

**Rapid Trade and Environment Assessment (RTEA)**

# **National Report for Lao PDR**

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**IISD**

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The RTEA is a project of the **International Institute for Sustainable Development**. IISD contributes to sustainable development by advancing policy recommendations on international trade and investment, economic policy, climate change, measurement and assessment indicators, and sustainable natural resources management. IISD's vision is better living for all—sustainably; its mission is to champion innovation, enabling societies to live sustainably. IISD has been supported in undertaking this project by the Swedish Environmental Secretariat for Asia (SENSA); the RTEA research team is grateful for the input of Mr. Christer Holtsberg and Dr. Anders Granlund (SENSA). A special thanks to Michelle French and Donna Huffman for copy editing and Don Berg for design and layout.

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# Acronyms

|        |   |
|--------|---|
| ACMECS | Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy                      |
| ADB    | Asian Development Bank  |
| AFTA   | ASEAN Free Trade Area   |
| AIA    | ASEAN Investment Area   |
| AISP   | ASEAN Integrated System of Preferences  |
| ASEAN  | Association of Southeast Asian Nations  |
| BIT    | bilateral investment treaty   |
| CEPT   | Common Effective Preferential Tariff  |
| CITES  | Convention on International Trade in Endangered Species of Wild Fauna and Flora |
| CPI    | Committee for Planning and Investment   |
| CSR    | corporate social responsibility   |
| DFQF   | duty-free, quota-free (market access)   |
| EHP    | Early Harvest Program   |
| EIA    | environmental impact assessment   |
| ESCAP  | (United Nations) Economic and Social Commission for Asia and the Pacific        |
| EST    | environmentally-sound technologies  |
| FDI    | foreign direct investment   |
| FTA    | free trade agreement  |
| GMS    | Greater Mekong Subregion  |
| GSP    | Generalized System of Preferences   |
| IISD   | International Institute for Sustainable Development                             |
| IPRs   | intellectual property rights  |
| IUCN   | The World Conservation Union  |
| LNTA   | Lao National Tourism Administration   |
| LDC    | least-developed country   |
| LNCCI  | Lao National Chamber of Commerce and Industry                                   |
| MAF    | Ministry of Agriculture and Forestry  |
| MDGs   | Millennium Development Goals  |
| MEA    | multilateral environmental agreement  |
| MFN    | Most-favoured Nation  |
| MAF    | Ministry of Agriculture and Forestry  |
| MoIC   | Ministry of Industry and Commerce   |
| MoFA   | Ministry of Foreign Affairs   |
| NES    | National Export Strategy  |
| NERI   | National Economic Research Institute  |
| NGPES  | National Growth and Poverty Eradication Strategy                                |
| NSC    | National Statistics Centre  |
| NTB    | non-tariff barrier to trade   |
| NTFP   | non-timber forest product   |
| NTR    | Normal Trade Relations  |
| NUoL   | National University of Laos   |
| PDR    | (Lao) People's Democratic Republic  |
| PFA    | Production Forest Area  |
| RO     | rules of origin   |
| PPMs   | process and production methods  |
| RTEA   | Rapid Trade and Environment Assessment  |
| S&D    | special and differential treatment  |
| SEA    | strategic environmental assessment  |
| SENSA  | Swedish Environmental Secretariat for Asia                                      |
| SFM    | sustainable forest management   |
| SIA    | strategic impact assessment   |
| Sida   | Swedish International Development Agency  |
| SME    | small and medium-sized enterprise   |
| SNV    | Netherlands Development Organisation  |
| SPS    | sanitary and phytosanitary (measures)   |
| STEA   | Science, Technology and Environment Agency                                      |
| TBT    | technical barriers to trade   |
| TMRC   | Traditional Medicine Research Centre  |
| WREA   | Water Resources and Environment Agency  |
| WTO    | World Trade Organization  |

## Preface

This project set out to test and refine a methodology—the *Rapid Trade and Environment Assessment* (RTEA)—aimed at providing decision-makers with advice on how to set a course for sustainable development in an era of rapid economic growth and trade liberalization. The RTEAs seek to answer the following questions:

- What impact will current and contemplated trade negotiations have on the environment and sustainable development?
- How can one best integrate environmental considerations with trade and investment liberalization?
- Are there green growth opportunities?

This is not a simple task; export-led growth involves dynamic processes and entails economy-wide impacts. While complex, the process of trade liberalization can deliver development gains if set in a sound domestic framework.

With the launch of pilot Rapid Trade and Environment Assessments in the Lao People’s Democratic Republic (PDR) and Thailand in October 2006, the work of the International Institute for Sustainable Development (IISD) on trade, investment and sustainable development has expanded in the Greater Mekong Subregion (comprising Cambodia, the People’s Republic of China (Yunnan and Guangxi), Lao PDR, Myanmar, Thailand and Vietnam). This project builds on the key elements of IISD’s work on sustainable development to raise awareness of the environmental impacts of trade liberalization. To conduct the RTEAs, IISD joined forces with IUCN – The World Conservation Union’s Asia Regional Office and with local partners. The project was funded by the Swedish International Development Agency (Sida).

The choice of Thailand and the Lao PDR for the pilot phase of the RTEA was deliberate. Thailand has been on a fast track to economic growth for over four decades. Notwithstanding decades of unbridled export-led growth, Thailand has chosen to base its recently-released *Tenth Economic and Social Development Plan* on the philosophy of the “sufficiency economy”—i.e., opting for quality over quantity of growth.

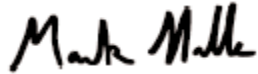
Lao PDR has only recently come into contact with the forces of globalization. While the framework for trade liberalization is currently being developed, Lao PDR is committed to open its economy to trade, to accede to the WTO and to graduate from the list of least-developed countries. It is clear that trade is expected to be the engine of growth and development in Lao PDR. Trade will change the structure of the economy and the rate of growth in Lao PDR which, in turn, will have an impact on the environment. This impact will not be inconsequential given the resource intensity of trade and investment.

There are myriad concerns raised by trade liberalization—mainly revolving around an increase in the scale of production placing an increased burden on the natural resource base without a sufficiently stringent regulatory framework and enforcement mechanism. Yet, the RTEA has also found mounting evidence of the potential for adding value in certain sectors and expanding green niche markets, such as silk handicrafts, organic agricultural products (rice and coffee), and sustainably-managed forest products.

