

**Comparative Analysis
Multilateral Environmental Agreements and
National Socio-Economic Development
in Lao PDR**




**Patricia Moore
Sivath Sengdouangchanh**

May 2007

TABLE OF CONTENTS

Acronyms	3
Executive Summary	4
1. Introduction	6
2. Background.....	7
3. Results.....	9
3.1 Inter-linkages.....	9
3.1.1 Substantive Issues	10
3.1.2 Cross-cutting issues	15
3.2 Legislation	23
3.2.1 Ecosystem conservation and management.....	24
3.2.2 Species conservation and management	24
3.2.3 Traditional knowledge.....	24
3.2.4 Pollution control	24
3.2.5 Institutional arrangements	25
3.2.6 Education and public awareness.....	26
3.2.7 Private sector involvement	26
3.2.8 Identification and monitoring.....	26
3.2.9 Training.....	26
3.2.10 Public participation	27
3.2.11 Incentives	27
3.2.12 Sustainable development and sustainable use	27
3.2.13 Policies, strategies and action plans	28
3.2.14 Legislation	28
3.2.15 Inventories	28
3.2.16 EIA.....	29
3.2.17 Research	29
3.2.18 Data collection	29
3.2.19 Information exchange, access to information	29
3.2.20 Technology transfer.....	30
3.2.21 Ex situ conservation	30
3.2.22 Environmental protection and management.....	30
3.3 Fundamental principles	31
4. Conclusions	31
4.1 Clustering	32
4.2 Cross-cutting issues	32
4.3 Decision-making.....	33
4.4 Legislation	34
5. Recommendations.....	35
5.1 MEA implementation	35
5.2 Strategies and Action Plans	35
5.3 Institutional arrangements	36
5.4 Legislation	36
Matrix 1: MEAs to which Lao PDR is a Party – Obligations and Principles	40
Matrix 2: Comparative Analysis -- MEA Obligations, National Development Strategies and Action Plans, and National Legal Instruments	46
Matrix 3: Priority Issues and MEA Clusters.....	47
Figure 1: Decision-making	48
References.....	49

Acronyms

ADB	Asian Development Bank
ASEAN	Association of South East Asian Nations
CBD	Convention on Biological Diversity
CCD	Convention on Combating Desertification
CITES	Convention on International Trade in Endangered Species of Fauna and Flora
DoE	Department of Environment, STEA
EES	Environmental Education Strategy
EIA	Environmental impact assessment
EMMU	Environment Management and Monitoring Unit
EPL	Environmental Protection Law
FCCC	Framework Convention on Climate Change
GEF	Global Environment Facility
IEE	Initial environmental evaluation
IUCN	The World Conservation Union
PDR	People's Democratic Republic
	Ministry of Agriculture and Forestry
MEA	Multilateral Environmental Agreement
NBSAP	National Biodiversity Strategy and Action Plan
NES	National Environment Strategy
NSEDP	National Socio-economic Development Plan
POPs	Stockholm Convention on Persistent Organic Pollutants
	Strengthen Environmental Management through STEA Project
SIDA	Swedish International Development Agency
	Science Technology and Environment Agency
UNEP	United Nations Environment Programme
UNU	United Nations University
WHC	World Heritage Convention
	Wildlife Conservation Society
WWF	World Wide Fund for Nature

Executive Summary

The Lao People's Democratic Republic (PDR) is a Party to 10 global multilateral environmental agreements (MEAs) that were the subject of this comparative analysis. These MEAs govern issues related to biodiversity conservation, climate change and atmospheric pollutants, and toxic chemicals.

The purpose of this comparative analysis was to illustrate and explain the ways in which the Government of Lao PDR can make most effective use of its institutional, human and financial resources to meet its international obligations under these MEAs and at the same time promote national socio-economic development goals.

The comparative analysis links individual MEA obligations to national socio-economic development priorities to demonstrate how socio-economic development and MEA implementation can be undertaken together to reduce poverty, provide infrastructure and basic services, and at the same time maintain the natural resource base on which the economy depends. The results of the comparative analysis support an issue-based approach to MEA implementation. This approach links the issues common to two or more MEAs rather than attempting to implement each MEA independently.

A comparison of six national policy documents and strategies with Lao PDR's MEA obligations identified five issues on which national environmental and socio-economic development policy coincides completely with MEA obligations:

- ecosystem conservation and management;
- species conservation and management;
- pollution control;
- sustainable agriculture; and
- traditional knowledge.

The comparative analysis also identified eight priority cross-cutting issues that should be incorporated into all conservation and development interventions:

- institutional arrangements;
- education and public awareness;
- private sector involvement;
- identification and monitoring;
- training;
- public participation;
- incentives; and
- sustainable use.

It is very interesting to see the issues that emerged from this comparative analysis and the relationships among them. Conservation and management of ecosystems and species and sustainable agriculture are all interdependent and rely to a great extent on controlling all sources and types of pollution. Implementing controls on trade in species, organisms and substances links otherwise seemingly unrelated MEAs – the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Cartagena Protocol on Biosafety, and the Stockholm Convention on Persistent Organic Pollutants.

It is significant also that the government has recognized the importance of traditional knowledge for national development as well as natural resource conservation. These

inter-linkages have significant potential for rationalizing national development and ensuring that it is sustainable, if a mechanism is put in place to ensure that they are incorporated into all sectoral programmes and projects.

At the policy level, harmonization appears to be well established as a concept in Lao PDR. While the country has made significant progress in recent years in developing its legal regime for natural resource conservation and environmental protection, the existing legal regime is not as well harmonized with national policy as national policy is with MEA obligations. In all but a few cases, national laws do not explicitly implement MEAs and where they do, links between international obligations and national law are not established.

In Lao PDR, international agreements are not self-executing, which means that their obligations must be implemented in national law. Section 5.4 makes 17 specific recommendations for legal reform to facilitate implementation of MEAs. One overarching recommendation is to consider the development of a national biodiversity law that would provide the framework for implementing the biodiversity-related MEAs in the same way that the Environmental Protection Law provides a framework for implementing MEAs that deal with climate change and the atmosphere and with chemicals and wastes.

The comparative analysis and the decision-making process described in Section 4.3 provide the rationale for justifying any proposed intervention that is based on the national priorities identified. This report should be shared with at least the following institutions identified in the 2006 National Environmental Performance Assessment report – the Ministry of Agriculture and Forests, the Ministry of Commerce and Industry, the Ministry of Communication, Transport, Post and Construction, and the Committee on Planning and Investment – as a first step toward strengthening cross-sectoral coordination among them and with the Science Technology and Environment Agency (STEA) on MEA implementation.

1. Introduction

This analysis was prepared as part of the project “Coordinating the Implementation of Multilateral Environmental Agreements in Lao PDR” (the MEA project). The project is:

- supporting the Government of Lao PDR in establishing an issue-based approach to MEA implementation;
- assisting in the creation of a national mechanism to coordinate development initiatives with MEA implementation;
- strengthening national environmental governance structures and the information systems required to support them; and
- promoting national awareness and institutional and individual capacity for MEA implementation as well as collaboration within the Asia region for the same purpose.

National MEA Focal Points compared the obligations in the MEAs for which they are responsible with the contents of national development plans and strategies and with national laws. A national legal expert and an international expert on MEAs prepared this consolidated comparative analysis.

The process for carrying out the analysis consisted of first identifying, in consultation with the Project Management Unit of the MEA project, the key documents that guide national policy until at least the year 2010. The Project Management Unit provided English translations of the documents. The national expert, who is also the national expert for a United Nations Development Programme (UNDP) governance project that is translating all Lao PDR laws into English, identified the national laws that govern the environmental and development issues contained in the MEA obligations and in the national policies and strategies and provided English translations of them. The international and national experts then read the MEAs, the national policy and strategy documents and the national laws, identifying the common provisions and structuring that information in matrices for easy reference (see Matrix 1, Matrix 2, and Matrix 3). Using the three matrices as the basis, the international and national consultants wrote the narrative text of this report.

Analyzing and agreeing on the issues, inter-linkages, priorities, and indicators for MEA implementation and demonstrating their relevance to national socio-economic development priorities is the first priority activity of the MEA project. Using this comparative analysis of issues, inter-linkages, and potential synergies, the project will facilitate the creation of a national coordinating mechanism that is constituted to respond to them. This will include setting timetables and building capacity for MEA negotiation, ratification and implementation; creating a system for MEA compliance monitoring and reporting that is integrated with existing systems and integrated into a harmonized national system for environmental information; and developing explanatory materials on MEAs, their inter-linkages and implications for socio-economic development in Lao PDR, targeting them appropriately for different stakeholders (central government decision-makers, provincial execution agency staff, and local communities) and delivering them effectively.

2. Background

Lao PDR is a Party to 10 global MEAs that are the subject of this comparative analysis: the Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention/WHC, 1972); the Convention on International Trade in Endangered Species of Flora and Fauna (CITES, 1973); the Vienna Convention for the Protection of the Ozone Layer (1985); the Montreal Protocol on Substances that Deplete the Ozone Layer (1987); the Convention on Biological Diversity (CBD, 1992), the Framework Convention on Climate Change (Climate Change Convention/FCCC, 1992); the Convention on Combating Desertification (CCD, 1994); the Kyoto Protocol (1995); the Cartagena Protocol on Biosafety (2000) and the Stockholm Convention on Persistent Organic Pollutants (POPs, 2001). See the References at the end of this document for the links to the websites providing the text and ratification status of each MEA.

These MEAs, adopted during the past 30 years, contain complementary and mutually-reinforcing obligations. Countries that sign and ratify MEAs do so at least in part because they recognize that MEAs contain principles and obligations for conservation and sustainable use of natural resources and for controlling polluting substances that are closely related to national interests in maintaining and enhancing the natural resource base that each country depends on for its own development.

The approach to implementing MEA obligations, therefore, should be based on two inter-dependent considerations:

- linking the issues common to two or more MEAs rather than attempting to implement each MEA independently; and
- linking MEA obligations to national development goals and strategies.

An issues-based, development-linked approach to MEA implementation is cost-effective, both for the Government and for donors. If it is comprehensively applied, the approach produces a multiple benefit for a single investment – funds allocated for development also support pollution control and sustainable use of natural resources through MEA implementation and, conversely, funds invested to support MEA implementation also promote the achievement of national development objectives. Adopting this approach will enable the Government of Lao PDR to make most efficient use of funds allocated in the national budget for both development and conservation. Bilateral donors will appreciate that the impact of assistance they provide is multiplied by promoting development that is sustainable because it also supports MEA implementation.

Coordinated implementation of MEAs first attracted attention in the second half of the 1990s, with “Rio + 5” efforts to assess progress in implementing the “Rio Agreements” signed at the 1992 Earth Summit in Rio de Janeiro – the Conventions on Biological Diversity and Climate Change. The focus of the United Nations agencies and the Global Environment Facility (GEF) remains on the Rio MEAs and the CCD, but it is acknowledged that other important implementation linkages exist.

The CBD, for example, contains overarching provisions that encompass the specific commitments in each of the earlier “biodiversity-related” conventions – the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat, the World Heritage Convention, CITES, and the Convention on Migratory Species.

Although there is no overarching convention for the pollution-related MEAs in the sense that the CBD is the “umbrella” for the biodiversity-related MEAs, there are implementation linkages among the pollution-related MEAs – the Climate Change Convention and its Kyoto Protocol, the Vienna Convention and its Montreal Protocol, and POPs. In addition, implementing controls on trade in species, organisms and substances links otherwise seemingly unrelated MEAs – CITES, the Cartagena Protocol on Biosafety, and POPs.

In 1999, the United Nations University (UNU) began to promote inter-linkages in MEA implementation, particularly in the Asia region, working first through the United Nations Economic and Social Commission for Asia and the Pacific Ministerial Conference on Environment and Development in Asia, held in Japan in September 2000 and at which Lao PDR was represented. Subsequently, during 2001-2003, UNU worked with the Secretariat of the Association of South East Asian Nations (ASEAN) to develop an ASEAN case study on negotiating and implementing MEAs, and their inter-linkages. As an ASEAN member, Lao PDR participated fully in these processes and is the first ASEAN member to formalize a programme to implement the issue-based approach to MEA implementation, through the MEA project.

The Asia regional consultations emphasized the need for countries to demonstrate the links between MEA implementation and national sustainable development, link MEA obligations to policy-making processes, link MEA implementation with planning and budget allocation processes, and focus on function rather than on structure by managing issues rather than individual MEAs. The consultations identified institutional and administrative measures that need to be taken in order to facilitate an issue-based approach to MEA implementation. These measures include promoting cross-sectoral responsibility for implementation – meaning that design and implementation of policies and activities should not be the sole responsibility of one institution but of all stakeholder institutions – decentralizing control over natural resources, and focusing on land use planning. In order to do apply these measures, countries need to increase collaboration among national MEA Focal Points, and raise awareness about MEAs and their relevance for national development among decision-makers and the general public.

“Clustering” is an additional aspect to issue-based MEA implementation. It refers to the concept of coordinated implementation of MEAs according to issues, functions, impacts or geographical areas. The United Nations Environment Programme (UNEP) uses three principal MEA clusters: biodiversity; atmosphere; and chemicals and wastes. The International Institute for Sustainable Development (IISD), which cooperates with UNEP to produce the “MEA Bulletin”, breaks UNEP’s biodiversity cluster down into three more specific clusters: biodiversity and wildlife; forests, deserts and land; and water, wetlands and coasts. In addition to these three biodiversity-related clusters, IISD uses clusters on climate and atmosphere and chemicals and wastes, for a total of five clusters.

