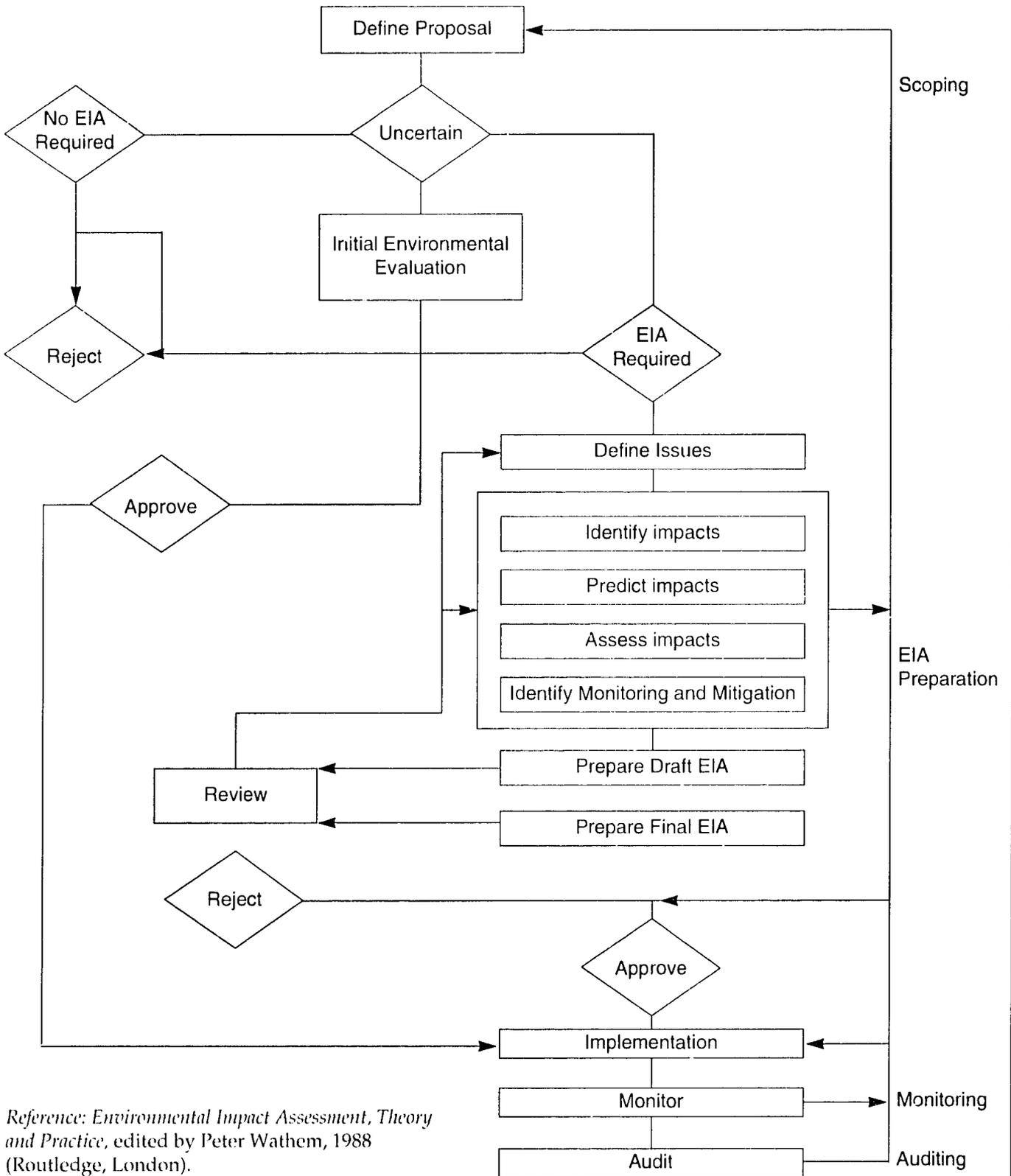
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Box B. Generic EIA Process



Reference: *Environmental Impact Assessment, Theory and Practice*, edited by Peter Wathem, 1988 (Routledge, London).

Impact prediction and assessment is the heart of the technical process. Since a wide variety of analytic methods and models are available, a central challenge is selecting those that provide the needed information in the most cost-effective way. Assessment criteria will generally include a mixture of legally mandated criteria, technical/scientific criteria, and social acceptability criteria. The latter are generally the hardest to agree upon and to apply.

Once impacts are identified, *impact-mitigation measures* must be specified. If the project planning and design process is flexible enough, the basic project alternative can be modified as needed. But in some cases, entirely new alternatives may be required. Where negative impacts cannot be eliminated, *monitoring* programs may need to be developed to minimize them.

The *circulation and review of the EIA report* will normally occur at this point. The review process may be an internal, largely technical process, or it may be open to input from the public at large. Public information meetings and even formal public hearings will often be part of the review process. Project proponents may be asked to respond to comments and to revise the EIA report accordingly.

Publication of the EIA report is increasingly being required, though some countries treat the findings as internal documents and do not make them available to the public at large.

Formal approval of the EIA report is often set forth in a written Record of Decision. Generally, the conditions that the project proponent must comply with to get approval are spelled out in this document. Commonly, *compliance monitoring and impact management plans* are required since they can help enforce environmental license and permitting procedures, keep public agencies and communities involved in dealing with negative impacts, and give useful "feedback" on the accuracy of the EIA's impact predictions.

Box B is a flow diagram of the generic EIA process.

EIA in the Philippines

In the Philippines, the EIA system was established in 1978 with the signing of Presidential Decree No. 1586, which designated the Environmental Management Board (EMB) and the regional offices of the Department of Environment and Natural Resources (DENR) as the primary implementing agencies. EMB

has an EIA unit comprised of technical personnel responsible for processing Environmental Impact Statements and for site inspections, compliance monitoring, and training.

Environmentally critical projects (such as those in heavy industry, resource extraction, and large-scale infrastructure), and projects located in environmentally critical areas are subject to environmental review. Projects requiring an EIS cannot be implemented until an Environmental Compliance Certificate is obtained from EMB.

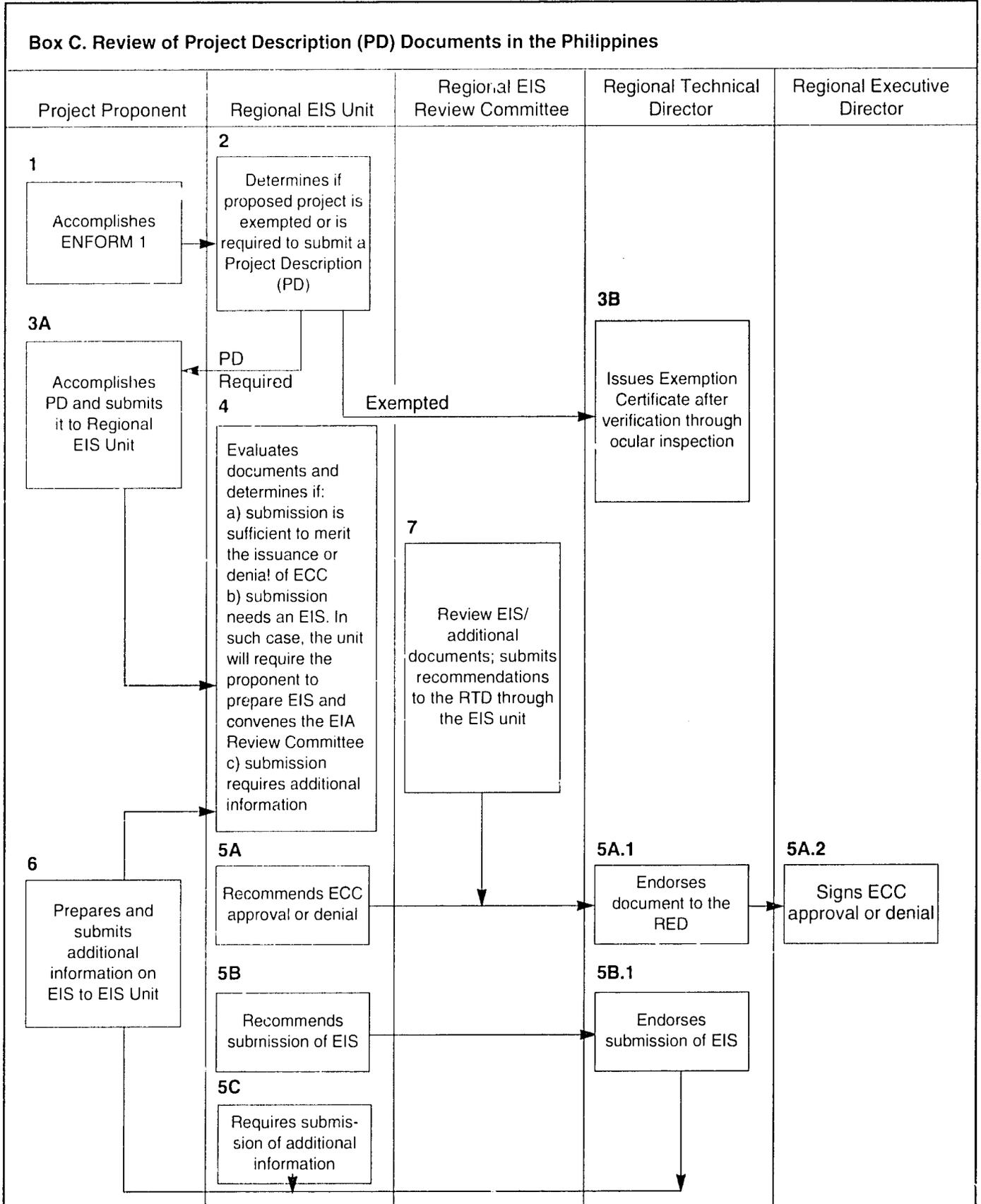
Two types of documents are produced under the EIA system: project descriptions and environmental impact statements. The first, which describes the project and its site prior to development and presents a preliminary examination of the project's likely environmental impacts, is required for nearly all projects located in environmentally critical areas. Project descriptions are evaluated and processed by the Environmental Management and Protected Areas Sector (EMPAS) within the regional DENR offices.

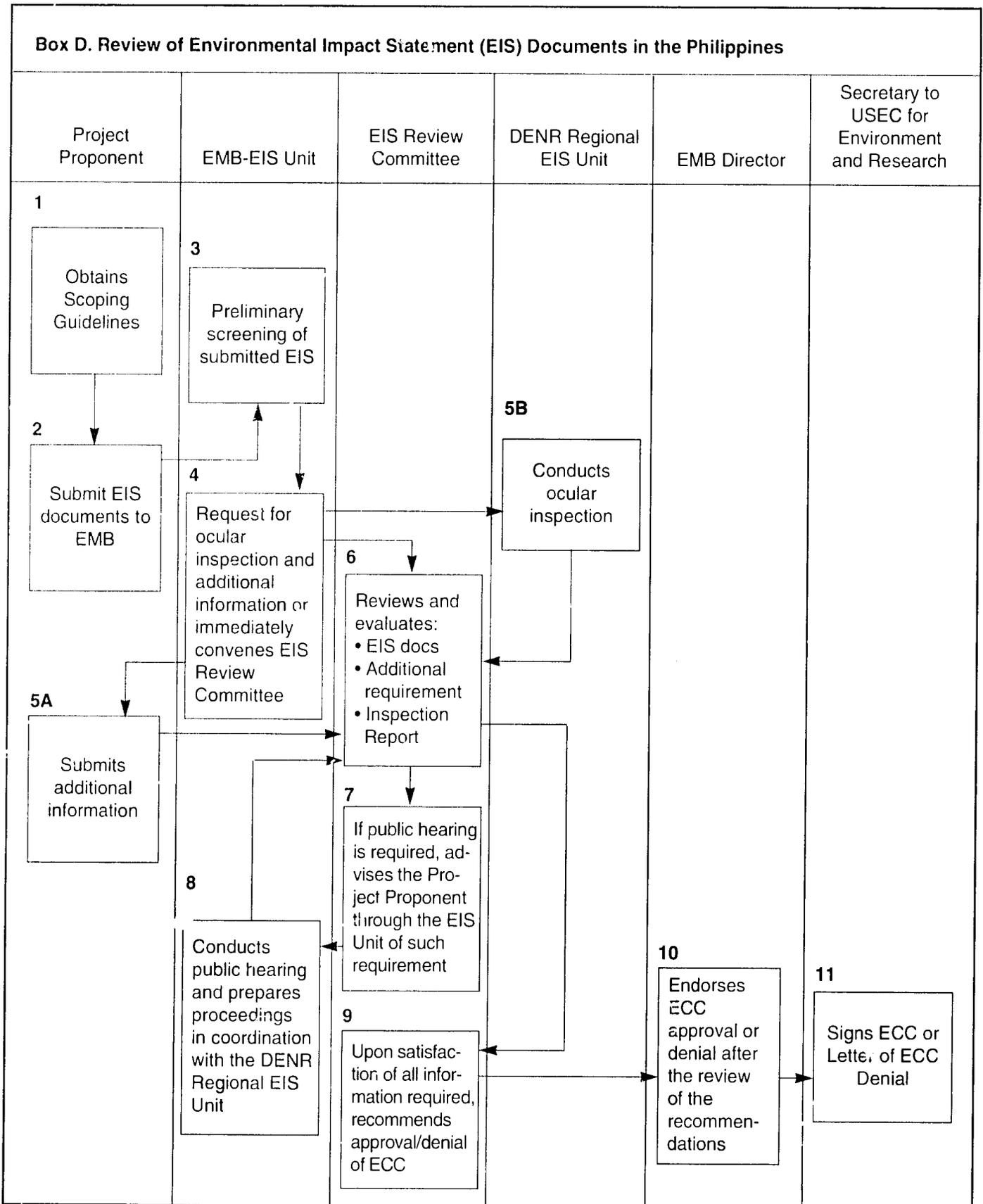
An Environmental Impact Statement is prepared for environmentally critical projects and for other projects located in environmentally critical areas if the project description reveals that more in-depth studies are needed to address anticipated environmental impacts. At the national level, EMB evaluates and processes Environmental Impact Statements for environmentally critical projects.

In general, projects are reviewed after major site and design decisions have already been made. Exploring alternative project designs is not an important component of the review process.

EIAs consist of eight basic procedures (*See also Boxes C and D*):

1. The project proponent initiates the review by filing a notice, known as ENFORM 1 with either the regional DENR or EMB. Once ENFORM 1 is reviewed, the project proponent must prepare and submit either a Project Description or an Environmental Impact Statement. If the project is found to be exempt from an EIA review, the project proponent is granted a certificate saying so.
2. If a project description is required, the project proponent submits 15 copies to the appropriate regional DENR or EMB office.





3. After it evaluates the project description, the reviewing office recommends: (a) issuing an Environmental Compliance Certificate, with necessary stipulations, (b) calling for additional information from the project proponent, or (c) elevating review and evaluation to an EIA Review Committee. The EIA Review Committee consists of governmental, academic, and private consultants representing various disciplines. When it completes its review, which may include a public hearing, the committee may recommend: (a) issuing an Environmental Compliance Certificate, with necessary stipulations, (b) asking the project proponent for additional information, or (c) preparing a full Environmental Impact Statement.
4. If an EIS is required, the project proponent submits a complete EIA to EMB's EIA Section, which prepares a three-part "information package" consisting of the environmental impact statement, a site-inspection report, and other relevant information. The EIA review committee then meets to consider this package. It may request additional information from the project proponent or call for a public hearing on the project. The EMB EIA Section receives all pertinent documents from here on in the review process (including any supplemental information provided by the project proponent, review comments, etc.) and maintains the project file.
5. EMB may also conduct a public hearing if the project is large or if the area and resources affected are particularly sensitive. The time and location of the hearing is set in cooperation with local officials in the municipality where the project is to be located, and EMB then publishes a notice of the hearing. Results of the public hearing, which become part of the project record, are considered when the project proponent's Environmental Impact Statement comes up for approval.
6. Once it reviews an EIS, the EIA Review Committee may recommend approval or denial of an Environmental Compliance Certificate. Approval may be conditional. The EIA Review Committee's recommendation is subject to review by the EMB Director and, if endorsed, is forwarded to the Secretary of DENR for final approval of the Environmental Compliance Certificate.
7. Once the Environmental Compliance Certificate is issued, compliance monitoring is normally conducted by the DENR regional offices as part of their

standard regulatory and enforcement procedures. But, with the emergence of the concept of multi-partite monitoring, a monitoring team consisting of representatives from DENR, the project proponent, NGOs, and local community residents may jointly undertake compliance monitoring.

8. The EMB may, upon recommendation of its Department Secretary, exempt any firm or entity from the EIA review requirements to preserve national security or comply with an international commitment. In such cases, however, the EMB or appropriate lead agency can still require the project proponent to take appropriate remedial measures to protect the environment.

EIA in Indonesia

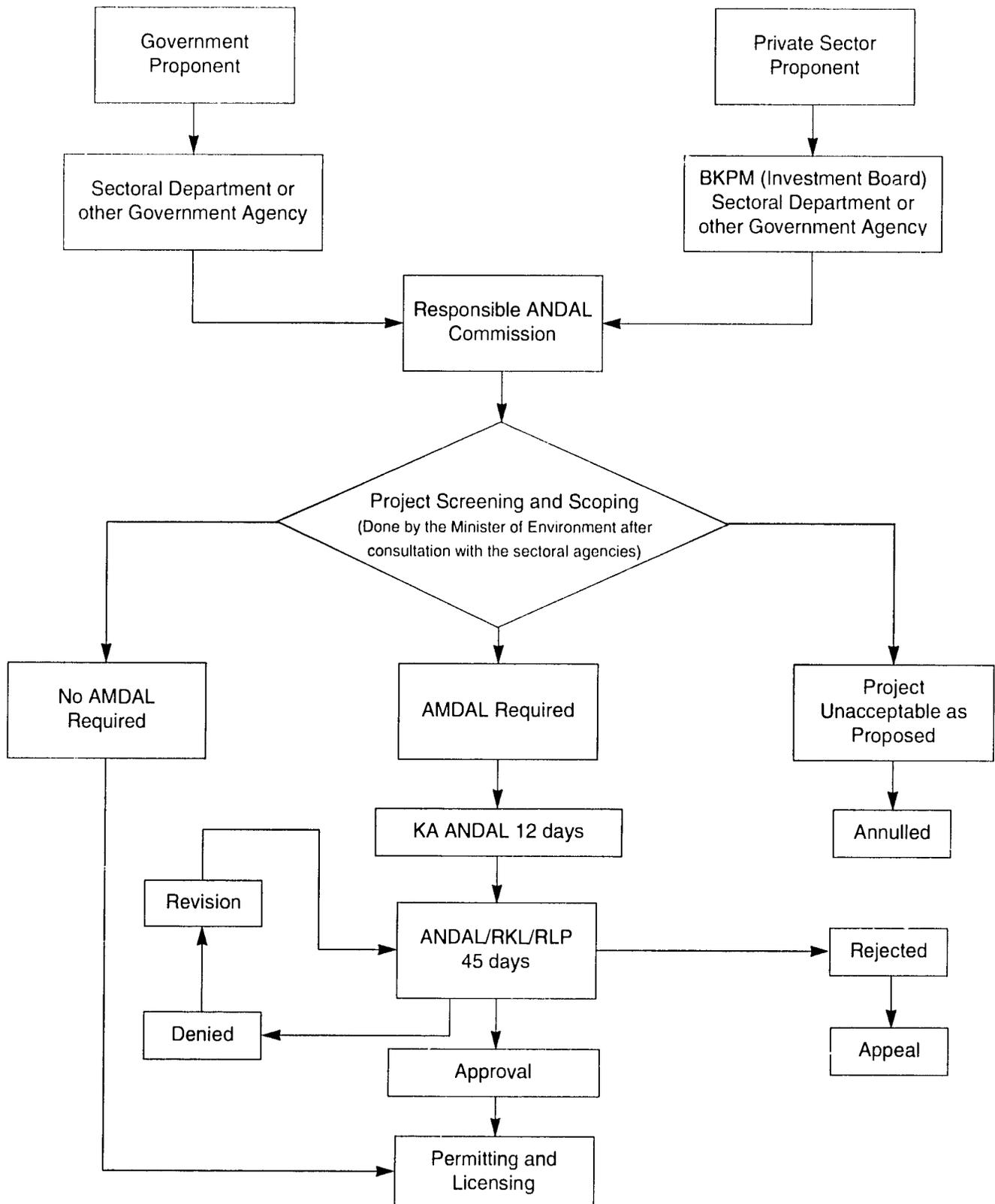
The Indonesian EIA system, known as AMDAL (Analisis Mengenai Dampak Lingkungan), is an integrated process for coordinating the planning and review of proposed development activities. It complements the evaluation of the project's technical and economic feasibility.

The AMDAL process was established in 1986 by Government Regulation No. 29. This regulation was one of the first pieces of environmental implementing legislation promulgated under the key Indonesian environmental law (Act No. 4 of 1982), which established the principle of sustainable development.

Regulation No. 29 applies to 14 central sectoral governmental departments and to the 27 provincial governments. It specifies which activities require preparation of a PIL (Penyajian Informasi Lingkungan, or Preliminary Environmental Information report) and which require a detailed ANDAL (Analisis Dampak Lingkungan, or Environmental Impact Analysis report). Each ministry or provincial government is required to develop sectoral AMDAL procedures and guidelines consistent with the basic guidelines issued by the Ministry of Environment and to establish an Environmental Review Commission (Komisi). Overall coordination of the AMDAL process rests with BAPEDAL (Badan Pengendalian Dampak Lingkungan, or Environmental Impact Management Agency), a division of the Ministry of Environment (LH, or Lingkungan Hidup).

In October 1993, the Government issued Regulation No. 51 to eliminate some of the confusion and delays that arose under the procedural guidelines set forth in Regulation No. 29. The new regulation simplifies the ini-

Box E. AMDAL Process Structure for New Projects in Indonesia



tial screening process, eliminates the preliminary impact assessment (PIL) step, reduces time limits for review of AMDAL documents, moves up the deadline for submitting environmental monitoring and management plans so they can be reviewed and approved at the same time as the underlying ANDAL document, and calls for greater BAPEDAL involvement in the review of projects with multi-sectoral implications.

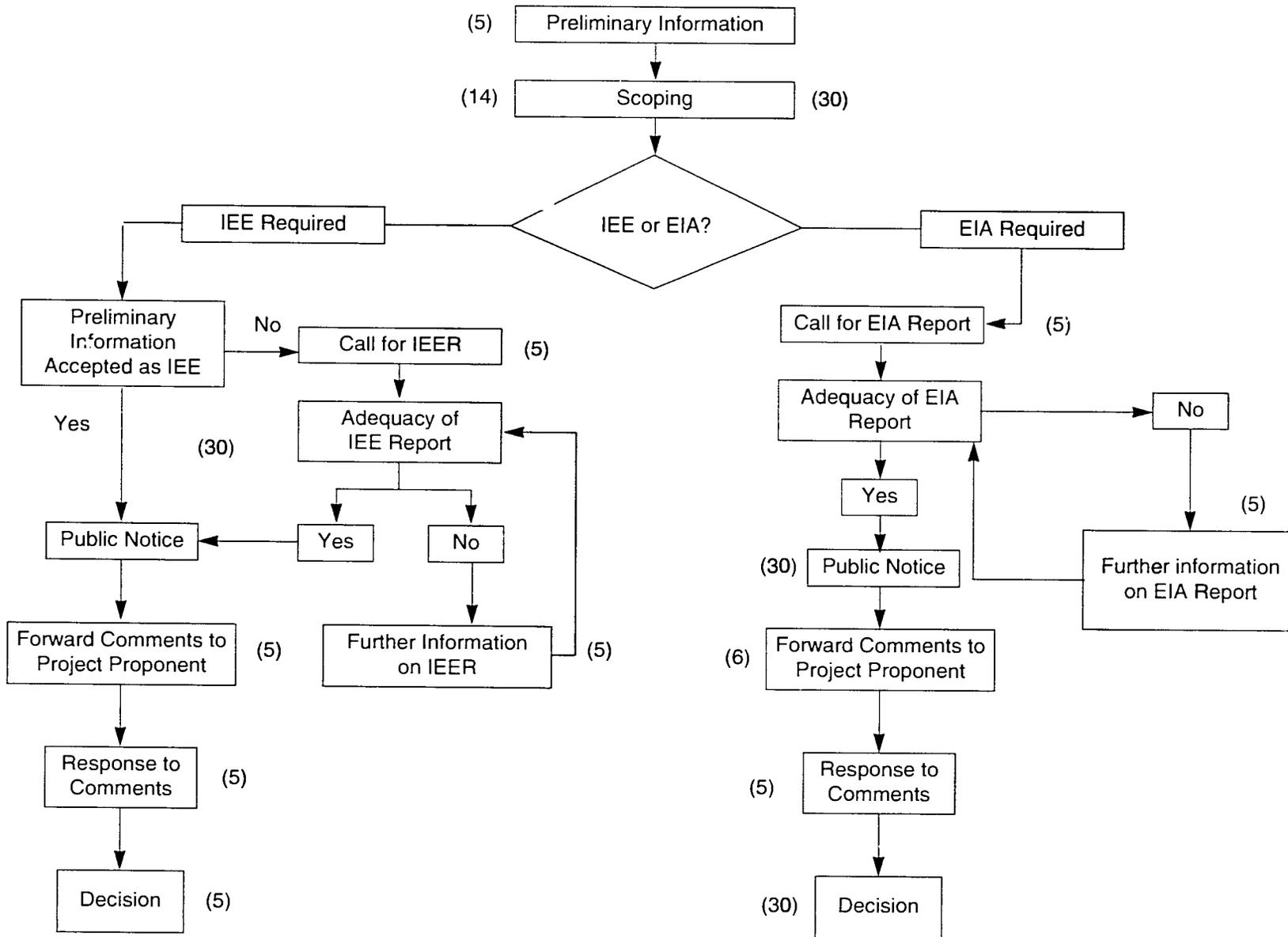
The new regulation also reconfigures the AMDAL Komisi (by, for instance, including greater NGO representation), extends application of the AMDAL concept to regional planning activities, and eliminates the time consuming option of establishing an official registration system for AMDAL practitioners. Finally, in several important respects, Regulation No. 51 underscores BAPEDAL's central role in guiding and supervising the AMDAL process. For instance, along with new authority in the review of complex multi-sectoral projects, BAPEDAL will assume the Indonesian Environment Ministry's responsibility for establishing broad guidelines for preparing and reviewing environmental documents, coordinating the formulation of sectoral guidelines, and providing technical advice to all AMDAL parties. The expansion of BAPEDAL's responsibilities presumes a significant increase in staff and budgets and an increase in the number of regional offices. It remains to be seen whether these logistical needs will be met.