Whether Thailand and Lao PDR can take advantage of the export potential of green niche sectors will also depend, to a great extent, on private sector initiatives. The ability of the private sector to capture opportunities arising from trade liberalization, in turn, depends on the institutional and regulatory setting in the country. To the extent that the RTEA can contribute to the policy coordination process, it will be a step in the direction of increasing awareness on how to move towards development that is sustainable in a dynamic subregion.

The proliferation of overlapping bilateral and regional trade and investment agreements is complicated to navigate, and the environmental implications are just beginning to be understood. It is indeed one of the main objectives of the RTEA to provide the understanding on which better policy coordination might be based—a task that is crucial but essential to setting a sustainable trade policy framework that embeds environmental considerations.

This is an important juncture for the Greater Mekong Subregion—the emerging dynamics are in the process of being defined and trade has become the currency of cooperation. In this light, the objectives of the RTEA are all the more relevant. Mechanisms such as the RTEA are worthwhile endeavours to assist governments in placing trade-led economic development on a sustainable path and to unravel some of the complexities involved in the policy linkages between trade and environment.

A handwritten signature in black ink that reads "Mark Halle". The signature is written in a cursive, slightly slanted style.

Mark Halle  
Director  
Trade and Investment Program  
IISD



# Executive Summary

Lao PDR is characterized by an abundance of natural resources and a small population of 5.6 million, the vast majority of whom live in rural areas and are dependent on subsistence agriculture. The country remains amongst the poorest in the region and ranks 133 out of 177 countries on the United Nations Human Development Index. The government has set a goal to graduate from “least-developed country” status by 2020. Lao PDR initiated a gradual shift to a market economy with the introduction of the *New Economic Mechanism* for economic liberalization in 1986. To a great extent, the strategy for reforming the economy is being situated in the context of Lao PDR’s commitments under the Association of Southeast Asian Nations (ASEAN) Free Trade Area and the process of accession to the World Trade Organization (WTO), as well as increasing bilateral relations and transportation links with neighbouring countries in the Greater Mekong Subregion (GMS). It is, therefore, clear that trade is expected to be the engine of growth and development for Lao PDR.

## Trade and investment context

Notwithstanding the rapid growth in the industrial and services sectors since the introduction of the reform process in the mid 1980s, agriculture continues to represent the lion’s share of the national economy, accounting for 45 per cent of GDP in 2005. However, the contribution of the agricultural sector to trade is relatively small. In 2005, this sector contributed only seven per cent to exports while it accounted for nearly 20 per cent of imports. The industrial sector has been driven by gold and copper mining, making it the main contributor to growth over the past five years and accounting for 30 per cent of GDP in 2005. Moreover, timber and garment exports played a significant role in the country’s economic performance throughout the 1990s—with an increasing contribution from electricity and mining—taking advantage of the abundance of unexploited forests, water, minerals and preferential textile and garment quotas prior to the termination of the WTO Agreement on Textiles and Clothing in 2005.

Lao PDR is situated in the centre of the Mekong region, bordered by Cambodia, China, Myanmar, Thailand and Vietnam. Lao PDR has committed itself to becoming a centerpiece for trade in the region—developing infrastructure to facilitate the freer movement of goods throughout the GMS, within ASEAN and between China and its ASEAN trading partners. However, while the country’s geographical location may offer opportunities, it also presents challenges, such as high transportation costs to get its exports to market and difficulty in monitoring trade along the Mekong River borders.

The recent flows of foreign direct investment (FDI) into Lao PDR have been an important source and guiding force for economic growth. Mining and hydroelectric power have attracted significant investment, with FDI reaching an estimated US\$500 million in 2006. The agriculture sector—specifically plantation production—is another key source of investment after mining, representing 15 per cent of FDI in 2004. Economic integration through the ASEAN Investment Area is expected to further promote flows of FDI from both ASEAN and non-ASEAN sources into Lao PDR by progressively streamlining and reducing investment regulations and conditions.

## Environmental context

Lao PDR’s path to development has been firmly rooted in developing its abundant natural resources, including water, minerals, wetlands, forests and biodiversity. For example, wood and wood products accounted for over 35 per cent of total export revenues and contributed over 15 per cent of GDP in 2005. However, as evidenced during the recent National Assembly meetings in July 2007, concerns are now being raised over the long-term sustainability of the current resource-dependent development path. For instance, while Lao PDR is still the most forested country in Southeast Asia, forested areas have declined considerably due to deforestation for timber and agricultural production, spill-over effects from hydropower and mining projects, and a lack of enforcement of the export ban on raw logs. Planned infrastructure develop-

ment will put further pressure on forests and biodiversity through road construction, increased pollution from transit, and illegal exports (timber, endangered wildlife and plant species).

The government of Lao PDR is in the process of elaborating a broad environmental policy and has assigned the recently created Water Resources and Environment Agency (WREA) with the responsibility of managing water and environmental resources in order to ensure sustainable development. Previously, the Science, Technology and Environment Agency (STEA) under the Prime Minister's Office held the main responsibility related to the environment and conservation of natural resources.

## Environmental impacts of trade liberalization in key sectors

In considering the linkages between trade and environment, it is helpful to keep in mind that countries that pursue trade liberalization agreements are ultimately seeking economic restructuring, which they anticipate will be beneficial on the whole for their economies and people. Whether trade and trade liberalization will in fact bring net benefits may vary from case to case. What is certain, however, is that whenever there is economic restructuring there are environmental impacts. These impacts may be positive or they may be negative, but there is no disputing the fundamental truth: trade is linked to the environment because economic change has environmental impacts. If we accept that trade can be both good and bad for the environment, the need to analyze environmental impacts becomes obvious. Where trade is liberalized, policy-makers need to be prepared to capture the positive opportunities and avoid any negative outcomes that may result.

The Rapid Trade and Environment Assessment (RTEA) has been developed as a practical tool to help integrate sustainable development considerations into trade and environment policy-making. It aims to provide policy-makers with the kind of information they need to better understand the environmental implications of trade liberalization initiatives. To this end, the RTEA examined 10 key economic sectors in Lao PDR: hydropower, mining, construction materials, wood and wood products, garments, tourism, organic agricultural products, silk handicrafts, medicinal plants and spices, and biofuels.

