

Environmental Policies and Institutional Framework

Environmental policies, to be effective, require capable public institutions. Enacting comprehensive legislation is of limited value if institutions are incapable of implementing the policies and actions that will address priority environment problems. One of the important functions of the framework legislation is to define the mandate for environmental agencies in relation to other government bodies. Because environmental problems cut across sectoral boundaries and may involve many different agencies, clearly delineating institutional arrangements is crucial for effective implementation.

Institutions generally do not have adequate resources, the needed incentives, and trained staff to carry out environmental management functions properly. A significant move has been made by the individual countries, beginning in the early 1990s—that of establishing a ministry or a cabinet-level coordinating organization to address natural resources and environment management issues. Thus, Viet Nam and Thailand now have their Ministry of Science, Technology and Environment (MOSTE), while Cambodia has its Ministry of Environment (MOE). In the Lao PDR, with the recent approval of Decree 068/PM (the Environmental Protection Law), the Science, Technology and Environment Agency (STEA), a cabinet-level executive institution, acts as the coordinating agency on all environment-related issues.

Cambodia

Institutional Framework

Political and socioeconomic context

The human resource vacuum experienced by Cambodia in the early 1990s has set the stage for the influx of much technical assistance from funding agencies. Thus, an evaluation of the environmental policies enacted and

institutional arrangements made in the 1990s necessarily reflects also in part upon the performance of the funding and development agencies.

Environmental considerations occupied a secondary place early in the decade when the rehabilitation and reconstruction needs of the country took precedence. Nevertheless, the 1994-1995 National Program to Rehabilitate and Develop Cambodia includes optimizing sustainable use of natural resources among its major concerns, along with the pursuit of macroeconomic stability, administrative and judicial reform, and other development objectives. Other planning documents mention strengthening the base for a market economy among the short-term priorities. The emphasis placed on market opening, however, also led to the uncritical, and harmful, management of natural resources.

The weak revenue base of the state, overstuffed public service, problems linked to demobilization and reintegration of former soldiers into the economy, and limited technical capability of the line agencies have all been easily recognized as major obstacles to economic development, and, as it turned out, to good environmental management. The weak revenue base makes natural resources a tempting target for revenue raising. Overstuffed and underpaid civil service makes it difficult to professionalize natural resource and environmental management. The resettlement demands often conflict with environmentally sound land use. Added to this is the fact that, after the period of the United Nations Transitional Authority in Cambodia (UNTAC), natural resources were being used to finance political party war chests rather than the government budget.

Institutional structures and linkages

Significant efforts have been made throughout the decade to establish viable environmental institutions. The MOE was created in 1993. For a brief period it became the Secretariat of State for Environment, but it reacquired

its ministerial status in 1996. The MOE operates along the principles to which the Government commits itself. These include: the recognition of the links between poverty and environmental degradation; commitment to a participatory approach to dealing with environmental issues; acceptance of the need for an integrated approach to most environmental problems; and the importance given to strengthening relevant institutions and to awareness building. The MOE has assumed a strengthened role in environmental management and conservation in recent years.

A number of institution-building projects in Cambodia have been funded by, among others, the World Bank, United Nations Educational, Scientific and Cultural Organization (UNESCO), European Union (EU), ADB (through two advisory TAs aimed at creating in-country EIA expertise), MRC, Danish International Development Agency (DANIDA), and other organizations. Still, institutional weaknesses persist. They fall into two broad categories: (i) technical and financial incapacity of the institutions to deal with environmental issues; and (ii) weak institutional linkages and coordination between MOE and other branches of government and civil society.

The first group involves issues like: (i) an overstuffed administration at the central level coexisting with weak and underfinanced provincial and district counterparts; (ii) the absence of a clear statement of the duties and responsibilities of the MOE staff and a human resource development plan; (iii) a nontransparent system of recruitment into the government service and insufficient political support for a radical overhaul of the civil service; and (iv) continued technical weaknesses in many areas of environmental management (e.g., monitoring of industrial emissions discharges, hazardous waste management, and others).

The main concern in the second group is the poor delineation of responsibilities between MOE and the Ministry of Agriculture, Forestry and Fisheries (MAFF) in several aspects of natural resource management (e.g., protection of wildlife, monitoring of illegal forest activities, regulation of fisheries in the inundated forests of the Tonle Sap, division of tasks within different management classes of land, etc.).

Complaints about lack of institutional coordination are common in Cambodia. The source of inefficiency is not the fact that different agencies look at the same problem but rather that it is not clear who has the final word, and decisions are often reached without reasoned consensus.

Much better coordination is needed not only among but also within the main bodies dealing with environ-

mental problems. For instance, in MOE, only weak links exist between the Department of Pollution Control and Department of EIA Review. Within MAFF, it is unusual for the Department of Forestry and Wildlife (DF&W) to even “compare notes” with agriculture-oriented departments. Several attempts of the last five years to establish internal linkages within MOE and formalize them in job descriptions for each of MOE’s units need to be resumed and completed.

A notable absentee from the process of environmental policy formulation in Cambodia has been the Ministry of Health. Apart from modest efforts by WHO staff and a token representation of the Ministry of Health in the EIA process, no work is conducted locally on the numerous links between environmental conditions and public health.²⁴ Environmental policy in Cambodia continues to lack any epidemiological basis.

There are a lot of overlaps in the management of complex problems. Tables 21 and 22 illustrate the extent of overlapping of government functions and legal provisions in coastal zone management (RGC 1998b).

In addition to overlaps, institutional responsibility is not well delineated vertically (i.e., between central, provincial, municipal, and even district levels). This problem is part of a bigger issue of fiscal decentralization and public administration reform as a whole. In the case of natural resource management in particular (forests, fisheries, and, in the future, mining), absence of clear (or any) specification of the regulatory and revenue functions of different levels of administration contributes to the breakdown of effective resource management at the local level.