From its earliest days, the Indonesian EIA process has had several unique and interesting features. First, projects that were under way or under construction in 1987 were subject to review if their environmental impacts had not already been assessed. This process, known as SEMDAL, was based on preparation of a SEL (Studi Evaluasi Lingkungan) report. Second, both the AMDAL and the SEMDAL processes are designed to result in the preparation of environmental monitoring and management plans (RPL, or Rencana Pemantauan Lingkungan, and RKL, or Rencana Pengelolaan Lingkungan). In principle, these plans provide an operational basis for implementing and enforcing the findings and conditions that emerge from the AMDAL/SEMDAL review process. In practice, however, the benefits of these innovative features have not yet been fully realized because there are too many existing projects to review and no standards upon which to base revisions nor any mechanism to monitor compliance. (*See the unabridged Indonesia Case Study Report.*)

In Indonesia, EIAs include six basic procedures. (*See also Box E.*)

1. The Project Proponent initiates the process by contacting the agency with authority for AMDAL review: either a central sectoral Komisi Pusat, a provincial government Komisi Daerah, or (for certain privately sponsored projects involving foreign investment) the national Investment Board (BKPM).
2. An initial project screening is then conducted by the Komisi (using criteria developed by BAPEDAL) to determine whether a proposed activity entails significant impacts. Government projects and non-BKPM private projects are screened by the responsible government authority; BKPM projects are screened by an inter-sectoral team coordinated by BAPEDAL.
3. The so-called significance finding determines the appropriate level of AMDAL clearance. If a finding is made that significant impacts will occur, a full ANDAL report and accompanying RPL/RKL is required. If none is found, the project may proceed immediately if it meets standard design and operating provisions.
4. If an ANDAL report is required, the Project Proponent will first draft a KA (Kerangka Acuan, or Terms of Reference) for review and approval in conjunction with the reviewing Komisi and will then prepare the ANDAL report and submit it to the responsible AMDAL Komisi. The ANDAL report must contain a RPL/RKL plan. Once the ANDAL/RPL/RKL documents have been submitted, the Komisi has 45 days to decide whether: (a) to reject the project because the impacts are unacceptable, in which case the Project Proponent can revise or abandon the project; or (b) to allow the project to proceed. The Komisi's approval can be conditional or unconditional.
5. Final decisions on projects within the central bureaucracy are made by the sectoral Minister on recommendation from the appropriate AMDAL Komisi Pusat. At the provincial government level, final decisions are made by the Governor on recommendation of the AMDAL Komisi Daerah.
6. The public may be involved at any stage of the AMDAL process, at the discretion of the Komisi. Oral or written comments can be submitted to the Komisi before permit decisions are made. AMDAL regulations also require the authorized government agency to inform the public of activities requiring ANDAL documents and of its decisions on most types of AMDAL documents.

Box F. Environmental Impact Assessment Procedure in Sri Lanka



Note: Bracketed figures indicate MAXIMUM number of days.

EIA in Sri Lanka

The National Environmental Act No. 47 of 1980, Sri Lanka's equivalent of the U.S. National Environmental Policy Act (NEPA), was amended in 1988 to include, among other things, a provision relating to environmental impact assessment. Recently, the government has promulgated implementing regulations to give force to this legislative mandate.

By law, the Central Environmental Authority, the principal organization responsible for environmental programs, must issue detailed guidelines for EIA, develop a list of Prescribed Projects subject to EIA review, and designate and coordinate the activities of Project-Approving Agencies. In turn, each of the 14 Project-Approving Agencies is required to establish an Environmental Cell to facilitate the coordination and review of EIA documents prepared for Prescribed Projects. A Project Approving Agency cannot review and approve EIA documents for its own projects.

All comparatively new, many of the procedures and requirements of the Sri Lankan process remain undefined and poorly understood by participants within and outside government alike. In general, though, the process consists of eight basic steps (*see also, Box F*):

1. The Project Proponent initiates the process by submitting preliminary information to the appropriate Project-Approving Agency. Once this information is reviewed, the Project-Approving Agency decides whether to require an Initial Environmental Evaluation or an EIA report. The Project-Approving Agency must hold an environmental scoping meeting and must take into account the views of other agencies and the public in reaching its scoping decision.
2. The Project-Approving Agency then prepares terms of reference for the Initial Environmental Evaluation or the EIA. Again, the Project-Approving Agency should take into account the views of other agencies and the public in reaching its decision.
3. The Project Proponent then prepares the Initial Environmental Evaluation, or EIA, and submits it to the Project-Approving Agency for review. If the document does not conform to the terms of reference, the Project-Approving Agency may request modifications.
4. Once the Project-Approving Agency accepts the document, the agency publishes notices in Sinhala,

Tamil, and English in the government *Gazette* and in a daily newspaper, giving the public 30 days to inspect and comment on the Initial Environmental Evaluation or EIA. Reviewers may also speak at a public hearing on the project.

5. If the Project-Approving Agency decides that the case warrants a public hearing, all comments received at the hearing are forwarded to the Project Proponent for review and response.
6. After the Project Proponent responds, the Project-Approving Agency must reach a decision within seven days on an Initial Environmental Evaluation or 30 days on an EIA. Approval may be given with or without conditions, and reasons must be given for a denial. Upon reviewing an Initial Environmental Evaluation, the Project-Approving Agency may direct the Project Proponent to prepare an EIA.
7. All project approvals, whether conditional or not, must be posted in the *Gazette* and in a daily newspaper in the same three languages. The approval is valid for 24 months.
8. If approval is refused, the Project Proponent can lodge an administrative appeal with the Secretary of the Ministry of Environment. The Secretary can confirm, reject, or modify the Project-Approving Agency's decision. In contrast, opponents of the approved projects have no recourse other than a judicial appeal.

C. KEY FINDINGS FROM THE CASE STUDIES

The three case studies and the in-country and regional workshops produced a wealth of information. This information is a mixture of facts, perceptions, and suggestions for improvement, all bound in the context of three EIA systems that were scrutinized. For this reason, the findings that have emerged may not be universally applicable, but there is a marked similarity in the key problems and issues articulated by the case-study teams and workshop participants. Only key points are set forth here, but those discussed below may well apply generally to other Asian nations. Although further analysis will be required to determine how broadly the case study findings can be extrapolated, input from other EIA studies (such as those now being conducted by the World Bank and by other donors including the

Canadian Federal Environmental Assessment Review Office's EIA Effectiveness Study) will complement and extend the analysis presented here.¹

Institutional Context

EIAs are gaining acceptance, but such acceptance is not yet universal. In all three case-study countries, support for environmental protection and management programs in general, and for the EIA process in particular, are growing. As noted in the Indonesia Case Study:

"... The concept of environmental impact assessment may be one way to achieve sustainable development in Indonesia, since it enables the state to foresee the negative and positive impacts of human activity on the environment. Steps may thus be taken, at as early a stage as possible, to mitigate negative impacts and provide alternatives for decisionmakers (sic.)." (Indonesian Case Study, p. 1)

At the same time, strong forces at work in each country question the value of EIA, especially when assessments seem to conflict with economic development objectives or other interests, or when the EIA process exposes and perhaps even exacerbates social and economic differences.

Given this tension, as well as under-funding and under-staffing, EIA implementation has been sporadic. Some major projects have been carried out with little or no consideration of EIA. Other projects with only minor or insignificant impacts have been delayed or quashed because environmental regulations were inappropriately applied. Even when the technical process is properly conducted, administrative uncertainties and delays have at times caused unnecessary expense and aggravation for project proponents.

Numerous success stories have also been reported despite such setbacks and other problems. Many projects with severe environmental impacts have been reconsidered or redesigned. Innovative techniques have been developed—particularly in the Philippines and Indonesia, where EIAs have been standard practice for some years—to improve interagency coordination, to better incorporate social values into the EIA process, to institute impact monitoring and management programs, to apply EIA to policy and program analysis as well as to projects, and the like. These new approaches attest to the commitment and creativity of EIA administrators and practitioners.

I. Legal and Administrative Framework

Existing laws and regulations are basically adequate. None of the case studies reveals a need for new legislation governing EIAs, although some amendments might be desirable. In the Philippines and Indonesia, the EIA legislation, implementing regulations, and departmental procedures developed over the past two decades now constitute a relatively comprehensive, if complex, legal and institutional matrix (Philippine Case Study, p. 19; Indo, p. 1). Even in Sri Lanka, where the EIA implementing regulations are still in a formative stage, major modifications to the legal/administrative framework for accomplishing EIA are not a priority right now (Sri Lanka Case Study, pp. 1-4). This finding is not totally positive, however, since it reflects the widely shared opinion that major legislative reviews and revisions consume more time and institutional energy than the benefits justify and do not by themselves address the EIA system's most fundamental defects.

Compliance and enforcement of EIA requirements are not strict enough. In particular, regulatory requirements for public participation in the EIA review process are weak or lacking, and linkages between EIA review findings and the permit and licensing conditions imposed on individual projects are tenuous.

The general consensus is that many of the needed changes can be made without new legislation. Administrative regulations can be revised or supplemented. EIA agencies can be reorganized. And interagency operating agreements for improving EIA review and compliance activities can be created.

In the Philippines, for example, when Department Administrative Order No. 21 was issued, the EIA rules and regulations were revised, the Interagency Memorandum of Agreement related to EIA was issued, and similar administrative measures were taken (*Phil*, pp. 2-3). In Indonesia, deficiencies in Government Regulation No. 29, which was issued in 1986, prompted the government to issue Government Regulation No. 51 in 1993 to correct the problems.

The widespread feeling of the case-study participants is that an imperfect system that works reasonably well is preferable to a letter-perfect one that is cumbersome and overly ambitious. The current need is to improve and solidify institutions and programs now in operation. In fact, the proliferation of environmental laws, programs, and policies over the past decade sparks fears that substantive and procedural conflicts requiring judicial and

Box G. Laos: A Nation at the Threshold of EIA Development

Currently, Laos has no national system or policy for environmental impact assessment standard for such assessment. The various donor-financed studies are performed according to different standards, so comparing one with another, much less evaluating their relative effectiveness is difficult.

Given the potential importance of EIA, government officials responsible for environmental programs are trying to identify an appropriate methodology to formulate the nation's EIA system.

Some of the problems of environmental management at present are:

- ▶ lack of funds for data collection and surveying;
- ▶ lack of trained EIA professionals;
- ▶ lack of equipment and other physical resources; and
- ▶ absence or inadequacy of legislation.

Like other developing countries, Laos will not be able to address all of its environmental issues on its

own. Financial and technical support will thus be sought from other donor agencies. Training, the establishment and maintenance of laboratories and libraries, and the exchange of information and experiences in other developing-country contexts are all needed. It would be beneficial if other Asian countries would also directly share their experiences with Laos.

Reference: Participant at the Regional Workshop

perhaps legislative intervention will escalate (*SriL*, pp. 2-3). In any case, "learning by doing" can yield an experience-based rationale for identifying needed improvements and should precede any major efforts to revise existing legislation. Of course, in countries where even minimally adequate EIA legislation and related institutional capabilities may be lacking, new or expanded EIA legislation may be essential.

Information about EIA legal decisions is not developed or distributed adequately. The need for a mechanism for improving reporting on EIA legal decisions and interpretations is clear. In Sri Lanka, it was suggested that the Central Environmental Authority or a national environmental NGO should compile and circulate new decisions made under the new EIA legislation and regulations to help make sure that they are clear and applied consistently (*SriL*, p. 9). In Indonesia, the newly created Indonesia Center for Environmental Law intends to publish an *Environmental Law Journal*, the first in the nation's history, to accomplish this objective.

More generally, law schools can encourage the development of sound legal and administrative practices in the environmental field by offering courses and short seminars on EIA and other environmental laws and by periodically disseminating information on new developments in the field through environmental law journals and publications.

The effectiveness of EIA systems is not evaluated regularly and comprehensively. Routine reviews and evaluations of EIA systems are needed to identify problems requiring legislative or administrative responses and to develop appropriate strategies for addressing them. Input from EIA administrators, technical experts, and legal scholars is needed to ensure that a balanced, multidisciplinary viewpoint is applied.

II. Institutional Needs

The role of the central environmental impact assessment (EIA) agency is poorly defined and inadequately developed. In all three case-study countries, a central EIA agency has been created to assume certain responsibilities for organizing and supervising the administration of the EIA system. These new agencies need to clarify their role as the "key umbrella organization for the environmental impact assessment program" (*SriL*, p. 17). At every in-country workshop, participants agreed that the central EIA agencies should not help prepare or even review every EIA or lesser clearance document. Rather, primary responsibility for conducting environmental assessments and document reviews should rest in ministries and agencies and in private sector organizations authorized to plan and implement projects.

Yet, workshop participants felt that at the central EIA agency level more attention should be given to clarify-

ing EIA policies and practices, publishing information on EIA, issuing procedural and technical guidelines, resolving interagency coordination and disputes, selectively providing technical assistance to project proponents, and periodically auditing all phases of the EIA process to make sure that it is thorough, fair, and effective. The central EIA agency should also maintain complete records of pending and completed EIA decisions and provide reasonable notice of and access to such decisions and materials.

EIA authority is too centralized. All three case studies highlighted the need to substantially change institutional arrangements for conducting EIAs. Particularly in the Philippines and Indonesia, where some responsibility for EIA preparation, review, and approval actions has already been decentralized, regional and provincial institutions need to be created or strengthened and linked effectively to the central authorities.

In the Philippines, the movement toward decentralizing and delegating EIA and related decisionmaking authority needs financial and technical support to help build the capacity to conduct EIAs at DENR's Regional Offices and within Local Governmental Units (LGUs), as well as at the national level (*Phil.*, pp. 3-8). In Indonesia, where provincial governments assume almost no EIA responsibilities (*Indo.*, p. 4), and in Sri Lanka, where institutional capacity at any level for preparing and reviewing EIAs is rudimentary at best, the need is especially great (*Sril.*, pp. 17-20).

Environmental career opportunities are inadequate. Poor pay scales, a lack of clear career ladders, and the overall low status of EIA agencies have made it difficult to recruit qualified staff and have made government EIA agencies over-reliant on temporary consultants to handle routine EIA review and administrative tasks. As noted in Indonesia:

"It still remains unclear whether or not working on the [AMDAL] commission is considered relevant to the career progress of commission members from government agencies. This is despite the fact that article 23 of the draft bill for Government Regulation 51/1993 clearly stated: 'The activities of commission members as well as that of all persons involved in technical assessments shall be used as a criteria for determining their progress up the career ladder.' Because this provision was not included in the final regulation, AMDAL duties will continue to be considered secondary business by the permanent members of the Commissions." (*Indo.*, p. 11)

Funding for EIA is inadequate. In each case-study country, the central environmental/EIA authorities (DENR/EMB in the Philippines, LH/BAPEDAL in Indonesia, MEPA/CEA in Sri Lanka) are greatly under-staffed and under-funded. They simply are not strong enough to counter the interests of entrenched departmental bureaucracies in more traditional (and often "higher status") sectoral agencies. As noted in the Philippines case study:

"With the state of budgetary deficit the government has been operating on for several years and with no end to this situation in sight, the DENR cannot possibly [expect] an increase in budgetary allocation that will make a significant difference for EIA implementation. Other innovative alternative ways of financing EIA implementation will have to be developed." (*Phil.*, p. 44)

Budgetary constraints in most developing nations make it necessary to explore "user fees" and other similar charges as a partial funding source for EIA agency-activities.

Many ways to increase EIA and related funding were suggested by workshop participants. Application and processing fees based on a realistic estimate of the cost of processing a project proponent's EIA application could be charged (*Phil.*, p. 44). Reliance on Environmental Guarantee Funds (*see Box 11*) for impact monitoring and mitigation of completed projects could be greater (*Phil.*, pp. 26-27). Self-monitoring schemes, whereby the project proponent assumes the costs of compliance monitoring, could be instituted (*Indo.*, p. 21; *Sril.*, p. 31). And an EIA Fund, initially financed by bilateral and multilateral development assistance organizations to sponsor environmental research, develop training programs, improve environmental data bases, undertake demonstration and pilot projects, and so forth could be created (*Sril.*, p. 21).

Most non-governmental organizations are too weak to participate effectively in EIAs. For starters, national environmental NGOs need to form closer links with regional and local NGOs and help fortify these groups. A further need is to increase the awareness of environmental (and EIA) issues among local NGOs that have a social and economic focus.

The same professional organizations that represent engineers, architects, landscape architects, land-use planners, and others that make logical sponsors of environmental awareness programs and training, can also help develop standard impact-monitoring and mitigation

Box H. Innovative Funding Mechanisms: The Environmental Guarantee Fund, The Philippines

The Environmental Guarantee Fund (EGF) of The Philippines is an innovative way to assure the payment of a project proponent's environmental costs, including:

- ▶ the immediate rehabilitation of areas damaged as a direct consequence of project operation;
- ▶ the implementation of a company's community environmental programs (which may include environmental maintenance and safety, ecosystem rehabilitation, environmental research, community-based environmental programs, envi-

ronmental information campaigns and training, and the funding of periodic environmental audits);

- ▶ the just compensation of parties and communities affected by the negative impacts of the project's operation; and
- ▶ the payment for all expenses incurred by the multi-partite monitoring team in the conduct of its monitoring activities.

The EGF is to be set up between the Department of Environment and Natural Resources (DENR), the project proponent, the local government

unit, and concerned NGOs through a Memorandum of Agreement.

The EGF is to be either a Monitoring Fund or a Trust Fund. For the Monitoring Fund, cash is to be deposited by the project proponent to a mutually acceptable bank for the exclusive use of the multi-partite monitoring activities. The Trust Fund is to be used to compensate aggrieved parties on any damages to life and property resulting from the operation of the company and to implement the company's environmental management programs.

measures, such as erosion and sedimentation control plans, storm water control plans, waste water treatment designs, revegetation schemes, and the like. Once accepted as planning and design norms, such measures will help simplify and shorten the EIA effort for individual projects and make the process more consistent.

All three case-study countries are considering or moving toward creating an Association of EIA Practitioners—a multidisciplinary organization devoted solely to their particular interests and concerns, including professional recognition, development of codes of ethics, standards of practice, and related environmental training

Box I. Private Sector Initiatives: IEMP

In the private sector, capacity building programs such as the Industrial Environmental Management Program (IEMP), funded by USAID, seek to strengthen the ability of private companies to address their environmental problems. Although not specifically focussed on EIA, the IEMP is designed to highlight the economic and operational benefits of pollution control, waste management and sound environmental management. IEMP can be tied to post-EIA impact monitoring and management steps.

In the Philippines, the IEMP's purpose is to "improve industrial pollution management in areas outside of Metro Manila through a three-fold strategy that: prevents or reduces pollution at its sources; reclaims industrial wastes and encourages cost-effective pollution abatement technologies for pollutants that are neither avoided nor reclaimed. Based upon successful results in other countries and the Philippines, the project will reduce industrial pollution through voluntary cooperation of firms in part-

nership with the GOP and non-governmental organizations. Improved monitoring in the public and private sectors will assist better enforcement."

The project has four components: Pollution Reduction Initiative, Policy Studies and Public/Private Dialogue, Capacity Building, and Evaluation and Monitoring.

Reference: Industrial Environmental Management Project, the Philippines.

Box J. Guidelines to be Developed for Various Stages in the EIA Process

Scoping or Initial Environmental Evaluation (IEE):

- ▶ Procedural guidelines, including those for undertaking consultative processes
- ▶ Project-specific scoping guidelines

Conduct of EIA Study:

- ▶ Project-specific guidelines
- ▶ Guidelines for NGO/community participation

EIA Review:

- ▶ Criteria for selecting review panel members

- ▶ Review standards/procedures
- ▶ Guidelines for a periodic evaluation of the review process

Public Hearing:

- ▶ Guidelines for conducting public hearings, including mechanisms to ensure participation of all interested parties

Granting of Environmental Compliance Certificates (ECCs):

- ▶ Standard format for ECCs, delineating major elements or conditions

- ▶ Guidelines for implementing Environmental Guarantee Funds

- ▶ Guidelines for determining social acceptability

Compliance Monitoring:

- ▶ Guidelines defining roles of each member of the monitoring team

Appeals:

- ▶ Procedures for appeals

Reference: The Philippines Case Study Report

programs. The Philippines has already created "Friends of EIA" (*Phil*, p. 29; *see also*, *SriL*, p. 21), whose members will come from both within and outside government to exchange information and to foster mutual technical and professional support. Once established, national organizations could form regional and international linkages with similar groups.

III. Implementing Regulations, Guidelines, and Standards

All EIA stakeholders lack adequate technical and procedural guidance materials (*Phil*, pp. 40–43; *Indo*, pp. 12–14; *SriL*, pp. 9–13). Administrative procedures, checklists, planning/design manuals, flow charts, reference lists of available data sources, good examples of EIA documents, etc., are all in short supply. (*See Phil*, p. 42 for a useful summary of the full range of needed guidance; *also see Box J*.) Fine-tuning is needed to fit guidance materials to local needs and conditions and to make them consistent with national environmental policy objectives.

Dissemination of existing guidance materials is also inadequate. Workshop participants noted that EIA practitioners lack access to published manuals and technical guidelines dealing with EIA. Numerous handbooks and

manuals generated over the past 25 years cover various aspects of EIA. Although some need to be translated into local languages and adapted to the Asian and local context, others can be of use even in their current state. Selective dissemination of existing EIA publications to EIA agency and other libraries is indicated, either in hard copy or on computer disk. In particular, EIA guidelines and the related publications of the Asian Development Bank, the World Bank, the United Nations, and other organizations aware of the need to encourage sustainable development have not been circulated widely enough in the region.

IV. Interagency Coordination and Cooperation

A key impediment to effective EIAs in the three case-study countries is the lack of adequate interagency coordination and cooperation mechanisms. Two needs are for: (1) cells or environmental units in sectoral agencies, which can begin to 'internalize' environmental policies and impact-assessment practices in all aspects of the agency's affairs (project planning, design, and operations) instead of solely formal "impact assessment" stage; and (2) development of effective interagency mechanisms and other networks of environmental specialists that can be called upon to help prepare or review EIA studies.

Box K. The U.S. National Environmental Policy Act (NEPA)

EIA involves more than producing a report. Indeed, the preparation of an Environmental Impact Statement (EIS) is but one of many environmental policies and practices that the U.S. National Environmental Policy Act (NEPA) requires all federal agencies to institute. NEPA mandates also:

▶ “a systematic, interdisciplinary approach...in planning and de-

cision-making which may have an impact on man’s environment”;

▶ the “study, development, and description of appropriate alternatives to...any proposal which involves unresolved conflicts concerning alternative uses of available resources;” and

▶ the dissemination of “information useful in restoring, main-

taining and enhancing the quality of the environment.”

Because of its action-forcing function and its high visibility in the project development, the EIS requirement has taken on a role of prime importance in the U.S. EIA system. Still, those factors should not obscure the importance of less visible, but transforming changes in agency planning and decision-making procedures.