Rather than focusing on lengthy quantitative assessments (as is the case for most assessment methodologies), the RTEA provides a relatively fast assessment to identify and prioritize those trade policies, negotiations and sectors that have potential to negatively or positively impact the environment, and deliver the associated policy advice. In some cases, this may be sufficient information; in others, it may be the basis for more detailed analyses of policies, institutional capacities and information gaps. Table 1 summarizes the results of the RTEA in Lao PDR.

### Overview of the RTEA methodology

The evolving methodology of the RTEA tool is based on a six-step process:

- Step I: Partnership-building with key government and non-governmental actors in the country (establishment of a National Expert Advisory Panel to guide the research);
- Step II: Setting the context through statistical, empirical and economic analyses;
- Step III: Expert input through broad-based stakeholder interviews and a literature review;
- Step IV: Scenario-building to establish the potential impact of liberalization agreements on the regulatory framework and policy coherence;
- Step V: Identification of the potential environmental and social results of the impacts of trade liberalization as per scenario-building; and
- Step VI: Conclusions and strategic policy recommendations, culminating in a National Workshop.

**Table 1: Environmental impacts of trade and investment liberalization in Lao PDR**

| Sector                        | Trade and investment drivers   | Main environmental impacts   | Mitigating factors (environmental management framework)   |
|-------------------------------|--|--|---|
| Hydropower                    | Priority investment and growth sector; industrial development in the GMS; ASEAN Investment Area (AIA)  | -ve: flooding of forested areas; impacts on natural water flows; biodiversity loss (including fisheries resources)<br>+ve: increased government revenue to contribute to sustainable development; increased possibility to leap frog outdated approaches to environmentally-sound technologies (ESTs); mitigate climate change | National Growth & Poverty Eradication Strategy (2004) (NGPES); National Policy: Environmental and Social Sustainability of the Hydropower Sector in Lao PDR (2005)              |
| Mining                        | Priority investment and growth sector; overseas demand, especially from China and India; AIA   | -ve: forest clearance; water, land and air pollution; habitat loss<br>+ve: increased government revenue to contribute to sustainable development; leap frog to ESTs  | NGPES; environmental impact assessment (EIA) required under the Mining Law (1997)   |
| Construction materials        | Priority investment and growth sector; AIA   | -ve: pollution; impacts from mining raw materials<br>+ve: efficient materials can mitigate resource use; leap frog to ESTs   | NGPES; Medium-term Strategy and Action Plan for Industrial Development (2003)   |
| Wood and wood products        | Prioritized for export in the National Export Strategy (NES); government focus on developing processing industry; various trade agreements and preferences | -ve: deforestation; forest degradation; habitat and biodiversity loss; fewer non-timber forest products (NTFPs); land-use change for plantations<br>+ve: market opportunities for sustainable products enhance forest management   | National Export Strategy (2006–2010); Forest Strategy 2020, export ban on raw logs; SFM certification   |
| Garments                      | Prioritized for export in the National Export Strategy; various trade agreements and preferences   | -ve: transport pollution to get to the product to port<br>+ve: leap frog to ESTs   | National Export Strategy  |
| Tourism                       | Prioritized for export in the National Export Strategy; growth of tourism sector overall; AIA  | -ve: pollution, habitat loss, unsustainable resource use (waste and water)<br>+ve: value environment as a business asset; increased funds for conservation; local employment; awareness raising, including through CSR   | National Tourism Development Strategy 2006–2020; Nation Export Strategy – Tourism; National Ecotourism Strategy and Action Plan 2005–2008; GMS Strategy for Sustainable Tourism |
| Organic agricultural products | Land-use management, impacts on NTFPs; growing overseas demand, particularly the EU and U.S.; various trade agreements and preferences                     | -ve: deforestation; forest degradation; shifting cultivation<br>+ve: fewer chemicals; less land degradation; maintain landscapes and agro-biodiversity; increased awareness through high sanitary and phytosanitary measures (SPS) in export markets   | NGPES; National Export Strategy – Organic Agricultural Products; organic certification  |
| Silk handicrafts              | Prioritized for export in the National Export Strategy; to be integrated in the tourism sector; various trade agreements and preferences                   | -ve: water discharge and consumption; land-use change for plantations<br>+ve: less pollution from natural dyes; leap frog to ESTs; more sustainable production and processing methods  | National Export Strategy – Silk Handicrafts; Industrial and Handicraft Development Strategy toward 2020   |

| Sector                      | Trade and investment drivers  | Main environmental impacts  | Mitigating factors (environmental management framework)                               |
|-----------------------------|---|---|---|
| Medicinal plants and spices | Prioritized for export in the National Export Strategy; overseas demand primarily in Asia; various trade agreements and preferences | -ve: unsustainable resource use; land-use change for plantations; pollution; biodiversity loss<br>+ve: value of products coupled with sustainable harvesting can help protect forests; contribution to pro-poor strategies, rise in incomes of local communities; increased environmental awareness                                   | NGPES; Forestry Strategy 2020; National Export Strategy – Medicinal Plants and Spices |
| Biofuels                    | Development of domestic energy alternative source considered to be key to supplement expense of petroleum imports                   | -ve: land-use change for plantations; less land for food crops; mono-cropping; soil erosion; pesticide use; water consumption<br>+ve: less costly energy source increases government revenue to contribute to sustainable development; mitigate climate change; reduce air pollution; use of biodegradable outputs from other sectors | Strategy for development of alternative biofuels (under development)                  |

Source: Compiled by the authors based on research and stakeholder interviews conducted for the RTEA project.

## Conclusions

The following general conclusions are highlighted from the research.

- *First*, the analysis of the impacts of the economic scenarios on the environment of Lao PDR reveal mixed and variable outcomes for the selected sectors. For the main exports—electricity, minerals and wood products—economic growth is likely to result in a significant expansion of exports and place an increased burden on the natural resource base and the environment in Lao PDR. To a large extent, the framework for managing natural resources is still in the process of being developed. Whether the increasing extraction of natural resources in these main export sectors is sustainable will depend on the development and implementation of effective institutional and regulatory structures in Lao PDR, as well as the use of government revenue to advance socio-environmental objectives.