Mechanisms are now being created gradually to achieve a more coordinated approach to environmental decision-making. For example, EIA working groups in key ministries have been created to provide better liaison with MOE, and several bodies have been designated to achieve a shared approach to coastal zone management.

Environment and development plans

The First Socioeconomic Development Plan (1996-2000) considers the environmental task an encompassing one—that is to “manage, conserve and protect Cambodia’s environment and natural resources in an ecologically sustainable manner to assist in alleviating poverty throughout the nation.”

Six medium-term objectives were identified in 1995, namely, to:

- Build the environmental planning and monitoring capacity of core institutions;

²⁴There is strong indirect evidence of generally poor understanding in Cambodia of the links between sanitation improvement and public health.

Table 21: Existing and Potential Institutional Overlaps in Coastal Zone Management in Cambodia

Responsible Department/Office	In	Fo	Fi	Ag	To	T	Lu	Rd	En
Industry (In)		P	CP	P	P	P	CP		CP
Forestry (Fo)	P		CP	CP	P	P	CP	P	CP
Fisheries (Fi)	CP	CP		CP	P	CP	CP	P	CP
Agriculture (Ag)	P	CP	CP		CP		CP		P
Tourism (To)	P	P	P	CP		P	CP		P
Transportation (Tr)	P	P	CP		P				CP
Land Use (Lu)	CP	CP	CP	CP	CP			CP	CP
Rural Development (Rd)		P	P				CP		CP
Environment (En)	CP	CP	CP	CP	P	CP	CP	CP	CP

C = current overlap/conflict, P = potential overlap/conflict.

Table 22. Current and Potential Overlaps Among Legal Provisions In Cambodia's Coastal Zone Management

Legal Provision	FL	FIL	LEPNRM	LL	LLM	PA
Forest Law (FL)	CP	CP			CP	
Fisheries Law (FIL)	CP		CP			CP
LEPNRM	CP	CP				
Land Law (LL)	P				CP	CP
LLaw on Land Management Utilization and Construction (LLM)				CP		
Protection Areas Decree (PA)	CP	CP		CP		

LEPNRM = Law on Environmental Protection and Natural Resource Management.
Source: RGC 1998b.

- Improve forest concession management;
- Strengthen protected area management;
- Improve the management of the Tonle Sap ecosystem;
- Manage coastal zones; and
- Reduce urban and industrial pollution.

With only small changes (addition of energy development and a major narrowing down of urban and industrial environmental issues to solid waste management), the same topics are contained in the NEAP, prepared under World Bank funding, and approved by the Council of Ministers in December 1997. The NEAP presents a five-year program (1998-2002) to improve environmental management. The first phase of the program (1998-2000) focuses on strengthening the policy and regulatory framework. The second phase is devoted to the implementation of the NEAP's priorities. For the Government of Cambodia, the NEAP provides the strategic framework for improving environmental management. It is complete (since it does not address water resources and certain urban and industrial environmental issues) but it is a sound technical basis for the medium term and for formulating Cambodia's environment strategy.

Other more specific planning documents are being drafted or are under consideration. They include the

National Wetlands Action Plan, Regional Biodiversity Action Plan (with Cambodia included), Strategic Coastal and Marine Environmental Management Plan, and several others.

Policy Development, Legislation, and Regulation

Environmental policy legislation

In terms of legislation, a government decree on the Creation and Designation of Protected Areas was issued in November 1993, largely adopting concepts of protected areas management from the World Conservation Union (formerly IUCN). It designates 23 areas of fragile and critical habitats constituting a very large (by international comparison) 19 percent of the total territory. Cambodia is a signatory to all major international conventions relating to environment (Biodiversity, Convention on International Trade in Endangered Species or CITES, Ramsar, Climate Change), and an active partner in regional environmental projects and programs.

The Law on Environmental Protection and Natural Resource Management (LEPNRM) was enacted in 1996. It codifies the State's obligation to protect the environment and ensure sustainable development of

natural resources. It also calls for the assessment of the environmental impacts of new investment projects and provides for public participation in environmental decision-making. It extends the MOE oversight to industrial and urban environmental issues.

Several key pieces of legislation currently await revision, including the much-debated Forest Law, which still needs to be complemented by more detailed regulations and implementing guidelines. Water pollution control and solid waste management subdecrees were promulgated in 1999, as was the subdecree on environmental impact assessment (EIA). The subdecree on the management of protected areas system is expected to be approved later in 1999.

Legal and regulatory issues

Efforts to recreate a legislative framework for environmental management in Cambodia, started in 1993 and interrupted in 1997, have been reasonably successful. However, the translation of the framework into detailed regulations and guidelines has only started and regulatory gaps still exist.

Experience in Cambodia and elsewhere in Asia suggests that mere existence of environmental laws may not be enough to create a suitable management framework. The laws may be conflicting or unclear, regulations quickly overtaken by events. Legislative and regulatory reform requires a long-term and costly commitment that calls for coordinated efforts among legislative drafters, subject matter specialists and, preferably, subject matter working groups.

Regulatory gaps must be closed for the legislative framework to be functional. Assistance would be particularly needed in the: (i) development of regulatory instruments and management guidelines for protected and neighboring areas (buffer zones); (ii) formulation of a regulatory framework for the management of hazardous wastes; (iii) review and finalization of regulations regarding agricultural materials (especially pesticides); and (iv) development of municipal regulations based on urban environmental subdecrees (on water pollution and solid waste management).

Human resource development

There has been a substantial infusion of funds for human resource development (HRD) within MOE and other line ministries. A number of ADB technical assistance projects have delivered training to MOE and other line agency personnel, and helped strengthen MOE's technical capacity. But until now, such programs have not included an integrated HRD plan for MOE, or for MAFF.