An issue-based, development-linked approach to MEA implementation is consistent with current and past Government of Lao PDR commitments and practice. One example is the government’s use of river basins and watersheds as the basis for development and natural resource management planning. The Lao National Mekong Committee focuses on river basin development, the Asian Development Bank (ADB) Environment and Social Sector Program coordinated by STEA used river basin management as a multi-sectoral and integrated planning framework for the energy and transport sectors, and the Ministry of Agriculture and Forestry used watersheds as the framework for natural

resource planning and management.

3. Results

The comparative analysis links individual MEA obligations to national socio-economic development priorities to demonstrate how socio-economic development and MEA implementation can be undertaken together to reduce poverty, provide infrastructure and basic services, and at the same time maintain the natural resource base on which the economy depends.

Two matrices are the basis for the consolidated comparative analysis. Matrix 1 compares the MEAs, showing the obligations and fundamental principles contained in all of them, how they relate to each other, and providing the references to the specific provisions for each obligation and principle. Matrix 2 compares the MEA obligations and principles with the VIII Party Resolution, with national plans and strategies for socio-economic development and for individual sectors, and with national legal instruments, providing the specific references for each. Matrix 1 and Matrix 2 demonstrate that national development plans and strategies incorporate the majority of MEA obligations. National laws, on the other hand, do not.

Most important for this analysis are the areas in which the VIII Party Resolution, national development priorities, and MEA obligations coincide. These are the primary issues on which MEA implementation efforts should focus until 2010 to ensure that MEA implementation supports the achievement of national development goals. At the same time, programmes and projects for national development in these areas should be designed so that they enable Lao PDR to meet its obligations under the MEAs to which it is a Party.

The first part of this section focuses on the inter-linkages between national development plans and strategies and MEA obligations. The second part focuses on the extent to which MEA obligations and principles are reflected in national laws.

3.1 Inter-linkages

The programmes and projects of the VIII Party Resolution intersect with MEA obligations in eight areas. Five of the areas are substantive; three are cross-cutting and relevant for all of the substantive issues.

The substantive issues are:

- ecosystem conservation and management;
- species conservation and management;
- traditional knowledge;
- pollution control; and
- sustainable agriculture.

The cross-cutting issues are:

- definition of institutional arrangements
- education and public awareness; and
- private sector involvement.

It is very interesting to see the issues that emerged from this comparative analysis and the relationships among them. Conservation and management of ecosystems and species and sustainable agriculture are all interdependent and rely to a great extent on controlling all sources and types of pollution. It is significant also that the government has recognized the importance of traditional knowledge for national development as well as natural resource conservation. These inter-linkages have significant potential for rationalizing national development and ensuring that it is sustainable, if a mechanism is put in place to ensure that they are incorporated into all sectoral programmes and projects.

3.1.1 Substantive Issues

Ecosystem management and conservation are closely associated with species conservation and management because habitat destruction is the primary cause of species loss. It is important to note that the VIII Party Resolution and the national strategies and plans have recognized this critical link and have prioritized the management and conservation of species as well as of the ecosystems that provide their habitats. Obligations related to ecosystem conservation and management are contained in five MEAs: the CBD, World Heritage Convention, CCD, and the Climate Change Convention and Kyoto Protocol. Species conservation and management are obligations of two MEAs – the CBD and CITES.

Sustainable agriculture has a close relationship with ecosystem conservation and therefore with species conservation. Although the CBD does not contain an obligation related to sustainable agriculture, it has identified agriculture as the largest single cause of habitat conversion at the global level. Pesticides and fertilizers used in agriculture enter the air and soil, affecting individual species and entire ecosystems. The MEAs that contain obligations related to sustainable agriculture are the Climate Change Convention and the Kyoto Protocol and the CCD.

While the biodiversity-related MEAs do not contain obligations for pollution control, pollution, particularly of the air and water, impacts ecosystems, species and agriculture. Pollution control, which is an obligation of all of the pollution-related MEAs – the Climate Change Convention and Kyoto Protocol, the Vienna Convention and Montreal Protocol, and POPs – contributes significantly to the national development priorities of conserving ecosystems and species and of ensuring that agriculture is sustainable.

Although preservation and promotion of traditional knowledge is an obligation in only two MEAs – the CBD and the CCD – the national strategies and plans have acknowledged the important contribution it can make to national development and the conservation and sustainable use of natural resources.

3.1.1.1 Ecosystem conservation and management (No. 17 in Matrix 1 and Matrix 2)

In addition to the VIII Party Resolution, this issue is included in the: National Socio-Economic Development Plan 2006-2010 (NSED); National Environment Strategy 2006-2020 (NES); Forest Strategy 2020; and National Biodiversity Strategy 2020 and Action Plan 2010 (NBSAP). All of these documents emphasize forest conservation and protected areas, with the VIII Party Resolution, NES, Forest Strategy and NBSAP focusing in particular on forest conservation. Although Programme 3 of the VIII Party Resolution aims primarily at conservation of forest resources, Project 5 includes

biodiversity conservation as well, emphasizing protected areas and endangered species. The NSEDP concentrates on restoration of degraded ecosystems and, like the VIII Party Resolution, specifies attention to protected areas and species.

Five MEAs contain obligations related to ecosystem conservation and management: WHC; FCCC; Kyoto Protocol; CBD; and CCD. The FCCC and the Kyoto Protocol emphasize conservation of forests, including afforestation and reforestation and sustainable forest management, as sinks for greenhouse gases. CBD provisions for conservation, restoration, rehabilitation, and sustainable use encompass all types of ecosystems, both inside and outside of protected areas, while the World Heritage Convention focuses only protected areas.

National laws with provisions related to ecosystem management and conservation include: Environment Protection Law, Forest Law, Land Law, Water Law, Agriculture Law, Mining Law, and Law on National Heritage. These laws are discussed in detail in section 3.2.1, below.

Current principal issues in ecosystem conservation and management in Lao PDR include:

- loss of natural habitat for wildlife (see also section 3.1.1.2, below);
- controlling slash and burn cultivation;
- unsustainable logging; and
- the proliferation of rubber and eucalyptus plantations.

According to information provided by MEA Focal Points and STEA, no government-initiated projects are currently being carried out that specifically address any of these primary issues. The Greater Mekong Subregion Environmental Cooperation Framework, funded by the Asian Development Bank, is supporting biodiversity conservation in economic corridors. This programme may address loss of natural habitat for wildlife and may address one or more of the other issues as well.

As of September 2006, the National Agriculture and Forestry Research Institute had received a grant to develop a proposal for GEF funding to implement the CCD, addressing sustainable land management in mountainous regions. There is no information available on the contents of that proposal or the status of its development, but it could potentially address all three of the principal issues identified. Another proposal to the GEF for implementing the CCD would address land degradation and mitigating the effects of drought. There is no information on the contents of that proposal, but it could potentially address the issue of unsustainable logging.

Ideas from STEA for eventual concepts and proposals include the following: two, dealing with biodiversity conservation generally and with biodiversity assessment and monitoring in protected areas and wetlands; one, for alternatives to slash and burn cultivation in the Luang Prabang area; one, for securing resource sustainability and biodiversity through adaptation to climate change in the context of poverty alleviation which could potentially address the issue of loss of natural habitat. There are also ideas for improving implementation of the integrated water resource management concept and for preventing and mitigating Mekong River bank erosion in Vientiane.

International organizations and non-governmental organizations, in cooperation with the government, are carrying out projects in support of ecosystem conservation and

management in Lao PDR. The country participated in the Mekong Wetlands Biodiversity Programme, which dealt with loss of natural habitat for wildlife, among other ecosystem management issues. The World Conservation Union (IUCN) is implementing two components of the ADB Biodiversity Corridors Initiative and carrying out a project on environmental flows. Currently, the World Wide Fund for Nature (WWF) is responsible for projects on sustainable management of forest resources and of aquatic resources. The Wildlife Conservation Society (WCS) is carrying out projects to develop baseline information on biodiversity and to promote integrated ecosystem and wildlife management. All of these projects address one or more of the current principal issues listed above. Projects in the pipeline would support the Forest Strategy – addressing all of the current principal issues – and national protected areas.

3.1.1.2 Species conservation and management (18 in Matrix 1 and Matrix 2)

Species conservation and management, like ecosystem conservation and management, is addressed in the NSEDP, NES, NBSAP and Forest Strategy as well as in the VIII Party Resolution. Programme 3, Project 5 of the VIII Party Resolution covers biodiversity conservation in general and specifically mentions endangered species. The NBSAP's Programme 2, Objective 3 focuses on threatened and endangered species, but includes long-term conservation of all species, while the NSEDP calls for protection of species generally. The Forest Strategy addresses only the issue of wildlife trade and the NES refers to species conservation only in the context of agriculture.

Two of the biodiversity-related MEAs – the CBD and CITES – include provisions on species conservation. The CBD contains obligations to maintain all species in their natural habitats, to promote the recovery of threatened species, and to control the introduction of alien species that threaten native ecosystems and species. CITES focuses exclusively on protecting endangered species by prohibiting or controlling trade in them.

National laws with provisions related to species management and conservation are the Environmental Protection Law (EPL), Forest Law, and the Agriculture Law. These laws are discussed in detail in section 3.2.2, below.

Current principal issues in species conservation and management include:

- loss of natural habitat for wildlife (see also section 3.1.1.1, above);
- excessive hunting of wild animals for subsistence consumption and for domestic and foreign markets; and
- excessive collection of non-timber forest products.

According to information provided by MEA Focal Points and STEA, no government-initiated projects are currently being carried out that specifically address any of these primary issues. The Greater Mekong Subregion Environmental Cooperation Framework, funded by the ADB, is supporting biodiversity conservation in economic corridors. This programme may address loss of natural habitat for wildlife and may address one or more of the other issues as well.

Two of STEA's three ideas for eventual concepts and proposals that address biodiversity and that are described in section 3.1.1.1 – the one that deals with biodiversity conservation generally, and the one that deals with biodiversity assessment and

monitoring in protected areas and wetlands – could potentially address one or more of the principal issues identified.

WCS is carrying out projects on wildlife conservation and awareness generally, and specifically in support of the conservation and management of tigers, deer, elephants, and gibbons. WWF is implementing projects on the conservation of aquatic species, including fish and turtles. Past projects include training in taxonomy, sustainable use of non-timber forest products and wildlife status (IUCN), elephant conservation (IUCN and WWF) and crocodile conservation (WCS).

3.1.1.3 Pollution control (21 in Matrix 1 and Matrix 2)

The VIII Party Resolution addresses pollution control only in the context of pollutant and pesticide-free agriculture – Program 2, Project 6. The NSEDP is more comprehensive but nevertheless very general, specifying implementation measures for preventing pollution and for ensuring transfer of technology to do so. The recommended actions in the NES call for reducing pollution and, similar to the NSEDP, for carrying out research on technology transfer for pollution prevention and control.

The five pollution-related MEAs – the FCCC and Kyoto Protocol, the Vienna Convention and Montreal Protocol, and POPs – all address pollution prevention and control of various types of toxic substances and other types of pollutants.

National laws with provisions related to ecosystem management and conservation include: Environment Protection Law, Land Law, Water Law, Agriculture Law, and Decree on Ozone Depleting Substances. These laws are discussed in detail in section 3.2.4, below.

Current principal issues in pollution control include:

- lack of national ambient and discharge standards; and
- overlapping jurisdiction for pollution control among several ministries.

A project funded by the Swedish International Development Agency (SIDA) is supporting the development of national emissions standards and ambient standards and of an amendment to the Environment Protection Law to clarify institutional responsibility for pollution control. This project addresses both of the primary issues identified.

Among STEA's ideas for eventual concepts and proposals are the following: a study of the environmental impact of Vientiane's wastewater on the Mekong River and That Luang swamp; chemical pollution control; hazardous chemical monitoring and assessment; air quality monitoring in Vientiane and other urban areas; and independent monitoring and audit of the mining and hydropower sectors.

3.1.1.4 Sustainable agriculture (23 in Matrix 1 and Matrix 2)

The VIII Party Resolution and the NBSAP identify sustainable agriculture as a development priority for Lao PDR. Program 2, Project of the VIII Party Resolution addresses integrated agriculture that is pollutant and pesticide-free. Programme 2, Objective 10 of the NBSAP is entirely focused on sustainable agriculture, with 11 recommended actions to be carried out by 2010.

Three MEAs – the FCCC, Kyoto Protocol and the CCD – contain obligations related to sustainable agriculture. The FCCC calls for reducing greenhouse gas emissions in the agriculture sector and for preparing integrated plans for agriculture. Both the Kyoto Protocol and the CCD specifically call for promoting sustainable agriculture practices.

The concept of sustainability in agriculture is not integrated into any national law, not even the Agriculture Law.

Current principal issues in sustainable agriculture include:

- expansion of commercial agriculture;
- use of monocultures; and
- use of chemical fertilizers and pesticides.

The Ministry of Agriculture and Forests is currently carrying out a campaign to promote organic farming and sustainable highland cultivation.

One of STEA's ideas for an eventual concept and proposal is for Phase 3 of a project on environmental policy and planning for sustainable agriculture and rural development that could potentially address all of the primary issues identified.