For those sectors which are environmentally and livelihood sensitive—ecotourism, organic agriculture, silk handicrafts, and medicinal plants and spices—economic growth is likely to result in an increased potential to develop “green” niche exports. Various obstacles will need to be overcome to realize the opportunities of developing these sectors, such as domestic supply-side constraints and non-tariff barriers to trade. Moreover, it needs to be borne in mind that such activities, even if aimed at supporting environmental protection, can have negative environmental impacts, such as land-use change and pressures from increased tourism. Again, the institutional and regulatory setting is an important variable in determining whether the outcome is positive or negative on the economy and the environment. Moreover, whether Lao PDR can harness the competitive advantage in these “green” niche sectors will depend to a great extent on private sector initiatives.

The RTEA puts forward a preliminary analysis of the potential environmental impacts of trade and investment liberalization. There is a need to study in greater detail specific policy linkages and monitor the implementation of liberalization commitments to ensure trade and environment policies are integrated.

- *Second*, Lao PDR is committed to putting in place a solid institutional and regulatory framework for managing natural resources and maintaining environmental sustainability. The evidence indicates

that implementation and enforcement of environmental rules and regulations is crucial and will likely prove to be a challenging issue in Lao PDR as trade-led growth accelerates. In order to meet this challenge, increased knowledge and capacity both in the public and, importantly, private sector are vital to ensuring positive outcomes.

- *Third*, openness to foreign direct investment is emerging as a key driver of development and export growth. The fact that a large share of FDI has been concentrated in the extraction of raw materials in the mining, hydropower and forestry sectors indicates the importance of ensuring that social and environmental considerations are taken into account in order to manage the natural resource base sustainably. This is an aspect that the government can build on to encourage sustainable investment in Lao PDR and stimulate transfer and use of environmentally-sound technologies, particularly in the mining and hydropower sectors.
- *Fourth*, the path forward charted by the government’s recent *National Export Strategy* emphasizes value-addition in many of the sectors examined in this report. An important factor for penetrating market access in many export sectors is emerging non-tariff measures and industry standards. These measures and standards may influence governmental regulations and private sector practices towards sustainable development. These measures cover certification and labelling for products as diverse as wood products, garments, agricultural products, silk handicrafts, medicinal plants and spices, and are relevant to the burgeoning tourism sector. The Lao private sector, thus, is a key stakeholder and plays a significant role in ensuring that exports can meet these increasingly strict standards. The government has a clear role to play in helping equip exporters with the necessary information and institutional support to help them meet these standards.

## Strategic policy recommendations

A number of *general recommendations* emerged from the research on how environmental impacts of trade and investment liberalization could be addressed:

- Continue to **raise awareness of the linkages between trade and environment** in diverse constituencies from the local to the national levels.
- Enhance **policy coordination and coherence on trade and environment** among the relevant policy-makers in government by assessing gaps in institutional capacities and strengthening institutional ability to meet changing priorities in Lao PDR.
- Recognize that **economic growth based solely on natural resources is not a panacea for development**. The extent to which the natural resource base is sustainably managed will determine longer-term growth potential.
- Enable an **inclusive domestic trade policy-making framework** and explore options for **institutionalizing a trade and environment body**, as piloted during the RTEA process, in order to allow input from the key stakeholders—related government ministries, private sector representatives and non-governmental organizations such as research and academic institutions.
- Strengthen the **role of the private sector in addressing environmental challenges in key sectors** and facilitate a domestic environment that attracts responsible business and encourage international best practice.
- Strike the right **balance between large environmental “footprint” and environmentally/people-sensitive sectors** to cushion the potential social and environmental impacts of export-led growth. Finding this balance will require solid coordination and effective policy-making among ministries. It will also need to strike a balance between FDI into those sectors which entail immediate benefit to the government and those activities which may take longer to foster but result in sustained gains for the people of Lao PDR.

- Ensure the appropriate **institutional and regulatory frameworks** are solidly in place and enforced in each sector. Enact and ensure compliance with regulations and policies for environmental management in order to provide an environmentally optimal enabling framework for trade liberalization to take place.
- Undertake **strategic impact assessment** of new policies, regulations, investments and projects in all sectors and raise awareness among stakeholders of the environmental and social impacts and possible mitigation measures.
- Strengthen **regional cooperation** to address the environmental impacts of economic integration. Of particular importance is managing the growing demand for natural resources in the GMS in pace with the development of infrastructure to facilitate the freer movement of goods, services and investment.
- Enhance **monitoring and assessment of the environmental impacts of trade liberalization** in order to ensure that investment and economic development priorities do not cause undue or avoidable social and environmental damage.
- Continue to collect **data on the current state of the environment, trade flows and potential environmental impacts** to aid in the policy-making and environmental management process.

In addition, *sector-specific recommendations* were identified in the background research papers and national workshop, including:

- Improve environmental governance at the same pace as current trends in FDI in the **mining, hydropower and construction materials sectors**, by encouraging companies to commit to a high standard of socio-environmental performance and ensuring clear investment laws and coordination mechanisms related to environment impact assessments.
- Encourage value-addition in the **wood and processed wood sector** to stimulate processing industries and obtain greater economic returns while ensuring sustainable resource use, including the promotion of forest certification and chain-of-custody verification.
- To enhance sustainability in the **tourism sector**, strengthen the Lao National Tourism Administration's ability to engage with the private sector and investment decision-makers to encourage the development of successful ecotourism models.
- Promote quality assurance in the **organic agricultural products sector** through the creation of certification bodies or by strengthening existing systems that fully take into account environmental and social considerations to help "green" exports meet international standards.
- The government should implement the *National Export Strategy* for the **silk handicraft sector** and work with the Lao Handicraft Association and the Lao National Chamber of Commerce and Industry through the creation of a silk handicraft fund to promote value-addition and foster diversification of the sector.
- Develop and enforce laws and regulations related to the forestry sector as a whole, and especially to non-timber forest products, such as **medicinal plants and spices**.
- Draft a national **biofuels** policy that clearly outlines environmental and social policies and is integrated with, and included in, a national energy production and management plan.

# Section I: Introduction

## 1.1 Background and methodology to the RTEA project

The Rapid Trade and Environment Assessment (RTEA) for the Lao People’s Democratic Republic (PDR) is a pilot project to assess the potential environmental impacts of trade liberalization. Research on the environmental impacts is based on seven background papers on nine economic sectors commissioned by the RTEA Expert Advisory Panel. These background papers were used as input to the RTEA National Workshop and are available on the Internet ([www.iisd.org](http://www.iisd.org) and [www.iucn.org](http://www.iucn.org)).