In all three case-study countries, as noted earlier, EIA experts have realized that the central EIA agency can best take on the role of referee and watchdog responsible for issuing regulatory and technical guidelines, resolving interagency conflicts, disseminating information, and the like. Under the guidance of the central EIA agency, however, primary responsibility for infusing environmental values into project-identification and development activities remains with sectoral agencies and private businesses. Although relying on these project proponents to prepare objective environmental assessments of their own projects entails obvious problems, the best way to reach environmental objectives is to gain project proponents’ active participation and support.

In the Philippines, the DENR has coordinated the preparation of an interagency Memorandum of Agreement involving all national agencies and departments involved in project planning, development, and related EIA activities. However, considerable effort will be required to implement the many policies and agreements set forth in this agreement (*Phil*, pp. 25–26). Although its scope is limited to EIA coordination, the need for greater coordination of EIA with the permitting and licensing procedures of other agencies has also been recognized (*Phil*, pp. 43–44). The Philippine approach is thoughtful and comprehensive. But it’s still too early to judge whether the Memorandum of Agreement will greatly influence how government restructures the EIA process.

In Indonesia, the EIA (AMDAL) process is hybrid. At the national level, under the guidance of the Environment Ministry (LH) and the Environmental Impact Management Agency (BAPEDAL), separate AMDAL Com-

missions are to be established in 14 sectoral governmental departments and institutions. Although some members from outside the sectoral agency are appointed, the Commissions are chaired by a senior agency official and generally advance agency policies and priorities. Meanwhile, the provincial Governor is to establish regional AMDAL Commissions. These multisectoral commissions are not paired with central government counterparts, though this lack of symmetry has not yet become a serious problem (perhaps partly because so few regional commissions have been established to date). The recently issued Government Regulation No. 51 has expanded BAPEDAL’s authority as the central coordinating body for EIA administration and ensures greater consistency and coordination in the operations of the individual AMDAL Commissions’ operations. Under the new regulation, for example, BAPEDAL will issue guidelines for determining whether a project or activity will have ‘significant’ impacts and will also take on more responsibility for reviewing multisectoral projects, which have often been mired in interagency redtape, as well as issue guidelines to allow area-wide activities and multi-phase projects to be assessed more efficiently (*Indo*, pp. 39–41).

In Sri Lanka, the EIA law gives environmental review and approval authority to project-approving agencies. Since these agencies are barred from approving their own projects or projects proposed by one of their departments or sub-agencies, the Central Environmental Authority (CEA) decides who will serve as the project approving agency when such conflicts of interest arise. This way, the system (once fully operational) can draw on the agency’s special knowledge and expertise in most cases (*Sril*, pp. 9–11).

Box L. Kandalama Hotel Project, Dambulla, Sri Lanka

This historically, religiously, and environmentally important site is very close to the Sigiriya area in central Sri Lanka. The site is on the catchment area of Kandalama tank, which is a major source of surface water for that area; and both equitable distribution of groundwater and pollution of tank by waste were at issue. Even so, the initial decision to put a hotel here did not include any environmental impact consideration or community input. The decision was primarily made to satisfy the needs and desires of the project proponent, the hotel developer and operator.

An EIA was eventually carried out, but it was deficient in many regards and prepared without signifi-

cant public involvement. Mass protests by local people followed (including multi-religious protests, even though the population around the proposed site is largely Buddhist). NGO representatives and the hotel developer began seemingly useful and successful negotiations. Then the Government intervened, using the media to change public opinion in favor of the hotel development. The Government also used taxpayers' money to give police protection to the developer.

The Environmental Foundation Limited took this case to court. The case was not founded on EIA considerations, however, since EIA regulations had not yet been enacted, but on the Crown Lands

Ordinance, which required the government to call for public objections when leasing State Land in this manner. In this way, the government was forced to listen to public objections. But construction activities continued meanwhile, undercutting the public comment and hearing process.

On the positive side, this project did increase public awareness of environmental impacts. It has also contributed to the process that led to the formal adoption of national EIA regulations.

Reference: Anandalal Nanayakkara, Environmental Foundation Limited, Colombo

EIAs within Environment Planning and Management

In the three case-study countries, EIA tends to be seen as a single-shot *regulatory* activity that results in the imposition of environmental strictures, rather than as an integral part of all phases of national and project-level planning and design and as a mechanism for helping decisionmakers balance competing economic, technical, social and environmental concerns.

As noted in Sri Lanka:

"As far as national economic and local development planning and implementation processes are concerned, the EIA process fits in very poorly as of now. There appears to be great resistance within planning agencies to use it as a planning tool and it can hardly be said to be integrated into their processes at all." (*SriL.*, pp. 3-4)

Similarly, in the Philippines:

"Recent experiences encountered in the implementation of major projects on the country show that despite the conduct of EIAs, serious difficulties are still faced by project implementers because environmen-

tal consequences are not sufficiently considered in the early stages of the project cycle. As a result, the entry point of environmental assessment in the project cycle is not early enough to be useful in decision-making and EIA is oftentimes seen as merely another bureaucratic requirement to hurdle." (*Phil.*, p. 33)

And in Indonesia:

"...problems [with AMDAL] include: (1) lack of understanding from participants that AMDAL should be used as a planning tool..." (*Indo.*, p. 1).

Preliminary EIA reviews should be employed as "issue screens" during the earliest stages of project identification and appraisal. When a project's feasibility is analyzed, an "Environmental Screening Report" or "Initial Environmental Examination" should identify the key natural or man-made resources to be affected, anticipated impact types and likely magnitudes, groups to be affected, alternatives to be considered, and similar issues that will loom larger as project development proceeds. As noted in the Sri Lanka report, this approach moves beyond the "Decide—Announce—Justify" approach, whereby an EIA is initiated, if at all, only after key decisions have already been made (*SriL.*, p. 11).

Box M. NGO EIA Procedures Applied to Rural Road Network Improvements in Bangladesh

CARE has a Food for Work program and other programs that have been used to help build new rural roads in Bangladesh. The project has done a good job in the past and has improved the rural road network. However, heavy rainfall and inadequate drainage systems have taken their toll on inadequately designed roads subject to increased transport demands, and serious drainage and erosion problems have ensued.

Aware of these problems, CARE has implemented very rudimentary EIA procedures and a related training program. These are now required for all new road projects in rural areas.

Reference: Dara Shamsuddin, Environmental Scientist, Irrigation Support Project for Asia and Near East (ISPAN), Dhaka

Projects or activities found likely to have significant impacts will require a detailed impact assessment study; others can be implemented immediately (*Undo*, pp. 13-14). By facilitating the early identification of key issues and concerns, and by sparing projects with negligible environmental impacts further review, a screening stage will accelerate environmental review processing (*Phil*, pp. 33-36). An Environmental Screening Report, or Initial Environmental Examination, normally need not be circulated for formal review and comment. It can simply become part of the project file, and project proponents can summarize it in any pre-feasibility documents or status reports as they see fit.²

Once a proposal for a project likely to have significant impacts has been defined with some specificity, an impact-scoping exercise should be undertaken and lead to the issuance of a Terms of Reference for a detailed EIA study. In its simpler form, impact scoping would consist of a more detailed and rigorous application of initial screening review procedures and would occur during or soon after the screening review. But, as workshop participants pointed out, an impact-scoping review may reveal the need to conduct more field research and collect more data. Since EIA is often criticized for delaying needed projects, discovering these needs early can speed the formulation of terms of reference for environmental review of the project, thus helping to *avoid* later delays.

As noted in the Sri Lanka Case Study Report:

"Scoping assumes great significance. It is scoping that will determine the significance of the impacts and [produce] the terms of reference for either an environmental impact assessment or an IEE. Scoping sessions must therefore be transparent and comprehensive. They must be used to strike consensus on issues, where possible, and to draw out the contentious ground, where that exists." (*Sril*, p. 16)

In the workshops held in the three case-study countries, however, it became clear that requiring a detailed technical report when projects are first identified and appraised can create yet another bureaucratic hurdle and end up requiring as much time and effort as a full-fledged EIA. Indeed, Indonesia dropped the preliminary impact assessment (or PIL) report from the AMDAL process for just this reason, replacing it with guidelines for making the AMDAL Commission's screening process more careful and consistent.

Although EIAs can help planners outline alternative courses of action and rule out environmentally risky or damaging paths, *the role of evaluating project design alternatives in its EIA process is not emphasized in any of the case-study countries*. Instead, the main thrust of the process is on modifying the design of relatively well-defined project proposals. Thus, probable impacts can be identified and mitigated at some depth, but ways to achieve the project's objectives at far less environmental (and other) cost are not likely to turn up:

"An examination of the process shows that the proponents are required to include detailed designs for the project in the EIS, leaving no motivation for proponents to look at alternatives. This results in the conduct of EIA at the end of the design and engineering stage in the project cycle when the objective is no longer to seek optimal choices, since the relevant choices have been made. The objective, instead, becomes how to justify the project." (*Phil*, p. 15)

This approach may be justified for private-sector projects subject to EIA review since the range of feasible and realistic alternatives is generally narrower than those available to public sector project proponents. But with public-sector proposals, beginning the EIA process earlier in the project cycle and using it to evaluate fundamental options instead of "fine tuning" predetermined location and design decisions would yield enormous benefits. Already, innovative procedures are being considered in the case-study countries, particularly in the Philippines and Indonesia, for applying EIA to the development and early review of program and policy

options and to the review of large-scale or multi-phase development activities at a regional or other area-wide scale (*Phil.*, p. 36; *Indo.*, p. 41).

During the impact-assessment phase *the apparent simplicity of the EIA process sometimes belies the complexities that arise when it is applied to real-world conditions and projects.* Each step in the process raises difficult questions: How will the level of analytical detail required be set? How will the significance of changes to future, as well as existing environmental conditions be projected, measured, and assessed? How will conflicts be resolved and competing values balanced? And what is the best way to mitigate identified impacts?

Such questions, neither purely technical or purely policy oriented, can be answered only through interaction, on a project-specific basis, with a broad range of policy-makers and stakeholders concerned about social, economic, and development issues. Nevertheless, despite the complexities of the process, the potentially positive impact of EIA on project planning and design is generally acknowledged:

“...a review of the case studies [indicates] that, where EIA was done, in most cases it led to modifications of the project plan.” (*SriL.*, p. 31)

Another issue that arose in all case studies is the lack of links between EIA findings and project permit and licensing. Workshop participants noted the need to integrate EIA findings and recommendations into enforceable conditionalities related to a project’s site, design, and operations. In the Philippines, the primary vehicle is the Environmental Compliance Certificate issued by the Secretary of DENR (*Phil.*, pp. 2-3, 9). In Sri Lanka, the project-approving agency is authorized to grant approval (with conditions) or to refuse approval (with reasons) (*SriL.*, pp. 6-7). In Indonesia, the AMDAL Commissions review environmental assessments and develop related environmental monitoring and management plans (that is, RPL/RKL). The AMDAL findings then either become binding conditions themselves through the project-specific RPL/RKL or, alternatively, are used in other formal licensing and permitting processes (*Indo.*, pp. 15-21).

In all three countries, the environmental review must be completed before construction and operating permits and licenses are granted, and such permits and licenses may specify environmental conditions. Thanks to such systems, EIA goals are closely coordinated with broader environmental management. Yet, success in achieving this objective has been mixed:

“...the link between AMDAL and the licensing system becomes dysfunctional when the proponent reaches the stage of asking for an operational license. This is against the spirit of AMDAL as a planning tool, whereby AMDAL can only be effective if it is completed before permits and licenses are issued. The confusion which occurs cannot be said to be a result of wrongful intentions on the part of proponents or their consultants, but is driven by weaknesses in the regulations.” (*Indo.*, p. 17)

The use of environmental impact monitoring and management plans in implementing the findings and recommendations of EIA studies is a key issue. Often, these plans are neglected or not effectively enforced. In the Philippines, compliance monitoring in accordance with the conditions set forth in an Environmental Compliance Certificate is considered to be primarily the responsibility of the project proponent (*Phil.*, p. 24), subject to review by DENR. For some complex or controversial projects, however, representatives of local governments, NGOs, and community residents serve on impact-monitoring committees (*Phil.*, p. 9).

In Indonesia, impact monitoring (Rencana Pemantauan Lingkungan, or RPL) and management plans (Rencana Pengelolaan Lingkungan, or RKL) are specified explicitly in AMDAL Regulations. The RPL/RKL plans are to be submitted to the appropriate AMDAL Commission for approval once an ANDAL clears the project. (At least one agency, the Department of Public Works, requires the project proponent to include a conceptual-level RPL/RKL in the ANDAL report itself.) In principle, no permits or licenses for constructing or operating a project are granted before an approved RPL/RKL plan is in place. In practice though, this provision has not been applied rigorously or consistently—a significant problem in AMDAL enforcement. Under the recently issued Government Regulation 51, RPL/RKL plans must now be submitted simultaneously with the ANDAL reports so that a single and consistent review can be conducted before the responsible AMDAL Commission approves or denies projects, permits, and licenses (*Indo.*, p. 18).

Sri Lanka’s monitoring procedures have yet to be tested. But EIA Regulations do provide that within 30 days of granting EIA approval, the project-approving agency shall forward to the Central Environmental Authority a report containing a monitoring plan for the project (*SriL.*, p. 31). Presumably, the plan will be part of a draft proposal in the project proponent’s environmental study. (Whether 30 days is enough time remains to be seen. The impact monitoring/management plans for

Box N. An Environmental Impact Assessment (EIA) for the Philippine Forestry Sector Policy Agenda

The Natural Resource Management Program (NRMP) is a USAID-assisted, US\$125 million grant to the Philippine government and NGO community for forestry management and protection. Its policy reform agenda is to fortify community tenure rights, community-based input to the management and utilization of forests; a ban on logging in old growth (virgin) forests; and deregulation in the tertiary wood-processing sector to stimulate additional investment.

These proposed policy reforms are now undergoing an environmental impact assessment. Key

stakeholders (tribal groups, upland communities, forest licensees, etc.) worked with government and the NGO community to determine key EIA issues through a public 'scoping' session.

The EIA is being carried out by USAID and the Philippine government more to improve program management policy than to comply with legal requirements. Non-traditional EIA methods are being used since policies are not time-bound or area-specific. One such method, 'risk assessment,' addresses the risks of pursuing policy change in a compartmentalized manner while

neglecting cross-policy interactions.

This policy-level EIA is raising awareness and interest in government policy consultation and will help fully operationalize this process for future policy development work. Part of the output of the EIA exercise will be to recommend actions on specific ways to incorporate EIA routinely in policy development efforts.

Reference: *Eduardo Queblatin, Development Assistance Specialist, USAID, Manila*

most projects will be based upon design decisions and information that are often incomplete or lacking at the EIA stage.)

Better and more explicit linkages are needed among the planning, EIA review, permitting, compliance monitoring, and enforcement stages. Without them, it is difficult to hold project proponents legally accountable for failing to meet the goals or maintain the standards set forth in planning and impact-assessment reports. Indeed, if EIA conditions are to be legally enforced, the results of any monitoring programs must be assembled and preserved in forms acceptable to administrative and judicial enforcement tribunals. This requires such standard procedures as establishing a "chain of custody" for environmental samples, using quality-controlled analysis techniques, testing relative to prescribed legal standards, and so forth.

EIA analytical methods and techniques are poorly integrated with upstream planning and policy development on the one hand and with downstream permitting, licensing, and enforcement activities on the other. Similarly, EIAs are not applied area-wide, even though doing so could help governments assess the cumulative impacts of multiple projects (or of comprehensive land-use master plan alternatives) within a regional context.

If clarity of analytic approach were the primary objectives of an EIA system, a good argument could be made for limiting EIA to the physical environmental impacts of individual development projects and similar discrete actions. But if the environment is defined as the aggregate of social, economic, and physical resources, both natural and man-made, and if the overriding goal is to develop these resources sustainably, then the need to extend the application of EIA is apparent. Within this more ambitious and far-reaching context, EIA can be seen as a technique for evaluating policies and programs as well as project options, and as a means for yielding information in support of long-range planning, environmental management, and pollution-control programs (*Phil*, p. 16).

In the Philippines, DENR has proposed a draft Department Administrative Order, providing for Programmatic Compliance Procedures within the Environmental Impact Statement (EIS) System, to address the issue of larger policy and programmatic impact assessment (*Phil*, p. 36). In Indonesia, BAPEDAL and the World Bank are working out policies that would institute sectoral program reviews of the environmental impacts of Bank-assisted projects.³

In efforts to develop industrial parks in Indonesia, the use of an area-wide EIA has been seen as one way to re-

Box O. Public Participation in Sri Lanka

The National Environmental Act No. 47 of 1980, as amended by Act No. 56 of 1988, provides an example of early public participation. Regulation 6(ii) of Regulation No. 772/22 (24 June 1993) provides that:

“...the Project Approving Agency [i.e., the agencies responsible for conducting EIAs] may take into consideration the views of state agencies and the public.”

Although the wording of the regulations makes public participation optional during scoping, the project-approving agencies have come to a common agreement that, whenever possible, the views of the public will be taken into account in project scoping. The exact mechanism for so doing has not been specified, but some of the project-approving agencies publish an advertisement in the National Newspapers—in the two national languages and in English—calling for the public’s responses and views on the proposed terms of reference for EIA studies.

Reference: *Anandalal Nanayakkara, Environmental Foundation Limited, Colombo*

duce the time and costs of having park occupants prepare assessments. Under Government Regulation No. 51, which also specifies that ADMALs should be incorporated in regional planning or other multi-phase or area-wide activities, an industrial park developer (normally a public agency) would obtain AMDAL approval for the entire development, including RPL/RKL plan approval. Individual industries would address only the impacts specific to their own sites and operations, either through a limited and tightly focused ANDAL report or, more simply, by amending the RPL/RKL plan. (A similar “tiered EIA” approach has been used in the Philippines at the General Santos City Port/Industrial Development project, with USAID support.)

Possible applications of this basic EIA methodology, as suggested by workshop participants, might include environmental assessment of national policy and program-development activities; national or sectoral agency annual budgets; regional or sectoral master planning activities; and multiple project assessments at various geographic scales.

Such applications differ from project-level applications of EIA, for which site-specific data and contextual considerations are so critical. Area-wide and programmatic EIAs will require new analytic techniques if they are to be used to develop and compare alternatives. Economic impact assessments and assessments of non-contextual ecosystems and social impacts will be more useful than traditional “displacement disruption” analyses. Considerable new research, both basic and applied, will be needed before area-wide and programmatic impact assessments can be fully effective.

Developing Effective Participatory Mechanisms⁴

Public participation should be an integral part of the EIA process, but the timing, purpose, and legal effects of such participation will vary. In large measure, differences in approach among stakeholders reflect a split between those who adhere to the technocratic/regulatory model and those who prefer the consensus-building/management model of EIA. The first group generally sees public participation as a necessary but sometimes intrusive element in project decisionmaking procedures, while the second views it as the heart of the process. But even though methods for assuring meaningful public participation will vary from country to country, certain basic principles of public involvement have become widely accepted.

During the in-country workshops in Indonesia, principles of “transparency” were proposed as benchmarks for judging whether mechanisms for meaningful participation exist. These would include, as a minimum: provision of timely notice of all pending actions or decisions; reasonable and timely access to EIA reports and other documents; provision of an opportunity to be heard before key decisions are made; and the creation of a written record of decision explaining the rationale behind the decision reached (*Indo, p. 22*).

Agreement was shakier on whether non-governmental participants should be limited to the role of observers, providing occasional advice and comment, but effectively excluded from “technical” decisionmaking on issues or, instead, should be full-fledged members of EIA technical teams, EIS review panels, post-construction impact-monitoring teams, etc.

Differences also arose over such issues as how to institutionalize public involvement, how to define the “public” vis-a-vis a given project, how to identify and select representatives of the public, and how much those representatives should be allowed to influence project deci-

Box P. Philippine National Oil Corporation's (PNOC) Northern Geothermal Exploration Project

Despite its highly controversial origins, PNOC's Northern Geothermal Exploration Project has managed to resolve many of the serious community and environmental impact issues raised by communities, NGOs, and other concerned parties.

The consulting team was committed to making the Environmental Impact Assessment process scientific, understandable, and participatory. The first step was to explain what EIAs are and their importance to project planning and decision-making. A two-day training session was conducted for representatives of the two communities where project sites were located, the local NGOs, and the local government. In the end, each participant was asked to decide whether he or she would participate and how.

All did agree to participate and identified various participatory approaches:

- ▶ Form an ad hoc committee to liaise with the consulting team;
- ▶ Review and finalize survey forms and pre-test results;
- ▶ Review scoping guidelines;
- ▶ Help gather baseline data, including soil samples, water samples (freshwater and marine), air and noise samples, and descriptions of flora and fauna (including crops and livestock); (since the partici-

pants know the area, they can identify additional data to be included in the assessment;)

- ▶ Discuss the initial findings and recommendations with consultants and DENR;
- ▶ Walk through project sites (with representatives from the proponent, the DENR, the local government, NGOs, and local residents) to identify areas (e.g., farms and homes) most likely to be affected;
- ▶ Consult in local languages;
- ▶ Translate the EIA report and disseminate it to the two communities involved;
- ▶ Hold public hearings;
- ▶ Establish multi-partite monitoring committee.

By involving the people in the entire EIA process, community concerns were immediately addressed and mitigation measures were openly and fully discussed. For instance, the road in one project site was rerouted to avoid having to relocate five families. Legal aspects of the EIA were also discussed with the people. For example, they were assured that if damages were suffered, compensation would be provided as deemed appropriate by the multi-partite monitoring committee.

Other important points addressed:

- ▶ Reports were translated and technical terms "laymanized";
- ▶ Two community organizers and one communications expert were hired from the locality;
- ▶ Consultants used the mass media (radio and press) to explain the process and the findings and recommendations;
- ▶ People were given enough time to study the report and comment on it;
- ▶ Consultants made it clear that their goal was to show a well done EIA is a tool for decision-making, not just by the project proponent but also by affected communities and other stakeholders. They stressed that the objective was not to sell the project, but to broaden and improve decision-making;
- ▶ Multi-sectoral participation (by, for instance, farmers, workers, housewives, priests and nuns, local government officials, health and agricultural extension officers, local and city NGOs, academics) was encouraged.

Reference: Elisea G. Gozun, National Program Coordinator, Metropolitan Environmental Improvement Programme (MEIP), Manila

sions. It was noted that while NGOs have an important and valuable role to play in EIA, they do not always hold a common viewpoint, nor do they necessarily adequately represent all the communities and citizens potentially affected by proposed projects.

Besides traditional public hearing and comment procedures, many other specific techniques can be used to increase public participation levels, including a more active role as full-fledged members of EIA technical teams, EIS review panels, post-construction impact monitoring

Box Q. Task Force Macajalar—A Case of Community Compliance Monitoring

The ongoing development of a major industrial corridor in Northern Mindanao in the Philippines threatens the survival of Macajalar Bay and the livelihood of the surrounding fishing communities. To ensure that industrial developers comply with environmental standards set by the government, representatives of local communities—together with NGOs, mass media, and government agencies—organized a task force called Task Force Macajalar. In the past two years, this task force has increased compliance with environmental standards and helped to close down establishments that chronically violate environmental regulations.

The communities play an active monitoring role by raising early warning signals and in ensuring that government agencies perform their responsibilities—by, for instance, issuing Cease and Desist Orders when necessary. The mass media drum up support from the general public while NGOs provide training for capacity building, facilitation, and coordination functions.

Reference: Roel Ravanera, Program Manager for Sustainable Agriculture, Asian NGO Coalition for Agrarian Reform and Rural Development (ANGOC), Manila

teams, etc. Perhaps the most innovative approaches are being tested in the Philippines, where the DENR is creating in each regional office a *Regional Community Advisory and Monitoring Committee* whose membership will include NGOs and the private sector. The Committees will be involved in all phases of the EIA process, including compliance monitoring. DENR is also developing criteria and procedures for formally determining the social acceptability of all projects as part of the EIA decision process. This formal “social acceptability” determination will, by necessity, require substantive input from both local government units and various non-governmental organizations.

The most fundamental mechanism for maximizing participation is to ensure that interested groups and impacted communities receive full and timely notice of pending EIA activities. Notice can be given through newspaper advertisements of pending activities, or through periodic is-

suance of EIA-activity status reports by the central EIA agency. Although less effective, direct mailings to groups that have registered an interest in particular geographic areas, resource types, or project types, and posting of project sites with signs in local languages might also work. More effective would be requiring staff from the project proponent or the EIA Agency to seek out representatives of impacted groups. Encouraging wider reporting of environmental issues generally (and EIA-related issues in particular) in both printed and visual media could be highly effective.

