



# Performance Evaluation Report

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Reference Number: PPE: LAO 2010-53  
Project Number: 34543  
Loan Number: 1867  
November 2010

## Lao People's Democratic Republic: Environment and Social Program

Independent Evaluation Department

Asian Development Bank

## CURRENCY EQUIVALENTS

	Currency Unit	–	Kip (KN)	
	<b>At Appraisal</b> (November 2001)		<b>At Program Completion</b> (January 2007)	<b>At Independent Evaluation</b> (December 2009)
KN1.00 =	\$0.000105		\$0.000134	\$0.000241
\$1.00 =	KN9,550		KN9,672	KN4,158

## ABBREVIATIONS

ADB	–	Asian Development Bank
EIA	–	environmental impact assessment
EPF	–	environment protection fund
EPI	–	Environmental Performance Index
EPL	–	Environmental Protection Law
ESI	–	Environmental Sustainability Index
ESP	–	Environment and Social Program
HDI	–	Human Development Index
IED	–	Independent Evaluation Department
Lao PDR	–	Lao People's Democratic Republic
MCTPC	–	Ministry of Communication, Transport, Post and Construction
MAF	–	Ministry of Agriculture and Forestry
MIH	–	Ministry of Industry and Handicrafts
MOF	–	Ministry of Finance
NT2	–	Nam Theun 2 Hydropower Project
PCR	–	program completion report
PIP	–	public investment plan
PPER	–	program performance evaluation report
RRP	–	report and recommendation of the President
Sida	–	Swedish International Development Cooperation Agency
STEA	–	Science, Technology and Environment Agency
TA	–	technical assistance
WREA	–	Water Resources and Environmental Administration

## NOTE

In this report, "\$" refers to US dollars.

### **Key Words**

asian development bank, development effectiveness, environment, lao pdr, laos, performance evaluation, social impact

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The guidelines formally adopted by the Independent Evaluation Department (IED) on avoiding conflict of interest in its independent evaluation were observed in the preparation of this report. The fieldwork was undertaken by Piya Abeygunawardena and Koulap Sysourath (staff consultants) under the guidance of the mission leader. To the knowledge of the management of IED, there were no conflicts of interest of the persons preparing, reviewing, or approving this report.

**BASIC DATA**  
**Environment and Social Program (Loan 1867-LAO)**

**Program Preparation and Institution Building**

TA No.	TA Name	Type	Person-Months	Amount (\$'000)	Approval Date
3133	Strengthening Social and Environment Management Project	ADTA	35	950	22 Dec 1998
3535	Energy and Transport Socio-Environmental Management	SSTA	13 <sup>a</sup>	150	10 Nov 2000
3746	Capacity Building for Environment and Social Management in Energy and Transport	ADTA	37	600	22 Oct 2001

<sup>a</sup> One consultant was fielded over a 13-month period. However, the exact person-months is unknown, because assignment was intermittent.

Key Program Data (\$ million)	As per ADB Loan Documents	Actual
Total Program Cost	SDR15.648 million (\$20.0 million equivalent)	SDR15.648 million (\$21.94 million equivalent)
ADB Loan Amount/Utilization		

Key Dates	Expected	Actual
Fact Finding		13–18 Jun 2001
Appraisal		3–13 Sep 2001
Loan Negotiations		5–6 Nov 2001
Board Approval		6 Dec 2001
Loan Agreement		24 Dec 2001
Loan Effectiveness	24 Jan 2002	19 Feb 2002
First Tranche Release	19 Feb 2002	11 Mar 2002
Second Tranche Release	Within 14 months after first tranche release	28 Oct 2005
Third Tranche Release	Within 36 months of loan utilization	1 Aug 2006
Program Completion	30 Jun 2005	1 Aug 2006
Loan Closing	30 Jun 2005	1 Aug 2006
Months (effectiveness to completion)	41	53

**Borrower** Lao People's Democratic Republic  
**Executing Agency** Science, Technology and Environment Agency  
 (renamed to Water Resources and Environmental Administration in May 2007)

**Mission Data**

Type of Mission	No. of Missions	No. of Person-Days
Fact-Finding	1	75
Appraisal	1	50
Inception	1	12
Midterm	1	20
Review	14 <sup>a</sup>	68
Program Completion <sup>b</sup>	0	0
Independent Evaluation	1	30

ADB = Asian Development Bank, ADTA = advisory technical assistance, TA = technical assistance, SSTA = small scale technical assistance.

<sup>a</sup> The program completion report mentioned 24 review missions, but 10 of these were conducted informally and did not include back-to-office reports. We have only listed the 14 review missions that included back-to-office reports.

<sup>b</sup> The Program Team Leader was based in the Lao Resident Mission, hence, a program completion mission was not fielded.

## EXECUTIVE SUMMARY

This program performance evaluation report (PPER) presents the findings of an evaluation of the Environment and Social Program (ESP) in the Lao People's Democratic Republic (Lao PDR).

In December 2001, the Asian Development Bank (ADB) approved the ESP. The program's main objective was to support the Lao Government's policy reform agenda for improved environmental management and social safeguards in the energy and transport sectors. According to the program framework in the report and recommendation of the President (RRP), the ESP's expected impact was to promote sustainable and equitable development. The ESP's expected outcome was to improve environmental and social management in these sectors. The ESP included five program outputs: (i) strengthening national policy and the regulatory framework for environmental management and social safeguards; (ii) undertaking measures to enhance policy implementation and capacity in sectors and provinces; (iii) improving compliance and enforcement; (iv) promoting river basin management as a multisectoral and integrated planning framework for energy and transport development; and (v) establishing sustainable financing mechanisms. For the sake of clarity, the PPER has reconstituted these original outputs into three groups of program outputs: (i) strengthening national policy and the regulatory framework for environmental management and social safeguards, including compliance and enforcement procedures; (ii) improving the subnational (sector, provincial and river basin) planning and policy implementation framework and capacity for environmental management and social safeguards; and (iii) establishing sustainable financing mechanisms, including of an environment protection fund (EPF).

ADB had a strong rationale to provide an ESP to Lao PDR in 2001. The country is land-locked and the economy heavily depends on natural resources. It has a large volume of water resources with strong hydropower potential, diverse forest cover with high biodiversity, and an extensive land base, well-endowed with mineral resources. It also has a culturally diverse population consisting of about 47 ethnic groups. In the late 1990s, the economy showed an increasing rate of growth and rising per capita incomes. Many investment opportunities, including the Nam Theun 2 Hydroelectric Power Project, were emerging in Lao PDR, but prudent environmental management and social safeguard systems were not in place to attract more competitive development partners, such as ADB, the World Bank and other bilateral donor agencies. Therefore, a real opportunity existed to give greater impetus to economic growth, while at the same time placing the country on a more sustainable development track by supporting enhanced environmental and social safeguards.

In September 2000, the Lao Government requested ADB to provide program assistance to strengthen environmental management and social safeguards in the energy and transport sectors. This request followed a process of policy dialogue and capacity building that started in the mid-1990s. The ESP was initially formulated with the assistance of an advisory technical assistance (TA) grant. An additional small-scale grant supported the development of a policy matrix and facilitated consultations with a wide range of stakeholders. The policy matrix set out specific policy conditions to be achieved, under each of the program outputs, before approval of each of the three program tranches. Forty-eight policy conditions were established, as well as an additional 20 "other actions," which were time-bound but not explicitly linked to the tranche releases. Examples of these other actions included establishment of an enhanced performance bond system, preparation of studies on user charges and market mechanisms for environmental management and social safeguard activities, and including estimates of public spending on the environment in the government's annual budget.

ADB negotiated the ESP loan with the Lao Government in November 2001 and approved it in December that year. As envisaged at appraisal, the Science, Technology, and Environment Agency (STEA) acted as the executing agency for the ESP. An interministerial steering committee, chaired by the president of STEA, was established to oversee ESP implementation. Shortly after ESP completion, STEA was renamed the Water Resources and Environment Administration (WREA) and given a broader mandate.

The ESP's implementation period was envisaged as 3 years, but actual implementation took 50 months—a 14 month delay. The delay was mainly due to the late release of the second tranche, which took 29 months longer than envisaged at appraisal. The main reason for the delay in releasing the second tranche was the late achievement of eight main policy conditions. Eventually, all but two of these outstanding conditions were achieved and the second tranche was disbursed in October 2005. The two unmet policy conditions, dealing with involuntary resettlement and compensation, were deferred to the third tranche and achieved before program completion.

Overall, the ESP was rated borderline *successful*, based on separate assessments of the three program components. The national and subnational framework components were both rated *successful*, whereas the sustainable financing mechanisms component was rated *partly successful*.

Two key issues have been identified:

- (i) **Over-complexity vis-a-vis available resources.** The design of the ESP was too broad and complex for the available resources. The ESP was intended to assist the government in improving environmental and social management, particularly in the energy and transport sectors. The ESP was to achieve this through improving the national policy and regulatory framework, and the subnational planning and policy implementation framework, and establishing sustainable financing mechanisms. Numerous activities (48 policy conditions and 20 other actions) were envisaged in each of these areas, to be implemented over 36 months for a loan of about \$20 million. In retrospect, given the institutional and capacity constraints in the country, the ESP's scope was too broad and the outcome unachievable given the limited time and resources available.
- (ii) **The ESP as a replicable model.** The scope for replicating the ESP model in other ADB developing member countries is limited. Firstly, the PPER rates the ESP's performance only borderline *successful*, which indicates that the ESP may not be the most suitable model. Secondly, there is little demand for ESP-style programs, perhaps reflecting the developing member countries' seeming preference for addressing issues related to environmental safeguard management separately from those related to social safeguard management. Thirdly, there is not enough evidence that sustainable financing mechanisms, such as the EPF, have yielded the expected benefits. Nevertheless, the ESP model has some scope for adaptation for financing policy changes and capacity building for other areas of environmental management, if time and resources can be allocated.

Five lessons have been identified:

- (i) **Program design encompassing a good technical analytical basis was useful.** The technical analytical basis for the ESP was sound. A large number of

detailed studies and reports financed by ADB, the government, and other donors provided a basis on which the ESP could build. This was particularly true in terms of environment-related information, and data base and analytical work. Complex programs, such as the ESP, should be preceded by good analytical work in order to inform the program design, particularly the conditions to be included in the policy matrix.

- (ii) **Adequate donor coordination was important to implement a complex crosscutting program in a small country with many donor agencies.** Donor coordination was generally adequate. The design of the World Bank's Lao Environment and Social Project was well synchronized with the ESP. The phasing-out of the Swedish International Development Cooperation Agency (Sida) assistance was well timed with the phasing-in of other donor assistance. Good donor coordination is important to ensure synchronization of activities and avoid duplication of effort.
- (iii) **Considering the full range of opportunities for enhancing the human resource base would produce a more sustainable outcome.** The ESP's RRP correctly identified the weak human resource base of Lao PDR as a risk to the implementation of the ESP. These weaknesses remain with no immediate or short-term solution. To make program implementation more effective in countries with human resource constraints, program design should take into account the full range of opportunities for enhancing the human resource base, including multiple delivery modes.
- (iv) **Capacity development is a long-term process encompassing multiple levels and institutional aspects.** The ESP's RRP correctly identified poor institutional capacity in Lao PDR as another risk to the implementation of the ESP. Capacity development refers to many aspects other than training or skills improvement and is a long-term process, in which all stakeholders should participate. In countries with capacity development constraints, program design should take a broad approach to capacity development encompassing multiple levels and institutional aspects.
- (v) **Need for better stakeholder analysis and involvement for complex programs.** The ESP's RRP could have provided a better stakeholder analysis of the central government agencies and their evolving roles in the management of environmental and social safeguards. The report omitted analysis of the mandate and remit of the Ministry of Finance and the key role that it would need to play in establishing sustainable financing mechanisms, including on the revenue collection aspects. The RRP should have flagged this as a substantial risk.