There is a pressing need to prepare an HRD plan for MOE—a plan that should complement the country's overall environment strategy. The plan must have sufficient authority to invite coordinated support from funding agencies, particularly for training in regional or cluster-based planning, among other skills.

Environmental Impact Assessment

Until recently, EIA²⁵ in Cambodia was an ad hoc activity with the Council for the Development of Cambodia (CDC) providing environmental (as well as overall) clearance for major investment projects.²⁶ EIA was largely limited to public sector projects normally financed by organizations whose internal approval procedures mandated an environmental assessment (ADB, World Bank, EU, bilateral agencies, etc.). This is being changed. The process is now underway for: (i) transferring the responsibility for EIA from CDC to MOE; (ii) transferring the initiative for conducting EIA from outside development agencies to Cambodian authorities; and (iii) making EIA apply across all new and old activities in a systematic manner. The first step is virtually accomplished while the other two still require further substantial efforts.

Today, the authority for EIA is squarely vested in the MOE,²⁷ as provided for by the LEPNRM. The scope of EIA has been extended to all investment projects, proposed or existing. Environment units have been, or are being, created in all ministries having resource management functions (Ministry of Industry, Mines and Energy; Ministry of Public Works and Transport; MAFF; Ministry of Rural Development; Tourism and Health). The approach to EIA is expected to be based increasingly on formalized links between MOE and these environment units. The Environmental Steering Committee (ESC), with membership from the line ministries, NGOs, and the Chamber of Commerce, was created in 1998 to advise MOE on issues relevant to EIA.

Implementation

Sector-specific technical EIA guidelines have been drafted and ambient standards have been recommended for air, water, and soils. In June 1999, an EIA subdecree

²⁵ Unless otherwise specified, EIA is used here in a generic sense as all forms of environmental assessment regardless of the depth of analysis provided.

²⁶ Strictly, the Cambodia Investment Board (within CDC) approves private sector projects and CRDB (also within CDC) approves public sector projects. Line ministries approve public sector projects not requiring a loan, and local governments approve projects that are outside the purview of CDC.

²⁷ CDC remains responsible for approving loan-funded projects and despite the transfer of responsibility for EIA to MOE, the latter still needs to comply with CDC's approval process.

needed to implement LEPNRM was issued. A number of recommendations have also been made regarding environmental data generation and their management.²⁸

The training of MOE and key line agency staff has been taking place since 1995 under two ADB TAs and two RETAs, as well as under other foreign-funded projects. All of these activities have (to quote from a consultant's report) "positioned some 60 government officials at the threshold for implementing the EIA process, including data management to facilitate the process."

Limitations

The EIA process provides important safeguards for environmental management, but it also has limitations. First, EIA procedures are typically far more advanced than the baseline data upon which the EIA process depends. Poor data lead to unreliable assessment of likely environmental impacts. Second, the EIA process is a static one based on certifying compliance (or noncompliance) with certain norms. And even if the norms change over time, the process contains few incentives for corresponding improvements in environmental performance (unlike some market-based approaches to environmental management). Third, the process has bypassed major areas of environmental concern (especially in Cambodia) such as land degradation, deforestation, and other issues.

Actions needing support

ADB has helped create a framework for EIA within MOE. The new procedures need to be fully absorbed first, and for this reason, no additional support for EIA is envisaged in the medium term. Possible areas of support, by ADB and other sources, would be in entrenching the new EIA procedures, providing for in-service training, physical buildup of monitoring capability, and creation or improvement of environmental databases such as a register of industrial polluters or a pollution discharges database.

Environmental Governance

Government structures

Starting with the UNDP-implemented National Program of Administrative Reform, a number of separate initiatives have been supported by the international development community aimed at creating a viable structure of government institutions that are responsive to the needs of the population and having the accountability and the ability to evolve. Reform of the civil service and demobilization were already identified as essential components of improved governance at the time of UNTAC. However, the slow progress in these areas has affected environmental management.

Personnel structure

The passage of the LEPNRM in 1996 and subsequent developments have consolidated the role and powers of MOE. Yet, the ministry's ability to meet this mandate is hamstrung by its "two-speed" personnel structure. One group of staff, mostly those involved in foreign-funded projects, are well-paid, motivated, and work full-time. But the rest of the staff, who are low-paid, perform poorly and merely retain their employment status by showing up for a part of the day. Without a good human resource development plan, it would be difficult to energize MOE and other key government agencies.

Public participation

Until now, most decisions regarding environmental policy in Cambodia have been supported financially and technically by the international community (including international NGOs) but made largely without any participation from the Cambodian public. The public gets no opportunity, for instance, to express their concerns in the environmental assessment of projects. And projects are approved with zero transparency to the public. The local press has to some degree served as the only alternative to a more structured dialogue. The 1999 subdecree on EIA, which requires that public scrutiny now be made an integral part of the approval process will, hopefully, change things for the better.

NGOs and voluntary organizations

A very large number of NGOs are active in Cambodia (some 100 local and 200 international) and many are involved in environment-related activities. Thus the Australian People for Health, Education and Development Abroad (APHEDA), Wetlands International, and the American Friends Service Committee have a major involvement in coastal zone management; CIDSE and a dozen others in agricultural development; OXFAM and four or five others in rural water supply, etc. There are also nonprofit voluntary organizations and the Buddhist order through the Khmer Buddhist Educational Assistance Project or Buddhism and Environmental Awareness Project run by Buddhist laic organizations) that have taken active interest in environmental issues.