Since 2000, WWF has completed a project on sustainable agriculture in Hin Nam Ho National Protected Area. IUCN has in the pipeline a project on agrobiodiversity that would address all of the current principal issues.

3.1.1.5 Traditional knowledge (25 in Matrix 1 and Matrix 2)

This issue is promoted in the VIII Party Resolution and in three of the five national strategies reviewed, but with the exception of the Law on National Heritage, it is not integrated into national law. The Law on National Heritage is discussed in more detail in section 3.2.3, below.

In addition to the VIII Party Resolution, the NES, Forest Strategy, and the NBSAP provide for protecting and promoting traditional knowledge. Project 16 of Program 10 of the VIII Party Resolution would promote traditional knowledge. Recommended actions under the NBSAP include protecting and recording traditional knowledge and integrating it into the management of biological resources. The NES also emphasizes integration of traditional knowledge into the management and use of biological resources and particularly focuses on traditional knowledge in the context of land use and forest management. The Forest Strategy considers traditional knowledge only in the context of protecting intellectual property rights in traditional knowledge associated with forest products.

The MEAs that contain obligations related to traditional knowledge are the CBD and the CCD. The CBD calls on Parties to protect, preserve and maintain traditional knowledge related to the conservation and sustainable use of biological resources and promote its application, subject to the consent of the people who hold the traditional knowledge. The CCD contains a provision similar to the CBD that also seeks to ensure that owners of traditional knowledge directly benefit from its use.

Current principal issues related to traditional knowledge include:

- lack of a system to identify, record and promote the use of traditional knowledge; and
- lack of clarity concerning institutional responsibility for traditional knowledge.

There are no government-initiated current projects or proposals in the pipeline to address the issue of traditional knowledge.

IUCN is currently carrying out a project for rapid trade and environment assessments that includes a component on traditional knowledge which addresses the issue of institutional responsibility.

3.1.2 Cross-cutting issues

Sub-sections 3.1.2.1-3.1.2.3 discuss the three cross-cutting issues – institutional arrangements, education and public awareness, and private sector involvement – that are identified as priorities in the VIII Party Resolution as well as the national development plans and strategies.

There are four issues, all cross-cutting, that are not included in the Programmes and Projects of the VIII Party Resolution, but which are included in all of the other national development strategies and plans reviewed for this comparative analysis and which intersect with MEA obligations. While issues 3.1.2.4-3.1.2.9 – identification and monitoring, training, public participation, incentives, and sustainable use – may be considered secondary for MEA implementation because they are not included in the VIII Party Resolution, they are clearly national development priorities as expressed in the national development plans and strategies.

It is feasible to include all nine of the primary and secondary cross-cutting issues (3.1.2.1-3.1.2.9) in most, if not all, national development programmes and projects. Donors are familiar with MEA obligations, and particularly with their own commitments to support developing countries in meeting them. Donors should also be aware of the issues-based approach to MEA implementation. Proposals for development support that contribute to MEA implementation at the same time that they contribute to meeting national development goals will be easier to justify to donors.

3.1.2.1 Institutional arrangements (13 in Matrix 1 and Matrix 2)

Projects 3 and 4 of Program 11 of the VIII Party Resolution call for defining division of responsibilities between ministries and the provinces and for improving governance and public administration generally. The NES highlights institutional reform to ensure appropriate environmental management; Focused Programme 3 is entirely dedicated to the issue of institutional reform. The Forest Strategy contains multiple recommended programs and actions to ensure that institutional arrangements are appropriate to deliver the results set out in the strategy. The NBSAP specifies several actions aimed at improving institutional arrangements to ensure conservation and sustainable use of biological resources, and the EES makes similar recommendations to ensure its implementation. Only the NSEDP does not address institutional arrangements.

Five MEAs – the World Heritage Convention, the CCD, the Vienna Convention and Montreal Protocol, and CITES – contain specific obligations for Parties to provide the institutional mechanisms necessary to implement them.

All national laws reviewed include provisions on institutional arrangements. These laws are discussed in detail in section 3.2.5, below.

Defining and formally establishing a coordination mechanism to facilitate issue-based implementation of MEAs in Lao PDR is a major focus of the MEA project.

Following completion of the National Capacity Self-Assessment project, additional funds are expected to strengthen institutional capacity for sustainable natural resource management; no information is available on when these funds may be expected.

STEA's ideas for eventual concepts and proposals include the following: strengthening environmental management in all provinces except those already supported by SIDA; strengthening the environment and development training institution; capacity building for sectoral and provincial environmental management and monitoring units; public service modernization programme; capacity-building for provincial-level offices in GIS and the National Environment Information System; training for e-government, government officials, environmental quality inspectors, and scientists and researchers; training in developing and writing project proposals; and training in the use of economic tools, particularly the contingent valuation method.

Two-thirds of the current and past projects implemented by IUCN, WCS and WWF addressing the five principal issues discussed in sections 3.1.1.1-3.1.1.5 included a component dealing with institutional arrangements. All of the projects these organizations have in the pipeline will address institutional arrangements.

3.1.2.2 Education and public awareness (8 in Matrix 1 and Matrix 2)

The importance of education and public awareness are highlighted in the VII Party Resolution and in all of the development plans and strategies reviewed for this comparative analysis – the NSEDP, NES, Forest Strategy, NBSAP, and the EES. Programme 10, Project 7 of the VIII Party Resolution calls for reform of the national education system. The Environmental Education Strategy 2020 specifically calls for integrating environmental education into both the formal and non-formal education systems. Applying the Environmental Education Strategy 2020 and Action Plan 2006-2010 to the reform process initiated by the VIII Party Resolution will require integrating the principles and practice of environmental protection and natural resource conservation into the national curriculum for primary and secondary schools and for universities and technical schools as well.

Education and public awareness are obligations in eight of the 10 MEAs to which Lao PDR is a party; the only MEAs which do not contain obligations for education and public awareness are CITES and the Vienna Convention.

Even though education and public awareness are priorities established by the VIII Party Resolution and all of the national plans and strategies reviewed, only the EPL and the Law on National Heritage contain obligations concerning these issues. None of the sectoral laws address either education or public awareness of activities and issues related to the sector. See section 3.2.6, below.

Current principal issues related to environmental education and public awareness include:

- limited knowledge and understanding among the general public about environmental protection and natural resource conservation; and
- very limited public access to environmental data and information.

Two faculties of the National University of Laos – the Faculty of Social and Environmental Science and the Faculty of Forestry – have recently introduced courses on environmental studies.

The Department of Environment (DoE)/STEA, with SIDA support, has worked with the Ministry of Education to incorporate environmental studies into formal and non-formal education. DoE also works with the Ministry of Information and Culture to develop media programmes and environmental campaigns to raise public awareness about these issues. Other ministries, including Public Health, Commerce and Industry, Communication, Transport, Post and Construction have *ad hoc* programmes on environmental education and awareness.

Two of STEA's ideas for eventual concepts and proposals would support education and public awareness: one to develop a teaching manual for environmental education; and another to support the establishment of a national research and education network.

More than three-quarters of the current and past projects implemented by IUCN, WCS and WWF addressing the five principal issues discussed in sections 3.1.1.1-3.1.1.5 include a component on education and public awareness. Three of four projects that these organizations have in the pipeline will include education and public awareness.

3.1.2.3 Private sector involvement (27 in Matrix 1 and Matrix 2)

The VIII Party Resolution and all of the national strategies and plans reviewed for this comparative analysis include involvement of the private sector in development as a priority. In its direction and measures for implementation, the VIII Party Resolution specifies the creation of a mechanism to promote cooperation between the public and private sectors. The NSEDP calls for removing all barriers to domestic private sector involvement and highlights private sector action in several sectors, including services, transportation, tourism, health care and culture. One of the actions called for in the NES is preparation of a plan to promote private sector participation in environmental protection and management. The Forest Strategy aims for private sector participation in extension services, while the NBSAP recommends private sector involvement in protection and sustainable use of forest resources generally. The NBSAP also recommends action on the part of the private sector to integrate environmental concerns into its decision-making generally and particularly to enhance its involvement in initiatives in the tourism sector and in urban environmental protection. Strategies 2, 3 and 4 of the EES call for private sector participation in environmental education.

Of the MEAs, the CBD, CCD, and Cartagena Protocol have substantive provisions on private sector participation in conservation and sustainable use of natural resources, while POPs calls for private sector involvement in its Preamble.

The EPL, the Industrial Processing Law, the Mining Law, and the Electricity Law include provisions on private sector involvement. These laws are discussed in detail in section 3.2.7, below.

The principal issue related to private sector involvement is that, although this is a priority for the government, there are currently no opportunities for the private sector to be an active participant in environmental protection and natural resource management. Current thinking tends to expect that the private sector would contribute resources for environmental protection. The private sector, however, is generally more interested in forming partnerships to achieve specific results and does not see itself as a primary resource provider. In Lao PDR, there is also interest in promoting the private sector to undertake third-party environmental monitoring to reduce the burden on government agencies.

Three of STEA's ideas for eventual concepts and proposals would focus on the private sector by supporting: programmes that stimulate entrepreneurship and human resource development; development of ecotourism generally; and research on ecotourism development and poverty eradication in Phongsaly Province.

More than one-third of the current and past projects implemented by IUCN, WCS and WWF addressing the five principal issues discussed in sections 3.1.1.1-3.1.1.5 involved the private sector in some way. IUCN's proposed project on agrobiodiversity would also involve the private sector.

3.1.2.4 Identification and monitoring (No. 4 in Matrix 1 and Matrix 2)

The NSEDP, NES, Forest Strategy, and the EES all include monitoring of environmental quality and of the impact of sector activities on the environment as a priority action. Only the NBSAP, in the first objective of Programme 1, incorporates identification of biological resources and improvement of the knowledge base about them as a priority. In contrast to the other national strategies and plans, the NBSAP calls for monitoring only in the context of controlling alien invasive species.

While the national strategies and plans focus on monitoring, the seven MEAs with substantive obligations on identification and monitoring emphasize identification of the resources and substances they govern in order to establish baseline data as a starting point for monitoring. The CBD and POPs contain provisions for both identification and monitoring. The World Heritage Convention, Kyoto Protocol, Vienna Convention, Cartagena Protocol all call on Parties to identify the resources and substances they govern and do not contain obligations for monitoring. CITES is the only MEA that provides only for monitoring, with no provision for identification.

All national laws reviewed assign responsibility for monitoring and inspection, but not for identification. These laws are discussed in detail in section 3.2.8, below.

There are no government-initiated current projects that involve identification and monitoring of natural resources and environmental quality. Several of STEA's ideas for concepts and eventual proposals, when they are developed, could include a component to support identification and monitoring.

More than 70% of the current and past projects implemented by IUCN, WCS and WWF addressing the five principal issues discussed in sections 3.1.1.1-3.1.1.5 include a component on identification and monitoring. Three-quarters of the projects these organizations have in the pipeline will include identification and monitoring.

3.1.2.5 Training (No. 9 in Matrix 1 and Matrix 2)

The NSEDP sets training of scientists as a priority, as well as calling for vocational and sector-specific training. The NES prioritizes a coordination mechanism for training in environmental issues and specifies a list of areas in which training should be provided in all parts of the country. Recommended actions in the Forest Strategy include training in skills ranging from sustainable use of forest resources to legal drafting. The NBSAP establishes research, taxonomy, *ex situ* conservation and resource management as priority areas for training, while training is a key element of Strategies 1, 2 and 4 of the EES.

All of the MEAs, with the exception of the Montreal Protocol, contain obligations for training in the fields of the subjects they govern.

The majority of the national laws reviewed, with the exception of the Land Law, Water Law, and the Law on National Heritage, establish obligations concerning training. These laws are discussed in detail in section 3.2.9, below.

Current principal issues related to training include:

- There are no models for systematic training on environmental issues;
- Most training opportunities are organized on an *ad hoc* basis and are rarely based on the job descriptions of the individuals being trained or on their needs for career development;
- Most training opportunities share information but not focused on improving the skills of the individuals being trained.

To address these issues STEA, with the support of the Strengthen Environmental Management through STEA Project (SEM) project, has begun to develop a personnel information management system. Based on the information compiled, the project will assist STEA in developing job descriptions. The SEM project is also setting up a system for recording training. Future training will be organized according to the needs of staff in order to ensure their professional development.

STEA's ideas for eventual concepts and proposals include 14 that are directly related to capacity building. Training components could be included in most of STEA's other concepts when they are developed.

Two-thirds of the current and past projects implemented by IUCN, WCS and WWF addressing the five principal issues discussed in sections 3.1.1.1-3.1.1.5 include a training component. Three-quarters of the projects these organizations have in the pipeline will include training.

3.1.2.6 Public participation (No. 10 in Matrix 1 and Matrix 2)

The NBSAP and the NES emphasize public participation while the NSEDP gives it little attention. One of the objectives of the NBSAP is to ensure that public participation is a

compulsory component in project planning and design processes and that public participation is introduced as a guiding principle for all natural resource management activities. The NES establishes public participation as one of the six priority programmes, and specifies priority actions to involve people in development processes, including in particular environmental impact assessment (EIA) and land use planning and the EES makes it a priority as well. The Forest Strategy sets village-level participation in the management of forests, NBCAs and watersheds as priorities. The NSEDP provides only that people should be encouraged to participate in environmental protection and preservation.