Based on the evaluation findings, one follow-up action is proposed: ADB should encourage the Lao Government to follow through on their commitment to establish transparent and efficient performance bond systems for the energy and transport sectors. The design for an enhanced performance bond system was supposed to be ready by September 2002, but this was not accomplished.

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## I. INTRODUCTION

### A. Evaluation Purpose and Process

1. The Environment and Social Program (ESP) was intended to assist the Lao People's Democratic Republic (Lao PDR) in developing and implementing a program aimed at putting the country on a more sustainable development trajectory, focusing initially on the energy and transport sectors. The ESP was expected to implement a policy reform agenda for environmental management and social safeguards in the energy and transport sectors, focusing on hydropower and roads. It was designed to benefit local communities by ensuring that social and environmental costs of energy and transport development projects would be borne by the project developers rather than the communities.

2. The ESP was included in the 2010 work program of the Independent Evaluation Department (IED) to provide inputs to three broader evaluations in Lao PDR (i.e., a transport sector assistance performance evaluation, an energy sector assistance performance evaluation, and a country assistance performance evaluation update). This program performance evaluation report (PPER), 3 years after program completion in 2007, allows sufficient time for some impacts to be visible, though attribution solely to the ESP is difficult. Following IED's evaluation guidelines,<sup>1</sup> the PPER assesses the performance of the ESP and provides lessons and follow-up actions. A copy of the draft PPER was shared with the Southeast Asia Department of the Asian Development Bank (ADB) and the Lao Government, and their comments were incorporated where relevant.

3. The program completion report (PCR), which was finalized in June 2007, rated the ESP *successful*.<sup>2</sup> It was rated *highly relevant, effective, efficient, and likely to be sustainable*. Taking into account the data provided and analyzed in the PCR, IED's validation exercise found the quality of the PCR to be on the borderline of satisfactory and partly satisfactory.<sup>3</sup>

### B. Program Objectives

4. The ESP's main objective was to support the Lao Government's policy reform agenda for improved environmental management and social safeguards in the energy and transport sectors. According to the program framework in the report and recommendation of the President (RRP),<sup>4</sup> the expected impact was to promote sustainable and equitable development.<sup>5</sup> The expected outcome was to improve environmental and social management in the energy and transport sectors. The ESP included five program outputs: (i) strengthening national policy and the regulatory framework for environmental management and social safeguards; (ii) undertaking measures to enhance policy implementation and capacity in sectors and provinces; (iii) improving compliance and enforcement; (iv) promoting river basin management as a multisectoral and integrated planning framework for energy and transport development; and (v) establishing sustainable financing mechanisms, including an environment fund.

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<sup>1</sup> ADB. 2006. *Guidelines for Preparing Performance Evaluation Reports for Public Sector Operations*. Manila.

<sup>2</sup> ADB. 2007. *Completion Report: Environment and Social Program in Lao People's Democratic Republic*. Manila.

<sup>3</sup> ADB. 2008. *Project Completion Report Validation Report on the Environment and Social Program in Lao People's Democratic Republic*. Manila (draft).

<sup>4</sup> ADB. 2001. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Lao People's Democratic Republic for the Environment and Social Program*. Manila.

<sup>5</sup> The program goal stated in the RRP is equated with program impact, the program purpose is equated with program outcome, and the program objectives are equated with the program outputs.

5. The ESP also included a policy matrix setting out specific policy conditions to be achieved under each of the program outputs, before approval of each of the three program tranches. Of the 48 policy conditions, 20 were to be met before the release of the first tranche, 27 before the release of the second tranche, and 1 before the release of the third tranche. The third tranche was designated as a "floating tranche," meaning that it could be approved either before or after the second tranche, depending on whether the condition of establishing an environment protection fund had been met. In addition to the policy conditions, the ESP policy matrix included 20 "other actions," which were time-bound but not explicitly linked to the tranche releases.

6. Whereas the policy matrix was generally well-formulated, the program framework lacked monitorable performance indicators or targets suitable for evaluating the success of several of the design statements. For example, the indicator for the impact statement was neither specific nor measurable and those for and the outcome statement were simply reiterations of the five output statements. The indicators for the output statements were better formulated, but they were too numerous, generally lacked baselines and were not time bound.<sup>6</sup>

7. For rating purposes, the PPER has grouped outputs to reflect the major categories of support under the ESP, taking into account the distinction between national activities and sector or province activities. The PPER considers three groups of program outputs: (i) strengthening national policy and the regulatory framework for environmental management and social safeguards, including compliance and enforcement procedures; (ii) improving the subnational (sector, provincial and river basin) planning and policy implementation framework and capacity for environmental management and social safeguards; and (iii) establishing sustainable financing mechanisms. Monitorable indicators more suitable for evaluating the success of the regrouped outputs have also been identified. Modified impact indicators, outcome indicators, output groupings and output indicators are reflected in the revised design and monitoring framework in Appendix 1.

## II. DESIGN AND IMPLEMENTATION

### A. Rationale

8. ADB had a strong rationale to provide an ESP to Lao PDR in 2001. The country is land-locked and the economy heavily depends on natural resources. It has a large volume of water resources with strong hydropower potential, diverse forest cover with high biodiversity, and an extensive land base, well-endowed with mineral resources. It also has a culturally diverse population consisting of about 47 ethnic groups. In the late 1990s, the economy showed an increasing rate of growth and rising per capita incomes. Many investment opportunities, including the Nam Theun 2 Hydroelectric Power Project, were emerging in Lao PDR, but prudent environmental management and social safeguard systems were not in place to attract more competitive development partners, such as ADB, the World Bank and other bilateral donor agencies. Therefore, a real opportunity existed to give greater impetus to economic growth, while at the same time placing the country on a more sustainable development track by supporting enhanced environmental and social safeguards.

9. Economic growth and the environment are closely related, with each affecting the other. It is important to keep policy on the natural environment at the center of economic development

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<sup>6</sup> The RRP's project framework had 42 output performance targets: 10 for the first output; 8 for the second output; 10 for the third output; 10 for the fourth output; and 4 for the fifth output.

for Lao PDR, and not just treat it as stand-alone environmental policy. Investments in the natural resource base or the environment should not automatically be favored over exploitation of resources. There is a sustainable level at which natural resources can be consumed to accommodate economic growth. However, it is also a myth that environmental protection is a luxury that only the rich can afford. The role that natural resources and the environment can play in economic growth and the well-being of the population is described in the environmental Kuznets Curve.<sup>7</sup>

10. The Lao Government's strategy was to focus on (i) developing a competitive and open market economy, (ii) enhancing human capital through improved health and education, and (iii) strengthening capacity to derive and deliver sustainable benefits from natural resource management. ADB's strategy for Lao PDR aimed to remove policy, institutional, and infrastructure development constraints to promote regional integration through improved opportunities for investment in energy, transport, trade, tourism, and other services. Other donors also supported similar development partnerships. The Lao Government was convinced that prudent natural resource management, implementation of proper environmental and social safeguards and a holistic approach were essential to achieving its economic development goals.<sup>8</sup> The rationale informing the goals and objectives of the ESP was consistent with this thinking.

## B. Formulation

11. In September 2000, the Lao Government requested ADB to provide program assistance to strengthen environmental management and social safeguards in the energy and transport sectors. This request followed a process of policy dialogue and capacity building that started in the mid-1990s and included provision of an advisory technical assistance (TA) to strengthen institutional capacity in the energy and transport sectors and to develop strategies and guidelines for improved performance.<sup>9</sup> Subsequently, a small-scale TA was implemented between December 2000 and March 2001 to help the government further develop the proposed ESP and its policy matrix, including consultations with a wide range of stakeholders.<sup>10</sup> These were further confirmed and consultations were carried out by ADB's fact-finding mission in June 2001 and by an appraisal mission in September 2001. The essence of the policy dialogue and the government's commitments were documented in the Policy Letter attached to the ESP's RRP. Finally, the ESP loan was negotiated with the government in November 2001 and approved by ADB in December 2001. Shortly before approval of the loan, ADB approved a TA for capacity building for environmental and social management in energy and transport, to be

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<sup>7</sup> A Kuznets Curve is a graphical representation of the relationship between economic development on the horizontal axis, and income inequality on the vertical axis. Simon Kuznets hypothesized in 1955 that this relationship took an inverted U-shape. In the early 1990s, environmental economists hypothesized that there could be a similar inverted U-shaped relationship between measured economic development and environmental quality. The reasons for the similar shape are that when an economy is primarily natural resource-based it has a low level of income inequality. During early industrialization, however, as natural resources are exploited, income inequality increases over time. As a result of resource depletion, the relationship between development and environmental quality starts to move in the opposite direction to economic growth. However, when income increases, people start asking for a higher quality of environment and for pristine natural systems. Such a behavior should provide an inverted U-shaped behavior between income and environmental quality of a country. Environmental economists have shown some evidence to prove the existence of an environmental Kuznets Curve, though, in most countries a similar relationship could not be shown due to data limitations.

<sup>8</sup> Government of Lao PDR. 2001. *Interim Poverty Reduction Strategy*. Vientiane.

<sup>9</sup> ADB. 1998. *Technical Assistance to the Lao People's Democratic Republic for Strengthening Social and Environmental Management*. Manila.

<sup>10</sup> ADB. 2000. *Technical Assistance to the Lao People's Democratic Republic for Energy and Transport Socio-Environmental Management*. Manila.

implemented in parallel with the ESP. The TA covered (i) strengthening compliance and enforcement mechanisms, (ii) establishing sustainable financing mechanisms for environmental and social management, including an environment fund, and (iii) refining the policy framework for involuntary resettlement and compensation, and seeking public involvement in these processes.<sup>11</sup>

12. The analytical basis for the formulation of environmental safeguard measures for the ESP was very sound. This reflected heightened environmental awareness in the 1990s, in the wake of a series of world summits on sustainable development. Lao PDR undoubtedly benefited from this environmental awareness and in 1999 enacted the Environmental Protection Law (EPL), which has been the main legislation and instrument for environmental protection and management in the country. A number of well-funded studies, often with donor support, were undertaken on sustainability-related topics, including environmental action plans, Agenda 2020, sustainable development, mainstreaming environment, etc. Table 1 shows the reports prepared by ADB, the government and other donors on which the ESP could build.