To further strengthen this constituency, there is need to: (i) establish better links between NGOs and nonprofit voluntary organizations on one hand and provincial and district levels of government on the other; and (ii) undertake continuing environmental education and

²⁸ ADB needs to ensure that expressions of need for further EIA support come from outside the EIA industry (see Tripartite Meeting of TA 2723 of 28 December 1998).

communication. Both the local media and the foreign press can be mobilized for purposes of supporting certain environmental causes, educating the public, and promoting transparency in environmental issues.

Environment and Natural Resource Data

The scarcity of reliable baseline data on the environment has been a concern since foreign technical assistance began in earnest in 1994. Some entities (e.g., the Food and Agriculture Organization, the United Nations Development Programme–CARERE, and the Japan International Cooperation Agency) have successfully obtained original field data on Cambodia’s environmental resources. However, agencies that collect data are often unwilling to share the information with other entities without compensation²⁹ (SEATEC et al. 1998). There is need to look for new ways of generating needed baseline data. Since the work involved and the value of such an undertaking go beyond the life of any given project, ADB is considering the notion of channeling funds to people with more long-term commitment and the needed technical competence, such as graduate students and young professionals. A suitable conduit—probably an education or research foundation with an interest in environmental issues—will gather and manage the data and maintain links between foreign young professionals and their Cambodian collaborators.

Lao PDR

Institutional Framework

Despite efforts of the Government to reverse the increasingly rapid deterioration of natural resources, environmental degradation proceeded unabated in the Lao PDR. Weak management capabilities at all levels of administration, low awareness of the need for environmental protection among the general population, and limited funds all contribute to the failure of these efforts. International support has been focused mostly at the central level. At the provincial and district levels, where more environmental problems occur, hardly any institutional support is provided. Government-funded development activities at the provincial and district levels, meanwhile, do not address environment-friendly development alternatives regularly and systematically.

Structures and linkages

Because of the cross-sectoral nature of environmental issues, various ministries and agencies are involved in environmental affairs. The responsibilities of individual agencies, however, are ill-defined, resulting in duplication in some areas and absence of coordination and oversight of environmental affairs in others.

The government agencies most concerned with environmental protection and natural resource management include the following:

Agency	Responsibility
Science, Technology, and Environment Agency, Office of the Prime Minister (STEA)	Overall coordination; oversight of environmental affairs; environmental management (setting policy and regulatory framework; setting standards; monitoring state of the environment and compliance with policies and regulations)
Ministry of Agriculture and Forestry (MAF)	Forest resource management; biodiversity conservation; soil resource management; water resource management
Ministry of Industry and Handicrafts (MIH)	Industrial environment management; mineral resource management
Ministry of Communications, Transport, Post and Construction (MCTPC)	Management of communication infrastructure
Ministry of Public Health (MPH)	Population management
Lao Tourism Authority (LTA)	Environmental management in connection with tourism

Legislative mandate

With the recent approval of Decree 068/PM (the Environmental Protection Law), STENO officially became the Science, Technology, and Environment Agency (STEA), and reportedly has been reorganized into three departments, three institutes, and the Cabinet Office, as follows:

²⁹ Growing and unregulated commercialization of government information services, sometimes defended by the “good privatization” rhetoric, is emerging as a major problem of governance in developing Asia (especially in the PRC, and also Cambodia). In most cases, payment for data is a poor substitute for institutional reform.

Department	Institute
Department of Environment	Environmental Research Institute
Department of Intellectual Property Rights, Standards and Metrology	Science Research Institute Technology Research Institute
Department of Science and Technology	Cabinet Office

The operational mandate of STEA is being expanded as it nears ministry status. It will then be increasingly involved in matters of implementation concerning watershed and other natural resource issues. The traditional role of STEA had been primarily as a coordinating agency, with special emphasis on reviewing EIAs for hydropower development projects and developing a set of environmental assessment standards. Within STEA, an Inter-Ministerial Working Group brings together officials from various ministries. This group has successfully facilitated communication among mid-level technical officials.

Under the new Environmental Protection Law, it is likely that STEA will have some degree of authority over shifting cultivation, soil erosion, and disaster preparedness and relief activities. STEA is in the process of developing units for watershed and water resource matters, and has proposed an expanded approach that will include a more varied selection of watersheds exhibiting a broader range of issues. STEA's enhanced coordinating and facilitating role, its broader environmental mandate that encompasses natural resource management, and the potential for it to be more involved in the implementation aspects of policy, will require substantial strengthening of its institutional capacity. Increased investment in HRD will be required. In the light of the government's limited fiscal resources, there will likely be increasing dependence on private sector personnel to assist with technical tasks at the field level.

In addition, STEA is eager to translate the new Environmental Protection Law into practical guidance for the technical departments and divisions in the provinces. To support the need for sound environmental management capacities at the provincial level, STEA has created, on a pilot basis, branch offices attached to the offices of the governors of six provinces in northern and southern Lao PDR. The legal basis, scope of work, and staffing of these units are underway. However, the facilities provided to these units from government resources in terms of manpower, office equipment, and transport facilities have been very modest.

Human Resource Development

The national pool of trained environmental professionals and technicians is relatively very small, and external assistance is needed in many cases, both to assist with the development of the policy framework and to train a core of professionals and technicians to implement it. The capacity of the government agencies in general to implement environmental policies and programs, and to enforce and monitor compliance with regulations, is still weak. The few individuals in government who have the experience in the management of natural resources are typically overburdened, and they have minimal expertise in the domestic application of policy analysis skills. The private sector, on the other hand, has not yet developed the capacity to provide adequate support and assistance to the Government.