Public participation is an obligation of the three “Rio conventions” and the Cartagena Protocol on Biosafety, as well as POPs. The CBD requires public participation only in the context of EIA, while the other MEAs have obligations for promoting and ensuring public participation in management and decision-making that are much broader in scope.

Only two of the national laws reviewed – the EPL and the Forestry Law – require public participation. These laws are discussed in detail in section 3.2.10, below.

The principal current issue related to public participation is that the role of the public in meetings is primarily passive, acting as an audience rather than taking an active part in raising issues and discussing them or being involved in decision-making processes.

The DoE/STEA is currently reviewing environmental assessment regulations to promote more active public participation in environmental assessment and pollution control by providing rights to the public to have access to environmental information, to be able to participate in decision-making processes, and to take action against project owners or operators who violate environmental laws and regulations. When STEA’s ideas for eventual projects are developed into proposals, they should comply with environmental assessment regulations and also include appropriate opportunities for public participation in the projects themselves.

More than 60% of the current and past projects implemented by IUCN, WCS and WWF addressing the five principal issues discussed in sections 3.1.1.1-3.1.1.5 involved public participation. Three-quarters of the projects these organizations have in the pipeline will involve public participation.

3.1.2.7 Incentives (No. 24 in Matrix 1 and Matrix 2)

The NSEDP and NES set general priorities for creating incentives for environmental protection, while the Forest Strategy, NBSAP and EES identify specific actions for which incentives are required. The NSEDP provides indirectly for incentives, specifying that appropriate policies on taxes, environmental protection expenditures and environmental funds are a priority. Focused Programme 5 of the NES is dedicated to financial mechanisms for environmental protection and for investment in environmental protection activities. One of the priority actions set out in the Forest Strategy is to improve funding and incentives for activities at household level. A priority action under the NBSAP is to establish appropriate incentives for NBCA management. The EES prioritizes incentives for environmental education and awareness generally.

Four MEAs contain obligations for establishing incentives. The CBD is the broadest obligation, calling for social and economic incentives for conservation and sustainable

use of biological resources. The Kyoto Protocol and POPs contain specific obligations for financial incentives to support the objectives of those conventions, while the CCD requires incentives only in the context of promoting technology to combat desertification.

All of the laws reviewed except for the EPL and Forest Law provide for incentives. These laws are discussed in detail in section 3.2.11, below.

Current issues related to incentives for environmental protection and sustainable use of natural resources include:

- Government resources allocated for activities related to environmental protection and sustainable use of natural resources are limited and rarely include incentives;
- Good practices used in major projects are viewed as exceptional cases and are not promoted as good models;
- Project developers and operators that make efforts to ensure good environmental management are neither recognized nor rewarded.

There are no government-initiated current projects that introduce incentives for good environmental management. Several of STEA's ideas for concepts and eventual proposals, when they are developed, could introduce incentives.

More than 35% of the current and past projects implemented by IUCN, WCS and WWF addressing the five principal issues discussed in sections 3.1.1.1-3.1.1.5 involved incentives. Three-quarters of the projects these organizations have in the pipeline will introduce incentives.

Two additional cross-cutting issues are included in four of the five national development plans and strategies:

3.1.2.8 Information exchange and access to information (No. 11 in Matrix 1 and Matrix 2)

The NBSAP contains the most extensive range of priority actions for compiling, systematizing and disseminating information related to biodiversity generally and to biosafety and forest resources in particular. Information exchange at the international level is also a priority in the NBSAP.

The NES prioritizes creation of a coordination mechanism for environmental information nation-wide, an action plan for managing environmental information, and production and dissemination of a report on the state of the environment at national and provincial levels. The Forest Strategy contains general and specific priority actions to improve access to information related to the sector, including the dissemination of research results, development of a demand-driven, household-based system for exchanging information, and publication of information on laws and regulations governing the sector. Information exchange is also a key component of the EES.

All but two of the MEAs – WHC and CITES – have obligations related to information. The Vienna Convention, Montreal Protocol, CBD, and Cartagena Protocol contain obligations on exchanging information. The Cartagena Protocol establishes the

Biosafety Clearing-house to facilitate information exchange. The CCD, FCCC, Kyoto Protocol and POPs obligate Parties to provide public access to information as well as to exchange information with other Parties.

The EPL, Forestry Law, Agriculture Law, Industrial Processing Law, Mining Law, and the Decree on Ozone Depleting Substances contain provisions on information exchange and/or access to information. These laws are discussed in detail in section 3.2.19, below.

Current issues related to information exchange and access to information include:

- There is no system for linking and accessing existing information that is held by a variety of projects and government agencies;
- There are no systems that facilitate access by the general public to environmental information held by government agencies.

One of STEA's ideas for eventual projects is to develop environmental resource centers in different parts of the country in places that will make it easy for people to have access to environmental data and information. These centers would also be facilities where environmental training can be organized, and eventually where the public could bring petitions and claims related to environmental problems.

Sixty percent of the current and past projects implemented by IUCN, WCS and WWF addressing the five principal issues discussed in sections 3.1.1.1-3.1.1.5 involved facilitating access to and exchange of information produced by the projects. Three-quarters of the projects these organizations have in the pipeline will have components promoting access to and exchange of information.

3.1.2.9 Sustainable development and sustainable use (No. 22 in Matrix 1 and Matrix 2)

Sustainable use of biological resources to ensure the sustainable development of the country is the goal of the entire NBSAP. The NSEDP calls for harmonizing economic development policy with the policy on natural resources protection and development and lists the preparation of models for sustainable development as one of its implementation measures. Focused Program No. 1 of the NES is entirely dedicated to priority actions to promote sustainable use of natural resources. Sustainable management and use of natural resources generally and of forest resources including wildlife and plants in particular is the focus of the Forest Strategy.

Four MEAs – the CBD, CCD, FCCC and POPs – contain obligations on sustainable use and sustainable development. The CBD establishes sustainable use as one of the overall objectives of the Convention and specifies substantive obligations for both sustainable use and sustainable development. The CCD establishes sustainable development as an objective and sustainable use as a fundamental principle and specified substantive obligations for both. The FCCC sets sustainable development as a fundamental principle, while POPs requires that national implementation plans must be integrated into national sustainable development planning. Neither the FCCC nor POPs contains obligations on sustainable use.

The EPL, Forest Law, Water Law, and Law on National Heritage address sustainable development and/or sustainable use. These laws are discussed in detail in section 3.2.12, below.

The key issue in ensuring sustainable development and sustainable use of resources is compliance with and enforcement of laws. Although national strategies and action plans call for sustainable development and sustainable use, many projects are not required to undergo environmental impact assessment as required by law. Illegal logging and hunting goes on, but few cases ever go to court.

STEA's ideas for eventual concepts and proposals include the following that have a specific focus on sustainability: sustainable financing for environmental protection; environmental policy and planning for sustainable agriculture and rural development (Phase 3); promotion of sustainable transport; securing resource sustainability through adaptation to climate change. Most of STEA's other ideas for projects could be developed to include a specific focus on sustainability.

Half of the current and past projects implemented by IUCN, WCS and WWF addressing the five principal issues discussed in sections 3.1.1.1-3.1.1.5 include a specific focus on sustainability. All of the projects these organizations have in the pipeline specifically focus on sustainability.

3.2 Legislation

The NSEDP calls for harmonizing economic development policy with policy on protection and development of natural resources. The Law on National Heritage in Article 4 echoes the NSEDP's call for harmonization, stipulating that socio-economic development is to be undertaken side-by-side with protection and conservation of national heritage.

At the policy level, harmonization appears to be well established as a concept. The VIII Party Resolution, NES, and NBSAP, as well as the NSEDP itself, for example, all support the Forest Strategy in requiring protection, conservation and sustainable management of forest resources. At the level of actions specified in each of these documents, there appears to be a significant degree of overlap, with no indication of how responsibility for each of the recommended actions is to be allocated.

The government of the Lao PDR has made relatively good progress in the development of legislation on protection of the environment and the management of natural resources in the last few years. Although Lao PDR does not have a comprehensive legal framework in this area, the country has framework laws that lay out general principles for development of further implementing regulations. These laws lack the conceptual harmonization that characterizes the national policy regime, however. This section examines obligations and principles common to MEAs to which Lao PDR is a Party and how existing Lao laws regulate such matters.

The laws reviewed for the purposes of this comparative analysis are: Environmental Protection Law 1999; Forestry Law 1996; Land Law 2003; Law on Water and Water Resources 1996; Law on Agriculture 1998; Industrial Processing Law 1999; Mining Law 1997; Electricity Law 1997; Law on National Heritage 2006; Decree on Ozone Depleting

Substances 2003. The primary issues on which the VIII Party Resolution, national development priorities, and MEA obligations coincide are addressed first in the sub-sections below.

3.2.1 Ecosystem conservation and management (No. 17 in Matrix 1 and Matrix 2)

Half of the laws reviewed contain general provisions related to ecosystem conservation and management. Article 13 of the EPL establishes a broad obligation to protect natural resources and Article 15 provides for designation of biodiversity conservation areas. Articles 41 and 42 of the Forestry Law establish strictly protected forests and three categories of conserved forests. The Law on National Heritage in Article 28 provides for the registration of national cultural and natural heritage. Article 43 establishes zoning for sites protecting national heritage. None of these laws indicate the relationship among biodiversity conservation areas, protected and conserved forests and national heritage sites.

The Water Law in Article 29 provides for protection of water resources generally and for maintaining forest cover in catchment areas. Areas for protection of water resources are to be established for the purpose of ensuring water supply for urban areas, but not for maintaining natural habitats. The Land Law in Articles 15-42 establishes rules and conditions for use of land on which water resources are located. Only the Law on National Heritage provides specifically for the designation of wetlands as protected areas, although the EPL's general provision on designation of biodiversity conservation areas would also include wetlands.

3.2.2 Species conservation and management (No. 18 in Matrix 1 and Matrix 2)

The Forestry Law is the primary law providing for species conservation and management. Only the Forestry Law stipulates, as required by the CBD, that species must be conserved outside of protected areas, as well as within them. The Forestry Law provides, in Articles 39 and 40, for the sustainable use of aquatic and terrestrial wildlife species and restricts hunting of species in prohibited categories. The EPL in Article 15 provides for designating protected and unprotected species and the Agriculture Law provides only for protection of fish and other aquatic animal species. The provisions in the Forestry Law, the EPL and the Agriculture Law are complementary, but no national law comprehensively governs conservation and sustainable use of species.

3.2.3 Traditional knowledge (No. 25 in Matrix 1 and Matrix 2)

Although the preservation and promotion of traditional knowledge features in the VIII Party Resolution as well as the NES, NBSAP and the Forestry Strategy, the issue is acknowledged in only one of the laws reviewed – the Law on National Heritage in Article 9, where it is included in the definition of intangible cultural heritage. There is no substantive obligation in any national law to implement the policy on traditional knowledge that is expressed in national development strategies and plans.

3.2.4 Pollution control (No. 21 in Matrix 1 and Matrix 2)

Although pollution control is a significant development issue, it is only selectively addressed in the laws governing polluting sectors and industries. The EPL contains an entire chapter on pollution control. At the same time, the EPL provides that each sectoral Environment Management and Monitoring Unit (EMMU) is to develop its own pollution control standards and inspect its own work. The Water Law in Article 42 specifies the activities leading to water pollution that are prohibited or controlled. Article 25 of the Land Law forbids water pollution, but the law does not deal with soil pollution or

any other type of pollution that may affect the land. The Agriculture Law contains several provisions controlling the use of fertilizers and pesticides. The Industrial Processing Law, the Mining Law, and the Electricity Law do not regulate pollution resulting from activities in those sectors.

3.2.5 Institutional arrangements (No. 13 in Matrix 1 and Matrix 2)

All of the laws reviewed contain provisions on institutional arrangements, but not all of them include conservation and environmental protection in the mandates of the responsible institutions, nor do they assign responsibilities for these functions at all levels, from central ministries to village administrations.

The EPL designates the institutions responsible for environmental management and monitoring. STEA has overall responsibility and is responsible for coordinating among sectors and local administrations. STEA carries out its coordination function through EMMUs at the sectoral ministry, provincial, municipal, special zone and district levels and through village administrations.

The Ministry of Agriculture and Forestry (MAF) is responsible for administering forests, water resources and agriculture. Under the Forestry Law, MAF and its provincial divisions, district offices and village administrations are responsible for preservation of the natural environment in the context of forest resources, which include wildlife generally and aquatic animals in particular. One of the basic functions of the Water Resources Law is to ensure that no damage is caused to the environment and one of the basic principles of water resources development is to ensure preservation of the environment. As MAF is responsible for administering the Water Resources Law, these basic principles should apply to any activities carried out for the water resources sector. Unfortunately, provisions of the Water Resources Law on the types of water use are not consistent with the basic principles. Medium-scale use is described to have “nominal” impact on the environment, as opposed to the basic function of causing no environmental damage. The descriptions of small-scale and large-scale use do not refer to their impact on the environment. Large-scale use requires a social impact assessment, but not an environmental impact assessment. The Agriculture Law includes development of regulations for environmental protection in the agriculture sector as a duty of MAF; there are no specific duties related to environmental protection in the agriculture sector at the provincial, municipal, special zone, district or village levels.