Both IUCN – the World Conservation Union in Lao PDR and the Committee for Planning and Investment (CPI) of the government of Lao PDR were identified as key partners to provide insight into the domestic context of trade and environment policy formation and implementation, and knowledge and access to key stakeholders. Based on recommendations from IUCN and CPI, an Expert Advisory Panel was established with representatives from key government agencies, industry, and academia (Annex I).

The role of the Expert Advisory Panel was to advise and direct researches on project implementation, provide access to stakeholders for interviews and give feedback and critique throughout the project. The members of the Expert Advisory Panel helped to develop the RTEA and were actively engaged in guiding the analysis at each step of the process. The Panel was chaired by the Permanent Secretary of the Lao CPI, with membership from the main ministries involved in trade and environment-related issues. The Panel convened four times during the project and was consulted regularly by the RTEA research team in between these formal meetings.

The assessment was divided into two phases of activity. Phase I consisted of a scoping exercise, defined by: partnership-building and the establishment of the Expert Advisory Panel; key stakeholder engagement; background research; and the identification of economic scenarios, (Steps I to IV of the methodology set out in Box 1). This phase yielded a picture of the current negotiations, what key elements are involved and stakeholder views of important issues of concern. It also provided initial insights into the scenarios that might unfold in current or planned trade negotiations.

### Box 1: Overview of the RTEA methodology

The evolving methodology of the RTEA tool is based on a six-step process:

- Step I: Partnership-building with key government and non-governmental actors in the country (establishment of a National Expert Advisory Panel to guide the research);
- Step II: Setting the context through statistical, empirical and economic analyses;
- Step III: Expert input through broad-based stakeholder interviews and a literature review;
- Step IV: Scenario-building to establish the potential impact of liberalization agreements on the regulatory framework and policy coherence;
- Step V: Identification of the potential environmental and social results of the impacts of trade liberalization as per scenario-building; and
- Step VI: Conclusions and strategic policy recommendations, culminating in a National Workshop.

The results of Phase I (Steps I to IV) set the context and boundary of the assessment, as a foundation for the further analysis of the scenarios in Phase II (Steps V and VI). During Phase II, the Lao Science, Technology and Environment Agency coordinated the research on the environmental impacts of nine eco-

conomic sectors including mining, hydropower and construction materials; wood and wood products; tourism; organic agricultural products; silk handicrafts; medicinal plants and spices; and biofuels. This research was then used as background information for the assessment and to illuminate sector-specific policy recommendations (see Annex V). The background research papers were also presented at the National Workshop.

The RTEA project was conducted over a 10-month period from September 2006 to June 2007, culminating in a National Workshop on 21 June 2007 in Vientiane (Annex VI contains the workshop agenda and Annex VII the workshop report). Reflecting the involvement of, and interest in this project, the Lao National Chamber of Commerce and Industry organized a dinner on 20 June for participants to highlight the role of the private sector in integrating trade and environment and achieving sustainable development in Lao PDR (Annex VIII contains a fact sheet on trade and environment prepared for this private-sector event).

## 1.2 Outline of this report

This National Report describes the work undertaken pursuant to the RTEA project in Lao PDR. Following the introduction to the project outlined above, Section 2 sets the context for the project. It highlights the linkages between trade and the environment and the rationale for assessing the policy interaction between these two policy areas. To assist in the analysis, a Trade and Environment Matrix of outcomes flowing from the research is presented. It then provides background on the economy, the environment and the current and planned trade liberalization initiatives in which Lao PDR is engaging.

The expected economic impacts of trade and investment liberalization are put forward in Section 3. It also explains how the sectors were chosen for analysis. Section 4 addresses how the expected economic developments could play out in terms of environmental impacts. This analysis is based on background papers commissioned for the project and includes both positive and negative environmental impacts, and identifies resource areas where pressure may increase, or where there is increased competition for these resources. The potential regulatory impacts of investment liberalization commitments are also discussed.

Section 5 provides a summary of the research findings and sets out selected strategic policy recommendations and suggests areas where national capacities may need strengthening to meet these new challenges. It also suggests a way forward for future research. A bibliography is contained at the end of the report. Annex I provides the composition of the Expert Advisory Panel. The methodology for this assessment is outlined in Annex II. A more detailed analysis of the structure of trade of Lao PDR is contained in Annex III.

Annex IV provides the list of the stakeholder interviews carried out for the project. The general and sector-specific recommendations arising from this research are further elaborated in Annex V. The agenda of the National Workshop is attached as Annex VI. The report on the National Workshop is attached as Annex VII. Finally, Annex VIII contains a fact sheet on trade and environment prepared for a private-sector dinner hosted by the Lao National Chamber of Commerce and Industry.



## Section 2: Setting the Context

### 2.1 Trade and environment linkages

In considering the linkages between trade and environment, it is helpful to keep in mind why trade—and trade liberalization—are so important. Why do countries expend such energy to pursue trade liberalization agreements? The answer is: they are seeking economic restructuring, which they anticipate will be beneficial on the whole for their economies.

Whether trade and trade liberalization brings net benefits to the country varies from case to case in each sector. What is certain, however, is that whenever there is economic restructuring there are environmental impacts. When new factories open, for example, they contribute to pollution (though they may be cleaner than what they have replaced). As will be discussed below, these impacts may be positive or negative, but there is no disputing the following fundamental truth: trade is linked to environment because economic change has environmental impacts.

Different taxonomies have been applied to structure the types of possible environmental impacts (see for example, Copeland and Taylor, 2003; OECD, 1994). The present analysis breaks down impacts into the following types:

- scale effects;
- structural effects;
- technology effects;
- direct effects; and
- regulatory effects.

Scale effects are the result of straightforward changes in the volume of economic activity. When a country liberalizes, it has a much larger potential market to serve than its own domestic market. Meeting this demand may allow it to utilize resources that had previously not been used, increasing the national scale of economic activity. An increased wealth which trade liberalization can bring may eventually increase the country's capital stock, meaning again that a greater amount of activity is possible. The increased scale of economic activity results in increased raw material use, and an increased amount of process-related pollution. This is a relatively simple equation: the more economic activity, the more environmental damage, with other things being equal.