**Table 1: Pre-ESP Environmental Work**

Year	Author	Name of Publication
1994	STEA	First National Environmental Action Plan
1999	WRCC	Water Sector Strategy and Action Plan
1999	STEA	Strengthen Environment Management through STEA
2000	STEA	National Environmental Action Plan 2000
2000	ADB	Country Environment Review: Lao PDR
2001	STEA	Environmental Management Standard Documents
2001	MIH	Implementing Environmental Assessment for Electricity Projects
2001	MIH	Power Sector Environmental Policy
2001	UNEP/NORAD	State of the Environment: Lao PDR

ADB = Asian Development Bank, ESP = Environment and Social Program, MIH = Ministry of Industry and Handicrafts, NORAD = Norwegian Agency for Development Coordination, STEA = Science, Technology and Environment Agency, UNEP = United Nations Environment Programme, WRCC = Water Resources Coordination Committee.

Source: Independent Evaluation Mission.

13. The RRP did not reflect a similar in-depth analytical basis for the formulation of social safeguard measures included in the ESP. This is understandable given that awareness of social safeguard issues emerged somewhat later than environmental safeguard issues as an element to be taken into consideration in infrastructure project formulation. Moreover, sociocultural issues are more difficult to address than environmental issues in development activities. Despite this, there was still a firm basis of data and experience that the ESP could draw from for social safeguard measures.

14. Donor coordination was adequate. The ESP was well coordinated with the two social and environmental programs financed by the Swedish International Development Agency (Sida). Also, the design of the World Bank's Lao Environment and Social Project was well synchronized with the ESP. The phasing-out of Sida assistance was well timed with the phasing-in of development assistance from the Finnish Government.

15. The design of the ESP had a few shortcomings. Firstly, it was too broad and complex. The intended outcome of the ESP was to assist the government in improving environmental

<sup>11</sup> ADB. 2001. *Technical Assistance to the Lao People's Democratic Republic for Capacity Building for Environmental and Social Management*. Manila.

and social management, particularly in the energy and transport sectors. The ESP was to achieve this by improving the national policy and regulatory framework, and the subnational planning and policy implementation framework, and establishing sustainable financing mechanisms. Numerous activities (48 policy conditions and 20 other actions) were envisaged to be implemented in each of these areas over 36 months for a loan of about \$20 million. In retrospect, given the institutional and capacity constraints existing in the country, the ESP's scope was too broad and the outcome unachievable given the limited time and resources.

16. Secondly, the RRP could have provided a better institutional analysis of the central government agencies and their evolving roles in the management of environmental and social safeguards. The RRP included a description of the existing administrative structure with regard to the main environment-related agencies, but little information on how the roles and responsibilities of the main agencies were expected to evolve over time. The report omitted analysis of the mandate and remit of the Ministry of Finance and the key role that it would need to play in establishing sustainable financing mechanisms, despite the fact that it was a key agency represented on the Steering Committee. Given that it was a major program stakeholder, the project processing missions could have made more efforts to involve the Ministry of Finance at an earlier stage and to reach an understanding on the revenue collection issues involved in the establishment of the envisaged sustainable financing mechanisms.

17. Thirdly, as discussed in the PCR, the DMF performance indicators and tranche release conditions did not include any specific outputs related to indigenous peoples or ethnic minorities. Unfortunately, this deficiency was not picked up during program implementation. Nevertheless, the ESP was effective in addressing ethnic minorities in the legislation on involuntary resettlement. Now all development projects that affect ethnic minorities are legally required to screen, identify, assess, and mitigate social impacts; and prepare and implement plans for development of ethnic minorities.

### **C. Cost, Financing, and Executing Arrangements**

18. The RRP estimated ESP adjustment costs at about \$37 million over a five-year period.<sup>12</sup> ADB financed the ESP with a loan of about \$20 million from Special Funds resources. The amount was determined through dialogue with the government and aimed to cover the estimated short- and medium-term adjustment costs associated with adopting the policy matrix. However, the time and resources were inadequate for the work that needed to be accomplished. The loan had a repayment period of 24 years, including a grace period of 8 years; with an interest rate of 1% per annum during the grace period and 1.5% per annum thereafter.

19. The Science, Technology, and Environment Agency (STEA) was the executing agency for the ESP, in coordination with the Committee for Planning and Cooperation (CPC); Ministry of Finance (MOF); Ministry of Communication, Transport, Post and Construction (MCTPC); Ministry of Industry and Handicrafts (MIH); and Ministry of Agriculture and Forestry (MAF). STEA had overall responsibility for ensuring effective implementation of the program. MOF was to monitor the use of loan proceeds and counterpart funds including administration and disbursement of the proceeds and maintenance of accounts. An interministerial steering

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<sup>12</sup> This indicative estimate is based on assumptions about (i) the incremental investment costs of improved compliance with stricter environmental and social safeguards in the power and transport sectors, (ii) the costs of undertaking planning and pilot projects to improve watershed management, (iii) indicative estimates of direct institutional strengthening costs, and (iv) the initial capitalization of the environment fund.

committee, chaired by the president of STEA, was established to oversee ESP implementation. This was composed of representatives of the CPC, MAF, MCTPC, MIH, MOF, and STEA. Some agencies interviewed by the PPER mission indicated that not all members of the steering committee regularly participated in meetings. During the ESP implementation, the MCTPC and the MIH underwent certain institutional changes and they became the Ministry of Public Works and Transport and the Ministry of Energy and Mines, respectively. Shortly after ESP completion, STEA also changed its name to the Water Resources and Environment Administration (WREA) and was given a broader mandate (see para. 47).

#### **D. Program Adjustment Costs**

20. As mentioned in para. 18, the program adjustment costs were about \$37 million over a five-year period. The major adjustment costs result from the additional public investment needed to ensure that environmental and social safeguards are built into infrastructure projects. Incremental compliance costs for road transport development projects are about 0.5–1.5% of total investment costs. The additional development costs result from improved resettlement programs, increased public consultations and information dissemination, social and environmental expertise in contract supervision and program monitoring, unexploded ordnance clearance, and regenerating construction areas. Incremental costs are higher for new and reconstructed roads than for rehabilitation of existing roads. For the power sector, incremental compliance costs are about 2% of total hydropower investment costs. The base assumption is that only 20% of planned projects by independent power producers are actually developed in the next 10 years (excluding the Nam Theun 2 Hydropower Project). Estimated program adjustment costs are sensitive to assumptions regarding development costs and the percentage of planned investment actually implemented.

#### **E. Program Scheduling and Implementation**

21. The ESP was approved on 6 December 2001 and became effective on 19 February 2002. The implementation period was envisaged as 3 years and the loan closing date, as per the Loan Agreement, was 30 June 2005. The loan closing date and the final disbursement took place on 1 August 2006, 14 months later than expected at the time of appraisal. The loan period was extended twice at the request of the government.

22. The delay of more than 1 year in the implementation of the ESP was mainly due to postponement in the release of the second tranche, which took 43 months compared to the 14 months envisaged at appraisal – a difference of 29 months. The main reason for the delay in the second tranche was the late achievement of eight main policy conditions.<sup>13</sup> Eventually, all but two of the outstanding conditions were achieved by July 2005 and the second tranche was disbursed on 28 October 2005. The delay in meeting all the conditions for the second tranche was due mainly to the time required for government review and formulation of national policy, and issuance of national guidelines for involuntary resettlement and compensation. The two unmet policy conditions, dealing with involuntary resettlement, were deferred to the third tranche (Table 2).

23. The release of the ESP's third tranche was contingent on the establishment of an environment protection fund by the government, which was expected to take place either before

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<sup>13</sup> As of March 2003, 15 of the 27 policy conditions were unmet; 8 of these were main conditions that were delaying the tranche release.

or after the second tranche. Given that the timing was not fixed, the third tranche was considered a "floating tranche." In June 2006, all third tranche release conditions (including the two different resettlement conditions) were achieved. Given its floating status, it is not possible to pinpoint the exact delay incurred in releasing the third tranche, but the tranche was only released on 1 August 2006, which was 14 months after the envisaged loan closing date of 30 June 2005. Table 2 compares the planned and actual schedules for the tranche releases and the reason for the delays encountered.

**Table 2: Planned and Actual Tranche Releases under the ESP**

Tranche	Planned Date	Actual Date	Time Delay	Main Tranche Release Conditions Delayed <sup>a</sup>
First	Jan 2002	Mar 2002	2 months <sup>b</sup>	
Second	May 2003	Oct 2005	29 months	<ul style="list-style-type: none"> <li>• Issuance of national public involvement guidelines</li> <li>• <b>Formulation of national policy on involuntary resettlement and compensation</b></li> <li>• Review of environmental management institutional arrangement</li> <li>• <b>Issuance of ministerial guidelines on involuntary resettlement</b></li> <li>• Consolidated review on priority resource requirements</li> <li>• Annual sector reports preparation on social and environmental compliance</li> <li>• Agreement to implement public expenditure review findings</li> <li>• MOF's medium term action plan to include decentralization</li> </ul>
Third	Floating <sup>c</sup>	Aug 2006		<ul style="list-style-type: none"> <li>• Formulation of national policy on involuntary resettlement and compensation</li> <li>• Issuance of ministerial guidelines on involuntary resettlement</li> <li>• Establishment of Environment Protection Fund</li> </ul>

ESP = Environment and Social Program, MOF = Ministry of Finance.

<sup>a</sup> Conditions that were not met at the second tranche and deferred to the third tranche are shown in bold.

<sup>b</sup> Delay in first tranche release was due to a one-month delay in declaring loan effectiveness, not late achievement of release conditions.

<sup>c</sup> A fixed date was not assigned to this tranche in order to provide operational flexibility. However, the loan agreement indicated 30 June 2005 as the loan closing date, which can be considered as the latest possible "planned date."

Sources: ADB. 2003. *Back to Office Report of Review Mission, 24 February–14 March 2003*. Manila; ADB. 2005. *Loan 1867-LAO: Environment and Social Program Progress Report: Release of Second Tranche*. Manila; ADB. 2006. *Loan 1867-LAO: Environment and Social Program Progress Report: Release of Third Tranche*. Manila; ADB. 2007. *Program Completion Report on the Environment and Social Program (Lao People's Democratic Republic) (Loan 1867-LAO)*. Manila.

## F. Consultants

24. Most of the consulting work was undertaken under two related TA projects: a small-scale TA, which preceded the ESP; and an advisory TA, which ran parallel to the ESP (para. 11). TA consultants, consisting of one consulting company and eight individual consultants were hired according to ADB's Guidelines on the Use of Consultants. No problems were encountered in consultant recruitment and the consultants generally performed satisfactorily. The PCR reported that STEA demonstrated strong leadership, but devoted insufficient staff to work with the

consultants on the preparatory work. During ESP implementation, both STEA and the other steering committee members had insufficient numbers of technically strong staff to work on the policy reforms. Nevertheless, the advisory TA did succeed in increasing awareness of environmental and social policy issues among steering committee members.