A "Human Resource Needs Assessment for Environmental Management in the Lao PDR and HRD Plan for STENO," prepared for UNDP in September 1997, proposes a detailed five-year management plan for STEA. The plan identifies the following as areas where STEA's technical capabilities and competencies need to be upgraded:

- Personnel management
- Project management regulations
- Formulation and adoption of regulations
- Preparation and review of EIA
- Monitoring of environmental quality
- Enforcement of environmental laws
- Public participation
- Database management

With the anticipated increase in staff and the level of activity following the promulgation of the Environmental Protection Law, the STEA central office will require, in addition, support in the following areas:

- Planning, organizing, executing, and monitoring programs and projects
- Defining and delegating tasks
- Procurement and contract management
- Staff motivation, guidance and leadership

Local government capabilities

The thrust towards decentralization has given local officials greater authority in natural resource management and environmental protection. The Government has devolved responsibility for national policy implementation to provincial governments, the level at which important economic development decisions are made and implemented. Gaps remain, however, in the local governments' understanding of important environmental

protection issues. There also appears to be little coordination among the agencies responsible for different aspects of environmental management. Thus, there is need for a strengthened environment office at the provincial level and for extensive environmental training in the provincial branches of central agencies.

With central government now concentrating on program management and coordination, provincial and district offices are left to assume most of the task of service delivery. A UNDP report based on meetings with representatives of six provincial agencies in Savannakhet points to the need for training in the following areas at the local government level:

- Information management
- Program development and management
- English language training
- Wastewater management and quality control
- Public relations and public participation
- Use of modern office equipment
- Sanitation and solid waste management
- Natural resource conservation and management

Recent rural development experiences have pointed to the need for a more horizontal approach in executing programs and establishing interdependent, collaborative, and responsive teams across ministries. The rural development committees and offices have demonstrated the benefits of area-based networking and area-based management, which is oriented towards local priorities. In the case of environmental protection, an ecosystem management approach could be adopted, with participating agencies pooling already scarce public sector resources and undertaking planning and implementation with local stakeholders in an integrated manner.

Training needs in conservation management

In the conservation management of flora and fauna, the Government has recognized the importance of the country's biodiversity resources. It has designated some 12-14 percent of the land area as national conservation forest (National Biodiversity Conservation Areas) and 9 percent as provincial and district protected areas. The Center for Protected Areas and Watershed Management was created in 1994 to establish and manage the protected areas system. An examination of the effectiveness of conservation management systems conducted in 1998 also identified current and future training needs in the area. The report made the following human resource development recommendations:

- Preparing and using a standardized MAF job description
- Initiating an HRD performance evaluation system
- Developing a formal system of career path planning for MAF
- Implementing a program of agriculture-forestry-conservation extension over a 7-10-year period
- Further examining the establishment of a Participatory Resource Management Institute

Skills requirements in forestry and land use

Recently, the Lao-Swedish Forestry Program undertook an assessment of its land use planning/land allocation activities to determine skill and resource requirements of the methods used. The study revealed that additional training would be required to develop the following abilities and areas of knowledge:

- Ability to communicate effectively with villagers and understand their points of view
- Ability to interpret aerial photos and topographic maps
- Knowledge of basic survey measurement techniques
- Understanding of various sustainable and unsustainable farming systems
- Understanding of government policies, regulations, and objectives
- Knowledge of forest classification criteria and their application
- Understanding of socioeconomic and land tenure issues
- Basic knowledge of soil conditions

Environmental impact assessment

A World Bank study has pointed out that, based on international methodologies and standards, the 1993 National Environmental Action Plan provides a comprehensive framework for the EIA process. Although a review and approval process has emerged (see *Institutional Mechanisms* below), deficiencies in EIA procedures still exist, such as the following:

- EIAs are initiated by project proponents rather than by the Government, with the terms of reference for the consultants being prepared by the proponents' own consultants, thus allowing for bias.
- The approval of a memorandum of understanding (MOU), indicating that proposed projects conform to national development strategies, is frequently used to exempt entire projects from

certain restrictions (e.g., timber harvesting restrictions are not imposed on reservoir or roadway projects).

- There is no environmental analysis prior to issuance of an MOU.

The Government of the Lao PDR is currently being assisted by ADB in developing national EIA procedures, guidelines, and regulations, and in further strengthening STEA's capacity for EIA and monitoring. It is also getting support from ADB through other technical assistance projects in energy and road development, EIA training, and environmental monitoring.

Policy

The environmental policies of the Government are clearly presented in the Political Report of the Lao People's Revolutionary Party:

To promote the capacity and potential of the country and the regions alike, our Party continues to implement the policies of establishing agro-forestry economy, closely linking it to industry and services. We will consider agriculture and forestry as fundamental while focusing on some urgent and potential industrial activities. On the other hand, we will strongly promote the services sector, corresponding to the modern trend.

In materializing the policies of building the infrastructure for these economic sectors, our Party considers the socioeconomic development of the regions as important, and it continues to encourage it. We will be able to appropriately determine the production force for all parts of the country, and exploit the rich natural resources of each region in the most efficient manner. Simultaneously, efforts will be made to protect and rehabilitate them to become the wealthy assets and heritage of the nation.

The recent promulgation of the Environmental Protection Law has advanced the implementation of these policies. Environmental protection measures in the form of requirements for EIAs are outlined in Part II, Chapter 1, Article 8, of the Law as follows:

1. *The Science, Technology and Environment Organization must issue general rules regarding a regime and a methodology for environmental impact assessments;*

Further:

2. *Sectors related to development projects and activities related to these sectors must issue rules regarding a regime and a methodology for environ-*

mental impact assessments based upon [overarching] general rules issued by the Science, Technology and Environment Organization;

And:

3. *Before establishing development projects and other activities that are seen to have an impact on the environment, an environmental impact assessment drafted in compliance with [relevant] prescribed regulations in clause one and clause two of this Article must be submitted to an environmental management and inspection agency assigned to consider and issue environmental certificates.*

The Government's intention is very clear: The Lao PDR Government will take the necessary actions to protect the environment and natural resources in the process of economic development.