In any case, notice must be timely to be effective. According to participants at the in-country workshops, *NGOs and community groups rarely receive notice of pending actions in time to take effective action to present their views or to counter the findings of the EIA preparers.* In particular, providing timely and effective notice is difficult in archipelagic countries. Undependable communications networks, high rates of illiteracy, or the use of multiple languages also cause problems throughout Asia. To overcome these barriers, a notice could be posted in local languages in public places in communities likely to be directly affected by the proposed project or policy. Another alternative would be to canvass the impacted area and to distribute fliers or verbally announce pending projects and project-related actions.

Yet another useful way to get public input in the EIA decision-making process is the formal public hearing. The EIA systems in all three case-study countries provide for public hearings under certain conditions, though some countries observe the formalities more strictly than others and the responsiveness to comments also varies. Despite their practical and symbolic importance, however, public hearings have serious drawbacks. They tend to be highly organized, formal, and somewhat intimidating. They tend to occur late in the process—typically, after an EIA report has been completed and many are limited to major, complex, and controversial projects.

Other mechanisms would also provide more effective, more frequent, and earlier opportunities for substantive public input to the EIA process, especially for projects not subject to a formal public hearing. For example, local government officials, environmental NGOs, and community representatives could be encouraged to provide advisory memoranda on the focus of impact studies, the development of project alternatives, the selection of evaluation criteria, and other key technical issues bearing critically on the conduct and output of EIA studies (*Phil, p. 46*).

Such alternative means of participation go well beyond the provision of “one time” testimony at public hearings or the inclusion of NGO and community representation on EIS review teams—two methods of participation that are, at best, only poorly provided for under current EIA procedures (*SriL*, pp. 26–29).⁵

The degree to which non-governmental inputs (or, those from any participants besides those legally responsible for fulfilling the EIA requirements) are reflected in the decision process is hard to measure. The “social acceptability” principle being adopted in the Philippines constitutes a high water mark for community empowerment, but other alternatives also hold promise.

At a minimum, the responsible public agency or official should be expected to provide concise but clear reasons, in writing, particularly when rejecting the advice or overriding the objections of project opponents. These so-called records of decision and supporting documents should be matters of public record—widely distributed in local languages within impacted communities. In Sri Lanka, for example, the project-approving agency must publish its notice of project approval in the official Gazette and in a daily newspaper in three languages, and it must specify the time period in which the project is to be completed (*SriL*, p. 31).

In the United States and Canada, the ability to appeal EIA decisions to administrative or judicial authorities, and the willingness of reviewing officials to liberally define and enforce new environmental standards, have been critically important to the success of national EIA systems. But in countries where the principle of judicial review is less well established, alternative ways to ensure the consistent enforceability of EIA requirements may be needed. Proper notice of important decisions, the availability of technical EIA reports and other information, and the existence of written records of decision are minimum supports to an appeals mechanism. The statutory scope of the appeals procedure can also be important in determining its effectiveness, however. In Sri Lanka, for example, there is both an administrative and a judicial appeals option. The administrative option is available only to a project proponent who is *refused* project approval. Parties aggrieved by a project approval must seek redress in the courts—a more expensive and time-consuming proposition (*SriL*, p. 30).

Frequently, the findings of EIA studies are not properly implemented, even when they are transformed into conditions of approval for the proposed project. In Sri

Lanka, it was suggested that the project proponent should bear both the responsibility and the expense of conducting compliance monitoring (*SriL*, p. 31, footnote 79). A periodic monitoring report would be filed with the appropriate project-approving agency and made available to the public. Random audits of compliance reports would be conducted by this agency to verify accuracy and completeness.

Since affected communities and citizens have a clear stake in ensuring compliance with any conditions imposed, many workshop participants also suggested that community representatives be included on teams charged with monitoring project operations, especially when a project is expected to have widespread or controversial socioeconomic as well as environmental impacts:

“In the absence of such ‘post-decision’ monitoring, there is a very great tendency on the part of proponents to significantly relax their level of compliance.” (*Indo*, p. 30)

Such an approach, if adequately funded through the Environmental Guarantee Fund mechanism, is being tested in the Philippines (*Phil*, p. 26).

Although techniques of negotiation, mediation, and conflict resolution are implicit in the EIA process, none of the case-study countries has explicitly adopted these approaches in their EIA regulations (See Phil, p. 49). As noted in the Sri Lanka Case Study Report:

“mechanisms and techniques for negotiation and conflict resolution...would also be an important factor in situations where the public is itself divided on an issue, a scenario which is by no means improbable.” (*SriL*, p. 29)

The Need for Skilled Human Resources

Although many able and talented individuals work on EIAs, the overall deficit of trained and experienced environmental professionals is severe. Indeed, there are too few trained people to meet today’s needs, much less tomorrow’s (Phil, pp. 45–56; Indo, pp. 3–4; SriL, Annexure A). The number and the skill levels of environmental consultants, academics, community and NGO activists, and governmental agency staff need to be augmented dramatically. Needs-assessment analyses and recruitment schedules for present and future EIA staffing requirements are needed for both government and non-governmental organizations involved in EIA (Phil, p. 45). The

Box R. A Program in Sri Lanka for Improving Environmental Education at the University Level

The Natural Resources and Environmental Policy Project (NAREPP) is a long-term environmental assistance project undertaken by the Government of Sri Lanka with funding from USAID. One successful activity that has helped build a sustainable basis for the NAREPP investments has been the university development work.

The program focuses on four universities and eight faculties located throughout the nation. An Environmental Engineering Masters Degree has been created at Moratuwa University on the basis of an earlier diploma program. A multidisciplinary Center for Environmental Studies has been created at Peradeniya University to introduce and coordinate both graduate and undergraduate environmental programs. Two new Masters Degree programs in Natural Resources Management and Environmental Economics have just been approved by the Senate to be created within the Post Graduate Institute of Agriculture at Peradeniya. A Wildlife Management Certificate program is under way at the Open University. A variety of workshops have already been presented by the Universities. Other short courses and degree programs will be initiated during the next year. NAREPP efforts focus on building programs, curriculum, teaching materials, and teaching capability for short courses and regular academic programs. Prior to NAREPP's intervention, there was little multidisciplinary activity in Sri Lanka.

NAREPP provides scholarships related to NAREPP's priorities. Besides increasing the number of environmental professionals, the scholarship program raises the quality of professional training for scholars as well as others in the Masters program by stressing the improvement of applied skills. For example, introducing a field work/research project component in the environmental studies Masters Degree programs will help create multidisciplinary teams of students working under university professors to carry out field projects that address the specific environmental needs of agencies and directly support National Environmental Action Plan (NEAP) priorities.

Even though this program has just begun, signs of sustainability over the long term are evident. Interaction between university faculties has been very productive. Enthusiasm and commitment from both universities and government agency personnel are clear. The sense of ownership that has been established among all participating personnel is strong and growing.

The financial sustainability of the NAREPP-initiated programs is strengthening rapidly. Even though NAREPP funds are very limited, the program is meant simply to catalyze sustainable development. NAREPP operates on the premise that limited donor investments will help create visibility and credibility that will, in turn, attract other national and international funding.

This approach is working: the World Bank is developing a US\$10-million program in environmental engineering and pollution control in cooperation with Moratuwa University. The Center for Environmental Studies at Peradeniya has already obtained two additional contracts. Donors, particularly the World Bank, are discussing future investments in the Masters Program in Environmental Economics at the Post Graduate Institute of Agriculture at Peradeniya. The Open University has already begun offering NAREPP developed courses on a fee basis and is slowly building a financial reserve.

Still, funds remain limited, university politics, and the extensive periods during which universities have been closed due to strikes are all constraints. The very narrow disciplinary approach that has traditionally characterized Sri Lankan universities is perhaps the most important stumbling block to long term success.

Future work with the universities will continue along current lines, as presented in the NAREPP Work Plan, and will include increased involvement with other donors and national agencies.

Reference: Ariyaratne Hewage, Deputy Director and Senior Environmental Training Specialist, Natural Resources and Environmental Policy Project (NAREPP), Colombo

Box S. Environmental Activities of the University of the South Pacific

The University of the South Pacific is a regional university founded 25 years ago and funded cooperatively by South Pacific regional governments and international donor agencies. The main campus is in Suva, Fiji; other major centers are in Apia, Western Samoa and Port Vila, Vanuatu. In addition, centers have been established in each member country, and a correspondence network has been developed.

The university has been instrumental in environmental education and environmental awareness campaigns. It offers degrees in environmental sciences focussing on regional issues, such as marine resources. In support of environmental impact assessment (EIA) activities, the university serves as a center for data gathering and monitoring.

Research institutions within the university carry out studies on key regional issues such as coral reefs, mangrove ecosystems, and environmental law, and consider the interplay between these natural resources and the unique tenure systems of the region. This provides a valuable source of baseline information for many EIA studies. The university also serves as a base for the region's main environmental action group and carries out EIAs on a consulting basis.

Reference: Sefanaia Nawadra, Environmental Planner, Environment Department, Ministry of Housing and Urban Development, Suva, Fiji

development of formal academic programs, less formal short courses and seminars, and various forms of on-the-job training for environmental professionals is sorely needed. An important first step is identifying the training needs of senior policy and project decisionmakers, EIA system administrators, EIS team managers and leaders, EIS team members, and EIS reviewers in and outside government.

Besides building up the environmental science faculties, universities should sponsor interdisciplinary environmental training provided by related faculties—law, planning, engineering, sociology, etc. Formal and informal environmental training activities sponsored by vari-

ous professional organizations in environmental and related fields also deserve attention.

To develop EIA-related capacity, a first step is a comprehensive assessment of current and future needs. For EIA programs in Asian countries, such assessments are appropriate at three levels. First, staffing profiles are needed for each agency in the EIA system, including the central EIA agency, sectoral agency environmental units or cells, and environmental departments or agencies at the regional/provincial government levels. (The Sri Lanka case study provides an example of such a profile; see *Sril., Annex A*). Second, the current level of academic training and professional experience among EIA staff members should be assessed along with their potential for skills upgrading through additional training or professional experience. By comparing the staffing profiles with the skills and training assessments a recruitment schedule can be derived. Third, adding current and future recruitment needs of individual agencies provides some sense of the national environmental-training requirements that universities, training institutes, and other skill delivery mechanisms must satisfy.

Besides overall numerical estimates, an estimate should be made of the demand for different levels of training: formal graduate and post-graduate programs, two-week vs. two-month short courses vs. on-the-job

Box T. Some Identified Training Needs

- ▶ Hands-on training in carrying out EIAs
- ▶ EIA Evaluation techniques
- ▶ Environmental negotiation, arbitration and mediation
- ▶ Social impact assessment
- ▶ Environmental monitoring
- ▶ Computer training in data management
- ▶ Project evaluation
- ▶ Risk assessment
- ▶ Communications

Reference: The Philippines Case Study Report

training techniques, one-day vs. one-week introductory or general awareness seminars, etc.

A clear understanding of the diverse target groups or audiences requiring skills upgrading is essential to the development of a sound capacity-building program. Each group may have particular needs that determine the nature, depth, and duration of the training approach to be employed. Some key candidate target groups for training include: EIA and other environmental agency staff, project proponent agency staff, private project proponents, professional disciplines/consultants, NGOs and other community interest groups, and affected citizens and businesses. Further, a key and sometimes overlooked target group consists of the “trainers of the trainers.”

Each of these target groups can be further subdivided for purposes of developing training materials and courses. For example, public agency staff include policy and project decisionmakers, often at a senior level, whose training needs (or available time for training) may be limited to participation in environmental awareness-raising or introductory overview short courses. In contrast, environmental professionals involved in EIA agency's day-to-day operations will need a more diverse and extensive training. (Some specific training needs are identified in the Philippines case study (*Phil*, p. 45, see also Box T.)

EIA agencies and other environmental organizations should also prepare and periodically review human resource development and staff recruitment plans. Besides detailing staffing requirements and training needs, these plans should also outline the career-development ladders that qualified staff can climb. Greatly expanded environmental scholarship and fellowship programs to help professional and non-professional EIA participants to develop their skills are major incentives for recruiting and retaining capable staff (*Phil*, p. 45).

Of course, human resource development and recruitment must take place within the context of the severe budgetary constraints faced by public agencies and private environmental organizations. Needs must be ranked at every stage of strengthening EIA capacity. Investments in human resource development (as well as investment in the collection of baseline environmental data, in basic and applied environmental research, in laboratories and research facilities, and in the creation of Environmental Centers of Excellence) will return immense dividends over the years in knowledge, time gained, and costs saved. Also, donor-sponsored development projects can be designed to include “piggy-

backed” environmental training programs (*SriL, Annexure A*, pp. 11–12).

Improving the Physical Resources for EIA

Although human resource needs are clearly the highest priority for EIA programs, additional facilities and equipment are also required. Basic physical resource needs identified by workshop participants include:

- ▶ Analytical and research laboratories for use in data collection, environmental research, and permit enforcement;
- ▶ Libraries and data centers to provide EIA practitioners with access to environmental publications and data, in both hard copy and electronic form;
- ▶ Computer hardware and software for maintaining central EIA agency project files and tracking pending EIA activities for administrative purposes; and
- ▶ Monitoring devices and related equipment for measuring environmental conditions, both project-related and ambient.

“Environmental Centers of Excellence” were suggested as a means to optimize scarce resources and to provide facilities for integrated training, data collection, research, and related services. They can be developed, as in Indonesia and the Philippines, in concert with university and other research institutions to maximize the synergistic benefits of ongoing programs. They might also be developed and managed by government, NGOs, or by a combination of these groups. Through networking, specialized Centers can draw on the complementary strengths available in other Centers. Such Centers can sponsor basic and applied research on EIA methods and techniques, including rapid assessment techniques, and help make sure that they are adapted to local needs and conditions. Outputs would include EIA manuals, technical guidelines, and other EIA materials that should be made readily available to practitioners working at the project level.

In Environmental Centers of Excellence, the challenge is balancing the development and support of practical operations-oriented techniques and measures with the conduct of more theoretical research into impact assessment methods. In addition, domestic and international donor support will be needed to create and link a network of Environmental Centers of Excellence and to support their continued operation.

Box U. Suggestions for Improving Baseline Data Systems

During a roundtable discussion on issues related to baseline environmental data, held as part of the regional workshop in December 1993, participants suggested a number of tools or approaches for addressing some of the problems with environmental data:

- ▶ Start with basics (both at the needs level and the techniques level), develop a hierarchy of data sources, and look for low-tech methods and data surrogates.
 - ▶ Build a database with existing EIA information. Emphasize site-specific ecological data—especially in urban settings, where extensive quantities of data have been collected on such factors as urban air and water quality, but are not centrally compiled.
 - ▶ Review existing data standards, link them to national goals and standards, and collect only relevant data. (UNEP has recommended specific data standards; there has also been a preliminary attempt by ASEAN countries to find common standards.)
 - ▶ Improve data-collection methods and gradually improve the quality of baseline data. Standardize sampling methods and laboratory methods.
 - ▶ Prepare ecological profiles and
- collect data for large areas—for example, watersheds. This was done in the Philippines, which compiled information and data for “environmentally critical area” projects. This information will have multiple uses—planning, resource management, enforcement, and impact assessment.
- ▶ Establish a central clearing-house for environmental data and information. This facility can help to encourage the institutionalization of routine environmental monitoring and assume responsibility for the comparability, continuity, and reliability of data. (The Clean Rivers Program in Indonesia, for example, has a limited data-collection program that can be seen as a first step in creating an appropriate regional or national baseline data system. Such a centralized facility is under consideration for Indonesia, under the auspices of BAPEDAL.)
 - ▶ Fund and give technical support for compatible, digitized, and accessible baseline data management systems.
 - ▶ Ensure timely data transmission to key decisionmakers and policy-makers.
 - ▶ Collect post-project data for comparison with predicted levels.
- ▶ Prepare national directories of sources of information for EIAs, including names, addresses, telephone numbers.
 - ▶ Make better use of aerial photography and develop a directory of aerial photos.
 - ▶ Provide training using tools that enable EIA practitioners to model environmental impacts and predict future conditions.
 - ▶ Improve expertise and skills in data analysis.
 - ▶ Promote tools and equipment for information gathering and analysis that are pertinent, compatible, easily understood, and not too labor- or cost-intensive.
 - ▶ Teach skills on making optimum use of simple data, for example, topographic maps.
 - ▶ Recommend reliable technology that will remain relevant and useful over time; and
 - ▶ Stress easy accessibility of data and accountability of data-system management officials.

Reference: Environmental Data Roundtable Discussion, Regional Workshop, Serpong, Indonesia, December 1993

Creating an Environmental Data System

Few developing countries have fully developed baseline data systems (including data-collection, interpretation, updating, storage and retrieval, and user-dissemination mechanisms),

some have none at all, and information that is theoretically available is often difficult to obtain. Geological, topographical, soils surveys, wetlands and other resource areas, cultural resources, lists of endangered and threatened species, ambient air and water quality data, demo-

graphic data, and a host of other data must often be collected project by project, generally at great expense. Often, accuracy suffers along with confidence in the conclusions reached (*Phil*, pp. 24 & 46; *SriL*, Annexure A, pp. 12–15). Frequently, EIA practitioners have to rely on secondary data, which may be incomplete and of doubtful accuracy. Data-availability problems are compounded when data is needed on resource dynamics: often, base-line data do not cover long enough periods to reveal long-term trends or even to depict seasonal variations.

Better tools are needed to ensure data quality. According to workshop participants, there are not enough established links to other users of EIA information, including the private sector, and EIA practitioners are often reluctant to share data or a common database. The need to keep some information confidential can also impede cooperation.

However obvious the need for good data, more work is required to clarify how a project's contextual setting influences the scope and coverage of EIA studies. The EIA system in the Philippines, for example, attempts to take account of both the effects of the project on the environment and the effects of the environment on the project by requiring EISs for certain designated "environmentally critical projects," as well as for all projects in designated "environmentally critical areas." A more accurate and comprehensive mapping of environmentally critical areas would be helpful, not only to identify applicability issues, but also to help EIA preparers evaluate the seriousness of potential impacts of a given project (*Phil*, p. 43). *Context matters, and good data are needed to properly define it.*

Urban EIAs demand the adaptation of information and data. In densely populated urban areas, "brown" issues predominate, major infrastructure systems are in place, and projects tend to have high visibility, while in agricultural regions, forested areas, remote coastal zones, and other areas where population densities are lower and social systems are less sophisticated, "green" issues predominate.

Workshop participants noted that urban environmental data and monitoring issues vary greatly among Asian nations. Although they did not agree on specific recommendations on urban EIA data needs, they considered the systematic national environmental monitoring system in Singapore worthy of emulation.

Since the uses and applications of environmental data extend far beyond EIA, data-collection and mapping programs must be developed in concert with national and regional land-

Box V. Beira Lake Restoration Project, Colombo, Sri Lanka

Beira Lake is a large inland urban lake with a sea outfall, into which much of Colombo's storm water drainage flows. Over the years, it has become a heavily polluted lake. The MEIP (Metropolitan Environmental Improvement Programme), a World Bank-assisted Program attached to the Ministry of Policy Planning and Implementation, has targeted the lake for a major clean up, known as the Beira Lake Restoration Project (BLRP).

The MEIP initiated a Technical Assistance (TA) Study with CIDA funding and contracted a Canadian firm to conduct the TA in cooperation with a counterpart team from Colombo's Urban Development Authority (UDA).

One of BLRP's first actions was to put an advertisement in all national newspapers asking the public for information and comments on restoring Beira Lake. A good response was received, including some technical inputs that were discussed at three workshops to which people with substantial contributions to make were invited.

The project has progressed, in part based on the public's input, and is now being reviewed by the World Bank which has asked for US\$30 million in assistance.

To help generate funds to repay the World Bank loan, the UDA has considered a number of innovative measures, such as establishing a land-development company ("Beira Lake Holdings, Ltd.") to sell real estate around Lake Beira on a planned basis, phased so as to help defray the loan payments as they become due.

Reference: S.W.P. Bulankulame, Secretary/Environment, Ministry of Environment and Parliamentary Affairs, Colombo

use planning agencies, resource-management agencies, and private industries. These groups will have to agree on the types of data to be collected, the appropriate level of detail needed, the frequency of collection and updating, and the spatial organization of data. This last item is especially important, since environmental planners, managers, and impact assessors need geographically precise

Box W. JICA's EIA Policies

For some technical assistance projects, the Japan International Cooperation Agency (JICA) has provided a team of consultants trained in developing sectoral master plans, sub-regional or regional economic development projects, or implementing the feasibility studies of specific bigger projects.

JICA calls these projects "Development Surveys." Development Survey budgets range on average between US\$1 million and US\$10 million and extend over one to three years. JICA has made EIAs mandatory for Development Surveys. Indeed, approximately 5 to 15 percent of the project budget is normally allocated for the EIA.

Recently, JICA conducted a number of Development Survey projects to develop an Environmental Management Strategy for several large cities, lakes, or bays (estuaries). However, JICA has not provided any direct assistance in implementing sectoral or area-based EIAs.

Reference: Masahiro Ohta, Japan International Cooperation Agency (JICA), Chief Advisor to the Environmental Management Centre, Serpong, Indonesia

data. Difficult issues of data confidentiality and national security interests may need to be addressed too.

In the context of EIAs, the power of such information technologies as Geographic Information Systems (GIS) is clear, but the substantial commitment and investment of personnel that they require must also be acknowledged. Some workshop participants claimed GIS is too dominated by experts and technicians and not responsive enough to the needs of policy-makers and decisionmakers. Participants felt that competing software vendors, often selling incompatible software, heighten the confusion and impede the development of internationally recognized standards and protocols for data collection and management.

The Search for Project Acceptability

In all three case-study countries, national environmental policy requires public agencies to consider environmental values and resources when reaching decisions about major project and other activities. All also mandate the use of an EIA process to generate the needed in-

formation. Still, it is no simple matter to determine whether and to what extent EIA findings have influenced project decisionmaking or led to the identification of new or redesigned alternatives with fewer impacts, instead of being used to justify *a priori* project decisions.

Given the inherent difficulty of measuring EIA's effectiveness, some participants believe that a system of checks and balances achieved through a broad-based public participation is essential to ensure that EIA is properly applied. In their view, public scrutiny can help highlight the most important impact issues, lead to the identification of new alternatives and other measures to reduce impacts, and encourage decisionmakers to seek consensus among social and community groups affected by proposed actions.

At the in-country workshops, the concept of social acceptability raised a number of fundamental questions: What does the term mean? Is the search for social acceptability one for planning and design acceptability, rather than environmental soundness? Can these multiple objectives best be achieved through the EIA process, or by some other means? Some participants feared that adding this dimension would place an undue burden on a process that has yet to be clearly defined and that is often considered controversial and intrusive. Others (especially in the Philippines, but also in Indonesia and Sri Lanka) maintained that EIA should not be seen as a narrow technical process or one limited to dealing solely with physical environmental impact issues, but should rather provide a forum for revealing and resolving issues of social or community impact and acceptability. In short, matters of social and economic concern and planning issues must be investigated, and a mechanism for achieving broad-based public participation installed. Also, this approach implies the existence of techniques for incorporating social impact mitigation (or compensation) into the underlying project.

In the Philippines, the still-evolving EIA system is becoming a broad-based process for addressing social acceptability criteria, as well as physical and environmental impacts. EIA review and approval authority has already been decentralized; attention to social as well as physical and environmental issues has increased; the potential of EIA for creating environmental planning and management capacity and regulatory controls has been recognized; and the number and depth of participants has grown. In Indonesia, the strong sectoral structure that has been adopted at the national level works against the development of inter-agency approaches to the EIA system. In Sri Lanka, despite prior experience

with EIA in the Coastal Conservation Program, the newness of the concept and the attention given to economic development has made introducing EIA at the national scale very difficult.

Although the social acceptability concept has been well received in the Philippines, implementation problems remain (*Phil*, p. 27). Currently, the social acceptability is determined by a majority vote of the members of the Regional Development Council. In the absence of written criteria for reaching the decision, however, the sentiments of the Regional Council members do not always represent those of the public-at-large. Further, the social acceptability finding is to be made in parallel with the EIA process, but is to be divorced from the technical environmental impact findings that will be addressed in the Environmental Compliance Certificate issued by DENR/EMB (*Phil*, p. 27).

Donor Influences on EIA Process Development

Although EIA requirements have been "on the books" in the three case-study countries for years, the renewed attention recently given to EIA has been driven in part by the donor community's increasingly stringent environmental review requirements. In addition, bilateral and multilateral donor organizations and other international development-assistance organizations have provided major funding for EIA technical assistance projects in each country (*see Appendix B*).

While workshop participants strongly agreed that the EIA process represents resources well spent and deserves to be expanded, and that donor-funded technical assistance is appreciated, they also believe that EIA systems have been too much influenced by northern concepts and approaches at the expense of firmly rooted local conditions, needs, and priorities. In addition, the conflicts and confusion that frequently arise out of variations in the donors' environmental clearance procedures and requirements slows progress.