## **G. Outputs**

25. The main outputs of each of the three components were as follows:

### **1. National policy and regulatory framework**

- (i) support for the issuance of four decrees, including (a) implementation decree for environmental impact assessment (EIA) regulations, (b) implementation decree for the environmental protection law, (c) decree for public investment plan, and (d) decree on involuntary resettlement and compensation;
- (ii) support for the formulation of two national policies for (a) involuntary resettlement and compensation for major projects and (b) watershed management;
- (iii) assistance in the formulation of two sets of instructions for (a) the preparation of a third-party monitoring system and (b) the preparation of a biannual environmental gazette;
- (iv) assistance in the formulation of national guidelines for public involvement and participation;
- (v) assistance in the formulation of implementing regulations for the decree on involuntary resettlement and compensation; and
- (vi) assistance with putting in place institutional measures, including (a) establishment of a high-level Environment Coordination Committee, (b) establishment of a public information center within STEA, and (c) establishment of a civil society consultation forum by STEA.

### **2. Subnational planning and policy implementation framework**

- (i) support for the issuance of a decree on the 1996 Water Resources and Water Law;
- (ii) support for the issuance of three regulations for (a) EIA for the energy sector, (b) EIA for the roads subsector, and (c) involuntary resettlement and compensation for major energy and road projects;
- (iii) assistance in the formulation of three sets of instructions and guidelines for (a) restructuring the MIH's Department of Electricity to include a social and environment management division and a monitoring and evaluation unit, (b) restructuring the MCTPC's Department of Roads to include a social and environment division and a monitoring and evaluation unit, and (c) allowing Electricité du Lao (EdL) to upgrade its Environment Office;
- (iv) assistance in the formulation of four sets of guidelines for (a) EIA for the energy sector, (b) EIA for the roads subsector, (c) involuntary resettlement and compensation in the energy sector, (d) involuntary resettlement and compensation in the transport sector; and
- (v) assistance with the establishment of institutional measures in provinces and sectors aimed at improving environmental and social management, including (a) the new Social and Environment Management Division in MIH's Department of Electricity, (b) the new Social and Environment Management Division in MCTPC's Department of Roads, (c) upgrading of Electricité du Lao's Environment Office to be fully functional, (d) strengthening and improving resourcing of seven of STEA's provincial offices, (e) improving functional linkages

between STEA and its provincial and district offices, and (f) establishing a mechanism for interministerial coordination of watershed and river basin management.

### 3. Sustainable financing mechanisms

- (i) agreement between ADB and the Lao Government on the principles for establishing the environment protection fund (EPF);
- (ii) support for the issuance of two decrees for (a) establishment of the EPF and (b) appointment of its board of directors; and
- (iii) assistance provided for formulation of the EPF charter and commencement of formal operations.

26. Box 1 describes international experience of the implementation of EPFs. Further details regarding program outputs can be found in the output section of the reformulated design and monitoring framework in Appendix 1.

#### **Box 1: International Experience with Environment Protection Funds**

Financing environmental protection has always been a challenge. In the early 1990s, in the wake of the United Nations Conference on Environment and Development, also known as the Rio Summit, and the ensuing global environmental re-awakening, many high-profile initiatives were undertaken to establish environment protection funds (EPF). Many environmental experts and agencies, including the United Nations Environment Programme, felt that necessary funds could be collected and environmental quality could be improved through EPFs. However, there was insufficient consideration given to the possible resistance from finance ministries or other agencies that are responsible for revenue collection, management and financial distribution within a country. As a result, in highly developed countries where the financial administration is decentralized, the EPFs often gave mixed results. Worldwide experience shows that environmental or institutional reforms should be based on several factors, such as the identification of a special niche for the EPF, the ability to demonstrate that the EPF can add value in addressing environmental problems of national policy significance, supporting projects that bring concrete results on the ground, and creating a strong and lasting political commitment to reform in government.

More than 100 agencies have environment funds worldwide, though representation in Asia is relatively low compared to Latin America or Africa. Most environment funds are designed to support long-term national environmental issues, and naturally have a focus on biodiversity and protected areas management. Diverse approaches have been used to set up national environment funds, but they can normally be classified as endowment funds, sinking funds, revolving funds, or a combination of the three. The funds can also be owned, established, or operated by a public or private agency or a combination of them.

Only limited evaluation studies have been carried out on EPF performance worldwide. For example, the Thailand EPF has been assessed by the Office of Environmental Policy Planning (1999) of Thailand and Ukraine's EPF was evaluated by the Organisation for Economic Co-operation and Development (OECD) (2006). In 1999, the Global Environment Facility (GEF) carried out an evaluation of experience with selected EPFs. Drawing lessons from the GEF evaluation, in 2003, the International Union for Conservation of Nature (IUCN) carried out a cross-country evaluation. The conclusion, based on these and other evaluations, is that EPFs' record has been mixed: some have been effective at taking steps to accomplish their goals, others have not.

These evaluation studies have also shown that EPFs have become much more than simply financial mechanisms. They are only one of an array of institutional arrangements available to address issues of conservation and sustainable development in a country. They have not always been the most effective or appropriate institutional mechanisms to address the environmental problems that they had intended to solve. In some cases, EPF managers and designers have not been creative in seeking ways to finance their activities beyond the conventional donor channels. EPFs have also not always

been successful in tapping the considerable potential that exists in many countries to raise funds, in particular collecting domestic funds through instruments such as fees for ecosystem services, user fees, or dedicated taxes. The recent Asian and global financial crises might have also created difficulties in collecting domestic revenues from most developing countries.

Some of the recommendations made by these evaluation studies are: (i) an independent evaluation exercise should be implemented, under the guidance of a competent agency like GEF or a multilateral bank, to assess not only the efficiency of EPFs but also, and as far as available data will permit, the impacts of these institutions on environmental protection; (ii) a third-party set of financial instruments of proven viability should be adopted, including the conditions under which they may be applied; (iii) the EPFs should tap private sector experience in developing their proficiency; and (v) new EPFs should join active networks in their respective continents and donors should consider applying this as a condition for funding of new EPF proposals.

Sources: GEF. 1999. *Lessons Notes No. 5: When is Conservation Best Served by a Trust Fund?* Washington DC; Office of Environmental Policy and Planning, the Ministry of Science, Technology and Environment, Thailand. 1999. *The Environmental Fund*. Bangkok; IUCN. 2003. *Environmental Funds: Lessons Learned and Future Prospects*. Geneva; OECD. 2006. *Performance Review of the State Environmental Protection Fund of Ukraine*. Paris; United Nations Development Programme. 2007. *Executive Summary of the Report of the Expert Group Meeting on Management of Environmental Funds for the Financial Sustainability of Biodiversity Conservation*. Lima, Peru.

### III. PERFORMANCE ASSESSMENT

#### A. Overall Assessment

27. Overall, the program was rated borderline *successful*, based on separate assessments of the three program components (para. 7). The national and subnational framework components were both rated *successful*, whereas the sustainable financing mechanisms component was rated *partly successful*. In terms of the four evaluation criteria, the program was rated *relevant, effective, less efficient and likely sustainable*.

28. To arrive at the overall assessment, the individual component ratings were aggregated using weightings developed by the PPER mission: national framework (35%); subnational framework (35%); and sustainable mechanisms (30%). These reflect the relative importance of the component groups to the expected overall program outcome. The rating of each component group used four criteria: relevance (20% weighting); effectiveness (30%); efficiency (30%); and sustainability (20%). Individual criterion ratings were in whole numbers from 0 to 3, in increasing order of program performance. The overall assessment is summarized in Table 3. Further details are in Appendix 2.

**Table 3: Overall Performance Assessment**

Criterion	Program Component			Overall Rating	Weighted Rating
	National Framework	Subnational Framework	Sustainable Mechanisms		
1. Relevance	2	2	2	2	.40
2. Effectiveness	2	2	1	2	.51
3. Efficiency	1	2	1	1	.41
4. Sustainability	2	2	1	2	.34
<b>Total Rating<sup>a</sup></b>	<b>1.7</b>	<b>2.0</b>	<b>1.2</b>		<b>1.66</b>

<sup>a</sup> Highly successful > 2.7; successful 2.7 ≥ S ≥ 1.6; partly successful 1.6 > PS ≥ 0.8; unsuccessful < 0.8. Source: PPER mission.

## B. Relevance

29. The ESP was rated *relevant*. The analytical basis for the formulation of environmental safeguard measures was very sound (para. 12) and the basis for the formulation of the social safeguard measures was adequate (para. 13). The design of the program was unique and new to ADB and there was substantial ownership from the executing agency.

30. The ESP was relevant at the time of appraisal, as well as at completion. The ESP's goal, purpose, and outputs were consistent with the government's development strategy and ADB's country strategy and program. Lao PDR is a natural resource based economy. Energy and transport are essential for economic development. River basin planning and area based planning have to take into account cross-sectoral linkages, as environmental and social implications run throughout these complex systems. The government and ADB consider conserving the environment and ensuring environmental and social sustainability a high priority since they are crucial for poverty reduction. With high levels of poverty and limited economic diversification, combined with major budgetary support from the international community, Lao PDR continues to rely heavily on its natural resources to support the livelihoods of a large portion of its population. The World Bank recently identified four critical areas related to sustainable use of natural resources in Lao PDR: (i) depletion of natural resources, primarily forest and biodiversity; (ii) development and social challenges, related to hydropower development and relocation of ethnic groups; (iii) economic growth and poverty reduction; and (iv) a weak legal and institutional framework for natural resources management, environmental protection and social safeguards.<sup>14</sup> The strong similarity between these issues and those identified during ESP appraisal shows the relevance of the original objectives and goals even almost a decade later.

31. Detracting from a higher relevance rating was the fact that there were three design flaws in the ESP (paras. 15–17): (i) the scope of the ESP was too broad and complex for the resources allocated, and (ii) there was insufficient institutional and stakeholder analysis of the central government agencies and their evolving roles in environmental and social safeguards management, and (iii) the limited scope of social safeguard coverage, which was initially limited only to involuntary resettlement and did not include indigenous peoples and ethnic minority issues. The last design flaw was to some extent corrected during implementation, with the inclusion of ethnic minority issues into the program, outside the ESP implementation.

## C. Effectiveness

32. The ESP loan was rated *effective*. The intended outcome of improving environmental and social safeguard measures in the energy and transport sectors was supported by the ESP. The expected outputs were generally achieved, with the exception of the EPF component. In terms of sectoral achievements, the energy and transport sectors established the required regulatory framework and institutional mechanism to undertake environmental and social safeguard measures on their own.

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<sup>14</sup> World Bank. 2009. *Project Paper on a Proposed Additional Financing Grant in the Amount of SDR1.9 Million (\$ 3.0 Million Equivalent) to the Lao People's Democratic Republic for the Lao Environment and Social Project (LENS)*. Washington DC. Annex 1 includes a sector review and update on the original LENS Project.

## 1. Program Outcome

33. The program partly achieved its expected outcome of improving environmental and social management, particularly in the energy and transport sectors. At the national level, the ESP succeeded in putting into place streamlined procedures for environmental and social management. The issuance of six decrees, approval of eight sets of guidelines and undertaking of numerous institutional improvements were particularly significant in achieving this. A new EIA decree was also issued by the government in February 2010.<sup>15</sup> A capacity-building program for judicial and legal personnel on compliance and enforcement of the environment law, and other related activities were successfully undertaken. In terms of capacity development, the ESP introduced a number of institutional measures aimed at improving environmental management and social safeguard measures.