Further, the Lao Constitution of 1991 states that environmental protection is the responsibility of everyone, and that it is against the law to degrade natural resources that are in principle owned by the State. The following laws and policy documents have been prepared and adopted by the Government subsequent to the promulgation to the Constitution, and underwrite the Government's policy:

- National Environment Action Plan, 1993
- Forestry Law, 1996
- Water Resources Law, 1997
- Environmental Protection Law, 1999

Institutional mechanisms

Proposals for the development of projects are presented by external (non-Lao PDR) proponents, and are submitted directly to the Office for International Cooperation (the OIC; formerly the Committee for Planning and Cooperation or CPC), which is responsible for the interministerial review process. This procedure has emphasized the authority of the OIC, while de-emphasizing the regulatory roles of the line ministries. The Foreign Investment Management Council (FIMC) takes responsibility for the preliminary evaluation of private sector proposals, and the Department of International Economic Cooperation evaluates public sector proposals. Screening of projects remains the responsibility of the ministry concerned. STEA participates in the consultative process by providing general inputs to meetings, and retains authority for final approval of EIAs.

Following the evaluation and screening of projects, an MOU is prepared, which indicates that in principle, proposed projects are in agreement with the Government's national development strategy. The MOU is considered confidential, thus severely limiting public participation in the review and evaluation process.

Thailand

Institutional and Legislative Framework

Basic law and institutions

Like all countries, Thailand has faced environmental problems for a long time, mainly natural resource degradation and pollution. It was not until 1972, however, after participating in the first United Nations Conference on Environment and Development (the Stockholm Conference), that the Thai Government passed the first basic environmental law. The Enhancement and Conservation of National Environmental Quality Act (NEQA) came into effect in 1975, creating the National Environment Board (NEB) and the Office of National Environment Board (ONEB). At that time ONEB was a subcabinet committee, chaired by the Deputy Prime Minister. ONEB, as secretariat to NEB, was under the Prime Minister's Office. This act was amended in 1978 and 1979, and ONEB was transferred to the supervision of the Ministry of Science, Technology and Energy.

A markedly new *Enhancement and Conservation of National Environmental Quality Act* was passed in April 1992. Under this new law, there are three environmental departments: the Office of Environmental Policy and Planning (OEPP), Pollution Control Department (PCD) and Department of Environmental Quality Promotion (DEQP). With these three new agencies, the functions of planning, standard setting and enforcement, and education of the public were to be delineated. Reflecting the new emphasis, the Ministry of Science, Technology and Energy came to be known as MOSTE.

In 1998, a legal and policy committee of NEB was assigned to study needed changes in the law, and its report was submitted to a Constitution follow-up panel in mid-1999. The revisions provided that: (i) public hearings would be mandatory for projects potentially harmful to the environment; (ii) individuals would have the right to public information, to be compensated for damage or injury resulting from pollution, and to lodge complaints against polluters; and (iii) MOSTE environmental officers would be given power to act on complaints by imposing penalties or forcing polluters to take corrective action.³⁰

Planning and coordination

In 1996 the Cabinet approved the National Policy and Prospective Plan for the Enhancement and Conservation of National Environmental Quality, 1997-2016. This

20-year plan was mandated in NEQA/92. The Plan sets out general vision-specific goals and includes strategies to accelerate the rehabilitation of renewable resources as well as environmental management measures to address air and water pollution and solid and hazardous wastes.

The Plan will guide the environmental and natural resource activities to be included under the four five-year plans that will be prepared over the 20-year period. A brief excerpt from the Plan provides the gist of the conclusions reached and the planned approach of the Government.

“Previous national development resulted in serious impacts to environmental quality and all types of natural resources; and what remains are degraded. Moreover, environmental pollution from development also caused problems for human health. The current environmental situation is of crisis proportion, and difficult to resolve due to rapid population growth and strong competition for natural resource utilization. Thus, in subsequent economic and social development, more effective natural resource management is required, including more suitable agricultural development and industrial production processes that are not harmful to environmental quality; as well as following multilateral environmental agreements and trade accords. The vision for managing environmental quality includes:

- Natural resources are the resource base for sustainable development. Administration of these resources for economic development purposes is based on conservation and social justice.
- Administration and management of environmental quality overall are decentralized to be effective, with power being transferred from central offices to local institutions. Thus, all government agencies, the private sector, NGOs and local level institutions can participate in the formulation of policy and planning, and a monitoring program.
- People have awareness and are willing to work together to protect and rehabilitate environmental quality.’

Provincial environmental planning

In accordance with Clause 37 of the NEQA/92, each province is required to prepare a Provincial Environmental Action Plan (PEAP) in conformity with the National Environmental Management Plan outlined by NEB. The PEAP has become the mechanism for a

³⁰ Kanittha Inchukul, “Polluters Face Tough Controls,” *Bangkok Post*, 14 April.

province to meet the documentation and budgetary planning requirements for the approval of urban sewerage facilities. The NEQA/92 entrusted OEPP with the responsibility to evaluate the programs proposed in PEAPs and to recommend the annual budgets to be allocated each year for these specific programs. OEPP has received numerous requests from provinces for funds, action programs or assistance in preparing municipal sewerage system plans, preparing feasibility studies and detailed designs, and engaging contractors for constructing facilities.

City planning

City planning is carried out by the Department of Town and Country Planning of the Ministry of Interior. In theory, city planning allows objective classification of land and rational planning of its use, which serve as guidelines in turn for the planning, development, and environmental management of cities. It should also be a primary tool for reducing conflicts in land use. At present, more than 120 city plans have been prepared, but few cities seriously follow the designated plans. Instead, pressure is often exerted to revise the plan so that it reflects (and accepts) the actual situation. City planning needs to be given greater attention. There should also be public participation and public discussion of the process in order to make such plans more effective.