Under the Land Law, management of land for forestry and industry includes environmental protection. Management of land where water areas are located does not specifically include environmental protection, but all of the conditions for managing such land deal with conserving natural resources. The Land Law does not stipulate environmental protection as one of the principles of managing land for communications, defence, agriculture, construction, or cultural purposes. Nor does the Law on National Heritage specify environmental protection among the duties of the Ministry of Information and Culture.

The Ministry of Energy and Mining is responsible for administering the Electricity Law and the Mining Law, and the Ministry of Commerce and Industry administers the Law on Industrial Processing. Only the Electricity Law specifies environmental protection as a duty of the ministry; no such duty is included in the Mining Law or the Law on Industrial Processing. Although the Decree on Ozone Depleting Substances does not specify

environmental protection as one of the duties of STEA, that function is implicit in the objective of the decree.

The stated objective of the Decree on Ozone Depleting Substances is to implement the Montreal Protocol. The Law on National Heritage does not specify that it implements the World Heritage Convention, nor does the Forestry Law stipulate that it implements either the CCD or CITES.

3.2.6 Education and public awareness (No. 8 in Matrix 1 and Matrix 2)

Although most of the MEAs require education and public awareness, most national laws do not. Eight of the 10 MEAs to which Lao PDR is a Party include obligations to provide education and stimulate public awareness on issues related to the subject matter of the MEA. Only the EPL and the Law on National Heritage specifically provide for education and public awareness, while the Decree on Ozone Depleting Substances provides that it is a duty of STEA. Article 4 of the EPL stipulates that the government promotes environmental education and raises public awareness to support compliance with participate in the protection of the environment. In response to the mandate in EPL Article 4, STEA has collaborated with the ministries of Education and of Information and Culture to produce the Environmental Education Strategy 2020 and Action Plan 2006-2010 and to organize campaigns to raise public awareness on the environment.

3.2.7 Private sector involvement (No. 27 in Matrix 1 and Matrix 2)

The EPL addresses the private sector only as a potential source of contributions to the Environment Protection Fund. Similarly, under the Mining Law, Industrial Processing Law, and the Electricity Law the private sector is simply a potential investor. These laws were adopted in the late 1990s and do not reflect the more progressive approach to private sector involvement taken by the national development strategies and plans that were developed for the 21st century.

3.2.8 Identification and monitoring (No. 4 in Matrix 1 and Matrix 2)

Although the MEAs emphasize identification of the resources and substances they govern in order to establish baseline data on which to base monitoring, none of the national laws reviewed provide for the essential first step of identification. With the exception of the Land Law, all of the laws reviewed define monitoring principles and methods. These laws do not, however, prescribe the scope, terms and conditions for monitoring. Compounding the difficulty in conducting monitoring is the fact that Laos does not yet have environmental ambient quality and pollution control standards. Most environmental compliance certificates issued following an environmental impact assessment (EIA) as required under the EPL do not specify environmental conditions and requirements that developers have to comply with, making it difficult or impossible to enforce the law and ensure compliance (see sub-section 3.2.20, below).

3.2.9 Training (No. 9 in Matrix 1 and Matrix 2)

The EPL, Forestry Law, Mining Law, Electricity Law, and the Decree on Ozone Depleting Substances do not contain substantive obligations for training, but do assign responsibility for training. The Electricity Law is the only one that assigns the duty of training to the private sector, rather than to a government agency, requiring that concessionaires provide training. The Agriculture Law contains a substantive obligation to provide training for farmers and the Industrial Processing Law mandates occupational training.

The training provided for in the laws is sector-specific and, with the exception of the EPL, does not specifically provide for including training on environment and natural resource-related aspects of the sector. Even though the laws do not specifically provide for integrating information on the environmental impacts of sector activities and how to mitigate them into sectoral training, sectoral authorities should follow the directives in the national development plans and strategies and ensure that training for their sector includes this information.

3.2.10 Public participation (No. 10 in Matrix 1 and Matrix 2)

Public participation is not required under all but two of the national laws reviewed. The EPL, like the CBD, provides for public participation only in the context of EIA. The Forestry Law has a broader obligation for public participation in preserving, rehabilitating and propagating forest resources.

Public participation under Lao law has the connotation of passive participation. While the public may be called to participate in a meeting, there are few provisions to ensure that they are well informed and have access to information and advice that enable them to make well-informed decisions. There are few opportunities for citizens to influence or actually participate in decision-making processes, they generally do not have opportunities to participate in monitoring of compliance, nor are they empowered to take action for law enforcement.

3.2.11 Incentives (No. 24 in Matrix 1 and Matrix 2)

Only the Electricity Law specifically provides performance incentives for outstanding results in protection and preservation of the environment, in the form of credits and extensions of concessions.

The Agriculture Law and the Mining Law contain incentives for both compliance and performance. Incentives in the Agriculture Law are the most comprehensive, allowing credits and tax exemptions as well as capital and promotion funds for loans. The Mining law offers credits and license extensions.

The Water Resources Law allows for privileges for compliance with its provisions on protection and use of water resources, and with the provisions of the NSEDP, the NES, and the water resources allocation plan. Similarly, the Land Law contains compliance incentives in the form of additional leases and other awards for using land in accordance with regulations. The Industrial Processing Law, the Law on National Heritage, and the Decree on Ozone Depleting Substances have general provisions for privileges or awards for outstanding performance in the fields governed by those laws, but do not contain incentives for compliance.

Neither the EPL nor the Forestry Law provide for any type of incentive.

3.2.12 Sustainable development and sustainable use (No. 22 in Matrix 1 and Matrix 2)

The EPL establishes sustainable development as a fundamental principle. Although the Forestry Law and the Water Resources Law do not use the term sustainable development, the first article of each of those laws specifies that the function of the law is to ensure that measures that lead to sustainable use and sustainable development of forest and water resources are in place in the country. The Law on National Heritage

provides for sustainable use of national heritage, and in particular conservation forests that have been designated as national heritage.

None of the sectoral laws on agriculture, industrial processing, mining or electricity require that activities in those sectors must be sustainable.

3.2.13 Policies, strategies and action plans (No. 1 in Matrix 1 and Matrix 2)

Eight of the MEAs to which Lao PDR is a Party include an obligation to develop national policy, strategies and plans to guide implementation – only CITES and the Montreal Protocol do not.

Most of the laws reviewed require the government or concerned government authorities to develop policies, strategies and action plans on the protection and management of the environment and natural resources. In particular, Article 5.2 of the EPL requires that the NSEDP contain provisions on the management and protection of the environment and natural resources.

In contrast, articles 22.1 and 43.3 of the Law on Water and Water Resources provide that water management plans must be in compliance with the NSEDP. This means that economic development has higher priority than sustainable water resource management. It also means that water management plans may be subject to revision on the basis of changes in policy, rather than on sound principles of water resource management. These articles of the Law on Water and Water Resources are not consistent with Article 5.2 of the EPL. This inconsistency creates uncertainty for whomever attempts to comply with existing law and for whoever is responsible for enforcing it.

Provisions of other laws require ministries and authorities responsible for exploiting natural resources to develop policies, strategies and action plans for their own sectors. They include Article 70 of the Law on Agriculture, Article 44.1 of the Law on Industrial Processing, Article 49.1 of the Mining Law, Articles 43.1 and 43.3 of the Electricity Law. None of these laws specify that the sectoral policies, strategies or plans must provide for avoiding and mitigating the impact of the activities of those sectors on natural resources and the environment generally, but each of them imposes on the sector a duty of environmental protection or a duty not to cause damage to the environment. The letter of the law is therefore generally consistent with MEA obligations. What are lacking are legally-mandated incentives for these sectors to allocate resources to sustainable use of resources or to restoration and rehabilitation of ecosystems degraded by their activities.

3.2.14 Legislation (No. 2 in Matrix 1 and Matrix 2)

Matrix 2 shows the extent to which MEA obligations have been incorporated into 10 national legal instruments. Obligations which have been incorporated into most laws include monitoring, data collection, and performance incentives. Issues that are lacking in the majority of the laws reviewed include requirements for: preparation of inventories of natural resources; education and public awareness; public participation in decision-making related to resource management, technology transfer and technical cooperation. In particular, no law reviewed requires that there be a review of its enforcement and of compliance with its provisions (Number 14 in Matrix 1 and Matrix 2).

3.2.15 Inventories (No. 3 in Matrix 1 and Matrix 2)

Four MEAs – the World Heritage Convention, FCCC, Kyoto Protocol and CCD – require that Parties undertake of the resources governed by each of those conventions. Only the NES includes inventories of biological resources among the recommended actions; no other national strategy or plan, including the NBSAP, does this. As noted in sub-section 3.2.14 above, no national law provides for natural resource inventories.

3.2.16 EIA (No. 5 in Matrix 1 and Matrix 2)

The CBD requires EIA for activities that may have significant impacts on biodiversity and the FCCC calls on Parties to take climate change considerations into account in conducting EIA. Article 8 of the EPL establishes the requirement for EIA in Lao PDR. Developers and project operators are required to undertake EIA and to submit an EIA report before receiving an environmental compliance certificate and authorization to begin a project. Article 31 of the Mining Law and articles 6 and 14 of the Electricity Law require project developers to undertake EIA, but none of the other laws reviewed contain this requirement.

The implementing regulations on EIA are intended to provide guidance to ministries which, according to Article 8.2 of the EPL, must develop regulations for their specific sectors. The regulations, however, are vague. It is not clear, for example, whether plantation projects in the forest sector are required to undertake EIA.

Only the hydropower and transportation/road sectors have developed sectoral EIA regulations. The question now is whether developers and project operators have to comply with the general EIA regulations, with sectoral regulations, or with both.

3.2.17 Research (No. 6 in Matrix 1 and Matrix 2)

CITES is the only MEA that does not contain an obligation to conduct research. The EPL does not contain a substantive requirement to conduct research, but provides that research is one of the duties of the Science, Technology and Environment Agency (STEPA) and also of EMMUs at district level. Research requires trained personnel and, in many cases, sophisticated equipment as well, neither of which are available to most district-level EMMUs. The Forest Law provides that research is a duty of the Ministry of Agriculture and Forestry and the Mining Law provides that it is a duty of the Ministry of Energy and Mining. The Law on National Heritage promotes research. Article 58 of the Agriculture Law, in contrast, specifically assigns research responsibility to specialized research centres and experimental stations.

3.2.18 Data collection (No. 7 in Matrix 1 and Matrix 2)

Data collection is one of the MEA obligations that is most thoroughly implemented in national law. Six MEAs include obligations for collecting data related to the subject matter of the MEA. With the exception of the Decree on Ozone Depleting Substances, all of the laws reviewed contain a requirement for data collection. In addition to the type of data collection referred to in the conventions, national MEA focal points must collect data on issues related to the MEAs for which they are responsible and on projects that support MEA implementation.

3.2.19 Information exchange, access to information (No. 11 in Matrix 1 and Matrix 2)

The obligation to exchange information and facilitate access to information is not integrated consistently into national law. The EPL specifies that it is a duty of EMMUs at the sectoral, provincial, municipal and district levels to collect, summarize and disseminate information, but there is no corresponding for STEPA to facilitate this

process. Similarly, the Decree on Ozone Depleting Substances makes disseminating information a duty of provincial, municipal and special zone Science, Technology and Environment offices. Under the Forestry Law, it is a duty of MAF to create an information centre.

The Agriculture Law is the only one that contains a substantive requirement for the government to provide information on the sector and to create an information system. The Industrial Processing Law encourages individuals and organizations to collect information and provide it to the state, but does not require the state to grant access to information about the sector. Rather than facilitating access to information, the Mining Law provides only for safeguarding information about mineral resources.

3.2.20 Technology transfer (Number 12 in Matrix 1 and Matrix 2)

Eight of the 10 MEAs include obligations related to transfer of technology, in all cases emphasizing the need for developed country Parties to facilitate transfer of technology to developing countries. Nevertheless, the VIII Party Resolution does not include encouragement of technology transfer as a development priority, although it is included in the NSDEP, the NES and the NBSAP.

Only two national laws address the issue of technology transfer. The EPL provides that transfer of technologies related to environmental protection is to be authorized by the sector involved, in coordination with STEA. With the exception of the Agriculture Law, which includes technology transfer as part of international agricultural cooperation, the sectoral laws do not encourage any kind of transfer of technology, neither specifically for the sector nor for making sector operations more environmentally sustainable.

3.2.21 Ex situ conservation (Number 26 in Matrix 1 and Matrix 2)

Not surprisingly, it is only biodiversity-related MEAs that contain obligations for *ex situ* conservation. The CBD, in Article 9, sets out a comprehensive series of obligations for *ex situ* conservation. CITES provides for it in the form of rescue centres for confiscated living specimens. Of the national strategies and plans, only the NBSAP provides for *ex situ* conservation, as Objective 4 of Programme 2.

Neither the EPL nor the Forestry Law has requirements for *ex situ* conservation of wild species. The Agriculture Law provides for the establishment of seed and animal banks, apparently for cultivated and domesticated species only. The Law on National Heritage provides for museums.