When trade is liberalized, we can expect to see increased efficiency in the economy overall, the result of comparative advantage—each trading partner produces those items at which it is relatively more efficient. In those sectors where a country has a comparative advantage, production will increase. There will also be sectors, however, where a country scales back its production and instead imports from a more efficient producer. The result is a changed economic structure for the country as a whole. If the new economic structure has a greater share of low-polluting sectors and a lower share of polluting sectors, the *structural effect* is environmentally negative; if the changes in the economic structure lead to a lower share of polluting sectors, the structural effect is environmentally positive. The final result of this impact is of course completely dependent on the economic characteristics of the countries in question and the specifics of the liberalization, which will determine which sectors raise and which fall.

Of course, a central point of trade liberalization is that it increases efficiency. This can come through comparative advantage, as noted above. It can also come through importing of new technologies, through new foreign direct investment (FDI), or through the innovation of domestic firms that are forced to become more efficient when their tariff protection is removed. In all these cases, the basic equation that links production and envi-

ronmental impacts is changed for the better. Efficiency means less use of raw materials and/or less waste and pollution created in the production process. This dynamic is known as the *technology* (or *technique*) *effect*.

*Direct effects* are a rather limited class of environmental impacts that are the direct result of trade itself. The most obvious of these is the pollution that results from transporting traded goods, such as air pollution from trucks and ships. Another such impact is invasive species that are transported with traded goods (e.g., pests on fruits and vegetables or in packing materials). Trade in endangered species, and other forms of illegal trade, also fall into this category.

*Regulatory effects* are environmental impacts caused by trade-induced regulation. The most positive type of these impacts comes from higher environmental standards that result when the country’s citizens become increasingly wealthy as a result of trade liberalization and seek such change.<sup>1</sup> More negative linkages result, on the other hand, when the provisions of investment law allow environmental regulations to be challenged as indirect expropriation.

These various linkages are illustrated in Table 2, a matrix of trade and environmental linkages, complete with the driving force that prompts the initial change, and the mitigating factors that might alter the final environmental impact for better or worse. This matrix is used as a framework for understanding the linkages addressed in the RTEA as described in subsequent sections. The matrix does not attempt to be exhaustive in listing all the possible types of linkage, but rather simply illustrates a few linkages in the form of examples to help better convey the nature of the trade-environment relationship described in Section 2.

Section 2 aims to convey the nature of the linkages between environment and trade, showing the various ways in which the two are related. Ultimately, as argued above, the relationship hinges on the fundamental links between economic activity and the environment—links that can be either positive or negative, depending on the specifics of the case.

If we accept that trade can be both good and bad for the environment, the need to analyze the environmental impacts becomes obvious. Where trade is liberalized, policy-makers need to be prepared to exploit the positive opportunities and avoid the negative consequences that may result. Otherwise the social welfare improvements that are sought through trade policy may be either cancelled out, or amount to less than they may be otherwise. The aims of the RTEA are precisely to provide policy-makers with the kind of information they need to better understand these sorts of implications.

**Table 2: Matrix on trade and environment linkages**

| Category                     | Driving force   | Pressure                                | Impacts  | Mediating factor(s)   | Example  |
|------------------------------|---|---|--|---|--|
| Scale effects<br>-ve and +ve | -ve: increased foreign market access from reductions in tariffs, non-tariff barriers to trade | -ve: increased scale of production      | -ve: increased consumption of natural resources; increased production-related pollution (air, water, soil) | -ve: if environmental regulatory regime is adequate, there is little negative effect. If not, then negative effects ensue | -ve: increase in forest product exports leads to accelerated and unsustainable deforestation   |
|                              | +ve: lowered domestic tariffs and non-tariff barriers on goods and services                   | +ve: increased efficiency of production | +ve: reduced consumption of natural resources; reduced production-related pollution (air, water, soil)     | +ve: use of environmentally-sound technologies enhances environmental benefits  | +ve: domestic pulp mills increase efficiency to meet international competition; improve processes to use less energy, produce less polluting waste |

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| Category                          | Driving force  | Pressure   | Impacts  | Mediating factor(s)   | Example  |
|-----------------------------------|--|--|--|---|--|
| Structural effects<br>-ve and +ve | -ve: greater openness to and attractiveness for FDI due to better foreign market access      | -ve: higher polluting firms migrate from higher-standard countries to lower-standard countries         | -ve: increased consumption of natural resources; increased production-related pollution (air, water, soil)   | -ve: this “pollution haven” effect will not occur if a strong environmental regulatory regime is in place   | -ve: increase in factory farming operations with problems of waste management leads to water contamination, human health issues                |
|                                   | +ve: increased foreign market access from reductions in tariffs, NTBs and subsidies          | +ve: increased demand for “green” goods means cleaner overall production mix in the economy            | +ve: reduced consumption of raw materials and energy inputs; reduced production-related pollution (air, water, soil)                                     | +ve: national certification of process and production methods (PPMs) enhances effects   | +ve: increased share of organic producers in export-oriented agricultural production means less water pollution, less harm from pesticides     |
| Technology effects<br>+ve         | +ve: greater openness to and attractiveness for FDI due to better foreign market access      | +ve: new investment brings in cleaner technology, PPMs, adherence to higher standards                  | +ve: reduced consumption of raw materials and energy inputs; reduced production-related pollutions (air, water, soil)                                    | +ve: if the environmental regulatory regime is strong, it increases the likelihood that imports of new technology will be best available              | +ve: best available technologies improve eco-efficiency of production, reducing pollution and increasing efficiency of resource use            |
|                                   | +ve: lower domestic tariffs and non-tariff barriers  | +ve: increase in imports of “cleaner” technologies and intermediate goods                              | +ve: reduced consumption of raw materials and energy inputs; reduced production-related pollutions (air, water, soil)                                    | +ve: if the environmental regulatory regime is strong, it increases the demand for “clean” imports  | +ve: agricultural producers are able to import “direct seeding” machinery leading to reduced soil erosion, reduced use of energy in production |
| Direct effects<br>-ve             | -ve: liberalization of trade and investment creates increased trade flows, economic activity | -ve: increased trade-related transportation activities   | -ve: increased air pollution, particularly along major transportation corridors; habitat loss from transportation infrastructure; climate change impacts | -ve: this effect will always occur, but will be less intense in direct proportion with the stringency of transportation-related emissions regulations | -ve: increased trade with neighbour countries means increased transport traffic, pollution along corridors and border zones                    |
| Regulatory effects<br>-ve and +ve | -ve: standard international investment agreements  | -ve: provisions on indirect expropriation constrains the ability of regulatory authorities to regulate | -ve: weaker enforcement of environmental laws; reluctance to draft new environmental laws (“regulatory chill”) in order not to lose FDI                  | -ve: if private investors successfully argue that regulation amounts to indirect expropriation, there will be a regulatory chill                      | -ve: domestic ban on a toxic substance is challenged by the foreign-based manufacturer as an indirect expropriation of its investment          |
|                                   | +ve: rising income from trade and investment liberalization                                  | +ve: increased public awareness and demand for higher environmental quality                            | +ve: stronger enforcement of environmental laws; pressure to draft new environmental laws; requirements to meet export standards                         | +ve: this effect is stronger if the decision-making process and institutional structures are transparent and inclusive of stakeholders                | +ve: regulations on sanitary and phytosanitary (SPS) better ensure that agricultural products comply with export standards                     |