D. TEN WAYS TO STRENGTHEN EIA CAPACITY IN ASIA

EIA systems in Asia vary widely. Some countries, such as the Philippines and Indonesia, have undertaken EIA studies for nearly two decades. They have developed EIA laws and regulations, acquired considerable practical experience, and marshalled significant institutional and personnel resources. Other countries, such as Laos, Cambodia, Vietnam, and Nepal, have just begun

to carry out EIAs, but have not yet gathered all of the resources needed to conduct EIAs systematically.

No single set of recommendations can apply equally to such widely differing situations. The following recommendations make most sense in countries like Indonesia, the Philippines, and Sri Lanka which are trying to strengthen or "fine tune" an existing EIA system. Countries that are creating, or are about to create, an EIA system should also find them useful, though a thorough review of environmental policies, capabilities, and institutional structures should be carried out first.

RECOMMENDATION #1: FACILITATE PUBLIC PARTICIPATION.

As noted, EIA can be viewed narrowly as a technical aid to government policy-making and project decision-making or broadly as a tool for facilitating effective public involvement in project planning and development processes. Although either approach can yield useful results, the broader approach to EIA has been widely recommended (in the Brundtland Commission Report, and in *Agenda 21*, for example) to help achieve sustainable development goals. The broad-based participation of NGOs, affected communities, and individual citizens in development planning and implementation and a strong, environmentally sensitive planning orientation are increasingly recognized as the twin pillars of effective sustainable development planning.

Two complementary initiatives can be pursued to enhance public involvement in EIA. Procedurally, timely notice and opportunities for effective participation must be provided. More specifically, five "due process" safeguards must be built into EIAs:

- ▶ the provision of *timely and appropriate* notice of all pending actions or decisions;
- ▶ reasonable and timely *access to EIA reports* and other documents;
- ▶ the provision of an *opportunity to be heard* before key decisions are made;
- ▶ the creation of a *written record* of decisions and the rationales behind them; and
- ▶ the provision of an *appeals mechanism*, whether administrative or judicial, for reviewing all final decisions.

Whatever final form these safeguards might take in one EIA system or another, they are sure to help make

or keep development planning and decisionmaking fair and open.

A second and more substantive approach to increasing public involvement is to seek to fashion new instruments for participation. Among the many innovative techniques noted during the workshops and discussed in Section C are:

- ▶ the inclusion of NGO and community representatives as full voting or participating members of EIA preparation and review teams;
- ▶ the use of “community monitoring committees” to review compliance with agreed-upon EIA conditions;
- ▶ the provision of “intervenor funding” to conduct technical studies and other activities requested by NGOs or community residents; and
- ▶ the use of new means of timely and appropriate notice of pending actions, such as posting of notice in local languages, canvassing impacted areas, distributing fliers, and verbally announcing pending actions (in meetings, on radio, etc.).

In addition, EIA agencies should consult with NGO and other community representatives to identify further ways to obtain public input.

**RECOMMENDATION #2:
MAKE INFORMATION AVAILABLE TO THE PUBLIC.**

An EIA process can be needlessly confusing, especially to laypeople. Since 1993, the World Bank has required recipients of Bank funds to release EIA documents prepared for Bank-assisted projects to the public for review and comment. Government EIA agencies should follow suit, making all EIA-related materials accessible to the public.

For example, official registries of actions subject to EIA review should be compiled by EIA agencies and made available for public inspection. Public comment might be requested at the time when a project is first declared to be subject to EIA review, before the Terms of Reference for the actual EIA study are established.

Other key milestones in the process—EIA report submission dates, duration of review and comment periods, public hearing dates, EIA approval dates, and the like—should also be publicized well in advance so that interested parties can respond fully. Suitable means in-

clude newspaper advertisements, posted notices, mailings, etc.

**RECOMMENDATION #3:
CLARIFY PARTICIPANTS' RESPONSIBILITIES.**

EIA effectiveness is greatly diminished when participants' roles are poorly defined. Even where underlying EIA legislation and policies are well founded, if procedures are not already spelled out and roles and responsibilities assigned, serious mistakes and oversights in EIA administration are inevitable.

Authority to promulgate EIA procedures is generally vested in a country's national environmental agency, or its EIA division, such as BAPEDAL in Indonesia, EMB in the Philippines, or CEA in Sri Lanka. These agencies' task is to translate the broad policy-oriented language contained in most EIA legislation into operative technical and administrative terms. Then, the project-proposing agencies responsible for preparing or reviewing EIAs for projects and other actions within their jurisdiction may issue even more detailed EIA procedures or guidelines.

A useful model in this regard can be found in the United States, where the Council on Environmental Quality (CEQ) within the Office of the President oversees the National Environmental Policy Act (NEPA) system. CEQ's regulations add detail and precision to the brief, sometimes vague, language of NEPA and direct all federal agencies to issue their own procedures to guide NEPA compliance actions. Thanks to this multi-tiered approach, the comprehensive national framework is flexible: it can be refined to reflect the technical or administrative needs and preferences of individual agencies.

In Asia, a number of the key problems identified in the case studies can be addressed by clarifying EIA responsibilities by issuing better EIA regulations and guidelines. Specifically,

- ▶ Streamline EIA systems and procedures to eliminate costly delays by reducing ambiguity, redundancy, and oversights in current administrative systems;
- ▶ Create better links to pre-EIA planning and programming, and to post-EIA project permitting and licensing;
- ▶ Institute and strengthen the participation of NGO and community groups in EIA preparation; and
- ▶ Periodically re-evaluate and upgrade the EIA system as experience is gained with its application.

**RECOMMENDATION #4:
PROVIDE TRAINING FOR ALL PARTICIPANTS.**

EIA systems require people with diverse skills:

- ▶ EIA technicians trained to assess natural or man-made impacts on social, economic, and physical resources or features;
- ▶ EIA reviewers with some technical skill and the ability to deal as generalists with the full range of impact assessment and EIA presentation materials;
- ▶ EIA system administrators who make sure that responsible projects do not get caught in a bureaucratic maze; and
- ▶ EIA policy-makers and system managers, responsible for developing effective working relationships with other public agencies, private businesses, and the public-at-large.

Each of these groups has specific training needs. Training programs should meet these and draw on the academic expertise and work experience of participants. The training needs of private EIA consultants, NGO staff, community residents, and other non-governmental participants in the EIA process should also be addressed.

**RECOMMENDATION #5:
LINK EIA TO DEVELOPMENT PLANNING,
PROGRAMMING, AND POLICY-MAKING.**

The failure to link EIAs to national and sectoral development programming, policy-making, and project identification and planning activities was mentioned at case-study and regional workshops as a significant “missed opportunity.” Although most EIA legislation speaks to the need to inject environmental considerations and values into early project development planning and programming, most EIA studies are conducted well *after* key project decisions have been made.

Almost universally, project-focussed EIA reports are relied on as the primary vehicle for achieving EIA objectives. Even in the United States and other countries with a lengthy history of EIA experience, efforts to integrate EIA with early planning, programming, and policy-making activities have met with only mixed success.

Many Asian countries have a tradition of centralized, long-range, or areawide economic and development planning. An environmental impact review “screen” can

be inserted into this institutional framework. Such early consideration of environmental resource issues and impacts is consistent both with sound professional practice and with donor preferences (as evidenced, for one example, by the World Bank’s emphasis on preparing National Environmental Action Plans [NEAPs] as well as the Bank’s increasing reliance on Programmatic EIAs rather than project-level assessments as a basis for loan and grant approvals).

To support these initiatives, EIA Agencies should issue guidelines to help policy-makers, program directors, and areawide planners perform EIAs. Such EIAs could initially be voluntary, but the EIA agency should reserve the right to make them mandatory for selected projects or policies. The guidelines should specify how such EIAs differ from conventional project-level EIAs and suggest impact-assessment methods and techniques that might be better suited to these applications. In most cases, however, existing environmental legislation should be enough to enable the EIA agency to enter into Interagency Memoranda of Agreement to accomplish these objectives.

**RECOMMENDATION #6:
COLLECT AND MANAGE ENVIRONMENTAL DATA.**

Lack of complete and accurate environmental baseline data is a major impediment to effective EIAs and to sustainable development planning generally. Although it is usually necessary to collect some project-specific data, it is neither cost-effective nor practical to collect all EIA data case by case or for “single use.” With access to comprehensive, properly validated environmental databases, project proponents can prepare EIA reports comparatively quickly. Also, the level of confidence in the data and in the inferences drawn from them rise.

Some of the data needed for EIAs must be collected over time, such as that on annual changes in ambient air or water-quality parameters, or basic economic and demographic data. To show meaningful trends, such data must be compiled in advance and at regular intervals. They cannot be collected efficiently during an individual EIA study.

Other data dealing with spatial characteristics—such as soils surveys, wetlands delineations, definitions of significant ecological habitat zones, cultural resource inventories, and the like—are collected most efficiently on an areawide scale, where methodological consistency will enhance the quality of the data and economies of scale will reduce their cost. Moreover, such data collec-

tion may require expertise or professional judgment that few EIA study teams possess.

Finally, since most environmental data are also used by development planners and managers, private businesses, and citizens generally, as well as by EIA study teams, a centralized data collection/storage/retrieval system is desirable. EIA agencies should thus work with other potential users of an environmental baseline data system to establish priorities and procedures for developing and using an environmental data-management system. A consideration here is compatibility with Geographic Information System (GIS) technology.

**RECOMMENDATION #7:
LINK EIA TO PROJECT PERMITTING AND LICENSING.**

A second key problem identified during the workshops is the failure to make better use of EIA findings. Often, EIA reports contain recommendations for eliminating or reducing anticipated impacts. (In Indonesia, environmental monitoring and impact management plans (RPL/RKL, *see p. 10*) must be included as part of each project's EIA submission.) But, too often, the agency responsible for approving the EIA study lacks the legal authority to modify project location and design decisions or the political strength to impose conditions on the project's operations. Even where it can impose environmental conditions, compliance monitoring and enforcement may be so lax that any effort to ameliorate harmful designs or practices is undercut. Not surprisingly, project proponents and opponents alike often conclude that the EIA process is a waste of time and money.

Although linking EIA with early planning, programming, and policy-making generally requires no new legislative authority, placing EIA-based conditions on parties seeking permits or licenses can conflict with private property rights or even lead to civil or criminal sanctions. Indeed, any attempt to impose strong conditions on projects as a result of EIA findings will probably require explicit enabling legislation.

Specifically, agencies issuing permits and licenses for land development, industrial operations, and similar activities must be directed to withhold their approval until an EIA review is completed. EIA findings and recommendations should be used to develop binding conditions. At the same time, compliance monitoring and enforcement programs need to be instituted. Monitoring programs might include self-monitoring, community-based monitoring (such as is done in the Philippines),

and formal independent environmental audits by government inspectors or contract employees.

**RECOMMENDATION #8:
PREPARE CLEAR, CONCISE EIA REPORTS.**

EIA reports are often characterized as too lengthy, too technical, dull, and impenetrable. Muddy prose and graphics can discourage people from using an otherwise worthwhile document.

EIA report quality can be improved in many ways. Page limits can be imposed. Executive summaries can be required. Standardized report outlines and formats can be used. Brief summaries of technical data for the main report can be prepared separately from lengthy supporting memoranda (which can be relegated to technical appendices). Not least, more maps, photographs, and simple diagrams can be used.

**RECOMMENDATION #9:
CREATE AN EIA NETWORK.**

Complementing EIA training, a network of EIA practitioners can also yield great benefits. The chance to share practical EIA experiences, both successful and otherwise, in a less formal and more collegial setting should be given to all practitioners, including private sector business, NGO staff, and community representatives, as well as public agency staff.

The range of activities that a national or a regional EIA network organization might undertake or co-sponsor is wide:

- ▶ organize seminars and field visits within (or between) Asian countries that have successfully established EIA programs, thus encouraging more South-South dialogue, information exchange, and networking among EIA practitioners;
- ▶ help circulate environmental handbooks and guideline manuals on EIA techniques and experience (such as those produced by the ADB, World Bank, ESCAP, and others) more widely and effectively;
- ▶ identify and circulate copies of good EIAs and summaries of effective EIA practices;
- ▶ publish an EIA newsletter covering EIA practitioners' experience in Asia; and
- ▶ prepare a directory (using innovative technologies, such as e-mail) of the names and addresses of key groups and individuals involved with EIA in Asia.

Networks could be funded largely from dues paid by members and their sponsoring organizations. Particularly in the early years, however, additional support might be sought from donor agencies.

**RECOMMENDATION #10:
CONDUCT EIA DEMONSTRATION PROJECTS.**

The most effective way to transfer EIA skills is through "hands on" demonstration projects. EIA agencies should identify one or more major development projects or national policy issues requiring an EIA. Donor assistance, both technical and financial, can be sought to help carry out the studies. Domestic experts and consultants should play significant managerial and technical roles. Expatriate consultants should be instructed to develop training modules so that similar studies can be carried out more readily in-country in the future.

CONCLUSION

These ten recommendations address the key problems identified during the WRI/AID Comparative Assessment study. As they put them into practice, EIA Agencies should focus on EIA strengthening efforts that will:

- ▶ be achievable in the near-term within their country;
- ▶ strengthen existing institutions rather than create new ones;
- ▶ rely on existing internal sources of funding, rather than new or external sources;
- ▶ strengthen institutions and skills at the local or district level, as well as the national and intra-regional levels;
- ▶ encourage multi-disciplinary and multi-institutional approaches, rather than more narrow approaches to EIA; and
- ▶ maximize learning opportunities for EIA practi-

tioners within the country or region as well as those from Northern countries.

The following chapters provide summaries of the three case studies on The Philippines, Indonesia, and Sri Lanka. For a more in-depth review of these countries' EIA systems, please refer to the actual case studies which can be obtained from both WRI and each case study team leader (see Box A, page 3).

NOTES

1. The following abbreviated citations will be used in reference to the *Case Study Reports: Phil*, p. xx; *Indo*, p. yy; *SriL*, p. zz.
2. Concise descriptions of environmental screening procedures as applied by the World Bank and by the European Commission are set forth in the Bank's *Environmental Assessment Sourcebook, Volume I: Policies, Procedures, and Cross-Sectoral Issues*, and in the Commission's *Environment Manual, Section 3: Initial Screening, and Section 4: Preliminary Environmental Assessment*.
3. This general topic is also addressed in the World Bank's **Environmental Assessment Sourcebook Update No. 4**, October 1993, entitled *Sectoral Environmental Assessment*.
4. This process was a major topic of discussion in the in-country workshops, and was addressed at length in all three case studies (*Phil*, pp. 46-52; *Indo*, pp. 22-29; *SriL*, pp. 26-29).
5. In both the Philippines and Indonesia, community representatives are eligible for inclusion on EIA/AMDAL review committees. However, particularly in Indonesia, such representatives still have not had great influence over project decisions (*Indo*, p. 24).

2. Summary of the Philippines Case Study Report

A CASE STUDY OF THE PHILIPPINE EIA SYSTEM

The environmental impact assessment (EIA) has become institutionalized in the Philippines, with systems, procedures, and administrative machinery well established. The EIA process has special economic significance because it can affect the implementation of projects crucial to the country's development. This process has evolved over the years, but deviates significantly from the U.S. system, after which it was patterned. The changes arose from the country's particular need for environmental safeguards, as well as administrative and legal differences.

The Philippine EIA System

Legal Framework. Environmental impact assessment began in the Philippines in 1977 with the Philippine Environmental Policy Decree, which requires that "All government agencies and private corporations should prepare an environmental impact statement for every project undertaken which would significantly affect the quality of the environment." Another presidential decree in 1978 further clarified the EIA provision, and instituted a screening mechanism so that only those projects that are considered environmentally critical and those that will be located in environmentally critical areas are subject to the environmental impact assessment.

Environmentally critical projects include heavy industries such as nonferrous metals, petroleum, and petrochemical; mining and quarrying; and infrastructure projects, such as major dams, power plants, roads, and bridges. There are 12 categories of environmentally critical areas. In 1982, the responsibility for reviewing environmental impact statements and issuing the Environmental Compliance Certificate became centralized in the National Environmental Protection Council, which is now known as the Environmental Management Bureau (EMB). This bureau is now part of the Department of Environment and Natural Resources (DENR), which was created in 1987.

Institutional Set-Up. The Environmental Management Bureau and regional offices of the DENR are the

primary agencies mandated to implement the EIA system. This bureau has 12 technical staff members to process documents, inspect sites, monitor compliance, and train personnel. In addition, the staff is expected to analyze policy and to monitor and validate the performance of DENR regional offices. In 1992, processing of project descriptions and EIS documents for projects in environmentally critical areas was delegated to the regional offices.

EIA Technical Process. There are two types of documents under the environmental impact assessment system—project descriptions and environmental impact statements (EIS). A project description describes the project and the project site prior to development and examines in a preliminary way the project's probable impacts on the environment. This document is required for projects that are not environmentally critical, but that will be located in an environmentally critical area.

An EIS documents the results of an environmental impact assessment, which is deemed necessary if a project falls under the three categories of environmentally critical projects, or if the determination in a project description shows that more in-depth studies are needed to address a project's environmental impact. A committee of consultants from several sectors reviews and evaluates the EIS documents. All interested parties are invited to express their views on a proposed project at a public hearing, the record of which becomes a factor in the decision to issue or deny an Environmental Compliance Certificate. After this certificate has been issued, compliance monitoring is performed by DENR regional offices. With the institution of multi-party monitoring for some projects, a team with representatives from the DENR, relevant NGOs, the project proponent, the local government unit, and affected communities undertakes the compliance monitoring.

Other Legislation in the Environment Sector

A wealth of sector-specific legislation addresses the problems of domestic and industrial pollution, management and conversion of natural resources, and land-use planning and management. The major forestry legisla-

tion is the Forestry Reform Code, which updates and revises all existing laws on forestry in the Philippines. It calls for the proper use of forest resources without impinging on growth and sustainability, and it shifts the primary responsibility for reforestation and rehabilitation to the state. Other legislation penalizes illegal tree cutting, governs tree planting, and requires the use of public forests on a sustained yield basis.

Other environmental legislation covers fishing, preserving the coral and marine environment, mining, maintaining air and water quality, prohibiting waste disposal in territorial and inland waters, land-use planning, and controlling vehicular emissions, garbage and littering, and nuclear and other hazardous wastes.

Issues in the Implementation of EIA

In 1986, the new government displayed a serious intent to pursue environmental objects, and EIA systems were enforced earnestly. There was also a growing environmental consciousness by the general public and rising expectations for better application of environmental laws. As a result, the number of project descriptions and EISs increased. The bureaucracy, however, was not able to increase the resources allocated to implementing EIA.

For the past few years, the implementation of EIA has taken on an added dimension because of its potential to address development issues other than the environment. EIA is now considered the major institutional mechanism for participation in decisionmaking on projects of national significance. For some previously disadvantaged groups, such as indigenous peoples, EIA is one of the most important ways to protect their rights.

With these recent developments, current EIA procedures are clearly inadequate to deal with the multiple objectives the EIA process is expected to attain. Not only does the government need to increase the resources allocated to implementing EIA; it also needs to review and revise its internal procedures, especially if public participation is to be encouraged. Streamlining procedures governing the EIA process could resolve these issues. Change is most needed in the implementing agency, DENR, and, to the agency's credit, those changes have begun. But the pace and scope of these reforms are not adequate to meet the increasing expectations. Reforms to the system will not be effective if they are not backed by increased resources. If another objective is to use EIA in the broader context of development planning and resource management, then institutions other than DENR will be required to play active roles in a process that will perforce take longer.

A number of problems and constraints that affect the use of EIA as a management tool are summarized below.

Regulatory vs Management. The entry point of environmental assessment is not early enough in the project cycle to be useful in decisionmaking. When EIA was first adopted in the Philippines, it was conceived mainly as a management tool to incorporate environmental considerations in project decisions. It was highly unlikely, however, that project proponents would incorporate these costs and benefits on their own. Unlike engineering and economic feasibility studies, which are traditional tools in entrepreneurial decisionmaking, EIA had to be introduced as a regulatory tool to ensure that proponents would include environmental safeguards in their projects. Still, its use as a management technique is not precluded. Indeed, whether it is used in management depends largely on how the EIA system is implemented.

Legal Framework. Most informants involved in the EIA process believe that EIA laws are adequate, but that enforcement should be stricter. In addition, mechanisms for exemption should be repealed, and the screening process should be changed so that it is based on probable environmental impacts of any project, rather than on a list of project types that will grow as the economy expands.

EIA Evaluation Is Too Long. There are no guidelines that specify how long each step in the EIA should take. The average time has been 10 months, and the longest lasted almost 5 years. Several factors apparently affect the evaluation—the EIA group is severely understaffed, there is not enough money to expand the pool of consultants from which review panels are drawn, and there is not enough expertise in the private sector to prepare quality EIAs.

Deficiencies in the Review Process. Several problems adversely affect the review process. There are no guidelines for review. Conflicts of interest may jeopardize the integrity of the process. Non-governmental organizations are not represented on the review panels. Moreover, there is no plan to develop an in-house capability for the Environmental Management Bureau of the DENR to undertake EIS reviews.

Lack of Implementation Guidelines. There are no guidelines for project-specific EIAs or for scoping, public hearings, multiparty monitoring, the determination and administration of environmental guarantee funds, and projects in environmentally critical areas.

Baseline Data Lacking. The absence of baseline data increases the cost of an EIA, and, in cases where data are available, they are not in a useful form.

No Regular Monitoring. Monitoring environmental conditions affected by project operations is the responsibility of project proponents. Most proponents do not submit the required periodic status reports.

Strengthen Institutional Coordination. Within DENR, implementation procedures for EIA are poorly coordinated. Lack of coordination in interagency planning processes also means that EIAs are not properly integrated within each agency. Both types of coordination should be stepped up, and EIA should be integrated with other permitting systems.

Strengthen Public Participation. Although the public participates in many public hearings conducted on the EIAs of specific projects, mechanisms are still lacking to ensure that all interested parties are able to participate. In addition, NGOs need training on the technical aspects of EIA to make them effective partners.

ECC Should Limit Conditionalities. The presence of many conditionalities in an Environmental Compliance Certificate gives the impression that the EIA was not properly conducted. Many conditionalities, in fact, are already contained in the mitigating measures delineated in the EIS, so it is not necessary to repeat them in the ECC.

Clarify Funding. The Environmental Guarantee Fund is a well accepted innovation to generate funds to pay for damages caused by or rehabilitation necessitated by a project. Several aspects, however, are not clear—determination of the amount, form (bond, cash, or securities), and administration.

Specify Criteria. Social acceptability criteria are not clearly specified, but currently the rule of thumb is that one indicator of social responsibility is the approval of a majority of the members of a Regional Development Council. This council may not be representative, however, and may want to develop specific guidelines.

Role of LGUs Unclear. The role of Local Government Units in the enforcement of EIA is not specified in the Local Government Code or DENR implementing guidelines.

Need for Training. There is an urgent need for massive information and education campaigns and training on EIAs.

Strengthening EIA Capacity

The five proposed strategies for strengthening EIA capacity fall into two categories. The first two strategies are considered long term because they involve major changes in the institutional infrastructure for implementing EIA. The other three proposals deal with the need for streamlining EIA procedures and enhancing the capacity of existing institutions and resources.

Enhancing EIA as a Management Tool. Expanding the use of EIA as a management tool can be accomplished by :

- ▶ Interfacing the conduct of environmental assessment with the early stages of the project;
- ▶ Adopting programmatic and area-wide EIAs in selected development activities;
- ▶ Recognizing project proponents with good environmental practices;
- ▶ Forming an institutional network as the support structure for implementing EIA;
- ▶ Implementing information, education, communication, and training activities; and
- ▶ Enforcing EIA requirements consistently.

Changing Legal Framework. Instituting changes in the organizational structure and legal framework for environmental management will strengthen the entire EIA process.

Streamlining Current Systems and Procedures. The EIA system could be simplified by:

- ▶ Improving the systems and procedures for processing documents;
- ▶ Developing screening mechanisms and using methodologies such as risk assessment;
- ▶ Developing guidelines for various stages of the EIA process;
- ▶ Developing guidelines for environmentally critical areas;
- ▶ Integrating permitting and licensing requirements of DENR;

- ▶ Integrating EIA in the permitting requirements of other agencies; and
- ▶ Strengthening the coordination among DENR, other agencies, regional offices, and Local Government Units in the implementation of EIA.

Building Capacity. Increasing the capacity to conduct EIAs would be aided by:

- ▶ Allocating more resources to EIA;
- ▶ Implementing a human resource development program for EIA;
- ▶ Improving professional and quality standards in the conduct of EIA and preparation of EIS documents;
- ▶ Developing an environmental information system; and
- ▶ Conducting information, education, and communication activities.