Standards and enforcement

Under the NEQA, a subcommittee of the Cabinet, NEB, has ultimate responsibility for setting plans, policies, and programs for the management of the environment and natural resources. The monthly meetings of NEB are chaired by the Prime Minister or the Deputy Prime Minister, and are attended by ministers or their representatives. NEB also includes several public (nongovernment) representatives, appointed by the Prime Minister from the academe and NGO community. OEPP serves as the secretariat to NEB.

NEB's work involves discussing current issues, reviewing and approving EIAs, and adopting regulations proposed by environmental agencies. NEB works through a number of committees and subcommittees. There are two coordinating committees: (i) the Coordinating Committee on Industrial Environmental Management, which brings together the Permanent Secretaries of MOSTE and of the Ministry of Industry; and (ii) the Coordinating Committee on Agriculture and Natural Resources, which brings together the Permanent Secretaries of MOAC.

These two committees encompass the key agencies for natural resources and environmental management in Thailand at a level and manner very conducive to resolving interagency conflicts and promoting interagency collaboration.

Environmental Impact Assessment

Formal consideration of the possible environmental impacts of a proposed project or activity was initiated in Thailand in 1981, under the authority of NEQA/75. NEQA/75 and the current NEQA/92 designated the types and sizes of projects or activities for which a formal EIA would be required. This EIA must ultimately be reviewed and cleared by NEB. The OEPP sets specific guidelines for EIA, and maintains a registry of firms that meet the basic qualifications for conducting EIAs. The proponent of a development project is responsible for preparing and submitting the EIA. It then goes to OEPP, which also conducts a technical panel review process. The members of the panel include recognized experts from the academe and the private sector. After the panel review, OEPP forwards the assessment, with the corresponding recommended action, to NEB for final clearance.

From June 1992, when the NEQA/92 was first implemented, through December 1994, EIA reports for 782 projects were submitted. Of these, 406 (52 percent) needed revision; the other reports were accepted.

There is widespread dissatisfaction, both inside and outside of OEPP and NEB, with the current system. Primary complaints concern the inadequate information and quality of the EIA, and the lack of public participation in the process. If one compares the current EIA situation in Thailand with that of the United States (where formal EIA was first implemented in the late 1960s) or other Western countries, a fundamental conceptual difference would be noted. Although EIA was initially regarded as an additional regulatory burden on companies, in most of the West it quickly proved to be of considerable value to the proponent agency or company. Costly mistakes in siting or design have been avoided frequently enough that most major companies in the industrialized countries have integrated a reasonable degree of EIA (and social impact assessment also) into their facility design process from the earliest stage. EIA to them has become an effective planning tool, rather than just another bureaucratic requirement. This evolution has not yet taken place in Thailand.

Viet Nam

National Environment Plan

Environmental concerns have received increasing recognition in Viet Nam since 1984, when the Viet Name Government formulated a National Conserva-

tion Strategy. In 1991, with the support of the Swedish Government, the UNDP, and the United Nations Environment Programme (UNEP), Viet Nam drew up its 10-year National Plan for Environment and Sustainable Development (NPESD) for 1991-2000.

The NPESD recognizes that sustainable development cannot be achieved without striking a balance between natural resources, population and economic growth. NPESD priorities center on developing appropriate organizational structures, integrating environmental policies and legislation for different sectors, and management programs. The action plan for the first five years gives the highest priorities to: (i) the establishment of a science environmental authority; (ii) population control programs; (iii) watershed management (including reforestation, soil erosion control, problem soil management, and stabilization of shifting agriculture); (iv) agricultural and industrial pollution control; and (v) estuary protection. For the second five years (1996-2000), watershed management and population control programs are given top priorities, along with other important areas, including protection of coral reefs, wetlands and inland waters. Following the adoption of a new constitution in April 1992, Viet Nam has rapidly progressed towards reforming its legal and institutional framework. Although much needs to be done at this stage, Viet Nam now has its framework law in place, and institutional capacity is being improved. With the support from the Global Environment Facility of the World Bank, Viet Nam has prepared a biodiversity action plan.

One obvious advantage Viet Nam has is its abundant and qualified human resource. Viet Nam's universities have been an important source of experts on various natural resource and environment-related issues. There is also a network of professional science and technology associations, which are linked both to the universities and the Government and provide advice to the latter.

Institutional Framework

Since the early 1980s, but more particularly in the 1990s, there have been a number of key institutional and policy reforms relating to Viet Nam's environment and natural resources. Policy reforms in environmental protection and land and water resources have been successful, but reforms in the forestry and fisheries sectors have been less effective.

The responsibility for environment-related concerns is vested mainly in six central government agencies:

- Ministry of Science, Technology and Environment (MOSTE)

- Ministry Agriculture and Rural Development (MARD)
- Ministry of Fisheries (MOFI)
- National Centre for Science and Technology (NCST)
- Ministry of Education and Training (MOET)
- Ministry of Planning and Investment (MPI)

MOSTE

The establishment of MOSTE in 1992 was provided for by the NPESD. One of its first initiatives was to set up the National Environmental Agency (NEA) as an executive department. Following the launching of NEA, local government arms of MOSTE, called DOSTE, were established in all 61 provinces, and from 1995, environment management divisions set up in every DOSTE.

NEA is headed by a director general assisted by two deputies. It has nine divisions: International Relations, EIA, Monitoring, Pollution Control, Inspection, Awareness and Training, Database Management, and Policy and Nature Conservation. An important NEA task is to chair the intersectoral Environment Impact Assessment Review Board. The Nature Conservation Division was established in 1997 to coordinate implementation of the Biodiversity Action Plan. NEA also has responsibility for national wetland policy and annual state of the environment reporting. In 1999, the Government decided to elevate the status of NEA to a general department, postponing consideration of proposed ministerial status.