34. At the subnational level, the ESP only partly achieved the expected improvement. With regard to the energy sector, the ESP provided very important groundwork for the preparation and implementation of the Nam Theun 2 Hydropower Project (NT2). Specifically, the work accomplished under the ESP contributed to the preparation of the NT2 environmental assessment and management plan and the social development plan, and helped to facilitate stakeholder participation. The NT2 has become a model for environmentally and socially sensitive hydropower development in the Greater Mekong Subregion. The Nam Leuk Hydropower Project is another example of a hydropower project that is considered to have been implemented with good safeguards. A few of the other energy sector projects (including the Nam Lik 2 Project visited by the PPER mission) have adopted adequate social and environmental safeguards. Nevertheless, there are other hydropower projects which do not have the same level of safeguard protection as the NT2 project.<sup>16</sup>

35. With regard to the transport sector, environmental management of transport projects has improved since the ESP has been implemented, however, the performance depends to a large extent on the location of such projects. Projects in sensitive areas have sometimes led to increased soil erosion during construction and air pollution during implementation. The social benefits from transport projects are not easy to quantify. On the one hand, transport corridors have certainly contributed to enhanced economic growth in the project areas, particularly with regard to improving market access. On the other hand, transport projects have not always been carried out with due attention to ethnic minorities.<sup>17</sup>

## 2. Program Outputs

### a. National Policy and Regulatory Framework.

36. The ESP has substantially achieved its expected output of strengthening Lao PDR's national policy and regulatory framework for environmental management and social safeguards. In terms of output indicators, the ESP supported the issuance of four decrees and the formulation of two national policies. In 2001, decrees were issued for EIA regulations and implementation of the EPL (para. 25). In 2002, a Public Investment Plan (PIP) decree was issued and the PIP for fiscal year 2003 was prepared in compliance with the EPL. In 2005, a national policy on involuntary resettlement and compensation was formulated for major projects

<sup>15</sup> Prime Minister's Office, Lao PDR. 2010. *Decree on Environmental Impact Assessment*. Vientiane.

<sup>16</sup> ADB. 2010. *Sector Assistance Program Evaluation of the Energy Sector in the Lao People's Democratic Republic*. Manila.

<sup>17</sup> ADB. 2010. *Sector Assistance Program Evaluation of the Lao People's Democratic Republic: Transport Sector*. Manila.

and issued as a prime ministerial decree (No. 192). In January 2003, MAF issued an interim policy statement on watershed management.

37. Three "other actions" were indicated in the ESP's policy matrix for this output, one of which was achieved and the other two partly achieved. The first was for the issuance of water quality criteria and standards for hydropower discharge by STEA by June 2002. Although this was not completed under the ESP as envisaged, it was fully completed under the subsequent Nam Ngum River Basin Development Project.<sup>18</sup> The second was for the issuance of environmental standards (air quality, emissions, soil pollution) by STEA by March 2003. Final approval of the revised EPL is still pending. The third was for designing an enhanced performance bond system by September 2002.<sup>19</sup> Progress has been made on this action—including issuance of regulations and guidelines by the MIH and the MCTPC, issuance of a code of practice by the MIH, and pilot testing of performance bonds in various projects—but a fully functioning performance bond system is not yet in place.<sup>20</sup>

#### **b. Subnational Planning and Policy Implementation Framework**

38. The ESP achieved its expected output of improving the subnational (sector and provincial) planning and policy implementation framework for environment management and social safeguards. In terms of output indicators, the ESP supported the issuance of one decree and three regulations. In 2002 a decree on the 1996 Water Resources and Water Law was issued. In 2002, ministerial regulations on EIA for the energy sector were issued by the MIH. In 2002, ministerial regulations on EIA for the roads subsector were issued by the MCTPC. In November 2005, ministerial regulations on involuntary resettlement and compensation for major energy and roads projects were issued by the MIH and the MCTPC.

39. There were three "other actions" indicated in the ESP's policy matrix, two of which were achieved and the other partly achieved. The first was for the preparation of provincial environment action plans in all provinces and their reflection in provincial development plans by fiscal year 2004. Progress was made on this action, with action plans prepared for 16 provinces and special regions. Nevertheless, the PPER mission was unable to confirm that the action plans for Vientiane and Luangnamtha provinces had been completed. Hence, this action was deemed only partially achieved. The second was for the preparation of MAF's plan for the 2020 Watershed Management Program by January 2002. The PCR indicated that this had been partially complied with, but the PPER mission confirmed that the action was subsequently completed. The third was for the implementation of the Nam Ngum River Basin Management Plan by December 2003. Although this was not completed under the ESP as envisaged, it was fully completed under the Nam Ngum River Basin Development Project (footnote 16).

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<sup>18</sup> Loan 1933-LAO: Nam Ngum River Basin Development Sector Project, approved 11 November 2002, to the amount of \$15 million.

<sup>19</sup> A performance bond is a market-based policy tool often used for environmental management. For example, a project entity hires an engineering firm to construct a road. The engineering firm may issue a performance bond to the project entity. If the road is not built according to the agreed specifications, the project entity will not incur any losses because the engineering firm must repay the bond or will not get the deposit amount back. This reduces the risk to the project entity that contractor will not fulfill its obligations.

<sup>20</sup> Experience with developed countries like the United States and Australia suggests that performance bonds could be a cost-effective way of aligning incentives, streamlining environmental compliance processes, internalizing the economic costs and incentivizing community stewardship.

### c. Sustainable Financing Mechanisms

40. The ESP only partly achieved its envisaged output of establishing sustainable financing mechanisms. In terms of the main output indicator, the establishment of the EPF, there was substantial achievement, with numerous activities having taken place. These included: (i) agreement between ADB and the Lao Government on the principles governing the EPF in 2001; (ii) formal establishment of the EPF (by Decree 146) and appointment of its board of directors (by Decree 72) in 2005; and (iii) adoption of the EPF charter by the EPF board and commencement of formal operations in 2006. At the time of the PPER mission (November 2009), the EPF had adequate short-term funds for its operations, however, funding for long-term activities and financial autonomy was still not assured. In this regard, ADB has provided \$5 million from the third tranche to set up the EPF, and other development partners have put in another \$4.75 million through two windows. However, additional funds are needed to assure the long-term sustainability of the EPF. The second output indicator, the conduct of a draft public expenditure review and implementation of its recommendations, was achieved in June 2002.

41. There were two output indicators that were not achieved. First, the Ministry of Finance was to have included estimates of public spending on the environment by central government agencies in its annual budgets. Although the PCR indicated that the activity was under implementation, the PPER mission found that there had been no progress as of the end of 2009. Second, two studies, one on user charges and the other on market mechanisms for environmental management and social mitigation, were supposed to have been prepared. Neither of the two studies was undertaken, due to confusion over which agency was responsible for the task. Both WREA and the EPF executive office indicated to the PPER mission that they believed the other agency to be responsible. Without a "champion" to take responsibility for the studies, there is little likelihood of making progress on this indicator.

### D. Efficiency

42. The ESP was rated *less efficient* in the use of resources to achieve its intended program outcome and outputs. ADB supported the ESP with a loan of about \$20 million. The loan amount took into account the depth and scope of the proposed policy reforms, and the estimated short- and medium-term adjustment costs associated with adopting the policy matrix. The program adjustment costs were estimated at about \$37 million over 5 years. The major adjustment costs of the program resulted from the additional public investment costs needed to ensure that environmental and social safeguards would be built into infrastructure projects. The estimation methodologies were re-examined and the mission considered them to be technically sound. However, it was not possible to verify the actual numbers retrospectively.

#### 1. National and Subnational Frameworks

43. The anticipated program implementation period was 36 months but it was delayed by 14 months. The main reason for the delay was the late formulation of the national policy on involuntary resettlement and compensation and late issuance of the corresponding ministerial guidelines on involuntary resettlement (para. 22 and Table 2). For this reason, the national framework component was rated *less efficient*, whereas the subnational component was rated *efficient*. The reasons for the delays were (i) weak institutional capacity, and (ii) poorly trained government employees in relevant agencies (including STEA).

## 2. Sustainable Financing Mechanisms

44. The main output under this component, the EPF, was established in 2005 as a financially autonomous organization to strengthen environmental protection, sustainable natural resource management, biodiversity conservation, and community development. The EPF was initially established as a water resources management window. Subsequently, additional windows were also created for pollution control, sustainable land management, community and biodiversity investments, and policy implementation and capacity enhancement. A concern that has emerged is that the monthly interest earnings from the ADB contribution of \$5 million decreased significantly since mid-2008, due to the 2008 global financial crisis and low bank interest rate payments on fixed deposits. Initial earnings, which had been about \$20,000 per month, were reduced to a low of \$6,479 in late 2009 and finally the government decided to deposit this money at the Banque pour le Commerce Extérieur du Laos to receive the originally anticipated interest earnings. Another longer-term concern is that the planned revenue contributions from all new hydropower projects have yet to be realized (see para. 50).<sup>21</sup>

45. Table 4 shows the total amount of the EPF's planned commitments, actual commitments, and actual completion of various projects in terms of monetary values as well as percentages of its sixth Five Year Plan (2006–2010), as of September 2008.

**Table 4: Comparison of EPF Commitments vs. Actual Amounts**

<b>EPF Areas</b>	<b>Five-Year Plan in (\$000)</b>	<b>Commitments (\$000)</b>	<b>No. of subprojects</b>	<b>Commitments as % of plan</b>	<b>% Completed subprojects by Sep 2008</b>
Biodiversity	1,460	1,082	90	74.1	19
Policy Implementation	1,600	636	39	39.8	36
Pollution Control	250	130	17	52.0	53
Water Resources	140	10	1	7.1	100
Land Management	150	2	1	1.3	100
<b>Total</b>	<b>3,600</b>	<b>1,860</b>	<b>148</b>	<b>51.7</b>	<b>28</b>

Source: Environment Protection Fund, Prime Minister's Office. 2009. *EPF Annual Report 2008*. Vientiane.

46. There were many discussions during the ESP preparation stage regarding the EPF's structure and operational procedures. Eventually, a consensus was reached to put in place the EPF, but in recognition of the significant institutional hurdles to be cleared, it was decided to adopt this as a floating tranche condition of the ESP. However, the appraisal mission overlooked the level of cooperation needed from the Ministry of Finance and other agencies that are responsible for revenue collection, management, and distribution. Moreover, initially it was difficult finding an institutional home for the EPF, although eventually it was placed in the Prime Minister's Office. The EPF also faced difficulties in receiving funds for its operations and maintenance. It was not until 2005 that the EPF was formally established and its activities started in earnest, following the securing of additional resources from the World Bank. As a result, the EPF produced mixed results. The experience from many parts of the world shows similar outcomes (Box 1). Lessons learned suggest that establishment of the EPF should have been based on several factors including (i) identification of a niche for the EPF, (ii) evidence that the EPF could add value in addressing environmental problems of national significance, (iii) a strong and lasting political commitment to the reform, and (iv) a commitment to provide adequate resources to deliver EPF functions.

<sup>21</sup> The Theun Hinboun Project will be the first contributor to the EPF when the Theun Hinboun Expansion Project is completed in 2012.