Public Participation. Participation by a broad range of interested people would be enhanced by:

- ▶ Instituting communications mechanisms among proponents, government and non-government organizations, communities, and Local Government Units;
- ▶ Developing capability for environmental arbitration and mediation; and
- ▶ Enhancing the capacity of non-governmental organizations, Local Government Units, and community groups to participate in EIA.

Role of Technical Assistance in Enhancing EIA Capability

Technical assistance can play an important role in enhancing the capability to conduct EIAs.

Donor Assistance. The Asian Development Bank is funding a project to encourage participation in the EIA process. The Australian International Development Assistance Bureau is supporting the strengthening of EIA through improved administrative and management procedures, the introduction of hardware and software for databases, and the training of EIA staff at the central and regional levels. Although a project funded by the

United States Agency for International Development is not specifically focused on EIA, certain training components can be designed to increase national capability. This project will also study policies and facilities that can include EIA. Another USAID project supports efforts to develop and implement policy reforms for sustainable forest and natural resource management.

Four other projects may also enhance EIA capability. A UNDP/World Bank project is examining the institutional arrangements for environmental management in five Asian cities, including Manila, while a second is defining mechanisms to strengthen institutions responsible for environmental management. Two more USAID projects are also involved: one has a training component to develop capability of Local Government Units for environmental management, while a second is identifying and evaluating the environmental impacts of the project's various components.

Possible Future Donor Assistance. In view of the limited resources available in the Philippines to strengthen the EIA process, several priority areas have been identified for potential assistance from bilateral or multilateral funding. These include development of EIA guidelines (handbooks or manuals), training, career development, development of environmental databases, and the production of case studies.

Conclusions

Despite a decade of implementation hampered by physical, financial, and institutional resource shortages and a lack of political support, EIA is still seen as a major policy instrument for reaching environmental objectives while pursuing economic growth. From 1982 to 1985, the major accomplishment was developing awareness among policy-makers and project proponents of the serious consequences of not considering the environment when planning projects. During this period, environmental issues were not yet considered priority concerns by the government and the private sector. The general public also lacked this awareness. From 1986 to 1992, stricter enforcement revealed the strengths as well as the shortcomings of the EIA process, which led to the adoption of innovative implementation approaches.

Although EIA is regarded as an effective instrument for meeting environmental objectives, its potential will be fully realized only when it is used within the broader framework of a natural resource management program, along with a national land use policy.

As EIA enters its second decade of implementation, the necessary support structure—institutional infrastructure, guidelines, databases, and manpower—must be instituted to make the assessment an effective tool for

decision-makers. Using it will enable them to examine the trade-offs among social needs, environmental concerns, and financial viability, rather than simply accepting or rejecting a project.

3.

Summary of the Indonesia Case Study Report

A CASE STUDY OF THE INDONESIAN EIA SYSTEMS

The use of environmental impact assessments may be one way to help achieve sustainable development in Indonesia. This tool allows the state to foresee both the negative and positive effects of human activity on the environment and to act as early as possible to mitigate negative effects and provide alternatives for decisionmakers.

Anticipating sustainable development, Indonesia established the legal basis for AMDAL in the Environmental Management Act (EMA) of 1982. Guidance for implementation was provided in 1986 by a government regulation and further defined in 1993. In Indonesia, AMDAL has had some positive effects, especially by increasing environmental awareness among bureaucrats and industrialists. Over the last six years, however, many problems have hampered its implementation—lack of understanding from participants that AMDAL should be used as a planning tool; lack of participatory mechanisms; lack of linkage with licensing; poor quality documents; and lack of monitoring and surveillance of environmental management plans and environmental monitoring plans.

When examining the implementation of AMDAL in Indonesia, it is important to explore the factors that influence the country's capacity to develop an effective system for environmental and natural resource planning. This study, conducted by the Indonesian Forum for the Environment (WALHI), looks at how AMDAL has been implemented and identifies the constraints, opportunities, and actions needed to develop effective mechanisms. The analysis concentrates on applicability, enforceability, and transparency.

Applicability

AMDAL commissions are affected by several institutional problems, including division of authority within the commissions, which weakens them and hampers their effectiveness.

Intervention by the AMDAL Technical Team. AMDAL's 14 national commissions are under the jurisdiction of

sectoral departments or various non-departmental government institutions. There are also 27 provincial AMDAL commissions. In general, all commissions have technical teams that, in theory, help the commissions evaluate AMDAL documents. There is little consistency in the way the commissions and technical teams are organized in the various institutions, but the technical teams are supposed to help the commissions. In practice, however, the technical teams play a leading role in the decisionmaking process. Questions asked by commission members during meetings tend to be driven by the presentation from the technical team. This way, debates are not prolonged, but if the technical team and commission members have differing opinions, the technical team's input becomes useless.

Another weakness is that commission members who double as technical team members have better access to information than other commission members do. Since advancement of AMDAL documents to a subsequent stage must first pass through a technical team, the team assumes a dominant role, with much more *de facto* authority than it is supposed to have. As a result, often pre-set schedules are exceeded, the AMDAL process is delayed, and bribes are paid to ensure that studies proceed through the process quickly and smoothly. For these reasons, an information distribution system must be developed that enables commission members to understand the material before commission meetings begin. One recommended method would be to send summaries of technical team recommendations, along with the AMDAL documents that are to be evaluated, to all commission members before the meetings.

The head of a commission has the sole authority to establish a technical team and select its members. There is no guarantee that technical team members will be qualified to evaluate AMDAL documents. Several improvements are needed in the form and role of the technical teams: clarification of their roles, improved systems to distribute information, and membership that reflects the multidisciplinary approach of AMDAL.

Sequences in the AMDAL Process. AMDAL procedures include a preliminary environment report, terms

of reference for an environmental impact statement, an environmental impact statement, an environmental management plan, and an environmental monitoring plan. All stages require approval by an AMDAL commission, a process which is clearly too time consuming and bureaucratic. Only rarely is even a single commission meeting held to assess terms of reference, so it is virtually impossible for commission members who do not double as technical team members to express their views about the terms of reference, even though these terms are crucial for determining the scope of a planned activity. One approach that seems to have the support of almost all agencies and sectoral departments would be to allow the environmental impact analysis, environmental management plan, and environmental monitoring plans to be submitted for simultaneous evaluation.

The AMDAL process sets time limits at every stage of assessment by the commissions, but deadlines are often ignored. While the length of each delay varies from department to department, it most often occurs while the documents are with the technical teams, which usually reach their decisions behind closed doors during deliberations with consultants. For this reason, it is crucial to get the technical team's approval before an AMDAL study goes to the commission.

AMDAL Commissions. Regulations provide that the central government commissions evaluate and make determinations about AMDAL documents for activities that are funded by a state agency and the private sector (where the activity in question is issued by an agency with jurisdiction at the central level). At this time, each of the 14 central government commissions is chaired by a minister or head of a non-departmental government institution. The Environmental Impact Management Agency (BAPEDAL) has permanent members from every central commission.

Regional commissions exist in every province to evaluate AMDAL studies for activities funded from regional budgets, the national budget, private sector activities that require regional permits, and other activities under regional jurisdiction.

Two of the most serious constraints on the AMDAL commissions are the lack of permanent members and the huge and diverse volume of issues to be decided. No one is assigned to work on AMDAL management full-time, so these activities supplement a team member's primary responsibilities. AMDAL activities are usually given second priority, and commission members often delegate these activities to lower-ranking staff.

To overcome this problem, WALHI's study team recommends amending the AMDAL regulations to guarantee continuous participation of commission members throughout the entire process of examining documents and that such involvement should be part of the criteria used to judge professional advancement.

Screening System. Arriving at a common understanding of "significant impacts" through the screening system is a primary issue in Indonesia's AMDAL system. By regulation, each agency must list types of activities considered to affect the environment, as well as classifications and criteria for activities that must undergo the AMDAL process. During the screening process, however, different interpretations of significant impacts have emerged. Two government regulations appear to sanction varied interpretations of just which activities give rise to significant impacts; however, a more recent regulation grants authority to the Environmental Impact Management Board to determine which activities are relevant to significant impacts and subject to the AMDAL process. This new regulation should reduce confusion.

Enforceability

To make the AMDAL process enforceable, the recommendations of the environmental monitoring plans and environmental management plans need to be legally binding. The following steps would make these AMDAL documents enforceable:

- ▶ Environmental management plans and environmental monitoring plans would contain detailed and applicable recommendations;
- ▶ The relationship between the monitoring and environmental plans, and the issuance of operating licenses would be strengthened;
- ▶ The legal status of decisions of AMDAL commissions would be clarified; and
- ▶ The skill and levels of expertise of licensing agents and compilers and evaluators of AMDAL documents would be raised.

Lack of Specificity. The plans usually lack operational guidelines and are very general, making it difficult for proponents to follow the recommendations in these documents. For example, technological, social, economic, and institutional approaches to addressing environmental impacts are stated only generally, so it is hard to clearly identify the tasks and responsibilities of the parties involved.

AMDAL and Licenses. Licensing agencies must comply with two crucial requirements—operating licenses may be granted only after the environmental management plans and environmental monitoring plans have been approved, and the contents of these two plans must be reflected in the operating licenses.

Legal Status of Decisions. There is some confusion about decisions made by AMDAL commissions and the authority of the chairperson. In some cases, a letter from the commission is treated as authorization to proceed with a project. The regulations state, however, that the commissions have the authority to make recommendations in an advisory capacity only and that final decisions rest with the concerned minister, governor, or head of a non-departmental government institution. The WALHI team recommends that the Minister of the Environment issue guidelines that unambiguously place the authority for final decisions with ministers, governors, or agency heads.

Segmentation of the AMDAL Process. Some bureaucrats believe that the AMDAL evaluation process can be divided into segments, a philosophy that contradicts the interdisciplinary nature of the process. Since the regulations are confusing, bureaucrats do not understand the issues. One solution would be to conduct frequent education and awareness programs for decisionmakers.

Transparency

As long as environmental impact assessments (EIA) are respected as an important tool of sustainable development, transparency—or openness—will always be critical. Indeed, a transparent process is the main prerequisite for effectively involving the public. Public participation will likely yield valuable information and will result in final decisions that better reflect the trade-offs among long- and short-term interests, the interests of the powerless and the powerful, and economic and environmental interests, as well as many others.

Public participation necessitates an increase in the community's understanding of the effects and consequences of certain activities. Thus, when final decisions are made, the public will be more likely to face and overcome the problems or consequences of such activities. In principle, public participation in the EIA process should include these requirements:

- ▶ A public notification period;
- ▶ Public access to EIA documents;

- ▶ The involvement from an early stage of those who may be affected; and
- ▶ A fair hearing of input from the public and other interest groups should be guaranteed in the decision-making process.

Based on government regulations, public involvement entails:

- ▶ An obligation on the part of government agencies to inform the public of planned activities;
- ▶ Public access to AMDAL documents; and
- ▶ Possible involvement of the public and interest groups in provincial and central AMDAL commissions.

Improving Public Participation in the AMDAL Process. Some argue that detailed mechanisms for public participation and access to information need not be regulated, and that, instead, guidelines issued by the Ministry of Environment or the Environmental Impact Management Agency would suffice. But since all government agencies are involved in the AMDAL process, detailed mechanisms should be provided in government regulations on AMDAL or, at the very least, in the presidential decree on AMDAL. Several improvements are considered necessary to achieve an open and transparent AMDAL process:

- ▶ *Information Service Mechanisms.* Government regulations state that a department or unit of an agency must be designated as responsible for providing information, but this regulation needs to be further clarified so that departments cannot shirk this responsibility
- ▶ *Notification Mechanisms.* Government regulations make public notification optional. To ensure that the AMDAL process is transparent, public notification should become mandatory.
- ▶ *Solicit Community Participation from the Outset.* Project proponents are not obligated to involve potentially affected people or interest groups in the EIA process, so, almost all EIA studies in Indonesia have been conducted without public participation in the early stages of the process. Public participation from the beginning of the AMDAL process should be required by law.
- ▶ *Community Appeal Mechanisms.* Appeal mechanisms by which potentially affected people may oppose

the final decision of an AMDAL commission are not specified under the regulations. Establishing these mechanisms for the public will force decision-makers to carefully consider public input throughout the entire AMDAL process.

- *Equal Access to Intervenor Funding.* If participation in the AMDAL process by the public and NGOs is considered important, then how is a meaningful level of participation to be achieved? Interested people and groups may have unequal access to participation in the AMDAL process because they lack financial support, access to expert advice, time to analyze documents, and access to resources to organize participation. Canada has developed programs to help the public and NGOs in the EIA review process—in particular, “intervenor funding.” Funding mechanisms, however, must be carefully constructed so that people do not participate merely for the money.

Role of the Community in the AMDAL Process. The requirement to provide information to the public on the AMDAL process is generally left to the discretion of various regional government officials. Typically, these officials selectively provide information to groups and individuals, bypassing those likely to use the information to disrupt the AMDAL process or cause difficulties for provincial or central government commissions.

Conclusions

There are several problems with the AMDAL process in Indonesia. It is not a “transparent” process. Compliance monitoring is lacking. Sanctions are not applied when compliance does not occur. Consultants and evaluators are not always qualified. Finally, lengthy and convoluted procedures make the process very expensive.

New regulations issued in 1993 are an attempt to overcome some problems with the AMDAL process. They remove one step in the process, shorten the time allowed for evaluation of the terms of reference, combine the environmental impact analysis and environmental management and monitoring plans into a single document, and provide “one-stop evaluation” in the Environmental Impact Management Agency for integrated projects.

Applicability. The applicability of AMDAL in Indonesia is greatly affected by the institutional capacities of the bodies involved in the process. The ability of the commissions to perform their duties depends largely on the internal interactions among the various members.

An imbalance between the roles of the technical team and those of other members of the AMDAL commissions indicates a need for a structural overhaul: all members should have relevant expertise as well as a government position. Immediately, the boundaries of authority between the technical teams and the commission members who are not members of these teams should be clarified, the information-distribution system within the commissions improved, and a mechanism to ensure representation of diverse scientific disciplines on the technical teams set forth.

The WALHI team recommendation that the environmental impact analysis, environmental management plan, and environmental monitoring plans all be submitted for evaluation at the same time appears to be possible under current regulations. The team also recommends that the authority to determine which activities are required to undergo the AMDAL process be held by a single body, without reducing coordination among the various agencies responsible for any particular planned activity.

Enforceability. These same 1993 regulations endeavor to overcome some problems related to “enforceability,” but they probably will not succeed. The authority to determine whether or not a project proponent has implemented environmental plans is vested in the agency that issues the license, whose primary interest is usually the growth of investment or development in its particular sector. One way to overcome this problem would be to give the community the opportunity to be involved in the monitoring process at the moment when approval is granted.

Another reason these regulations will not be successful is that they do not provide a mechanism for monitoring compliance with approved environmental plans after the initial decision to allow activities has been made.

The key to effective monitoring is not simply assigning this task to a government agency. External control and monitoring conducted by the community are also needed. In addition, the proponents of a project must comply with regulations. Monitoring must include at least the following elements:

- Self-monitoring, where the proponent measures the extent to which it can comply with approved plans;
- Monitoring by responsible sectoral agencies, and if necessary warnings issued, followed by sanctions if violations are not corrected;

- ▶ Monitoring by environmental impact management bodies (known as compliance monitoring) in which sectoral departments or provincial governments coordinate with each other and jointly issue recommendations for action; and
- ▶ External monitoring and control by the community.

External controls will be effective only if the community has guaranteed rights to information, if proponents are obliged to widely publicize the plans for their activities and their AMDAL studies, if community members are guaranteed at an early stage in the AMDAL process that their opinions will be heard and considered, and if there is a guaranteed right of appeal when the community feels that its opinions have been ignored.

Transparency. Genuine involvement by the public is crucial to the AMDAL process, but such involvement has not yet been built securely into the process. The general perception of bureaucrats is that involving the community only consumes a substantial amount of time and that it might lead to more public opposition. The most often overlooked advantage of involving the public is that the public can help ensure the completion of a high quality AMDAL process, which is far more important than merely getting an AMDAL document approved rapidly. Public involvement in the process also encourages the community to carry out its function as an external control to the project and to monitor compliance with approved plans.

Hope for improved community involvement rests on the need for immediate new policies. These new policies would:

- ▶ Make it obligatory for a project proponent to involve the community in the very earliest stages of drawing up documents;
- ▶ Provide specific mechanisms to give information to the general public;
- ▶ Oblige evaluation commissions to consider whether or not a project proponent has conducted genuine pre-submission consultations; and
- ▶ Oblige project proponents to self-monitor the implementation of their environmental management plans and environmental monitoring plans, report the results to responsible agencies, and make such documents available to the public.

Improving the Process. There is a clear need to develop further recommendations on how to overcome the problems that continue to afflict the AMDAL process in Indonesia, especially problems of enforceability, quality of evaluations, and transparency. The objective should be to ensure that the AMDAL process can become an effective tool for implementing environmentally sustainable development in the country.

4. Summary of the Sri Lanka Case Study Report

LEGAL AND ADMINISTRATIVE FRAMEWORK

The National Environmental Act (NEA) of 1980 is Sri Lanka's basic environmental law. It was amended in 1988 to include a provision for environmental impact assessment. This provision was pre-dated by corresponding provisions of the Coast Conservation Act of 1981, but that act is applicable only to the coastal zone while the NEA provision applies to the entire island. For projects within the coastal zone, the Coast Conservation Department usually has jurisdiction unless the project falls within specified areas. Various government departments have issued other environmental policy documents, including the National Conservation Strategy, Wildlife Policy, Coastal Zone Management Plan, Forestry Master Plan, and National Forest Policy.

NEA's environmental impact assessment (EIA) provisions, though enacted in 1988, still do not have legal force. These provisions create a decisionmaking framework that still has to be fleshed out by supporting regulations. Now in draft form, these regulations were prepared after much consultation and compromise with NGOs, industry, and regulatory agencies. In this document, they are referred to as the EIA regulations, even though they are not formally in force.

Under Sri Lankan law, EIA studies are prepared by the project proponent, who must submit the studies to the relevant project-approving agency (PAA) for approval. A formal appeals procedure is also incorporated in the process, but it is available only to those aggrieved by the decision to refuse approval for the project. Those who are challenging permission to implement it have no recourse except to file court action, and so far no one has tried.

The EIA provisions of the NEA can be made to fit with other regulatory programs, though there has been no effort yet to do so. There is an urgent need to establish guidelines for each project-approving agency and other related agencies to integrate their respective mandates, regulatory and management programs, and statutory requirements with the EIA process. EIAs are not mandatory for master plans because they do not fall within the

list of prescribed projects. EIAs were carried out for the Forestry Master Plan and the Muthurajawela Master Plan, perhaps partly in response to concerns by NGOs, but these were voluntary. No EIA has been conducted for the Tourism Master Plan or the Greater Southern Development Plan.

Public hearings that may be part of the EIA may also be mandated by other laws. For example, for the Kandalama Tourist Hotel, the State Lands Ordinance required public comment before state land could be leased, and the Land Acquisition Act required public hearings on the Katunayake Expressway before private land could be acquired for construction.

The EIA process fits in very poorly with national economic and local development planning. Planning agencies resist using EIA as a planning tool. International donor agencies have not been directly involved in influencing EIA legislation or in drafting regulations, but it is not known whether pressure from these agencies was behind the enactment of the NEA. In the case of specific projects, however, international donor agencies have made EIA conditional to granting aid. In one case, the donor agency accepted the EIA recommendation that the project be shelved and refused to grant the money.

The EIA Process

The EIA process applies only to "prescribed projects"—those that must be approved by the appropriate project-approving agency before they can be implemented. The Minister of Environment must decide which projects are prescribed and which project-approving agencies are relevant. The NEA mandates an EIA or initial environmental examination (IEE) from the project proponent. As early as possible, the project proponent must submit preliminary information to the project-approving agency, which will decide whether an EIA or IEE will be conducted. Before making that decision, the project-approving agency must define terms of reference and may take into consideration the views of other state agencies and the public.

After an EIA is prepared, the project proponent must submit it to the project-approving agency, which checks

it against the terms of reference. An IEE does not have to be checked. If the project-approving agency is not satisfied with the EIA, it returns the assessment to the project proponent for revision and resubmittal. The project-approving agency must then publish notices inviting the public to inspect and comment on the EIA or IEE within 30 days. Once the public comment period is over, the project-approving agency must decide if a public hearing is warranted.

At the conclusion of the hearing or comment period, the project-approving agency must send the comments to the project proponent for review and comment. When this response is received, the project-approving agency has seven days (for an IEE) or 30 days (for a EIA) to decide whether to grant project approval. For an IEE, the project-approving authority can grant approval with conditions or refuse approval (with stated reasons); alternatively, it can call for an EIA. The project-approving agency can approve an EIA with conditions or refuse approval (with stated reasons). When approval is refused, the project proponent has the right to appeal to the Secretary of the Ministry of Environment. The Secretary can confirm, reject, or modify the project-approving agency's decision.

Prescribed Projects. In Sri Lanka, the Minister of Environment determines which projects are prescribed. EIA regulations describe the projects and establish three lists for projects that would require an EIA or IEE before they can be implemented. One list describes 17 types of projects (excluding industries) generally considered to have significant impacts. The other two lists relate to industries and have been subject to much negotiation. One of these lists describes highly polluting industries that need an EIA or IEE regardless of where they are located. The third list describes medium- and highly-polluting industries that would need an EIA or IEE if located in environmentally sensitive areas, which are listed separately in the regulations. Industries on this third list are subject to the EIA or IEE process only if they are located in areas on the environmentally sensitive area list.

Project-Approving Agencies. Under the NEA, approval for all prescribed projects must be granted by a project-approving agency. The EIA regulations designate 11 such state agencies. The state agency concerned or connected with the prescribed project is the designated project-approving agency. However, a project-approving agency that is also the project proponent is disqualified from acting as the project-approving agency for that project.

When ministries are designated as project-approving agencies, the formal approval decision would be taken by the Secretary acting on behalf of the Minister. When the project-approving agency is a government department, formal decisions would be made by the head of the department.

Initiation of the EIA Process. When does a project come into existence? The issue is not so much when the actual process begins, but rather when the project proponent comes in contact with the project-approving agency. The timing of the EIA or IEE is crucial if it is to become a useful tool in decisionmaking. If the timing is late, then many important decisions would already have been made, and the EIA or IEE would only justify decisions already made. In this common but ill-fated "Decide-announce-justify" process, many projects emerge only to be struck down by the judiciary.

The project proponent must be encouraged to contact the project-approving agency once the project proponent has established a goal and is actively preparing to make a decision about it. At this stage, according to the EIA regulations, a project could be subject to the EIA process. (A project is defined as any undertaking, scheme, or plan for which resources, time, and funds are planned.)

Institutional Capacity for Preparation and Review

The Central Environmental Authority is the key umbrella organization for the environmental impact assessment program. It provides guidelines to government departments and agencies for establishing and operating EIA cells and also directly helps certain agencies conduct EIAs.

At a workshop for those involved in the EIA process—both government and the private sector—many people felt that there are too many project-approving agencies and that few are equipped to function effectively. Further, they claimed, many project-approving agencies were inappropriate for the purpose and simply wanted to be involved in decisionmaking. It was suggested that the criteria for qualifying to be a project-approving agency should be made clear and that one essential criterion should be that any such agency should have natural resource management as part of its overall mandate. A single project-approving agency was proposed, particularly by the private sector, to eliminate the confusion of a project proponent trying to determine which agency should approve or reject projects. Training and professional qualifications of EIA cell staff members were also discussed.

Another issue discussed at the workshop was the political independence of the project-approving agencies. Participants said that when a project has strong political backing, the concerned agency is often helpless and has no option but to comply with orders from above. The key is insulating the Central Environmental Authority from such pressures.

Resource Availability for Preparation and Review

Many environmental assessment guides and handbooks are available for use in preparing or reviewing environmental impact assessments. However, such literature will not fully satisfy all the requirements of all development projects because these materials vary in detail, and scope, as does the suggested sequence of procedures.

An effective EIA considers environmental and socio-economic consequences and presents strategies to reduce unacceptable effects. This approach is taken because a multidisciplinary group of resource people is employed. On the other hand, not all of the diverse group of people within the country in academia, government, and the private sector are available, even part time, when needed in any given project.

An EIA report prepared by experts should indicate available alternatives for project design and mitigation of adverse effects so that decisionmakers understand the reasoning behind recommendations and what, if any, alternatives they have. Preparation of such reports is strengthened by collecting all available technical resources.