3.2.22 Environmental protection and management (Number 29 in Matrix 2)

The majority of the laws reviewed impose an obligation to protect the environment, or define a duty not to cause damage to the environment. The only laws that do not do this are the Water Law, the Law on National Heritage, and the Decree on Ozone Depleting Substances. As for environmental management, the EPL stipulates that environmental quality standards must be set for each sector and the Water Law makes similar provisions for water quality standards. The Electricity Law sets a penalty for failure to comply with environmental standards, but does not contain an obligation for the sector to develop such standards. All but two of the other laws reviewed contain obligations concerning licensing, technical, equipment or safety standards, but do not specifically provide for setting environmental standards for the sector. The Land Law and the Law on National Heritage have no obligations related to environmental standards.

3.3 Fundamental principles

The MEAs set out basic principles that apply to all of their obligations – the precautionary principle, the principle of intergenerational equity, the principle of not causing harm outside national boundaries, and the polluter pays principle. Two of these principles – intergenerational equity and the polluter pays principle – are included in the NSEDP and the NBSAP. Only one of them is incorporated into national law – the polluter pays principle, which is a basic principle of the EPL.

The precautionary principle is expressed in five of the MEAs. It says that the lack of scientific certainty should not be used as an excuse to postpone action to avoid potentially significant or irreversible damage to the environment. The precautionary principle is a substantive obligation in the Climate Change Convention, the Cartagena Protocol, and POPs, and is stated in the Preamble to the CBD and the Montreal Protocol. The precautionary principle is not incorporated in any of the national development strategies and plans, nor is it expressed in national law.

The principle of intergenerational equity is a way of expressing sustainable development in legal terms. Equity is the fundamental principle of what is sometimes called “natural justice”. The concept of intergenerational equity was expressed as Principle 2 of the 1972 Stockholm Declaration. The Brundtland Commission report “Our Common Future” in 1987 defined “sustainable development” as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The principle of intergenerational equity re-states that definition of sustainable development as a legal principle, essentially saying that the current generation should use natural resources sustainably so that they are available for future generations to use them as well. This principle is a substantive obligation in the Climate Change Convention and is set out in the Preamble of the CBD and the CCD. This principle is not included in national law.

The principle of not doing harm outside of State boundaries was included as Principle 21 of the Stockholm Declaration in 1972. It is linked with the principle of sovereignty, which says that States have the sovereign right to exploit their own resources pursuant to their own environmental policies. In exercising their sovereignty, States have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction. It is a substantive obligation of the CBD and is included in the Preamble of the CCD and the Vienna Convention, but it is not expressed in national law.

The polluter pays principle says that a polluter must pay for the damage to the natural environment. The principle most likely originated in Sweden and is applied most widely in Europe. It is included in one national law – as Article 5.4 of the EPL. However, the burden of proof, lack of access to the judiciary and the cost of a court case make it difficult for most people in Lao PDR to implement this principle.

4. Conclusions

Lao PDR’s existing policy framework is relatively well harmonized with the country’s obligations under MEAs and provides a solid foundation for issues-based implementation of MEAs. The five priority substantive issues, three principal cross-

cutting issues and six additional cross-cutting issues for Lao PDR for the period 2006-2010 offer a great deal of scope and flexibility for designing programmes and projects that reflect and support the priority programmes set out by the VIII Party Resolution.

Using the results of this comparative analysis to guide future project design will result in projects that are more cost effective because they implement obligations under two or more MEAs and contribute to natural resource management, environmental protection and sustainable development at the same time.

4.1 Clustering

Matrix 3 shows the relationships among the priority issues, the MEAs and the MEA clusters. It also illustrates that clustering by MEAs will always not be to Lao PDR's advantage and that in many cases it will be more advantageous for Lao PDR to focus on issue-based clustering.

For example, an issue-based project on the national priority of ecosystem management could eventually contribute to implementing five MEAs – the WHC, CBD, CCD, FCCC, and the Kyoto Protocol. Three of these MEAs – the WHC, CBD and CCD – fall into UNEP's biodiversity cluster while the other two are in the atmosphere cluster. Strictly following the UNEP MEA clusters to design a project on ecosystem management would require a focus on either biodiversity or climate change. As the recent reports of the Inter-governmental Panel on Climate Change make clear, it is increasingly impossible to separate climate change from the multiple impacts it creates on biological resources. Future initiatives on ecosystem management will have to take climate change into account along with biodiversity conservation considerations.

Another example is the national priority of sustainable agriculture. A project on sustainable agriculture could contribute to implementing the CCD, FCCC and the Kyoto Protocol. As in the previous example, MEA clustering would require a focus on either the biodiversity-related MEA – the CCD – or on the climate change related MEA. In contrast, focusing on the issue of sustainable agriculture makes it possible to conceptualize and design a development project in the agriculture sector to incorporate both biodiversity and climate change considerations.

Similarly, the national priority issue of pollution control cuts across two MEA clusters – atmosphere, and chemicals and wastes. An eventual project on controlling imports of polluting substances will be more efficient and effective if, for example, it deals with both ozone-depleting substances and persistent organic pollutants.

4.2 Cross-cutting issues

Institutional arrangements are a high policy priority for the Government of Lao PDR, even though they are only reflected in half of the MEAs to which the country is a Party. A 2006 ADB report on National Environmental Performance Assessment recommends cross-sectoral coordination among STEA, the Ministry of Agriculture and Forests, the Ministry of Commerce and Industry, the Ministry of Communication, Transport, Post and Construction, and the Committee on Planning and Investment. The results of this comparative analysis give the Government the basic information that can be used to justify and design projects that promote cross-sectoral coordination, address national

priority development issues, and meet MEA obligations. The consolidated national mechanism for coordinating inter-sectoral implementation of MEAs to be developed under the MEA project would provide the platform for initiating such coordination.

Education and public awareness is an obligation under all but two MEAs – CITES and the Vienna Convention – as well as being a high priority issue for the Government of Lao PDR. The results of the comparative analysis indicate that any project that contributes to the implementation of any MEA should contain a component on education and public awareness.

It is interesting to note from Matrix 3 that only biodiversity-related MEAs require involvement of the private sector. Because engagement with the private sector is a priority cross-cutting issue, engagement with the private sector should be a component of projects dealing with climate change and chemicals and wastes as well.

Of the additional cross-cutting issues, training is an obligation under all but one MEA – the Montreal Protocol. Information exchange and access to information are obligations under all but two MEAs – WHC and CITES. Even though information exchange and access to information are not substantive obligations of these two MEAs, the issues are integrated into the current programmes of work of both. Identification and monitoring are obligations of the majority of MEAs to which Lao PDR is a Party and of MEAs in each cluster as well. The comparative analysis indicates that any project contributing to the implementation of any MEA should contain components on all three of these issues – training, information exchange and access to information, and identification and monitoring.

4.3 Decision-making

The comparative analysis has identified the priority issues for Lao PDR 2006-2010 and illustrated the possibilities for synergies among MEAs with respect to the country's priority issues. Issue identification is only the first step in a coordinated approach to implementing MEAs and meeting national development priorities. See Figure 1.

With the issues identified, planners must ask the following questions to determine the feasibility of each proposed intervention:

- What are the benefits?
- What are the costs?
- Are the costs higher than the benefits? If the answer is “yes”, reconsider the proposed intervention and adapt it.
- Is there sufficient institutional, human, and financial resource capacity for implementation? If the answer is “no”, reconsider the proposed intervention and adapt it.

The combination of national priorities and cross-cutting issues offer ample scope for designing conservation, environmental protection, and development projects that implement multiple MEAs.

Assuming that interventions will be proposed only if they address one or more of the national priorities and cross-cutting issues, if an intervention cannot be adapted so that

benefits are greater than costs, the intervention should be implemented only if there are overriding strategic factors that require it.

If it is not possible to adapt a proposed intervention so that it can be implemented with available capacity, it would be advisable to postpone the intervention and seek support to develop the required capacity.

4.4 Legislation

While Lao PDR has made significant progress in recent years in developing its legal regime for natural resource conservation and environmental protection, the existing legal regime is not as well harmonized with national policy as national policy is with MEA obligations. In all but a few cases, national laws do not explicitly implement MEAs and where they do, links between international obligations and national law are not established.

National laws contain complementary provisions on ecosystem management and species conservation, but none of these laws indicate the relationship among biodiversity conservation areas, protected and conserved forests, national heritage sites, and wildlife habitat protection. No national law comprehensively governs either ecosystem management or conservation and sustainable use of species.

There is no substantive obligation in any law to implement national policy on traditional knowledge.

Pollution control is addressed in the EPL, which requires sectors to develop their own standards and inspect their own work. Certain sectors – water and agriculture – regulate pollution control to a degree, while others – industry, mining, and electricity – do not regulate it at all.

All of the laws reviewed contain provisions on institutional arrangements, but not all of them include conservation and environmental protection in the mandates of the responsible institutions, nor do they assign responsibilities for these functions at all levels.

Although most of the MEAs require education and public awareness, most national laws do not. Only the EPL and the Law on National Heritage specifically provide for education and public awareness, while the Decree on Ozone Depleting Substances provides that it is a duty of STEA.

National law addresses the private sector only as a potential investor, with no provisions for collaboration with the private sector in natural resource management and environmental protection.

None of the national laws reviewed provide for identifying resources important for conservation. Only the requirement for EIA provides a mechanism for identifying processes and activities that are likely to have significant negative impacts on the environment. With the exception of the Land Law, all of the laws reviewed define monitoring principles and methods, but do not prescribe the scope, terms and conditions for monitoring.

Only the Agriculture Law contains a substantive obligation for training; other laws assign responsibility for training, in one case to the private sector. Training provided for in national law is sector-specific and, with the exception of the EPL, does not specifically provide for including training on environment and natural resource-related aspects of the sector.

Public participation is required under only two of the national laws reviewed – the EPL and the Forestry Law.

Only the Electricity Law provides incentives for performance in environmental protection. Neither the EPL nor the Forestry Law provide for any type of incentive for natural resource conservation and sustainable use. The Agriculture and Mining laws offer compliance and performance incentives and the Water Law and Land Law offer incentives for compliance. All other laws reviewed provide rewards for performance.

The EPL establishes sustainable development as a fundamental principle. None of the sectoral laws on agriculture, industrial processing, mining or electricity require that activities in those sectors must be sustainable.

Recommendations for legal reform in support of MEA implementation are set out in Section 5.4, below.

5. Recommendations

The contents of this section are derived from the analysis done for this report and are meant to provide a starting point for the future work of the coordinating mechanism that the MEA project will assist in establishing.

5.1 MEA implementation

The comparative analysis and the decision-making process described in Section 4.3 provide the rationale for justifying any proposed intervention that is based on the national priorities identified. This report should be shared with at least the following institutions identified in the 2006 National Environmental Performance Assessment report – the Ministry of Agriculture and Forests, the Ministry of Commerce and Industry, the Ministry of Communication, Transport, Post and Construction, and the Committee on Planning and Investment – as a first step toward strengthening cross-sectoral coordination among them and with STEA on MEA implementation.

5.2 Strategies and Action Plans

Issues that are not well-represented in national development plans and strategies include: natural resource inventories (see 3.2.15), EIA (3.2.16), data collection (3.2.18), technology transfer (3.2.20) and *ex-situ* conservation (3.2.21).

The NSEDP, the National Biodiversity Action Plan, and the Environment Education Action Plan all must be renewed in 2010. When the NSEDP and NBAP for 2011-2015 are being prepared, it would be advisable to review all MEA obligations, incorporate them appropriately in these plans, and particularly include provisions that address these

five issues. In particular, the NSEDP will need to include a focus on sustainable management of ecosystems outside of protected areas and of species that are not yet endangered.

5.3 Institutional arrangements

When natural resource conservation and environmental protection were introduced in national law and institutions, it was prudent to have several different authorities and agencies involved in all aspects of the protection and management of the environment and natural resources, to build support and cooperation on environmental matters and to ensure that sectoral programs took environmental issues into consideration.

Almost a decade of experience with administering natural resources (“green” issues) and pollution control (“brown” issues) and production (“gray” issues) through multiple central authorities indicates that it would be advisable to establish a separate authority to manage the “green” and “brown” issues, leaving the “gray” issues with the traditional sectoral authorities. In the context of environmental protection and natural resource conservation, that would mean that one ministry would be responsible for these issues, while sectoral ministries would continue to manage exploitation and production of natural resources in their sectors.

In order to avoid conflicts of interest within and among institutions, the functions of environmental monitoring and inspection should not be carried out by the same institution that is responsible for exploiting natural resources. The institution responsible for exploitation should have its offices attached to local administrative authorities and be close to local communities in order to ensure that extension and other services are available to the communities. The institution responsible for monitoring and inspection should not have its offices attached to local administrative authorities to ensure that it has the independence to undertake impartial inspections.

In considering the most effective way to implement such reforms, institutional design will have to take into account the availability of resources and personnel. When an institution is spread too thin – either in terms of finances or of personnel – it is impossible for it to deliver good service in carrying out its tasks. Institutional reform and design will therefore have to build in activities designed to create and strengthen institutional capacity.

Institutions responsible for environmental management need to cooperate to develop a mechanism or network for information exchange with the public, as well as the information-sharing mechanism that the MEA project would establish for the central government. The first priority should be to provide sources or information for citizens seeking advice and assistance when they face problems that have to do with natural resources and pollution. Most environmental data and information is held in public offices to which other government agencies and the majority of citizens often do not have access. Many institutions and authorities hold good databases, but the information is not in a format that can be shared.