Source: Adapted from IISD/UNEP, 2005.

## 2.2 Background on the economy of Lao PDR

Lao PDR is characterized by a low population of 5.6 million (2005 Census) and an abundance of natural resources. With a Gross Domestic Product (GDP) of US\$2.9 billion in 2005, the economy has achieved an average growth rate of six per cent over the past five years (World Bank, 2007). Lao PDR is classified by the United Nations as a least-developed country (LDC). As an LDC, Lao PDR benefits from preferential market access in most OECD countries under various schemes. While the government has set a goal in the *Sixth National Socio-Economic Development Plan* to graduate from LDC status by 2020, the country remains amongst the poorest in the region, with a per capita GDP of approximately US\$390 in 2006, which, adjusted for purchasing power parity (PPP), is the equivalent of US\$1,900 (Asian Development Bank/World Bank, 2007).<sup>2</sup> While still low, per capita GDP has increased from US\$330 in 2004. Lao PDR is placed in the “Middle Human Development” category of the Human Development Index, ranking 133 out of 177 countries (UNDP, 2006). Lao PDR, by far, has the lowest population density in the region, with 26 people per km<sup>2</sup> as compared with 127 in Thailand and 256 in Vietnam (ASEAN, 2007).

Lao PDR initiated a gradual shift from a centrally planned system to a market economy with the introduction of the “New Economic Mechanism” in 1986 (Menon, 1999). The government’s recent *Sixth National Socio-Economic Development Plan* (2006–2010) seeks to develop the private sector and encourage regional and multilateral integration through trade reforms. The private sector is estimated to account for over 80 per cent of GDP (ADB/World Bank, 2007). To a great extent, the strategy for reforming the economy is being situated in the context of Lao PDR’s commitments under the ASEAN Free Trade Area (AFTA) and the process of WTO accession, as well as increasing bilateral relations with neighbouring countries in the Greater Mekong Subregion (GMS). It is, therefore, clear that trade is expected to be the engine of growth and development for Lao PDR. Moreover, expectations are high. The government has committed to increasing exports by 18 per cent by 2010 (CPI/UNDP, 2006).

Notwithstanding the rapid growth in the industrial and services sectors since the introduction of the reform process in the mid-1980s, agriculture continues to represent the lion’s share of the national economy. The vast majority of the Lao population lives in rural areas and is dependent on subsistence agriculture, primarily for the cultivation of rice. However, the contribution of the agricultural sector to trade is relatively small. In 2005, this sector contributed only seven per cent to exports, while it accounted for nearly 20 per cent of imports (World Bank, 2006a).

The process of rapid industrialization currently underway in Lao PDR has shifted production from agriculture to industry, with the share of services in comparison to other economic activities rising, in large part due to tourism. Economic growth is being driven by the hydropower and mining sectors, with increasing contributions from tourism and emerging processing industries (World Bank, 2007). As set out in Table 3, while the agriculture sector remains the largest contributor to GDP, accounting for 46.4 per cent of GDP in 2005, the percentage has declined from over 60 per cent in 1990. The industry and services sectors are increasing in importance, accounting for 23.6 and 30 per cent respectively in 2005 (STE/UNEP, 2006).

**Table 3: GDP composition by sector, 1990–2005**

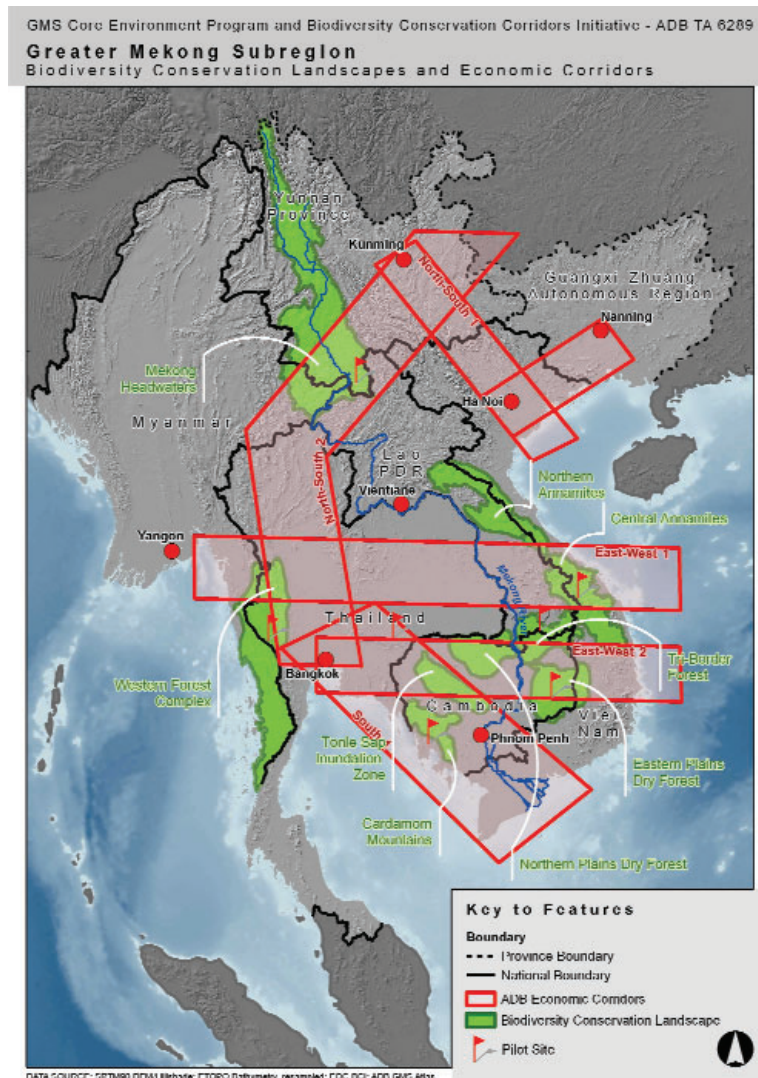
| Sector      |       | 1990 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2005 |
|-------------|-------|------|------|------|------|------|------|------|------|
| Agriculture | GDP % | 60.7 | 54.3 | 52.2 | 52.2 | 51.8 | 52.2 | 51.8 | 46.4 |
| Industry    | GDP % | 14.4 | 18.8 | 20.6 | 20.8 | 21.9 | 22.0 | 22.6 | 23.6 |
| Services    | GDP % | 24.1 | 24.5 | 24.8 | 25.0 | 25.3 | 25.2 | 25.0 | 30.1 |