## E. Sustainability

47. The ESP was rated *likely to be sustainable*. In terms of the government's institutional structure, there has been significant change since the ESP's completion with the environmental functions of STEA being combined with a water resources mandate into the new Water Resources and Environment Administration (WREA) in May 2007.<sup>22</sup> WREA is now the main coordinating agency for environmental planning and management across all sectors. Its responsibilities include implementing the National Social and Environmental Action Plan, forming environmental policy, issuing and revoking of licenses to organizations involved in providing environmental services, and receiving and evaluating social and environmental impact assessments. WREA is also responsible for preparing other environmental reports, implementing pollution control policies, strengthening environmental assessment, undertaking initial spatial planning, and regulating agencies to curtail or modify activities that are damaging the environment.

48. Through the implementation of the ESP, the government has demonstrated its strong commitment to policy, legal, and institutional reforms for improved environmental and social management. Even after ESP completion, the government has continued to show its commitment to strengthening the existing EPL and EIA regulations. A new environmental law that would replace the previous law is currently awaiting approval with the National Assembly. Likewise, the new EIA regulations are being prepared that would complement the new EIA decree, which was approved in February 2010. It is expected that, when approved, these new measures will provide a solid basis for comprehensive social and environmental assessment work in Lao PDR.

49. The two key risks identified in the RRP, namely (i) limited human resources in key agencies and (ii) weak institutional capacity, remain concerns. The human resource base in the key agencies has improved from pre-ESP days, but is far less than adequate to implement environmental and social safeguard measures. Currently, WREA has 355 staff in Vientiane and 578 staff in its provincial and district offices. The environment and social divisions of key sectors, such as water, energy, and transport, have also increased the number of employees dealing with environmental and social management, but the numbers are still insufficient.

50. Some institutional capacity development and in-service training programs were provided under the ESP and associated TA, however, weak institutional skill levels are still a concern. To address this concern, ADB has provided follow-up assistance to WREA to strengthen their capacity in environmental monitoring, develop a national water policy and strategy, review EIA

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<sup>22</sup> Prime Minister's Office. Lao PDR. 2007. *Decree on the Establishment and Activities of the Water Resources and Environment Administration*. Vientiane. WREA is responsible for ensuring management of water resources and environment including social concerns. WREA comprises the Cabinet, the Lao National Mekong Committee (LNMC), the Water Resources and Environment Research Institute (WERI), and five of its own departments. The five departments include the Department of Environment (DOE), Department of Meteorology and Hydrology (DMH), Department of Water Resources (DWR), Department of Water Resources and Environment Research (DWRER), and Department of Environment and Social Impact Assessment (DESIA). WERI took over the responsibility of the Environment Research Institute (ERI) of STEA. The DOE was also separated from STEA and is responsible for national policy, control of pollution, climate change, and public education and outreach. The DMH was separated from MAF and is responsible for collection and analysis of meteorological and hydrological data. The DWR was newly created by combining the Water Resources Coordination Committee functions and the LNMC office and is responsible for ensuring effective management of water resources and promotion of an integrated river basin management. DESIA was also newly created by upgrading the EIA division to department level and is responsible for ensuring effective implementation and monitoring of the social and environmental impact assessment process.

reports of hydropower developers, and support river basin management.<sup>23</sup> ADB's Greater Mekong Subregion Environmental Operations Center in Bangkok is also providing technical support to WREA in terms of strategic environmental assessment. Finally, other development partners, such as the World Bank, the Australian Agency for International Development (AusAid) and the United States Agency for International Development (USAID), are also providing support or considering supporting WREA. Thus, WREA has a continuity of support in terms of organization, capacity building, and policies that addresses the capacity deficiencies and alleviate the risk that weak institutional capacity will undermine the achievements of the ESP.

51. **Environmental Protection Fund.** The long-term financial sustainability of the EPF is a concern (para. 40). Whereas the EPF has adequate short-term funds for its operations, funding for long-term activities and financial autonomy is still not assured. As originally conceived, hydropower developers were supposed to contribute to the EPF, however, this was not achieved because MOF has not agreed to the developers request that contributed funds be deducted from royalties that they pay to the government. MOF's position is that all such funds should be channeled through the budget. In the case of the NT2 project, the funds are set aside by the developer for river basin and watershed management and MOF has agreed to this arrangement. The issue of whether hydropower developers will be allowed to contribute to the EPF was recently resolved and the Theun-Hinboun Extension Project is likely to be the first one to begin contributing to EPF when it comes on stream in 2012. Overall, the EPF component has been rated *less sustainable*.

#### IV. OTHER ASSESSMENTS

##### A. Institutional Development

52. The ESP's contribution to institutional development was rated *significant*. The program raised awareness among politicians, bureaucrats, donors, project developers, and the general public of the need and usefulness of environmental and social safeguards in development projects. To help achieve these objectives, a new policy, an institutional framework, and a financing mechanism have also been put in place. The ESP also made an important contribution to building capacity to lead and manage the reform process, as well as improving the skills, procedures and institutional mechanisms related to environmental and social planning and management. Less progress was made in ensuring that good governance practices and incentive structures were in place to ensure transparency, enforceability and predictability of institutional arrangements. The limited progress made in putting in place an enhanced performance bond system (para. 37) and in including estimates of public spending on environment by central government agencies (para. 41) suggests that more work is needed in this area. Nevertheless, in the case of performance bonds, there are a number of issues that have to be weighed in the Lao context, including (i) the performance bond approach works best in countries with robust systems of tenurial access, property rights and contract enforcement, (ii) bonding requirements can tie up operating capital funds imposing liquidity constraints on firms, and (ii) the long latency period between the operating activity and the potential liability is a disadvantage.

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<sup>23</sup> ADB. 2007. *Cumulative Impact Assessment for the Nam Ngum 3 Hydropower Project*. Manila; ADB. 2007. *Updating the National Water Policy and Strategy*. Manila; ADB. 2008. *Greater Mekong Subregion Nam Theun 2 Hydroelectric Project – Social Safeguards Monitoring*. Manila; ADB. 2009. *Updating the National Water Policy and Strategy (Supplementary)*. Manila.

53. STEA has undergone significant change. Its environmental functions were transferred to WREA in May 2007 (see para. 47). The Environmental Impact Assessment Division has been upgraded to department level and additional provincial and district offices have been set up and strengthened. WREA now has a clearer mandate and more streamlined structure to carry out its assigned environmental and social impact management functions. This has served to raise the profile of environmental and social management in Lao PDR and is an important institutional development. Appendix 3 contains an organization chart for WREA.

## B. Impact

54. An expected impact of the ESP was the protection and enhancement of Lao PDR's natural resource endowment. Relatively good progress has been made in achieving this. The extent of forest cover and the drinking water quality have not greatly deteriorated, despite the country's accelerating economic development during the last 10 years. For example, in 1995, forest coverage accounted for 73.3% of land area and in 2005 it accounted for 69.9%. Similarly, drinking water quality has remained consistently high, according World Health Organization water quality standards.

55. Another expected impact of the ESP was improvement in Lao PDR's environmental and social development. This was to be indicated by an improvement in the rankings of international social and environment development indexes. Progress in achieving this ranking has been mixed. The main international social development index is the Human Development Index (HDI), which has been published since 1993 and is widely accepted. There is no comparable universally accepted environment index, but the Environmental Sustainability Index (ESI) and Environmental Performance Index (EPI) both developed by Yale University are generally considered to be the most reliable indexes available. The country's HDI ranking marginally improved from 140th out of 174 countries in 2000 to 133rd out of 182 countries in 2008. Whereas Lao PDR's ranking slipped from 52nd out of 146 countries in the 2005 ESI,<sup>24</sup> down to 80th out of 163 countries in the 2010 EPI.<sup>25</sup> Counter-balancing this deterioration in the environmental ranking, it should be noted that Lao PDR's scores for "policies and institutions for environmental sustainability" in ADB's annual country performance assessments have improved notably between 2007 and 2009,<sup>26</sup> partly reflecting the improvements brought by the ESP. These improvements may reasonably be expected to feed into future EPI rankings in the medium-term.

## C. ADB and Executing Agency Performance

56. The PCR did not specifically rate the performance of ADB, although it did state that the "program loan is rated *partly satisfactory* in terms of implementation" and that "overall performance of the loan is rated *satisfactory*." In general, IED finds that ADB's performance was overall satisfactory, with its implementation performance making up for some of the problems in the initial design of the ESP (paras. 15–17). ADB carried out 14 loan review missions and a

<sup>24</sup> Yale Center for Environmental Law & Policy. 2005. *2005 Environmental Sustainability Index: Appendix B Country Profiles*. USA.

<sup>25</sup> Yale Center for Environmental Law & Policy. 2010. *2010 Environmental Performance Index*. USA.

<sup>26</sup> ADB. 2006. *2005 Annual Report on the ADB's Country Performance Assessment Exercise*. Manila; ADB. 2007. *Annual Report on the 2006 Country Performance Assessment Exercise*. Manila; ADB. 2008. *Annual Report on the 2007 Country Performance Assessment Exercise*. Manila; ADB. 2009. *Annual Report on the 2008 Country Performance Assessment Exercise*. Manila; ADB. 2010. *Annual Report on the 2009 Country Performance Assessment Exercise*. Manila. Whereas the average rating for all DMCs on "policies and institutions for environmental sustainability" remained constant at 3.3 between 2005 and 2009, the rating for Lao PDR increased from 3.0 in 2005, 2006 and 2007, to 3.5 in 2008, and to 4.0 in 2009.

midterm review mission to monitor program progress and resolve implementation issues. A social safeguards specialist was transferred to the Lao Resident Mission to assist, among other things, with the implementation of the ESP, which seems to have had a very beneficial effect on program implementation. The PCR noted that, because of limited staff resources, some review missions were conducted informally in conjunction with other projects and missions in the Lao PDR and that such informal missions did not always include back-to-office reports. However, WREA staff indicated that they were generally satisfied with ADB's performance.

57. The PCR found that the executing agency's performance was satisfactory and that STEA implemented the program diligently. The only caveat is that the interministerial steering committee did not function as effectively as expected. This was partly due to MOF initially not fully supporting the establishment of the EPF, because it did not agree with its principles on revenue collection. The poor functioning of the steering committee and MOF's lack of support for EPF operations substantially hindered the implementation of the program and contributed to the delay in implementation. Therefore, despite STEA's generally satisfactory performance, IED rates the performance of the government agencies as a whole *less than satisfactory*.

## V. ISSUES, LESSONS, AND FOLLOW-UP ACTIONS

### A. Issues

58. **Over-complexity vis-a-vis available resources.** The design of the ESP was too broad and complex for the available resources. The ESP was intended to assist the government in improving environmental and social management, particularly in the energy and transport sectors. The ESP was to achieve this through improving the national policy and regulatory framework, the subnational (e.g., provincial, sectoral and river basin) planning and policy implementation framework, and establishing sustainable financing mechanisms. Numerous activities (48 policy conditions and 20 other actions) were envisaged in each of these areas, to be implemented over 36 months for a loan of about \$20 million. In retrospect, given the institutional and capacity constraints in the country, the ESP's scope was too broad and the outcome unachievable given the limited time and resources.