Participation and Review

The National Environmental Act provides that an EIA or IEE is to be made available for public review, and a notice of availability is to be published in the government gazette and one newspaper each in Sinhala, Tamil, and English. Following the 30-day comment period (which need not be stated in the notices), the project-approving agency must decide if the case warrants a public hearing. In principle, this decision is based on whether it is in the public interest to hold a hearing, but "public interest" is never clearly defined. Only those who have submitted written comments are entitled to attend and be heard at the meeting.

Decisionmaking

It is difficult to assess the effect of the EIA on projects because, until recently, participation in the process was strictly voluntary. In the case of the Trincomalee Coal Power Plant, the EIA was conducted under the Coast Conservation Act, which was legally operational at the time, and after a public hearing, permission for the project was declined. As a result of an EIA, the Forestry Master Plan was amended. However, though an EIA was conducted for the Kandalama Tourist Hotel, it was not submitted for public review, and the project was approved.

There are both administrative and judicial appeals procedures to challenge a project-approving agency's decision. But the administrative procedure is only available to the project proponent if permission to implement a project is refused. To dispute project approval, the public must seek court action.

Overall Effectiveness of the EIA Process

The effectiveness of the EIA process can be answered only by a review of specific cases because the process does not yet have the force of law, and implementation is often at the discretion of the concerned authorities. In most cases where an EIA was conducted, the project plan was modified as a result. In the case of the Kandalama Tourist Hotel, the Central Environmental Agency imposed certain conditions on the project proponent to safeguard the environment before allowing the project, but public participation in the EIA process was rejected.

The success of the EIA process in any given case would be thwarted if the conditions imposed were not effectively monitored. The regulations provide that the project-approving agency should submit to the Central Environmental Agency a monitoring plan for implementing every project within 30 days of granting approval.

It should be noted that all of the EIAs done for the projects considered in this case study were performed under previous environmental regulations or voluntarily. Thus, the effectiveness of current EIA policy is not analyzed here.

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Appendix A

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Appendix B

Capacity Building: Examples of Recent or On-Going EIA Strengthening Activity

IN THE PHILIPPINES

Asian Development Bank. (ADB). ADB TA no. 1632. *Improving the Implementation of EIA in the Philippines*. Objective: to develop effective techniques for EIA-related communications, and environmental monitoring of completed projects.

Australian International Development Assistance Bureau (AIDAB). *Strengthening Environmental Assessment Project*. Objective: to assist the Environmental Management Bureau (EMB) in strengthening institutional procedures related to EIA.

Canadian International Development Agency (CIDA). *Philippines Environment and Resource Management Project (EMRP)*. Objective: to foster greater interaction between universities, NGOs, and government in creating and implementing policies and programs which affect the environment.

Ford Foundation. *Environmental Education Network of the Philippines (EENP)*. Objective: to create a network of, and to coordinate instruction, research and extension activities undertaken by environmental and educational institutions in the Philippines.

U.S. Agency for International Development. *Industrial Environmental Management Project (IEMP)*. Objective: to encourage pollution reduction initiatives, policy studies and dialogues, and capability building in government, industry and community organizations. EIA is one of several areas of interest.

— . *Natural Resources Management Program (NRMP)*. Objective: to improve the development and evaluation of policy initiatives for sustainable development, with special emphasis on tropical forests, biodiversity, and the forest-products industry.

IN INDONESIA

Asian Development Bank (ADB). ADB TA no. 1013. *Strengthening the Capacity for EIA in the Ministry of Pub-*

lic Works. Objective: to develop an effective AMDAL unit within the Ministry.

— . ADB TA no. 1281. *Strengthening the Capacity for EIA in the Ministry of Agriculture and the Ministry of Forestry*. Objective: to develop an effective AMDAL unit within the Ministry.

— . ADB TA no. 1451. *Strengthening the Capacity for EIA in the Ministry of Mines and Energy*. Objective: to develop an effective AMDAL unit within the Ministry.

— . ADB TA no. 1452. *Strengthening the Capacity for EIA in the Ministry of Industry*. Objective: to develop an effective AMDAL unit within the Ministry.

— . ADB TA no. 1697. *Establishment of BAPEDAL Regional Network*. Objective: to decentralize the environmental management and impact assessment capability of BAPEDAL.

Australian International Development Assistance Bureau (AIDAB). *Industrial Pollution Control in East Java*. Objective: to strengthen the capability of the central and provincial BAPEDAL offices to deal with the environmental impacts of existing and proposed industrial installations.

Japan International Cooperation Agency (JICA). *Construction of a National Environmental Management Center*. Objective: to establish a center for environmental research, monitoring, information system management, and human resource development.

— . *Expert Assignment Programme*. Objective: to assign short-term and long-term experts to Indonesian environmental (and other) government agencies.

— . *Remote Sensing Engineering Project*. Objective: to assist in the development of remote sensing capability for environmental (and other) uses.

— . *Training Programme in Japan and Friendship Programme for the 21st Century*. Objective: to provide short-

term and long-term training for environmental staff from government agencies and private corporations.

U.S. Agency for International Development. *General Participant Training*. Objective: to provide short-term (technical) and long-term (post-graduate) training for environmental (and other) staff from government agencies.

—. *Natural Resources Management*. Objective: to encourage sustainable economic development, pollution minimization, and proper management of forests and other natural resources.

IN SRI LANKA

Asian Development Bank (ADB), ADB TA no. 1361. *Review of Industrial Pollution Regulations*. Objective: to identify opportunities for coordinating EIA activities with environmental permitting and licensing procedures.

U.S. Agency for International Development. *Natural Resources and Environmental Policy Project (NAREPP)*. Objective: to carry out a five-year project designed to improve environmental policy and management in Sri Lanka by encouraging sustainable economic development, pollution minimization, and proper management of forests, coastal zones, and other critical natural resources.

AT THE REGIONAL SCALE

Asian Development Bank (ADB), ADB TA no. 5277. *Strengthening the Information System for Environmental Sanitation and Impact Assessment*. Objective: to provide funding support to the Environmental Systems Information Center (ENSIC) for the dissemination of information regarding water supply, wastewater treatment and environmental impact assessment.

—. ADB TA no. 5478. *National Level GIS for Environmental Planning and Management*.

Asian Institute of Technology (AIT). *Environmental Management and Technology Program*. Objective: as an au-

tonomous, international post-graduate training and research institute, AIT sponsors training courses, seminars, conferences, and related human resources development activities in a variety of technological fields, including EIA and other environmental disciplines.

Association of Southeast Asian Nations (ASEAN). *Environmental Improvement Project*. Objective: to facilitate environmentally acceptable economic development in ASEAN countries by strengthening local, national, and regional capabilities in environmental management and promoting private sector initiatives to address urban and industrial pollution.

IUCN (The World Conservation Union). *Environmental Assessment (EA) Service*. Objective: to encourage greater use of EA methods and techniques by providing limited but strategic technical assistance input to ongoing projects.

UNDP and The World Bank. *Metropolitan Environmental Improvement Programme*. Objective: to assist governments, industries and community organizations in reversing the process of environmental degradation in major cities of Asia. A variety of innovative studies, action plans, demonstration projects, and training programs have been initiated. The five participant cities include Manila, Jakarta and Colombo as well as Beijing and Bombay.

U.S. Agency for International Development. *US-AEP/United States-Asia Environmental Partnership*. Objective: to improve environmental protection capability in Asia through a variety of program initiatives, including technical and financial support for environmental fellowships, exchange programs, and training.

World Resources Institute (WRI) and USAID. *Strengthening EIA Capacity in Asia*. Objective: to describe the state-of-the-art of EIA practice in the Philippines, Indonesia, and Sri Lanka; to analyze the weaknesses and impediments limiting these countries' capacity to conduct EIA effectively; and to help define strategic action and programs that countries in Asia and the Pacific could implement to strengthen EIA capacity.

Appendix C

Current Status of EIA Requirements in Selected Asian Countries

COUNTRIES	LEGISLATIVE AND ADMINISTRATIVE DOCUMENTS	DATE OF ENACTMENT
Bangladesh	• Constitutional provision for Conservation	1972
	• Guidelines for Private Appraisal in Water Sector	1991
	• Guidelines for EIA in Water Sector	
	• National Environmental Policy	1992
	• Guidelines for People's Participation in Water Sector	1992
	• National Environmental Guidelines for Industries	1993
	• No specific EIA legislation: EIA consulted on selected projects	pending
People's Republic of China	• Constitutional provision: Article 11	1978
	• Environmental Protection Law (articles 6 and 7)	1979
	• Marine Environmental Protection Law	1982
	• Management Guidelines on Environmental Protection of Construction Projects of the P.R.C.	1986
	• Regulations for Engineer Design on Environmental Protection Construction Projects	1987
	• Management Procedure for Environmental Protection of Construction Projects	1990
	• Constitutional provision: Articles 9, 10, 22, and 26	1993
• Management Guidelines on Strengthening Loan Projects for EIA		
India	• Administrative Instructions Established	1973
	• Constitutional provision: Articles 48A and 51A(g)	1977
	• Department of Environment (Protection) Act no. 29	1986
	• Specific legislation is planned	
Indonesia	• Constitutional provision: Article 33(3)	1945, 1973
	• Articulation of a National Environmental Policy, as part of the general Guidelines of the State Policy (GBHN)	1978
	• Creation of the State Ministry of Population and Environment (KLH)	1982
	• Act No. 4 Basic Provisions for the Management of the Living Environment (Article 16)	1986
	• Government Regulation No. 29: required implementation, as of 5 June 1987, of an AMDAL (EIA) System	1987
	• Ministerial Decrees Nos. 49-53: General AMDAL guidelines promulgated by KLH	1990
	• Presidential Decree No. 23, creating new agency BAPEDAL	1993
	• Government Regulation no. 51, repealing No. 29 and 49-53, only addresses applicability parameters	
	Laos	• No EIS legislation to date
Malaysia	• Implicit reference in Constitution	?
	• Environmental Quality Act	1974
	• Environmental Quality Act Amendment	1985
	• Environmental Quality (Prescribed activity) (EIA) Order	1987

MAIN OVERSIGHT AGENCY	EIA PREPARER	PUBLIC PARTICIPATION	COORDINATION WITH LOCAL AUTHORITY	PENALTY FOR VIOLATION
Ministry of Environment and Forests	Project Proponent	yes	no	Some sanctions under existing civil and criminal legislation unrelated to EIA
National Environmental Protection Agency at various levels (no committee review)	Project Proponent	yes, but no public hearings	yes	yes
Department of Environment within the ministry of Environment (utilizes an environmental appraisal committee)	Project Proponent	limited	yes	no
BAPEDAL (Environmental Impact Management Agency) within the Ministry of the Environment (utilizes two EIA review commissions)	Project Proponent	limited	yes	no
If EIS conducted, Ministry of Agriculture and Forestry				
Department of Environment (DOE) within the Ministry of Science, Technology, and Environment (EIA Review Committee within DOE for preliminary EIAs and an EIA ad hoc panel for detailed EIAs)	Project Proponent	yes	yes	yes

COUNTRIES	LEGISLATIVE AND ADMINISTRATIVE DOCUMENTS	DATE OF ENACTMENT
Philippines	• Constitution: indirect reference	1987
	• Presidential Decree No. 1121, establishing the National Environmental Protection Council, now called the Environmental Management Bureau	1977
	• Presidential Decree, No. 1151 Philippine Environmental Policy	1978
	• P.D. 1586, establishing the Environmental Impact Statement (EIS) system under management of the National Environmental Protection Council (NEPC)	1981
	• Presidential Proclamation, No. 2146 defining Environmentally Critical Projects and Critical Areas pursuant to PD No. 1586	
	• Presidential letter of Instructions No. 1179, requiring relevant Ministries to create environmental units to carry out PD No. 1586, but allowing for exemption of certain projects	1983
	• EMB Office Circular No. 3 further defining Environmentally Critical Projects and Areas	1985
	• NEPC issues Rules and Regulations to govern EIS	1982
	• DENR Administrative Order (DAO) No. 2, amending EIS rules and Regulations	1992
	• Inter-agency Memorandum of Agreement creating an EIA network	
South Pacific:		
PNG	• Constitution: fourth and fifth National Goals and Directive Principles of the Constitution	?
	• Environmental Planning Act, introduces system for EIA	
Fiji	• No specific EIA legislation: EIA consulted on selected projects	1978
Sri Lanka	• No. 47, National Environmental Act, established the Central Environment Authority	1980
	• No. 57, Coast Conservation Act	1981
	• Creation of the Cabinet-level Ministry of Environmental and Parliamentary Affairs (CEA is a line agency)	1982
	• No. 56, Amendments of the National Environmental Act requiring IEEs and EIAs	1988
	• No. 772/22, Regulation for the IEE/EIA process	June 24, 1993
Thailand	• National Environmental Quality Act, known as the Improvement and Conservation of National Environmental Quality Act (ICNEQA)	1975
	• ICNEQA amended	1978
	• Enhancement and Conservation of National Environmental Quality Act	1992
Vietnam	• EIA Regulation 1485/MTG	Oct. 1993 in draft, expect passage in 1994
	• EIA Legislation	

Reference: Prepared by Holly Welles, currently Senior Policy Analyst, Council on Environmental Quality

MAIN OVERSIGHT AGENCY	EIA PREPARER	PUBLIC PARTICIPATION	COORDINATION WITH LOCAL AUTHORITY	PENALTY FOR VIOLATION
Environment Management Bureau within the Department of Environment and Natural Resources (DENR) (EIS Review Committee) Environmental Management and Protected Areas Sector of the DENR Regional Offices	Project Proponent	yes, but not mandatory	yes	minimal
Department of Environment and Conservation within the Ministry for Environment and Conservation (no EIA Review Committee)	Project Proponent	yes	yes	yes
Environment Department	yes, because most land is private	sometimes	sometimes	no
Central Environment Authority (no Committee)	Project Proponent	yes	limited	yes, newly established
Office of Environmental Quality and Planning (Review Committee)	Project Proponent	no	no	no

Appendix D

EIA Chronologies

PHILIPPINES: EIA CHRONOLOGY

18 April 1977: Presidential Decree No. 1121, establishing the National Environmental Protection Council, since renamed the Environmental Management Bureau (EMB).

6 June 1977: Presidential Decree No. 1151, establishing a Philippine Environmental Policy. (Section 4 requires the preparation of Environmental Impact Statements for all projects and other undertakings significantly affecting the environment.)

11 June 1978: Presidential Decree No. 1586, establishing an Environmental Impact System, under the management of the National Environmental Protection Council (NEPC).

14 December 1981: Presidential Proclamation No. 2146, defining Environmentally Critical Projects and Environmentally Critical Areas pursuant to PD No. 1586.

14 December 1981: Presidential Letter of Instructions No. 1179, directing all appropriate Ministries to create environmental units to carry out the activities pursuant to PD No. 1586, but also allowing for the exemption of certain projects from the EIS System.

1983: EMB Office Circular No. 3, further defining Environmentally Critical Projects and Environmentally Critical Areas.

1985: NEPC issues Rules and Regulations to govern the Environmental Impact System.

1992: DENR Administrative Order (DAO) No. 21, substantially amending the Rules and Regulations governing the Environmental Impact System.

26 June 1992: Interagency Memorandum of Agreement committing each agency to integrate the EIA System into its regular functions, creating an EIA network, and reaffirming the goals and objectives of the EIA System.

INDONESIA: EIA CHRONOLOGY

1973: Articulation of a National Environmental Policy, as part of the general Guidelines of the State Policy (GBHN).

1978: Creation of the State Ministry of Population and Environment (KLH).

1982, Act No. 4: Act on Basic Provisions for the Management of the Living Environment (Environmental Management Act). Article 16 of the Act requires the preparation of an environmental impact analysis (AMDAL, or Analisis Mengenai Dampak Lingkungan) for every plan significantly affecting the environment.

1983: Initiation of the EMDI (Environmental Management Development in Indonesia) Project, a joint project of the KLH and Dalhousie University, with substantial funding from the Canadian International Development Agency.

1986, Government Regulation No. 29: requires implementation, as of 5 June 1987, of an AMDAL (EIA) System by 14 line agencies at the central government level, and by 27 provincial governments.

1987, Ministerial Decrees Nos. 49-53: General AMDAL guidelines promulgated by KLH. (Subsequently, more technical AMDAL guidelines have been issued by various individual line agencies.)

5 June 1990: Presidential Decree No. 23, creating a new agency, the Badan Pengendalian Dampak Lingkungan (BAPEDAL), to oversee environmental management programs, including the AMDAL (EIA) System.

1993, Government Regulation No. 51: Amends Government Regulation No. 29, with the intent to simplify and strengthen the AMDAL process. Changes include revised screening criteria, reduced time limits for document review, increased authority for BAPEDAL in the

review of multisectoral projects, and simplification of AMDAL review of multi-phase and/or areawide projects such as industrial park or tourist center developments.

SRI LANKA: EIA CHRONOLOGY

1980, Act No. 47: National Environmental Act (NEA), which articulates a national environmental management and pollution control policy, and established the Central Environmental Authority (CEA).

1981, Act No. 57: Coast Conservation Act, which empowers the Coastal Conservation Department to require preparation of environmental impact assessments for certain development projects located in the coastal zone.

1988, Act No. 56: Amendments to the National Environmental Act, which require preparation of an initial envi-

ronmental examination (IEE) report or an environmental impact assessment (EIA) report for certain "prescribed projects" wherever located.

1990: Creation of the Cabinet-level Ministry of Environment and Parliamentary Affairs, of which the CEA is now a line agency.

1992: Initiation of the Natural Resources and Environmental Policy Project (NAREPP), a five-year project jointly sponsored by MEPA and USAID, designed to improve environmental policy and management in Sri Lanka.

1992-1993: Preparation and promulgation of draft implementing regulations for the IEE/EIA process.

Appendix E

Issue Clusters

(The following nine Issue Clusters were developed at the initiation of the project to guide the investigations of the WRI project team and the three case-study teams.)

(1) Legal/Administrative Framework for EIA

- ▶ What EIA legislation has been enacted at national and/or provincial levels? (Provide copies or summaries)
- ▶ Have other environmental policy documents been issued?
- ▶ Have implementing regulations been issued? (At national or agency levels; provide copies or summaries)
- ▶ Who has responsibility to prepare EIA studies? To review EIA findings? When do the preparation and review activities take place? (Provide flow charts of process)
- ▶ Is there a formal appeals procedure? Have administrative or judicial interpretations or decisions been handed down?
- ▶ How does EIA fit in with other environmental laws and programs, i.e., regulatory programs, land use planning and resource allocation, sectoral and project development planning, etc.
- ▶ How does EIA fit within national economic and/or local development planning and implementation processes? (Illustrate interrelationships with flow charts)
- ▶ What role have international donors' EIA requirements played in shaping the EIA requirements and process?

(2) Institutional Capacity for EIA Preparation and Review

- ▶ Have detailed procedural guidelines been issued for EIA preparation and review? (Provide copies)
- ▶ Are professionally qualified staff in place at EIA agencies/divisions? (Provide staffing profiles)
- ▶ Are sufficient budgets available to support EIA program activities?
- ▶ Are effective management systems in place to overview all aspects of the EIA process?
- ▶ Is the EIA process centralized at the national level, or decentralized to regional/provincial levels?
- ▶ Have intra- and inter-agency review and coordination mechanisms been formulated? (Provide description—text and/or graphic)

(3) Restore Availability for EIA Preparation and Review

- ▶ Human resources:
 - Agency staff: see above
 - Consultants, academics and other experts: provide descriptive profile of available resources
 - NGOs: provide descriptive profile of available resources
 - Scope and success of prior training and technical assistance initiatives? (e.g., programs sponsored by ADB, World Bank, CIDA, DGIS, USAID, etc.)
- ▶ Technical resources:
 - Published data series, research reports, maps, other secondary data
 - On-line data collection/storage/retrieval systems

- Published guidelines, impact assessment methodologies, other technical guidance

(4) The EIA Process

- ▶ Provide description of EIA process (text and graphic)
- ▶ Who is given responsibility for the following EIA activities (or their functional equivalents)?
 - Definition of project and project alternatives?
 - Initial EIA and decision whether full-scale assessment is required?
 - Impact scoping?
 - Identifying impacted groups?
 - EIA preparation (or consultant management)?
 - Consultant selection (if done) and preparation of consultant work programs?
 - EIA reviews?
 - Assessment of EIA validity and adequacy?
 - Preparation of impact monitoring plans?
 - Definition of impact mitigation measures?
- ▶ How are potential conflicts of interest (e.g., project proponent is responsible for preparation and/or approval of EIA reports) addressed?

(5) EIA Coverage

- ▶ Who defines the alternatives to be assessed? Are they real, or 'straw-men'?
- ▶ Is the 'no action' option given fair consideration in the assessment process?
- ▶ Are social (e.g., displacement/relocation, community cohesion, etc.) and economic (e.g., job loss/creation, income effects, etc.) addressed in addition to physical environmental effects?
- ▶ Is the EIA process applied to regional, sectoral, and programmatic or policy development activities?
- ▶ Are guidelines and data available for treating

'green' as well as 'brown' issues and areas? Rural as well as urban development projects?

(6) Participation/Review

- ▶ Has the role of NGOs, impacted citizens and other community groups, private sector representatives been explicitly recognized in the EIA preparation and review process?
- ▶ Have the roles of other governmental agencies (i.e., not the project proponent) been defined?
- ▶ Do non-governmental groups have adequate access to data ('Freedom of Information Act' parallels)?
- ▶ Is the EIA process generally open and 'transparent'? Are public hearings provided for?
- ▶ Does the participation process include mechanisms and techniques for negotiation and conflict resolution?
- ▶ Has the review process been decentralized sufficiently to ensure adequate participation by residents and other stakeholders at the project level?

(7) Decisionmaking

- ▶ What effect do EIA findings have on project decisionmaking?
- ▶ Have projects been redesigned or shelved? Have new project alternatives been explored (and selected)?
- ▶ Has the EIA process been used to justify project decisions that have already been made?
- ▶ Are decisionmakers required to prepare a written Record of Decision (giving their findings, reasons for the decision, and listing conditions to be incorporated in project plans and designs)?
- ▶ Is there an appeals procedure (administrative and/or judicial) for review of agency decisions?

(8) Donor Interactions

- ▶ How have donor requirements vis-à-vis EIA influenced the substance or conduct of the EIA process?

- ▶ Do donor EIA requirements conflict with specific provisions of EIA legislation or regulations?

(9) Overall Effectiveness of the EIA Process

- ▶ Are alternatives properly defined? Are they given equal attention in the assessment process?
- ▶ Have project decisions been significantly affected by the EIA process?
- ▶ Are project plans/designs frequently modified to reflect assessment findings and any agreed condi-

tions for impact mitigation?

- ▶ Are suitable mitigation and monitoring programs implemented?
- ▶ Are applicable environmental regulatory and design standards identified and enforced as a result of the EIA review?
- ▶ Is the EIA process properly coordinated with other on-going environmental research, planning and enforcement activities?