MARD

Until 1995, Viet Nam had separate ministries for agriculture, forestry, water resources and fisheries. The separate structures meant that policies in one subsector were developed in isolation and usually without consideration of their possible impacts on other subsectors. In late 1995, these separate ministries were amalgamated into the Ministry of Agriculture and Rural Development or MARD, with the Ministry of Fisheries remaining separate. The level of cross-sectoral integration remains limited. Like MOSTE, MARD functions through provincial departments or DARD, with forestry representation down to district level.

MARD's Forest Protection Department coordinates protected area management under the Government's 1991 Law on Forest Protection, the 1993 Land Law, the Law on Environmental Protection, and the 1995 Bank (ADB) Assistance Plan (BAP), as well as various decrees outlining regulations and penalties. Field management is the responsibility of management boards that report to the forest protection boards within each

province. Management boards have been established for all national parks and for 32 nature reserves. The Forest Inventory and Planning Institute is responsible for addressing the technical issues associated with protected area management such as planning, inventory and research.

MOFI

The Ministry of Fisheries (MOFI) and the Institute for Fisheries Economics and Planning recently prepared a “Master Plan for Fisheries to Year 2010” with support from DANIDA. The Master Plan outlines projects to support MOFI and the fishing industry, to protect the environment, and preserve Viet Nam’s fisheries resources and other natural resource systems that are affected by the fisheries industry.

MOFI is now preparing new laws and policies promoting the principle of sustainable use. Examples of these are: a national program to control environmentally damaging practices associated with aquaculture; a decree for the protection of fisheries; and a decision on banning illegal fishing methods. MOFI is drafting a new umbrella Law on Fisheries aiming to control all activities in the industry.

NCST

The National Center for Science and Technology (NCST), which services MARD and MOSTE, is a large independent assembly of 20 separate institutes responsible for science and technology research and development. NCST’s members include a number of important environmental research organizations, such as: the Institute of Ecology and Biological Resources, which is responsible for biodiversity survey and research; Institute of Geography, which is currently coordinating projects on EIAs and systems geographic information funded by official development assistance; and the Institute of Oceanography, which is the main research authority for marine and coastal environmental issues.

MOET

In 1998, the Ministry of Education and Training (MOET) adopted a National Policy Statement on Environmental Education and a National Strategy for Environmental Education. The following year, the Government approved a detailed program prepared by MOET together with MOSTE for “incorporating environmental issues into all levels of the national education system” in response to Party Instruction 36 of 1998.

MPI

The Ministry of Planning and Investment (MPI) is concerned with economic policy, development planning,

and major projects. It has ultimate control over sectoral and provincial plans and budgets. Any new policy or institutional initiative requires the support of MPI if it is to succeed. In the provinces, MPI operates through the departments of Planning and Investment, which have similar authority at that level.

Environmental Policies

There are a number of policies that support environment-related initiatives and define institutional responsibilities in the area. In general, the Law on Environment Protection governs the interests of the NEA, including EIA. Policies on land use, and water and forest resources affect concerns mostly within the purview of MARD.

Environment protection policy

The 1994 Law on Environment Protection, which is the key environment policy innovation of this decade, provides the legislative mandate of NEA. The law, and close to 20 specific regulations that have followed, introduced a national system of EIA, a process of annual reporting on the state of the environment to the Legislative Assembly, national pollution standards, and a comprehensive system for auditing existing industrial facilities. The law also provides for preparing regional environment plans and assessing development master plans prepared by other arms of government. While the progress in applying EIA and auditing procedures has been impressive, challenges remain in bringing the sectors and local government to fully shoulder their environment responsibilities under the law. Strategic EIAs of plans and policies, prior to the definition of project proposals, have not begun and, overall, there are impediments to enforcement.

Land use policy

In 1981, land policy reforms commenced to devolve land-ownership. In 1988, the Government defined the farm household as the autonomous economic production unit and allowed farm households to hold long-term land use rights to annual cropland for 10-15 years and to forestland for longer periods. The 1993 Land Law extended the use rights to 20 years for annual crops and to 50 years for perennial crops. Rights have been allocated to 86 percent of cropland but only 9.8 percent of forestland. Most forestland is located in upland areas with difficult terrain, where customary use rights are common. Problems are beginning to emerge with the accumulation of land in a few hands through the market. In the Mekong Delta, for example, 6 percent of those who had received allotments are now landless, and another 10 percent retain plots too small for viable

subsistence production. Lacking access to credit, they were forced to sell off their land to those who could afford to invest in seed and equipment.

Water management policy

In 1998, for the first time, the Water Law recognized the need for integrated watershed management between and within central, provincial and district authorities, and the private sector. The Government is developing the institutional framework to implement the Water Law in the Red River Basin with support from the ADB-financed Red River Basin Water Resources Management Project. Similar exercises are being planned for Viet Nam's other major river basins.

Forest policy

The Government has promoted forest restoration and reforestation as a national priority since 1956, aiming to develop nationally significant plantation resources. By the early 1990s, planting programs had made more progress than in previous years but the country had advanced little in its efforts to replace natural forest timber with plantation sources. In 1993, the Government launched the "Regreening the Barren Hills Program (327)," which identified reforestation and watershed protection as a primary focus and recognized the integrated nature of natural resource management. In 1997 the Prime Minister instructed MARD to prepare a plan to "close" all natural forests to logging. The plan significantly reduced natural forest harvesting. In 1998, the Government introduced the follow-on to 327—the "Five Million-Hectare Program."

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