59. **The ESP as a replicable model.** The scope for replicating the ESP model in other ADB developing member countries is limited. Firstly, the PPER rates the ESP's performance only borderline *successful*, which indicates that the ESP may not be the most suitable model. Secondly, there is little demand for ESP-style programs, perhaps reflecting the developing member countries' seeming preference for addressing issues related to environmental safeguard management separately from those related to social safeguard management. Thirdly, there is not enough evidence that sustainable financing mechanisms, such as the EPF, have yielded the expected benefits (Box 1). Nevertheless, the ESP model has some scope for adaptation to financing policy changes and capacity building for other areas of environmental management, if time and resources can be allocated. For example, ADB's new approach to climate change in the region may warrant this comprehensive approach: addressing environmental safeguards, mitigation and adaptation at the same time. ESP experience could be a useful tool in understanding and implementing complex development efforts.

### B. Lessons

60. **Program design encompassing a good technical analytical basis was useful.** The technical analytical basis for the formulation of the ESP was very sound (para. 12 and Table 1). There were a large number of detailed studies and reports financed by ADB, the government,

and other donors that the ESP could build on. This was particularly true in terms of environment-related information, data base and analytical work. Complex programs, such as the ESP, should be preceded by good analytical work in order to inform the program design, particularly the conditions to be included in the policy matrix.

**61. Adequate donor coordination was important to implement a complex crosscutting program in a small country with many donor agencies.** Donor coordination in the formulation and implementation of the ESP was adequate. The design of the World Bank's LENS project was well-synchronized with the ESP. The phasing-out of Sida assistance appears to have been well-timed with the phasing-in of development assistance from the Finnish Government. Donor coordination is important to ensure synchronization of activities and avoid duplication of effort.

**62. Considering the full range of opportunities for enhancing the human resource base would produce a more sustainable outcome.** The RRP correctly identified the weak human resource base of Lao PDR as a risk to the implementation of the ESP. These weaknesses remain with no immediate or short-term solution. The full range of opportunities for enhancing the country's human resource base should be fostered, including employee training, career development, performance management and development, coaching, mentoring, succession planning, key employee identification, tuition assistance, and organization development. To make program implementation more effective program design should take into account this full range of opportunities.

**63. Capacity development is a long-term process encompassing multiple levels and institutional aspects.** The RRP correctly identified poor institutional capacity in Lao PDR as another risk to the implementation of the ESP. Capacity development refers to many aspects other than training or skills improvement and is a long-term process, in which all stakeholders should participate. It is also important that such training address the needs of the local population and various ethnic groups' with respect to key development areas such as hydropower development, water resource allocation, road transport, and mining sectors. In countries with capacity development constraints, program design should take a broad approach to capacity development encompassing multiple levels and institutional aspects.

**64. Need for better stakeholder analysis and involvement for complex programs.** The RRP could have provided a better stakeholder analysis of the central government agencies and their evolving roles in the management of environmental and social safeguards (para. 16). It omitted analysis of the mandate and remit of the Ministry of Finance and the key role that it would need to play in establishing sustainable financing mechanisms, including on the revenue collection aspects. The RRP should have flagged this as a substantial risk.

### **C. Follow-up Action**

**65.** Based on the evaluation findings, one follow-up action is proposed: ADB should encourage the Lao Government to follow through on their commitment to establish transparent and efficient performance bond systems for the energy and transport sectors. A design for an enhanced performance bond system was supposed to be ready by September 2002, but this was not accomplished.

**REVISED SUMMARY DESIGN AND MONITORING FRAMEWORK SHOWING PROGRAM ACHIEVEMENTS AGAINST INTENDED IMPACTS, OUTCOME, AND OUTPUTS**

Design Summary <sup>a</sup>	Performance Indicators <sup>b</sup>	Assessment	Program Achievements
<p><b>Impact:</b> To promote environmentally and socially sustainable development in the Lao People's Democratic Republic (Lao PDR)</p>	<p>Protection and enhancement of Lao PDR's natural resource endowment</p>	<p>Likely to be achieved</p>	<p>There has been relatively good progress in maintaining Lao PDR's natural resource endowment, with no significant deterioration in the extent of forest cover and drinking water quality, despite the country's accelerating economic development in the last 10 years. For example, in 1995 forest coverage accounted for 73.3% of the land area and in 2005 it accounted for 69.9%. Similarly, drinking water quality has remained consistently high, according World Health Organization water quality standards.</p>
	<p>Improvement in the institutional structure of Lao PDR's key environment agency to support enhanced environmental and social management</p>	<p>Likely to be achieved</p>	<p>The Science, Technology and Environment Agency (STEA) has undergone significant changes in the past 10 years. STEA's environmental functions were transferred to the Water Resource and Environmental Administration (WREA) in May 2007. The Environmental Impact Assessment Division has been upgraded to department level and additional provincial and district offices have been set up and strengthened. WREA now has a clearer mandate and more streamlined structure to carry out its assigned environmental and social impact management functions. This has served to raise the profile of environmental and social management in Lao PDR and is an important institutional development.</p>
	<p>Improvement in Lao PDR's rankings in international social and environment development indexes</p>	<p>Mixed achievement</p>	<p>The main international social development index is the Human Development Index (HDI), which has been published since 1993 and is widely accepted. There is no comparable universally accepted environment index, but the Environmental Sustainability Index (ESI) and Environmental Performance Index (EPI), both developed by Yale University, are generally considered the most reliable indexes available. The country's HDI ranking marginally improved from 140th out of 174 countries in 2000 to 133rd out of 182 countries in 2008. Whereas Lao PDR's ranking slipped from 52nd out of 146 countries in the 2005 ESI down to 80th out of 163 countries in the 2010 EPI. Counter-balancing this deterioration in the environmental ranking, it should be noted that Lao PDR's scores for "policies and institutions for environmental sustainability" in ADB's annual country performance assessments have improved notably between 2007 and 2009, partly reflecting the improvements brought by the ESP. These improvements may reasonably be expected to feed into future EPI rankings in the medium-term.</p>
<p><b>Outcome:</b> To improve environmental and social management, particularly in the energy and transport sectors</p>	<p>Streamlined procedures put in place for environmental and social management</p>	<p>Achieved</p>	<p>The Environment and Social Program (ESP) has assisted in implementing clearly defined, step-wise, and streamlined procedures for enhanced environmental and social management of development projects. The issuance of 7 decrees, approval of 8 sets of guidelines and undertaking of numerous institutional improvements were particularly useful in achieving this. More recently, a new environmental impact assessment decree was approved in February 2010. However, a new environment law is still under consideration by the government.</p>

Design Summary <sup>a</sup>	Performance Indicators <sup>b</sup>	Assessment	Program Achievements
	Improvement in the environmental and social management of energy projects	Partially achieved	The ESP provided important groundwork for the preparation and implementation of the Nam Theun 2 Hydropower Project. The Nam Theun 2 project has become a model for environmentally and socially sensitive hydropower development in the Greater Mekong Subregion. The Nam Leuk Hydropower Project is another example of a hydropower project that is considered to have been implemented with good safeguards. However, few of the other energy sector projects have adopted adequate social and environmental safeguards.
	Improvement in the environmental and social management of transport projects	Partially achieved	The environmental management of transport projects has improved since the ESP was approved, however, this depends to a large extent on the location of such projects. Projects in sensitive areas have sometimes led to increased soil erosion during construction and air pollution during implementation. The social benefits from transport projects are not easy to quantify. On the one hand, transport corridors have certainly contributed to enhanced economic growth in the project areas, particularly with regard to improving market access. On the other hand, transport projects have not always been carried out with due attention to resettled people and ethnic minorities.
<b>Outputs:</b> 1. National policy and regulatory framework for environmental management and social safeguards strengthened	Decrees and national policies issued	Achieved	The ESP supported the issuance of four decrees and the formulation of two national policies. In 2001, decrees were issued for the environmental impact assessment (EIA) regulations and implementation of the Environmental Protection Law (EPL). In 2002, a public investment plan (PIP) decree was issued and the PIP for fiscal year 2003 was prepared in compliance with the EPL. In 2005, a national policy on involuntary resettlement and compensation was formulated for major projects and issued as a prime ministerial decree (No. 192). In January 2003, the Ministry of Agriculture and Forestry (MAF) issued an interim policy statement on watershed management.
	Instructions, guidelines and regulations issued	Achieved	The ESP directly assisted in the formulation of two sets of instructions, one set of guidelines and one set of regulations. In May 2003, STEA issued instructions for the preparation of a third-party monitoring system, while in June 2002, STEA issued instructions for the assignment of responsibilities and procedures, including provisions for web site publication and the format for the biannual publication of an environmental gazette. In November 2003, national guidelines for public involvement and participation were issued by STEA. In 2005, implementing regulations for the decree on involuntary resettlement and compensation were issued.
	Institutional measures undertaken	Achieved	The ESP introduced a number of institutional measures aimed at improving environmental and social management. Firstly, three new institutional structures were established: (i) the high-level Environment Coordination Committee (ECC) responsible for review of institutional arrangements; (ii) a public information center within STEA to house a comprehensive repository of laws, EIAs, environmental management plans, and resettlement action plans; and (iii) a civil society consultation forum. Secondly, a review of institutional arrangements for environmental management was completed and submitted by the ECC for approval by the government. Thirdly, an aid coordination mechanism was put into place within STEA. Fourthly, STEA was appointed to conduct public consultations and prepare and finalize policy on involuntary resettlement and compensation for major projects consistent with international standards.
	Other national outputs	Achieved	The ESP assisted with a number of other national outputs, including (i) a review of

Design Summary <sup>a</sup>	Performance Indicators <sup>b</sup>	Assessment	Program Achievements
			<p>ambiguities and inconsistencies in laws relating to land, water, forests, roads, electricity, related implementing decrees, and the EPL, (ii) state of the environment reporting by STEA from January 2003 onward, (iii) a review of institutional arrangements for environmental management, (iv) a capacity building program on compliance and enforcement of the EPL for judicial and legal personnel, (v) legally binding codes of acceptable environmental and social safeguard practices for developers and contractors, (vi) a registry of laws and regulations pertaining to environmental and social safeguards, EIAs, environment management plans, and resettlement action plans, and (vii) annual sector reports on the social and environmental compliance of EIAs, environment management plans, and resettlement action plans.</p>
	Other actions from the policy matrix	Partially achieved	<p>There were three "other actions" indicated in the ESP policy matrix:</p> <ul style="list-style-type: none"> <li>(i) Water quality criteria and standards for hydropower discharge were supposed to be issued by STEA in June 2002. Although this was not completed under the ESP as envisaged, it was fully completed under Loan 1933-LAO: Nam Ngum River Basin Development Sector Project.</li> <li>(ii) Environmental standards (air quality, emissions, soil pollution) were supposed to be issued by STEA by March 2003. Final approval of revised EPL and EIA regulations are still pending.</li> <li>(iii) A design for an enhanced performance bond system was supposed to be ready by September 2002. Progress has been made on this action, including issuance of regulations and guidelines by the Ministry of Industry and Handicrafts (MIH) and the Ministry of Communications, Transport, Post and Construction (MCTPC), and issuance of a code of practice by MIH, but a performance bond system is not yet in place.</li> </ul>
2. Subnational (sector and provincial) planning and policy implementation framework for environment management and social safeguards improved	Decrees and regulations issued	Achieved	<p>The ESP supported the issuance of one decree and three sets of regulations. In 2002, a decree on the 1996 Water Resources and Water Law was issued. In 2002, ministerial regulations on EIA for the energy sector were issued by the MIH. In 2002, ministerial regulations on EIA for the roads subsector were issued by the MCTPC. In November 2005, ministerial regulations on involuntary resettlement and compensation for major energy and roads projects were issued by the MIH and the MCTPC.</p>
	Instructions and guidelines issued	Achieved	<p>The ESP directly assisted in the formulation of three sets of instructions and seven sets of guidelines. The instructions issued included (i) ministerial instructions to restructure MIH's Department of Electricity to include a social and environment management division and a monitoring and evaluation unit, (ii) ministerial instructions to restructure the MCTPC's Department of Roads to include a social and environment division and a monitoring and evaluation unit, and (iii) management instructions to allow Electricité du Lao (EdL) to upgrade its Environment Office. The guidelines issued included (i) MIH guidelines on EIA for the energy sector, (ii) draft MCTPC guidelines for the roads subsector, (iii and iv) MIH and MCTPC guidelines on involuntary resettlement and compensation, (v and vi) MIH and MCTPC ministerial guidelines on involuntary resettlement and compensation for major energy and roads projects, and (vii) MAF concepts and guidelines for integrated watershed management.</p>