5.4 Legislation

The only MEA that specifically requires sectoral reform to implement its obligations is the Kyoto Protocol. Nevertheless, it is understood that on becoming a Party to a MEA a

country should review its existing laws and regulations to see if they implement the MEA obligations. If they do not, the country should amend existing laws and/or prepare new laws and regulations, as necessary. In Lao PDR, MEAs are not self-executing, which means that their obligations must be implemented in national law.

5.4.1 As a matter of general practice, it is advisable to establish a procedure for periodic review and amendment of major national laws to ensure that they are up-dated on a regular basis. The first review of the laws that govern conservation and exploitation of natural resources should focus on the MEA obligations identified in Matrix 2 that are not currently included in the laws in order to bring them into compliance with the Government's international commitments.

5.4.2 As part of a legal reform process, when existing laws are amended provisions should be included to implement fundamental principles derived from MEAs: the precautionary principle, the principle of intergenerational equity, the principle of not causing harm outside national boundaries, and the polluter pays principle.

5.4.3 Existing laws governing natural resources and the sectors that exploit and impact them should be reformed to incorporate a rights-based approach. Existing laws define only obligations and duties on institutions and citizens who often do not have the means to fulfil such obligations. Specifying rights to sustainably use resources along with corresponding duties to conserve them will create a legal regime that facilitates compliance and enforcement.

5.4.4 No national law comprehensively governs either ecosystem management or conservation and sustainable use of species. One option to remedy that situation is to amend both the EPL and the Forestry Law to provide for comprehensive regulation under two laws and harmonize the amendments so that they are completely complementary. Another option is to develop a Biodiversity Law, as Viet Nam is doing, to serve as the framework law for biodiversity conservation, and ensure that the provisions of the EPL and the Forestry Law are harmonized with it.

5.4.5 Traditional knowledge is a policy priority, but there is no substantive obligation in any law to implement national policy on this issue. Protection of traditional knowledge would require new legislation – which could be a new Biodiversity Law – because there are no provisions in either the EPL or the Forestry Law under which regulations on traditional knowledge could be issued. Regulations on use of traditional knowledge must be harmonized with national law on intellectual property rights.

5.4.6 The EPL should be amended to provide for independent monitoring of sectoral pollution control. Sectoral legislation, particularly in the industry, mining, and electricity sectors, should be amended to establish requirements for pollution control and monitoring.

5.4.7 Responsibilities for natural resource conservation and environmental protection should be included in the mandates of all government institutions at all levels that are responsible for the conservation, management and exploitation of natural resources and for activities which use or generate pollutants.

5.4.8 Sectoral laws should be reformed to provide for education and public awareness about the environmental impacts of those sectors, the effect they have on the lives of citizens, and the measures that can be taken to prevent or mitigate them.

5.4.9 In line with national policy, national law must be reformed to enable and require collaboration with the private sector in natural resource conservation and environmental protection.

5.4.10 National law should require identification of resources that are important for conservation and of processes and activities that significantly affect those resources. That could be done by reforming the EPL and sectoral laws, or with a new Biodiversity Law. The EPL and all sectoral laws should be reformed to prescribe the scope, terms and conditions for monitoring resources, processes and activities.

5.4.11 The EPL and all sectoral laws should be reformed to provide incentives for both compliance and performance in natural resource conservation and environmental protection.

5.4.12 It would be preferable to replace the existing EIA regulations with a Prime Minister's Decree on EIA which clearly applies to all sectors and government agencies. The decree should contain a screening list specifying the kinds of projects that must undertake a full EIA, the types of projects that may submit an initial environmental evaluation (IEE), and the types of projects that do not have to undertake either EIA or IEE. The decree should provide for independent review of sectoral EIA regulations to ensure that they are in full compliance with the EPL and the general EIA regulations. The decree should also provide that when sectoral EIA regulations have been certified to be in compliance with the EPL and the general EIA regulations, developers and operators are required to comply only with the sectoral regulations. Projects in sectors that have not yet developed their own EIA regulations should comply with the general EIA regulations.

5.4.13 Legal requirements to conduct research should be assigned to institutions, including universities that have the human resource and technical capacity to absorb the assignments and carry them out. National laws that assign research responsibility to units and institutions that do not have research capacity only encourage non-compliance. It is true that national capacity to conduct research needs to be created and strengthened at all levels, which will require a significant investment in education and training that is more appropriately done at the national, rather than sectoral level.

5.4.14 National laws governing natural resources and the activities that affect them should be amended to require and enable public participation in making policy, law, and decisions concerning the management of those resources.

5.4.15 Environmental and other laws should be amended to guarantee the rights of citizens to have access information about environmental issues and the social consequences of environmental problems.

5.4.16 There should be national environment standards that all developers and project operators have to comply with. Until environmental quality standards or discharge standards, are established, conditions for compliance with environmental laws must be

included in contracts and concessions for natural resource exploitation and in the environmental compliance certificate

5.4.17 Environmental and other laws should be amended to shift the burden of proof from the plaintiff to the polluter and strict liability should be imposed on polluters.

Harmonizing provisions on natural resource conservation and environmental protection across all framework and sectoral laws would significantly strengthen the Government's scope for ensuring compliance with and enforcement of the national legal regime that governs natural resource conservation and environmental protection and implements MEAs.

Matrix 1: MEAs to which Lao PDR is a Party – Obligations and Principles

		WHC ^[1] 1987 ^[2]	FCCC 1995	Kyoto 2003	CBD 1996	CCD 1996	Vienna 1998	Montreal 1998	Cartagena 2004	CITES 2004	POPs 2006
1	Policies, strategies, action plans	5.a.	4.1.(b), 4.2.(a)	5, 10(a) &(b)	6, 15.7, 16.3, 16.4, 19.1	4.2.(c), 5(b), 9, 10	2.2.(b)		16.1, Annex III		5(a), 7
2	Legislation	5.d.	Preamble		8(k), 15.7, 16.3, 16.4, 19.1	5(e)	2.2.(b)		2.1	II.1	3.1.(a), 5(a)(ii)
3	Inventories	11.1	4.1.(a), 12.1.(a)	7.1		18.2					
4	Identification and monitoring	5.d.		3.4, 3.5, 3.7, 3.8 (establish baseline)	7		2.2.(a), 3		15.1, 16.1, 16.5, 18	IV.3	11
5	EIA		4.1.(f)		14						
6	Research	5.c. & e.	4.1.(g), 5(a), 5(b)	2.1.(a)(iv),10(d)	12(b) & (c)	17	2.2.(a), 3, Annex I	9	26.2		11
7	Data collection		4.1.(g), 5(a)	10(d)	7(d)	16	3.3, Annex I				11.2.(a)

Matrix 1: MEAs to which Lao PDR is a Party – Obligations and Principles

		WHC ^[1] 1987 ^[2]	FCCC 1995	Kyoto 2003	CBD 1996	CCD 1996	Vienna 1998	Montreal 1998	Cartagena 2004	CITES 2004	POPs 2006
	Education, public awareness	27	6.(a)(i)	10(e)	12(a), 13	5(d), 10.4, 19		9	23		5(a)(iv), 10
9	Training	5.e.	6.(a)(iv)	10(e)	12(a)	19	4.2.(d), Annex I	10.3.(b)(iii)	22		5(a)(iv)
10	Public participation		6.(a)(iii)		14.1.(a) (EIA)	3(a), 5(d), 10.2.(f)			23		10
11	Information exchange, access to information		4.1.(h), 5(b), 6(a)(ii)	2.1.(b), 10(f)	17	16	2.2.(a), 4.1	9	20, 21		9
12	Technology transfer, technical cooperation		4.1.(c), 4.3, 4.5, 4.8	10(c), 11.2.(b)	16, 18	6(e), 18	4.2	10.1	22.2		12.4
13	Institutional arrangements	5.b.				4.2.(g)	2.2.(b)	8		IX	

Matrix 1: MEAs to which Lao PDR is a Party – Obligations and Principles

		WHC ^[1] 1987 ^[2]	FCCC 1995	Kyoto 2003	CBD 1996	CCD 1996	Vienna 1998	Montreal 1998	Cartagena 2004	CITES 2004	POPs 2006
14	Assess compliance, enforcement		4.2.(e)(ii)	8				6, 8	33	8.1	5(a)(v), 16
		WHC ^[1] 1987 ^[2]	FCCC 1995	Kyoto 2003	CBD 1996	CCD 1996	Vienna 1998	Montreal 1998	Cartagena 2004	CITES 2004	POPs 2006
15	Notification				14.1.(c) & (d) (EIA)			2.5, 2.5bis, 2.7, 5.6, 5.7	8, 17		4.3
16	Reporting	29	4.1.(j), 4.2.(b), 12	7.2, 7.3	26	10.2.(g), 26	5	7	33	VIII.7	15
17	Ecosystem conservation & management, protected areas	5.b.	4.1.(d) & (e)	2.1.(a)(ii)	8, 9(d)	10.4					
18	Species conservation & management				8(h) (alien species), 9(c)					Entire agreement	

Matrix 1: MEAs to which Lao PDR is a Party – Obligations and Principles

		WHC ^[1] 1987 ^[2]	FCCC 1995	Kyoto 2003	CBD 1996	CCD 1996	Vienna 1998	Montreal 1998	Cartagena 2004	CITES 2004	POPs 2006
19	Access to genetic resources and benefit-sharing (ABS)				15						
20	Biosafety				8(g), 19				Entire agreement		
		WHC ^[1] 1987 ^[2]	FCCC 1995	Kyoto 2003	CBD 1996	CCD 1996	Vienna 1998	Montreal 1998	Cartagena 2004	CITES 2004	POPs 2006
21	Pollution control		4.2.(a)	2.1.(a)(vii) & (viii), 2.2, 3.1-3.3			2	2, 2A-2I, 3, 4, 4A, 4B			3, 4, 5, 6, 8
22	Sustainable development, sustainable use		3.4		8(e), 8(i), 10	10.4					13.4
23	Sustainable agriculture		4.1(c)	2.1.(a)(iii)		10.4					

Matrix 1: MEAs to which Lao PDR is a Party – Obligations and Principles

		WHC^[1] 1987^[2]	FCCC 1995	Kyoto 2003	CBD 1996	CCD 1996	Vienna 1998	Montreal 1998	Cartagena 2004	CITES 2004	POPs 2006
24	Provide incentives, reduce/eliminate perverse incentives			2.1.(a)(v)	11	18.1.(e)					13.1
25	Traditional knowledge				8(j)	17(c)					
26	Ex situ conservation				9					VIII.5	
27	Private sector involvement				10(e), 16.4	17.1(f)			22.1		Preamble
28	Sectoral reform to meet MEA obligations			2.1.(a)(vi)							
		WHC^[1] 1987^[2]	FCCC 1995	Kyoto 2003	CBD 1996	CCD 1996	Vienna 1998	Montreal 1998	Cartagena 2004	CITES 2004	POPs 2006
Principles											
29	Intergenerational equity		3.1		Preamble	Preamble					

Matrix 1: MEAs to which Lao PDR is a Party – Obligations and Principles

		WHC ^[1] 1987 ^[2]	FCCC 1995	Kyoto 2003	CBD 1996	CCD 1996	Vienna 1998	Montreal 1998	Cartagena 2004	CITES 2004	POPs 2006
30	Precautionary principle, approach, measures		3.3		Preamble			Preamble	Preamble, 1		1
31	Do no harm outside state boundaries				3	Preamble	Preamble				
32	Polluter pays										Preamble

1) MEA acronyms: WHC-World Heritage Convention; FCCC-Framework Convention on Climate Change; Kyoto-Kyoto Protocol to the FCCC; CBD-Convention on Biological Diversity; CCD-Convention on Combating Desertification; Vienna-Vienna Convention for the Protection of the Ozone Layer; Montreal-Montreal Protocol on Substances that Deplete the Ozone Layer; Cartagena-Cartagena Protocol on Biosafety to the Convention on Biological Diversity; CITES-Convention on International Trade in Endangered Species of Fauna and Flora; POPs-Stockholm Convention on Persistent Organic Pollutants.

2) For each MEA, the year indicated is the year that Lao PDR became a Party.