Appendix F

List of Regional Workshop Participants

WORKSHOP ON STRENGTHENING ENVIRONMENTAL IMPACT ASSESSMENT (EIA) CAPACITY IN ASIA The Environmental Management Center (EMC) Serpong, Indonesia

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Appendix G

Regional Workshop Agenda

ENVIRONMENTAL IMPACT ASSESSMENT REGIONAL WORKSHOP AGENDA December 12 to 16, 1993

Sunday, 12 December

- 14:00 – 19:00 Registration
- 16:00 – 17:30 Presentation and Tour of EMC Facilities
- 17:30 – 18:30 Reception
- 18:30 – 19:15 Opening Ceremonies, Welcoming remarks by:
- ▶ *P.L. Coutrier*, Deputy for Development, Environmental Impact Management Agency (BAPEDAL)
 - ▶ *Goichiro Okazaki*, Jakarta Resident Representative, Japan International Cooperation Agency (JICA)
 - ▶ *Charles Weden*, Jakarta Mission Director, United States Agency for International Development (USAID)
 - ▶ *Kirk Talbott*, Regional Director for Asia and the Pacific, Center for International Development and Environment, World Resources Institute (WRI)
- Keynote address by:
- ▶ *Ir. Sarwono Kusumaatmadja*, State Minister of Environment, Ministry of Environment (LH), Indonesia
- 19:30 – 21:00 Dinner

Monday, 13 December

- OBJECTIVE I: IDENTIFICATION OF KEY ACCOMPLISHMENTS AND CHALLENGES REGARDING EIA IN ASIA**
- 08:30 – 09:00 Review of expectations, agenda, and workshop procedures
- 09:00 – 10:00 Presentation and discussion of Philippine case study: *Beta Balagot*, Vice President, Center for Economic Policy Research (CEPR), Manila
- 10:00 – 11:00 Presentation and discussion of Sri Lanka case study: *Lalanath de Silva*, Attorney-at-Law and Executive Director, Environmental Foundation Ltd. (EFL), Colombo
- 11:00 – 11:20 Break (tea and coffee served)
- 11:20 – 12:20 Presentation and discussion of Indonesia case study: *Mas Achmad Santosa*, Presidium Jakarta, Indonesian Forum for the Environment (WALHI), Jakarta
- 12:30 – 13:30 Lunch
- 13:30 – 15:10 Panel of country presentations from Thailand, Malaysia, Bangladesh, and Nepal and discussion
- ▶ *Mr. Sonti Vannasaeng*, Director of Environmental Impact Evaluation Division, Office of Environmental Policy Planning, Thailand
 - ▶ *Ms. Hasmah Harun*, Director Prevention Division, Department of Environment, Malaysia

▶ <i>Mr. Anwarul Islam</i> , Deputy Director, Department of Environment, Bangladesh	13:30 – 17:30 Concurrent small group meetings (5 groups, in main building lecture rooms)
▶ <i>Mr. Subhadra Jha</i> , Soil Conservation Officer, Department of Soil Conservation, Ministry of Forests and Soil Conservation, Nepal	18:00 – 19:30 Dinner
15:10 – 15:30 Break (tea and coffee served)	20:00 – 21:30 Issue Panel: EIA Information Needs and Issues, presentation and discussion
15:30 – 17:10 Panel of country presentations from Lao P.D.R., Vietnam, and China and discussion	Wednesday, 15 December
▶ <i>Dr. Noulinh Sinbandhit</i> , Vice Minister for Environment, Ministry of Science and Technology, Laos	08:30 – 10:30 Small group presentations and questions/answers
▶ <i>Dr. Nguyen Thuong Hung</i> , Senior Researcher, Institute of Geography, National Center for Science and Technology, Vietnam	10:30 – 10:50 Break (tea and coffee served)
▶ <i>Li Xinmin</i> , Environmental Engineer, EIA Division, National Environmental Protection Agency, China	10:50 – 12:30 Identification of approaches to strengthen EIA in Asia
17:10 – 17:20 Summary of key issues	12:30 – 13:30 Lunch
19:00 – 21:00 Dinner	Afternoon and evening of free time
Tuesday, 14 December	Thursday, 16 December
OBJECTIVE II: DISCUSSION OF MAJOR ISSUES AND POSSIBLE APPROACHES TO STRENGTHEN EIA IN ASIA	09:00 – 10:40 Bilateral and Multilateral Agency Roundtable
08:30 – 09:00 Announcements, review of agenda, and questionnaire results	▶ Presentation of CIDA/OECD EA Donor Coherence Study
09:00 – 09:30 Presentation of identified major issues: <i>David B. Smith</i> , Project Principal Investigator, WRI EIA Project	▶ Presentation of matrix of bilateral and multilateral agencies' EIA capacity strengthening projects in Asia and the Pacific
09:30 – 11:00 Discussion of identified major issues	▶ Discussion
11:00 – 11:20 Break (tea and coffee served)	10:40 – 11:00 Break
11:20 – 12:00 Formation of small groups by issue, and explanation of assignment	11:00 – 12:30 Discussion of Possible Follow-up Activities
12:00 – 13:30 Lunch	12:30 – 13:30 Final Words; Closing Remarks by:
	▶ <i>P.L. Coutrier</i> , BAPEDAL
	▶ <i>WRI Team</i>
	13:30 – 14:30 Lunch

Appendix H

Responses to the Regional Workshop Questionnaires

This Appendix summarizes the results of responses to the two Participant Questionnaires (*see pp. 84–86*) which were distributed to the attendees of the Regional Workshop on Strengthening EIA Capacity in Asia.

The Workshop was held at the Environmental Management Centre in Serpong, Indonesia, in December 1993. It was co-sponsored by the Environmental Impact Management Agency of Indonesia (BAPEDAL), U.S. Agency for International Development (USAID), and the Japan International Cooperation Agency (JICA). More than sixty participants were invited from twelve Asian nations and eight regional and international development assistance organizations.

The cooperation of those who completed the questionnaires is gratefully acknowledged.

PARTICIPANT QUESTIONNAIRE #1

The first questionnaire was distributed prior to the Workshop, and explored three topics:

Question (I): Critical impediments to EIA effectiveness;

Question (II): Useful measures for dealing with those impediments; and

Question (III): The EIA function of the questionnaire respondent.

Each respondent was also given an opportunity in Question IV to provide a summary of the most critical shortcoming and the most notable achievement of the EIA system in his/her country.

RESPONSE TO QUESTION I

Questionnaire #1 was completed by 32 participants. For Questions (I) and (II), a weighted score was given to each response, as follows:

5 points: issues/techniques identified as most critical/most useful

3 points: issues/techniques identified as critical/useful

1 point: issues/techniques identified as not a problem/not useful

0 points: No response

Weighted scores and rankings of the critical issues (Question I) and appropriate responses (Question II) are presented in the lists on the following pages. The listings have been reordered to reflect the weights and corresponding rankings received.

Most Critical Impediments

Four issues received virtually identical scores as the "most critical" impediments to EIA effectiveness:

- ▶ EIA approval conditions are not adequately monitored and enforced;
- ▶ Skilled EIA practitioners are lacking within other sectoral (i.e., non-EIA) agencies; and
- ▶ Baseline data needed to conduct EIA do not exist, and must be collected on a case-by-case basis.
- ▶ Skilled EIA practitioners are lacking within my country's environmental agencies.

Thus, the identified critical impediments include *inadequate inputs* to the EIA process (baseline data needs); *inadequate follow-through* once the EIA study is completed (poor compliance monitoring and enforcement); and *insufficient human resources* needed to conduct EIA studies themselves (lack of enough qualified staff both within and outside environmental agencies).

Closely following the four top ranked issues were concerns for the inadequate provision for public participation in the EIA process, the lack of EIA skills among private sector environmental consulting companies, and the lack or poor conduct of scoping and screening procedures, resulting in the failure to identify important im-

pacts. These issues indicate a concern with some key procedural components of the EIA process (public participation and the process of impact identification and characterization) as well as further confirmation of the need to improve human resource capabilities.

Least Critical Impediments

At the other end of the scale, less concern was indicated for the following issues:

- ▶ EIA requirements of foreign donors or development assistance organizations often conflict with the requirements of my country's EIA process;
- ▶ Inadequate legislation exists for conducting EIA in my country;

- ▶ Terms of Reference for EIA studies are unclear; and
- ▶ Important development projects are being delayed or cancelled because of EIA controversies.

However, in interpreting these results, two caveats should be noted: first, respondents from countries where EIA has yet to be, or has only recently been established, did identify the lack of adequate legislation as a serious impediment; and second, the lack of private sector and other project proponent representation among the Workshop participants (as was noted on several occasions during the course of the Workshop) may have contributed to the low importance attached to the problem of project delay and cancellation.

Ranked responses to Question D: In my opinion, critical impediments to EIA effectiveness in my country are:

	Weighted		
	Rank:	Score:	
p)	*1	135	EIA approval conditions are not adequately monitored and enforced.
g)	*1	135	Skilled EIA practitioners are lacking within other sectoral agencies;
d)	*3	130	Baseline data needed to conduct EIA do not exist, and must be collected on a project-by-project basis.
f)	*3	130	Skilled EIA practitioners are lacking within my country's Environment Agencies;
n)	5	116	Inadequate provision has been made for public participation in the EIA process.
i)	6	114	Skilled EIA practitioners are lacking within private sector environmental consulting companies.
j)	7	111	EIA screening and scoping are lacking, or not properly conducted, and important impacts are thus often overlooked.
d)	8	104	Inadequate technical guidelines for conducting EIA.
b)	9	102	Lack of sufficient political support for EIA at senior government levels.
c)	*10	100	Inadequate administrative or procedural regulations for conducting EIA.
q)	*10	100	The EIA process takes too long, and costs too much money.
o)	12	97	EIA findings are not incorporated into project permits and licenses, or followed in project design and/or operations.
h)	13	95	Skilled EIA practitioners are lacking within universities and other environmental institutions.
m)	14	92	Suitable impact prediction methods either do not exist, or are not applicable to local conditions.
e)	15	91	EIA studies are carried out too late to make a difference.
r)	*16	90	Important development projects are being delayed or cancelled because of EIA controversies.
k)	*16	90	Terms of Reference for EIA studies are unclear.
a)	18	72	Inadequate legislation exists for conducting EIA in my country.
s)	19	71	EIA requirements of foreign donors or development assistance organizations often conflict with the requirements of my country's EIA process.

* = tie

RESPONSE TO QUESTION II

Question II probed three interrelated issues: what are the most useful measures for responding to the identified impediments? what training targets can be identified to guide human resource development efforts? and what are the most effective training vehicles?

Most Useful Response Measures

Increased funding for training programs was identified as the most effective response measure for dealing with EIA system impediments. Closely following in second and third place were the collection and widespread dissemination of baseline data needed for EIA studies, and increased funding for EIA agency budgets.

These three response measures correlate well with the critical impediments identified by Question I.

Targets for Training Programs

Key targets groups were identified for capacity building, including in order of priority: EIA preparers, community and NGO representatives involved in EIA issues, and Environmental Agency staff, closely followed by EIA reviewers and EIA system administrators.

Senior government officials and private sector project proponents were assigned the lowest priority for additional EIA training.

Training Vehicles

EIA short courses (one to six weeks duration) were identified as the clear favorite, followed in descending order by workshops and seminars (one to five days duration), degree programs (one or more years), direct project-related technical assistance (variable duration), and "twinning" arrangements (variable duration).

Ranked responses to Question 11): I believe the most useful measures for dealing with the identified critical impediments to EIA effectiveness in my country include:

**Weighted
Rank: Score:**

Increased funding for:

- | | | | |
|----|----------|------------|---|
| g) | <u>1</u> | <u>147</u> | —training. |
| f) | <u>2</u> | <u>137</u> | —collection and widespread dissemination of baseline data needed for EIA studies. |
| a) | <u>3</u> | <u>135</u> | —EIA agency budgets. |
| d) | <u>4</u> | <u>132</u> | —development of improved public participation methods. |
| c) | <u>5</u> | <u>127</u> | —development of improved technical guidelines. |
| b) | <u>6</u> | <u>120</u> | —research into prediction and analytic methods. |
| e) | <u>7</u> | <u>114</u> | —publication and timely dissemination of EIA reports and related documentation. |

Training programs should be targeted on:

- | | | | |
|----|-----------|------------|--|
| j) | <u>*1</u> | <u>139</u> | —EIA preparers. |
| m) | <u>*1</u> | <u>139</u> | —community and NGO representatives involved in EIA issues. |
| i) | <u>3</u> | <u>138</u> | —Environmental Agency staff. |
| k) | <u>4</u> | <u>136</u> | —EIA reviewers. |
| l) | <u>5</u> | <u>133</u> | —EIA system administrators. |
| h) | <u>6</u> | <u>129</u> | —senior government officials. |
| n) | <u>7</u> | <u>119</u> | —private sector project proponents. |

The most effective training vehicles are:

- | | | | |
|----|----------|------------|---|
| p) | <u>1</u> | <u>144</u> | —short courses (one to six weeks). |
| o) | <u>2</u> | <u>125</u> | —workshops and seminars (one to five days). |
| q) | <u>3</u> | <u>116</u> | —degree programs (one or more years); |
| s) | <u>4</u> | <u>109</u> | —direct project-related technical assistance (variable duration). |
| r) | <u>5</u> | <u>88</u> | —“twinning” arrangements (variable duration). |

* = tie

RESPONSE TO QUESTION III

The EIA profile of Workshop attendees is summarized in the responses to Question III: 7 respondents were government officials (who were attached to their nation's EIA Agency); 4.5 represented an academic or research institution; 3 were NGO representatives; 9 Environmental consultants; 0 environmental officers in private industry; 6.5 “other”; and 2 no response. (The

fractions reflect the part-time involvement in multiple activities reported by a number of the respondents.)

As noted above, no private sector environmental officers attended the conference (although several had been invited). The absence of input from this critical sector was properly pointed out as one of the principal deficiencies of the Workshop.

Responses to Question III: My primary role in my country's EIA process is as:

Government official:

- a) 5 —within the EIA Agency;
- b) 2 —within another agency's EIA unit.
- c) 4.5 Academic or research institution member.
- d) 3 NGO representative.
- e) 9 Environmental consultant.
- f) 0 Environmental Officer in private industry.
- g) 6.5 Other
- 2 No response
- 32 Total responses

RESPONSE TO QUESTION IV

Question IV provided respondents with the opportunity to add to or to elaborate on the issues and responses addressed in Questions I, II and III, and to note the particular achievements (or failures) of EIA in their country. Following are some of the additional points raised by the respondents:

Legal sufficiency:

- ▶ The EIA procedure does not have legal teeth.
- ▶ EIA legislation is good, but EIA studies come too late in project planning to allow proper EIA to be done.

EIA scope:

- ▶ Most notable achievement is inclusion of socio-cultural aspects in the EIA system.
- ▶ An adequate framework is lacking; EIA exists virtually in isolation, without recourse to a context of land use planning goals or resource policies.
- ▶ Case-by-case EIA does not address cumulative impacts.
- ▶ EIA does not cover plans and programs of governments which could have greater impact than projects.

EIA process:

- ▶ There is a serious lack of expertise to implement EIA, both in EIA agencies and in line, or sectoral, agencies.
- ▶ There is a lack of checks and balances in the EIA system: neither the media, NGOs, nor elected officials are playing an effective watchdog role.
- ▶ The major difficulty is to establish an administrative system capable of efficiently and expeditiously reviewing EISs and issuing pertinent approvals.
- ▶ The critical shortcoming is the monitoring of impacts and of approval conditions.
- ▶ EIA recommendations have successfully influenced project design, layout, siting, technology and decision-making.
- ▶ Once EIA requirements have been made clear and are understood by private industry, they will follow the rules.
- ▶ EIA Commission members, being part-time, are not truly committed to the task.

Public participation and awareness:

- ▶ There is a lack of awareness (among the public) of what EIA is.

- ▶ Government agencies (especially those not directly responsible for environmental protection) see EIA as only a requirement, not as a tool for achieving sustainable development.
- ▶ EIA provides a system that accommodates public participation in the planning of projects. (However, other respondents felt that there is no true public participation at all.)
- ▶ EIA serves an important role in expanding public involvement in decisionmaking.
- ▶ All EIA practitioners should promote the link between EIA and sustainable development.

Regional and trade-related Issues:

- ▶ Regional cooperation and donor funding needed to properly conduct some EIA studies.
- ▶ Emergence of AFTA (ASEAN Free Trade Agreement) and implementation of CEPT (Common Effective Preferential Tariffs) will lead to greater efforts focussed on the harmonization of EIA procedures in ASEAN countries.

Capacity building needs:

- ▶ Education and training should be put in the highest priority.
- ▶ Neither the public nor the NGO community has the necessary capacity to properly evaluate an EIA report.
- ▶ In cases where capability does exist, there is often a lack of confidence and lack of will, resulting in no effective intervention.
- ▶ There is a need to "professionalize" EIA practitioners.
- ▶ One of the most serious constraints is the problem of monitoring and enforcement due to inadequacy of staffing in relevant agencies.
- ▶ We need more case studies of success stories, and demonstration EIAs.
- ▶ Environmentally sensitive areas should be mapped.

PARTICIPANT QUESTIONNAIRE #2

The second questionnaire was distributed prior to the final day of the Workshop, and sought the respondents' input in three areas:

- (1) Identification of potential follow-on activities to the WRI study;
- (2) Principal achievements of the WRI Workshop; and
- (3) Suggestions on how the effectiveness of the Workshop might have been enhanced.

Eleven responses were received, and are summarized below.

Follow-on Activities

Several respondents, particularly those from countries without EIA systems, or with newly-established systems, felt that a case study of EIA needs, resources and achievements to date would be helpful. Such case studies would be similar to those produced by the WRI study in Indonesia, the Philippines and Sri Lanka.

Others felt that a one-to-three day seminar designed to present the findings of the WRI study should be scheduled in their respective countries. Such seminars would involve participation by 30 to 50 participants drawn from a broad range of interest groups and professions involved with EIA. Representatives from China, Fiji, Nepal and Bangladesh were especially interested in this concept.

The conduct of a "hands on" EIA demonstration project was seen as a potentially useful training tool. Such a project would involve the environmental assessment of a major project or national policy, and would require the involvement of both local and international EIA experts.

Creation of national networks of EIA practitioners was also strongly supported. National networks could eventually form a basis for intra-regional and international networking activity, and for the exchange of environmental data, as well as information about successful EIA project activities.

Other suggestions for building upon the momentum established by the WRI study include:

- ▶ Organize seminars and field visits to countries within the region that have successfully established EIA programs;

- ▶ Develop training materials and conduct training courses on programmatic/sectoral/areawide EIA;
- ▶ Develop national Environmental Data Directories, which provide information on data availability and sources;
- ▶ Prepare policies, procedures and guidelines for use in initiating and standardizing national baseline data systems, which will be of use to environmental professionals for planning, resource management, compliance monitoring and enforcement, as well as EIA preparation and review;
- ▶ Develop a program of annual regional EIA seminars, or workshops, to encourage greater interaction and networking among EIA practitioners;
- ▶ Circulate existing environmental guidelines materials (such as has been produced by the ADB, World Bank, ESCAP and others) more widely and effectively;
- ▶ Identify and circulate copies of good EIAs;
- ▶ Publish an EIA Newsletter, drawing on the experience of EIA practitioners in Asia.

Principal Achievements of the Workshop

Some of the key achievements of the Workshop, as identified by the questionnaire respondents, include:

- ▶ Participants were exposed to a wide range of EIA experiences and issues throughout the region, and were able to share their own EIA experiences;
- ▶ The potential "core group" of a regional EIA network was identified and assembled;
- ▶ The Workshop served as a "confidence building" statement that EIA programs in various Asian nations are "on the right track";
- ▶ The Workshop underscored the importance of public participation as a central component of the EIA process;
- ▶ Important and innovative concepts such as area-wide/sectoral/programmatic EIA were introduced and described;

- ▶ Initiated a process that may lead to greater harmonization of EIA policies and requirements throughout the Asian region;
- ▶ Explored some of the problems and issues involved with the imposition of donor EIA requirements in Asian countries.

Enhancing the Effectiveness of the Workshop

Ideas for enhancing the effectiveness of future Workshops, as identified by the questionnaire respondents, include:

- ▶ The very meaning and scope of the term "EIA" should have been more clearly and fully clarified at the outset of the Workshop;
- ▶ Guidelines for participant preparations should have been given well in advance;
- ▶ Greater use of visual aids and computer demonstrations of EIA analysis techniques and process, including playing video recordings of "EIA success stories";
- ▶ Greater participation by private sector representatives was needed;
- ▶ More time should have been allowed for open discussion, development of ideas, and sharing of insights as to how improvements to EIA systems might be made;
- ▶ Countries just getting started on EIA should have been invited to a one-day advance seminar to discuss the basic concepts and procedural steps of EIA;
- ▶ Greater attention and sensitivity to the English language difficulties of some participants would have been helpful.

With respect to conference logistics, several issues were raised:

- ▶ Poor telecommunications linkages were distressing;
- ▶ Clarification of expense reimbursement and per diem regulations was desired;
- ▶ The workshop schedule was quite demanding; it was difficult at times to keep going, and more time should have been allowed for formal and informal discussions among participants;

- ▶ Lack of opportunities for in-depth discussion among workshop participants; more time should have been allowed for formal and informal interaction;

PARTICIPANT QUESTIONNAIRE #1

Each participant in the workshop on Strengthening Environmental Impact Assessment (EIA) Capacity in Asia is requested to complete the following questionnaire, and to return it to WRI at the time of registration on December 12th. Results will be compiled and distributed to all attendees. *Your input is important, and your cooperation will be appreciated!*

If you are representing a multilateral development organization or have come from a country outside of Asia, please answer based on your understanding of conditions in the Asian country with which you have had the most EIA experience. Also, if useful, feel free to add to or rephrase the list of issues provided below.

For Question I, please use the following responses:

- 1 Critical impediment(s) to EIA effectiveness in my country
- 2 Important issue, but not critical in my country
- 3 Not a problem in my country

Question I: In my opinion, critical impediments to EIA effectiveness in my country are:

- a) _____ Inadequate legislation exists for conducting EIA in my country.
- b) _____ Lack of sufficient political support for EIA at senior government levels.
- c) _____ Inadequate administrative or procedural regulations for conducting EIA.
- d) _____ Inadequate technical guidelines for conducting EIA.
- e) _____ EIA studies are carried out too late to make a difference.

Sufficient numbers of skilled EIA practitioners are lacking:

- f) _____ within my country's Environment Agencies.

- g) _____ within other sectoral agencies.
- h) _____ within universities and other environmental institutions.
- i) _____ within private sector environmental consulting companies.
- j) _____ EIA screening and scoping are lacking, or not properly conducted, and important impacts are thus often overlooked.
- k) _____ Terms of Reference for EIA studies are unclear.
- l) _____ Baseline data needed to conduct EIA do not exist, and must be collected on a project-by-project basis.
- m) _____ Suitable impact prediction methods either do not exist, or are not applicable to local conditions.
- n) _____ Inadequate provision has been made for public participation in the EIA process.
- o) _____ EIA findings are not incorporated into project permits and licenses, or followed in project design and/or operations.
- p) _____ EIA approval conditions are not adequately monitored and enforced.
- q) _____ The EIA process takes too long, and costs too much money.
- r) _____ Important development projects are being delayed or cancelled because of EIA controversies.
- s) _____ EIA requirements of foreign donors or development assistance organizations often conflict with the requirements of my country's EIA process.

Other effectiveness issues include:

- t) _____
- u) _____
- v) _____

For Question II, please use the following responses:

- 1 Very useful in my country
- 2 Useful, but not a high priority in my country
- 3 Not useful in my country

Question II: I believe the most useful measures for dealing with the identified critical impediments to EIA effectiveness in my country include:

Increased funding for:

- a) _____ EIA agency budgets;
- b) _____ Research into prediction and analytic methods;
- c) _____ Development of improved technical guidelines;
- d) _____ Development of improved public participation methods;
- e) _____ Publication and timely dissemination of EIA reports and related documentation;
- f) _____ Collection and widespread dissemination of baseline data needed for EIA studies;
- g) _____ Training.

Training programs targeted on:

- h) _____ Senior government officials;
- i) _____ Environmental Agency staff;
- j) _____ EIA preparers;
- k) _____ EIA reviewers;
- l) _____ EIA system administrators;
- m) _____ Community and NGO representatives involved in EIA issues;
- n) _____ Private sector project proponents.

The most effective training vehicles are:

- o) _____ Workshops and seminars (one to five days);

- p) _____ Short courses (one to six weeks);
- q) _____ Degree programs (one or more years);
- r) _____ "Twinning" arrangements (variable duration);
- s) _____ Direct project-related technical assistance (variable duration).

Other effective interventions include:

- t) _____
- u) _____
- v) _____

Question III: My *primary* role in my country's EIA process is as:

Government official:

- a) _____ within the EIA Agency.
- b) _____ within another agency's EIA unit.
- c) _____ Academic or research institution member.
- d) _____ NGO representative.
- e) _____ Environmental consultant.
- f) _____ Environmental Officer in private industry.
- g) _____ Other (please describe): _____.

Question IV: Please provide a brief (one or two paragraph) discussion of the most critical shortcoming and the most notable achievement of the EIA system in your country:

My answers have been based on my EIA experience in: _____.

Thank you for your cooperation and assistance.

PARTICIPANT QUESTIONNAIRE #2

We hope you are enjoying your participation in the Workshop on Strengthening Environmental Impact Assessment (EIA) Capacity in Asia. We would like your help in identifying follow-on activities that might be undertaken to strengthen EIA capacity, and we welcome your comments and evaluation of the Workshop itself. Please return the completed questionnaire to one of the Workshop Organizing Committee members before lunch on Thursday morning. *Thank you!*

Question I: In my opinion, useful follow-on activities might include:

- a) _____ Conduct a case study of the effectiveness of the existing EIA system in my country; such a study might be conducted by: _____.
- b) _____ Hold a one-day seminar to present and discuss the results of the WRI project to EIA practitioners in my country; such a seminar might be conducted by: _____.
- c) _____ Conduct a demonstration project in my country, using the environmental assessment of a major project or program as a "hands on" training tool; such a demonstration project might be conducted by: _____.
- d) _____ Develop a network of EIA practitioners in my country, and link this national network to similar groups in other countries within the region; such a network project might be organized by: _____.

Other effective follow-on activities include:

- e) _____
- f) _____
- g) _____

I am willing to assist in organizing and/or carrying out one or more of the above follow-on activities. My name is:

Question II: In my opinion, the principal achievements of this Workshop have been: (Please continue on an attached sheet, if necessary)

Question III: In my opinion, the effectiveness of this Workshop could have been enhanced in the following manner: (Please continue on an attached sheet, if necessary)

Thank you for your cooperation and assistance.

Appendix I

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