Design Summary <sup>a</sup>	Performance Indicators <sup>b</sup>	Assessment	Program Achievements
	Institutional measures undertaken	Achieved	The ESP introduced a number of institutional measures aimed at improving environmental and social management in the provinces and sectors. First, new social and environment management divisions were established in the MIH's Department of Electricity and the MCTPC's Department of Roads. Second, EdL's Environment Office was upgraded to be fully functional. Third, seven of STEA's provincial offices were strengthened and resourced with relevant staff, operating budgets, and equipment. Fourth, STEA reviewed and implemented improvements in functional linkages with provincial and district offices. Fifth, a mechanism was established within STEA for interministerial coordination of data for watershed and river basin management.
	Other subnational outputs	Achieved	The ESP assisted with a number of other subnational outputs, including (i) a consolidated review of priority medium-term resource requirements (human and financial) to effectively implement the EPL in the provinces and districts, (ii) a review of the MCTPC's Roads Sector Plan to ensure strategic environmental management and social safeguard issues were addressed, (iii) a review of the MIH's Energy Sector Plan to ensure strategic environmental management and social safeguard issues were addressed, (iv) issuance of a notification adopting the national implementing regulations on resettlement and compensation, (v) completion of the first stage of the watershed monitoring and information system, (vi) initiation of area-based planning in selected provinces and placement of selected energy and transport sector projects within an area-based framework, (vii) approval of a biodiversity conservation strategy and action plan.
	Other actions from the policy matrix	Partially achieved	Three "other actions" were indicated in the ESP's policy matrix: (i) Provincial environment action plans were supposed to be prepared in all provinces and reflected in provincial development plans by fiscal year 2004. Progress was made on this action, with action plans prepared for 16 provinces and special regions. Nevertheless, the PPER mission was unable to confirm that the action plans for Vientiane and Luangnamtha had been completed. Hence, this action was only partially achieved. (ii) MAF's plan for the 2020 Watershed Management Program was supposed to be made available by January 2002. The PCR indicated that this had only been partially complied with, but the PPER mission confirmed that the action was subsequently completed. (iii) The Nam Ngum River Basin Management Plan was supposed to be under implementation by December 2003. Although this was not completed under the ESP as envisaged, it was fully completed under Loan 1933-LAO: Nam Ngum River Basin Development Sector Project.
3. Sustainable financing mechanisms established	Environment protection fund (EPF) established with adequate resources	Substantially achieved	Numerous activities took place for this important output indicator. Activities included (i) the 2001 agreement between the Asian Development Bank and the Lao Government on the principles governing the EPF, (ii) formal establishment of the EPF (by Decree 146) and appointment of its board of directors (by Decree 72) in 2005, and (iii) adoption of the EPF charter by the EPF board and commencement of formal operations in 2006. At the time of the PPER mission (November 2009), the EPF had adequate short-term funds for its operations, however, funding for long-term activities and financial autonomy was still not

Design Summary <sup>a</sup>	Performance Indicators <sup>b</sup>	Assessment	Program Achievements
			assured.
	Draft public expenditure review (PER) implemented and implementation of agreed-upon PER recommendations	Achieved	In June 2002, the draft PER review and agreed-upon PER recommendations were all implemented.
	Ministry of Finance to include estimates of public spending on the environment by central government agencies in annual budgets	Unachieved	The Ministry of Finance was supposed to publish data on environment-related public spending in fiscal year 2004. The PCR indicated that the activity was under implementation, but the PPER mission found that there had been no progress as of end-2009.
	Study on (i) user charges, and (ii) market mechanisms, for environment management and social mitigation and activities	Unachieved	Neither of the two studies was undertaken, due to confusion over which agency was responsible. Both WREA and the EPF executive office indicated to the PPER mission that they believed the other agency was responsible. Without a "champion" to take responsibility for the studies, there is little likelihood of making progress on this indicator.

ECC = Environment Coordination Committee, EdL = Electricité du Lao, EIA = environmental impact assessment, EPF = Environment Protection Fund, EPI = Environmental Performance Index, EPL = Environmental Protection Law, ESI = Environmental Sustainability Index, ESP = Environment and Social Program, HDI = Human Development Index, Lao PDR = Lao People's Democratic Republic, MAF = Ministry of Agriculture and Forestry, MCTPC = Ministry of Communications, Transport, Post and Construction, MIH = Ministry of Industry and Handicrafts, PER = public expenditure review, PIP = public investment plan, PPER = program performance evaluation report, RRP = Report and Recommendation of the President, STEA = Science, Technology and Environment Agency, WREA = Water Resource and Environmental Administration.

<sup>a</sup> Design summary statements are the same as those included in the RRP's program framework, except for the impact statement, which was slightly modified to make it more relevant.

<sup>b</sup> The RRP's program framework lacked suitable performance indicators and targets for impacts and outcome, and included too many indicators and targets for outputs. Except for the third output, new indicators have been added in order to better measure the attainment of the design summary statements.

Sources: ADB. 2001. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Lao People's Democratic Republic for the Environment and Social Program*. Manila; ADB. 2007. *Program Completion Report: Environment and Social Program (Lao People's Democratic Republic) (Loan 1867-LAO)*. Manila; ADB. 2006. *2005 Annual Report on the ADB's Country Performance Assessment Exercise*. Manila; ADB. 2007. *Annual Report on the 2006 Country Performance Assessment Exercise*. Manila; ADB. 2008. *Annual Report on the 2007 Country Performance Assessment Exercise*. Manila; ADB. 2009. *Annual Report on the 2008 Country Performance Assessment Exercise*. Manila; ADB. 2010. *Annual Report on the 2009 Country Performance Assessment Exercise*. Manila; Yale Center for Environmental Law & Policy. 2005. *2005 Environmental Sustainability Index: Appendix B Country Profiles*. USA; Yale Center for Environmental Law & Policy. 2010. *2010 Environmental Performance Index*. USA.

## ASSESSMENT OF OVERALL PERFORMANCE

**Table A2.1: National Policy Framework**  
(35% weighting in overall rating)

Criterion	Weight <sup>a</sup> (%)	Assessment	Rating Value (0–3)	Weighted Rating
1. Relevance	20	Relevant	2	0.4
2. Effectiveness	30	Effective	2	0.6
3. Efficiency	30	Less efficient	1	0.3
4. Sustainability	20	Likely	2	0.4
<b>Total</b>	<b>100</b>			<b>1.7</b>

**Table A2.2: Subnational Implementing Framework**  
(35% weighting in overall rating)

Criterion	Weight <sup>a</sup> (%)	Assessment	Rating Value (0–3)	Weighted Rating
1. Relevance	20	Relevant	2	0.4
2. Effectiveness	30	Effective	2	0.6
3. Efficiency	30	Efficient	2	0.6
4. Sustainability	20	Likely	2	0.4
<b>Total</b>	<b>100</b>			<b>2.0</b>

**Table A2.3: Sustainable Financing Mechanisms**  
(30% weighting in overall rating)

Criterion	Weight <sup>a</sup> (%)	Assessment	Rating Value (0–3)	Weighted Rating
1. Relevance	20	Relevant	2	0.4
2. Effectiveness	30	Less effective	1	0.3
3. Efficiency	30	Less efficient	1	0.3
4. Sustainability	20	Less likely	1	0.2
<b>Total</b>	<b>100</b>			<b>1.2</b>

**Table A2.4: Overall Rating**

Criterion	Weight <sup>a</sup> (%)	Assessment	Rating Value (0–3)	Weighted Rating
1. Relevance	20	Relevant	2	0.40
2. Effectiveness	30	Effective	2	0.51
3. Efficiency	30	Less efficient	1	0.41
4. Sustainability	20	Likely	2	0.34
<b>Total</b>	<b>100</b>	<b>Successful</b>		<b>1.66</b>

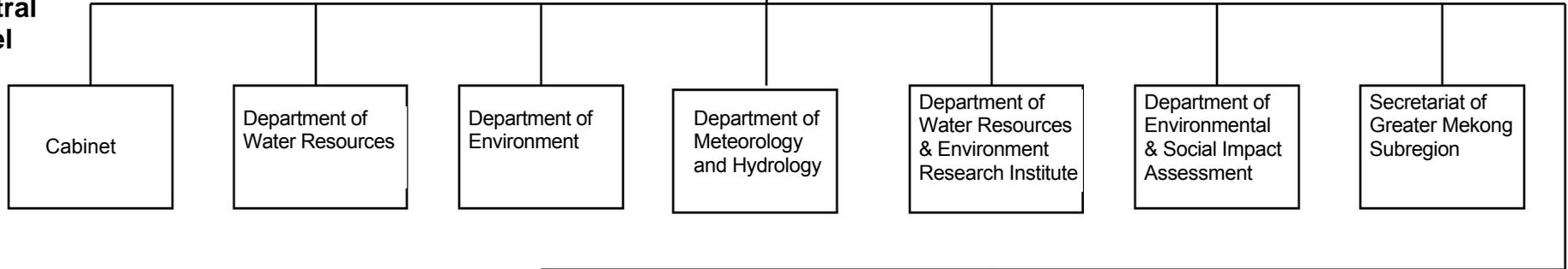
<sup>a</sup> Weighted average of rating values for each component rounded to whole numbers. Highly successful (HS): Overall weighted average (OWA) is > 2.7. Successful (S): OWA is 1.6 ≤ S ≤ 2.7. Partly successful (PS): OWA is 0.8 ≤ PS < 1.6. Unsuccessful (US): OWA is < 0.8.

Source: Independent Evaluation Mission.

# ORGANIZATION CHART OF THE WATER RESOURCES AND ENVIRONMENTAL ADMINISTRATION

Head of WREA  
Minister of Prime Minister's Office  
Chairperson of the Lao National Mekong Committee

Central Level



Local Level