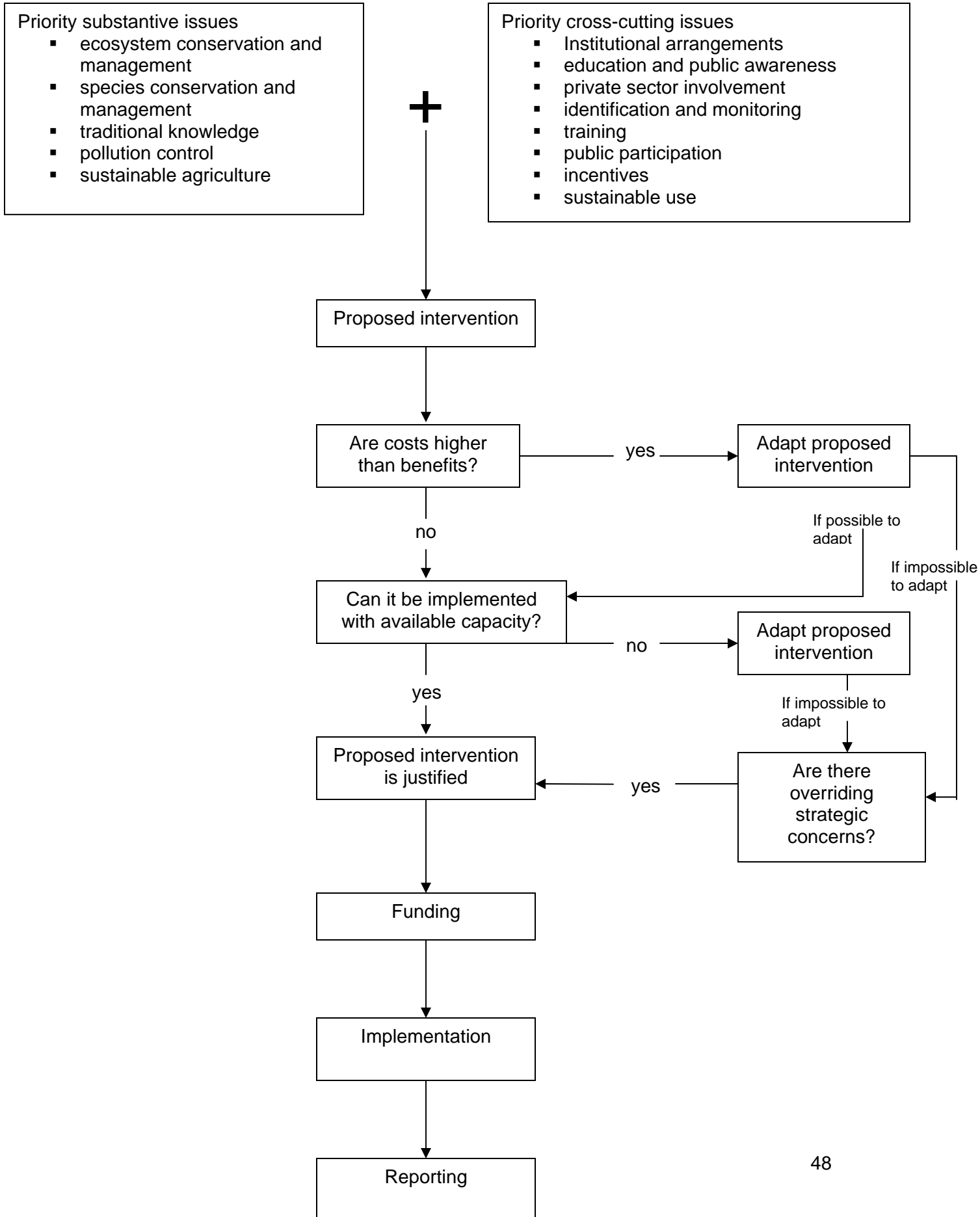
Matrix 2: Comparative Analysis -- MEA Obligations, National Development Strategies and Action Plans, and National Legal Instruments

Matrix 3: Priority Issues and MEA Clusters

	Priority Issues	MEAS TO WHICH LAO PDR IS A PARTY									
		UNEP MEA Clusters									
		Biodiversity					Atmosphere				Chemicals & Wastes
		WHC	CITES	CBD	Cartagena Protocol	CCD	Ozone (Vienna Convention)	Ozone (Montreal Protocol)	FCCC	Kyoto Protocol	POPs
	Substantive issues										
3.1.1.1	Ecosystem conservation and management	Blue		Blue		Blue			Blue	Blue	
3.1.1.2	Species conservation and management		Red	Red							
3.1.1.3	Pollution control						Brown	Brown	Brown	Brown	
3.1.1.4	Sustainable agriculture					Green			Green		
3.1.1.5	Traditional knowledge			Purple		Purple					
	Cross-cutting issues										
3.1.2.1	Institutional arrangements	Orange	Orange			Orange	Orange				
3.1.2.2	Education and public awareness	Pink		Pink	Pink	Pink		Pink	Pink	Pink	
3.1.2.3	Private sector involvement			Grey	Grey	Grey					
	Additional cross-cutting issues										
3.1.2.4	Identification and monitoring	Teal	Teal	Teal	Teal		Teal		Teal	Teal	
3.1.2.5	Training	Light Green	Light Green	Light Green	Light Green	Light Green		Light Green	Light Green	Light Green	
3.1.2.6	Public participation			Magenta	Magenta	Magenta		Magenta		Magenta	
3.1.2.7	Incentives			Yellow		Yellow			Yellow	Yellow	
3.1.2.8	Information exchange and access to information			Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	
3.1.2.9	Sustainable development and sustainable use			Green		Green		Green		Green	

Figure 1: Decision-making

(derived from Velasquez, 2007. <http://www.iisd.ca/mea-l/sm.jpg>)



References

Multi-lateral Environmental Agreements (MEAs)

MEAs to which Lao PDR is a Party

1. Cartagena Protocol on Biosafety. 2000. *Opened for signature 15 May 2000*. (Entered into force 11 September 2003.) The text of the Protocol is available on-line:
<http://www.cbd.int/biosafety/protocol.shtml> (accessed 23 May 2007).
Ratification status is available on-line:
<http://www.cbd.int/biosafety/signinglist.shtml> (accessed 23 May 2007).
2. Convention on Biological Diversity. *Opened for signature 5 June 1992*. (Entered into force 29 December 1993.) The text of the Convention is available on-line:
<http://www.cbd.int/convention/convention.shtml> (accessed 23 May 2007).
Ratification status is available on-line:
<http://www.cbd.int/convention/parties/list.shtml> (accessed 23 May 2007).
3. Convention on International Trade in Endangered Species of Wild Fauna and Flora. *Opened for signature 3 March 1973*. (Entered into force 1 July 1975.) The text of the Convention is available on-line:
<http://www.cites.org/eng/disc/text.shtml#texttop> (accessed 23 May 2007).
Ratification status is available on-line:
<http://www.cites.org/eng/disc/parties/index.shtml> (accessed 23 May 2007).
4. Convention concerning the Protection of the World Cultural and Natural Heritage. *Opened for signature 16 November 1972*. (Entered into force 17 December 1975.) The text of the Convention is available on-line:
<http://whc.unesco.org/en/conventiontext/> (accessed 23 May 2007).
Ratification status is available on-line: <http://whc.unesco.org/pg.cfm?cid=246> (accessed 23 May 2007).
5. Kyoto Protocol to the United Nations Framework Convention on Climate Change. 1998. *Opened for signature 16 March 1998*. (Entered into force 16 February 2005) The text of the protocol is available on-line:
<http://unfccc.int/resource/docs/convkp/kpeng.pdf> (accessed 23 May 2007).
Ratification status is available on-line:
<http://maindb.unfccc.int/public/country.pl?country=LA> (accessed 23 May 2007).
6. Montreal Protocol on Substances that Deplete the Ozone Layer. 1987. *Opened for signature 16 September 1987*. (Entered into force 1 January 1989.) The text of the Protocol is available on-line:
http://unfccc.int/files/essential_background/convention/status_of_ratification/application/pdf/unfccc_rat_130407.pdf (accessed 23 May 2007).
Ratification status is available on-line: http://ozone.unep.org/Ratification_status/ (accessed 23 May 2007).
7. Stockholm Convention on Persistent Organic Pollutants. 2001. *Opened for signature 23 May 2001*. (Entered into force 17 May 2004 .) The text of the Convention is available on-line:
http://www.pops.int/documents/convtext/convtext_en.pdf (accessed 23 May 2007). Ratification status is available on-line:

<http://www.pops.int/reports/StatusOfRatifications.aspx> (accessed 23 May 2007).

8. United Nations Framework Convention on Climate Change. 1992. *Opened for signature 4 June 1992*. (Entered into force 21 March 1994.) The text of the Convention is available on-line:
http://unfccc.int/essential_background/convention/background/items/2853.php
(accessed 23 May 2007). Ratification status is available on-line:
http://unfccc.int/files/essential_background/convention/status_of_ratification/application/pdf/unfccc_rat_130407.pdf (accessed 23 May 2007).
9. United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa. 1994. *Opened for signature 14 October 1994*. (Entered into force 26 December 1996.) The text of the Convention is available on-line:
<http://www.unccd.int/convention/text/convention.php> (accessed 23 May 2007).
Ratification status is available on-line:
<http://www.unccd.int/convention/ratif/doiif.php> (accessed 23 May 2007).
10. Vienna Convention for the Protection of the Ozone Layer. 1985. *Opened for signature 22 March 1985*. (Entered into force 22 September 1988.) The text of the Convention is available on-line:
<http://ozone.unep.org/pdfs/viennaconvention2002.pdf> (accessed 23 May 2007).
Ratification status is available on-line: http://ozone.unep.org/Ratification_status/
(accessed 23 May 2007).

MEA to which Lao PDR is in the process of acceding

1. Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar). *Opened for signature 2 February 1971*. (Entered into force 21 December 1975.) The text of the Convention is available on-line:
http://www.ramsar.org/key_conv_e.htm (accessed 23 May 2007). Ratification status is available on-line: http://www.ramsar.org/key_cps_ratifs.pdf (accessed 23 May 2007).

VIII Party Resolution, National Strategies and Plans

1. VIII Party Resolution 2006-2010 (*hard copy available from Prime Minister's Office*)
2. National Socio-Economic Development Plan 2006-2010 (*hard copy available from Committee for Planning and Investment*)
3. National Environment Strategy 2006-2020 (*hard copy available from STEA*)
4. Forestry Strategy 2020 (*hard copy available from Ministry of Agriculture and Forestry*)
5. National Biodiversity Strategy 2020 and Action Plan 2010 (*hard copy available from STEA*)
6. Environmental Education Strategy 2020 Action Plan 2006-2010 (*hard copy available from STEA*)

National Laws and Regulations

(*hard copy of 1-9 available from Ministry of Justice and/or National Assembly*)

1. Forestry Law, No. 04/96/NA, adopted 11 October 1996; last update No. 13/NA, dated 9 November 2005; Resolution of the National Assembly No. 57/NA, dated

- 09 November 2005; Decree of the President No. 143/PDR, dated 09 December 2005.
2. Law on Water and Water Resources, No. 02/96/NA, adopted 11 October 1996
 3. Land Law, adopted 12 April 1997, last update No. 04/NA, date 21 October 2003; Resolution of the National Assembly No. 04/NA, dated 21 October 2003; Decree of the President No. 61/PDR, dated 5 November 2003
 4. Mining Law, No. 04/97/NA, adopted 12 April 1997
 5. Electricity Law, No. 02/97/NA, adopted 12 April 1997
 6. Agriculture Law, 01/98/NA, adopted 10 October 1998
 7. Environmental Protection Law, No. 02/99/NA, adopted 3 April 1999
 8. Industrial Processing Law, No. 01/99/NA, adopted 3 April 1999
 9. Law on National Heritage, No. 08/NA, adopted 9 November 2005
 10. Decree on Ozone Depleting Substances, No. 162 /PM, issued 13 October 2003
(hard copy available from STEA)

Background Reading and Internet Resources

Boyer, Brook, Jerry Velasquez, Uli Piest. 2002. *National & Regional Approaches in Asia and the Pacific. Inter-linkages: Synergies and Coordination among Multilateral Environmental Agreements*. Tokyo: United Nations University.

International Institute for Sustainable Development (IISD). 2001. Summary Report of the Informal Regional consultation on Inter-Linkages: Synergies and Coordination among Multilateral Environmental Agreements, 26-27 February 2001. Vol. 48, Number 01, Thursday, 1 March 2001. (On-line). Available: <http://www.iisd.ca/download/asc/sd/sdvol48num1.txt> (Accessed 17 May 2007).

Letchumanan, Raman, Jerry Velasquez, Philip Mathews. 2002. *Case Study in the ASEAN Region*. Unpublished summary. Inter-linkages Initiative. United Nations University.

Malabed, Jong, Jerry Velasquez, Rajendra Shende, eds. 2002. *Inter-Linkages Between the Ozone and Climate Change Conventions. Part I: Inter-Linkages between the Kyoto and Montreal Protocols*. Tokyo: United Nations University.

Organization for Economic Co-operation and Development. 2002. *Integrating the Rio Conventions into Development Co-operation. The DAC Guidelines*. (On-line). Available: <http://www.oecd.org/dataoecd/49/2/1960098.pdf> (Accessed 17 May 2007).

United Nations Development Programme. 1997. *Synergies in National Implementation – The Rio Agreements*.

United Nations Environment Programme. Synergies and Inter-Linkages. (On-line). http://www.unep.org/dec/Support/Cross_Cutting/SynergiesInter-linkages.aspx (Accessed 17 May 2007).

United Nations University. Inter-linkages Initiative. (On-line). <http://www.unu.edu/inter-linkages/> (Accessed 17 May 2007).

———. 1999. *Inter-Linkages: Synergies and Coordination between Multilateral Environmental Agreements*. Tokyo.

Van Toen, Carlene. 2001. *Delegates Perceptions on Synergies and the Implementation of MEAs – Views from the ESCAP Region*. Paper prepared for the Informal Regional Consultation on Inter-linkages, Kuala Lumpur, 2001. Discussion paper series 2001-2002. Tokyo: United Nations University.

Velasquez, Jerry. 2007. A Structured Approach to the Promotion of Synergies among MEAs. *MEA Bulletin*. No. 25. Thursday, 26 April. International Institute for Sustainable Development (IISD) (in collaboration with United Nations Environment Programme (UNEP)).

Velasquez, Jerry. 2002. *National Framework for Inter-Linkages: Bridging Problems and Solutions to Work toward the Further Implementation of Agenda 21*. UNU Monitor. Tokyo: United Nations University.