Source: STEA, 2006 based on National Statistics Center data.

<sup>2</sup> There is a range of recent estimates for per capita income in Lao PDR. The latest ASEAN estimate of per capita income is US\$540 in 2006 or, adjusted for purchasing power parity, US\$2,300 (ASEAN, 2007). The World Bank estimates per capita income to be US\$460 in 2005 (World Bank, 2007). The Asian Development Bank (ADB) estimate for 2005 is US\$440 (ADB, 2007c). Basic data for Lao PDR varies and should be treated with caution. As noted in the *Diagnostic Trade Integration Study*, there are large statistical discrepancies provided by different agencies in Lao PDR (World Bank, 2006a).

The Third Lao PDR *National Human Development Report* notes that “increasing trade, openness and integration of the Lao PDR with the regional and global economies are now inevitable. Exports and imports will increase rapidly” (CPI/UNDP, 2006). The government’s list of priorities reflects the new reality of trade and openness and incorporates economic growth in a strategy to eliminate poverty and meet the Millennium Development Goals (MDGs). Trade-led growth is also a prominent feature of the government’s latest *National Socio-economic Development Plan* (2006–2010).

**Figure 1: Biodiversity conservation landscapes and economic corridors in the GMS**



Source: GMS Environment Operations Centre, [www.gms-eoc.org](http://www.gms-eoc.org).

It is notable that recent reports from key international organizations operating in the region—the Asian Development Bank, the United Nations Development Programme and the UN Economic and Social Commission for Asia and the Pacific—focus on the human face of trade-oriented development and “green growth” (ADB, 2006; UNDP, 2006; ESCAP, 2007). These reports deal with the nature of growth and the dynamic links between growth and human development to achieve a sustainable balance. As illustrated in these reports, socio-environmental factors underpin the current paradigm shift towards sustainability. Another key aspect of these reports is the proactive approach recommended for developing countries engaging with inter-

national trade; specifically, to put in place “a more complex package of measures” to open their economies to trade and investment (CPI/UNDP, 2006). These reports emphasize trade and investment liberalization as vital components of sustainable development—which is the heart of the examination of the RTEA project.

The role of economic integration currently underway in the Greater Mekong Subregion is pivotal. As set out in Annex III, the main trading partners for Lao PDR are within the region. As a strategic land-link with the other GMS countries—and the only member bordering all the others—Lao PDR is a central anchor in the unfolding integration strategy; the ABD’s East-West and North-South Economic Corridors will serve to increase cross border road connections and stimulate commercial activities. The ABD Regional Cooperation Strategy<sup>3</sup> aims to assist GMS countries in “strengthening connectivity and competitiveness, and developing a greater sense of community in the region” (ADB, 2004a). To this end, the regional economic corridors set out in Figure 1 will have a vital role to play in Lao PDR’s development efforts—increasing economic activities, transport, telecommunications and tourism. Moreover, the performance of the economic corridors will also depend on maintaining the natural resource endowments (ADB, 2005).

## 2.3 Background on the environment of Lao PDR

Lao PDR’s path to development has been firmly rooted in developing its wide range of natural resources, including water, wetlands, forests and biodiversity (Lazarus *et al.*, 2006). Moreover, Lao PDR has a key role to play in the conservation of biodiversity along the Mekong River, particularly given that one quarter of the drainage that feeds the river is located within its borders. There is increasing literature on the importance of the sustainable use of the natural resource endowment of Lao PDR and the need to ensure consideration of sustainable management as the country grows (Mekong Wetlands Biodiversity Programme, 2007; ICEM, 2003). A recent assessment by the Science, Technology and Environment Agency (STEA/UNEP, 2006) outlines several core environmental concerns related to natural resources that are of particular relevance for both economic development and environmental sustainability in Lao PDR:

*Water* – Lao PDR has a significant number of indigenous energy sources. However, most energy is generated from hydroelectric power, with households mainly using traditional fuels (wood and charcoal). Figure 2 illustrates the hydropower project developments along the Mekong River, notably Nam Theun 2 dam, which is to be completed by 2010. While there are plans to put in place over 40 hydropower projects, Lao PDR has only developed a little over two per cent of its hydropower generating capacity, the vast majority of which is currently exported to neighbouring countries. Lao PDR has in place agreements to supply hydropower to Thailand and Vietnam and is in discussions with China. The potential environmental impacts of these hydropower projects are likely to be significant—in terms of logging, downstream water quality, fisheries, soil fertility, wildlife diversity and non-timber forest products (IUCN, 2007; CPI/UNDP, 2006; Lazarus *et al.*, 2006; World Bank, 2006c).

*Forests* – With estimates of land area covered by forests ranging from 41.5 per cent in 2004 (World Bank, 2006c) to 69.9 per cent in 2005 (ADB, 2007b), Lao PDR is the most forested country in Southeast Asia.<sup>4</sup> As set out in Table 4, while forested areas have declined from 75 per cent in 1990, the ratio of protected areas has increased significantly (ADB, 2007b). This table also offers a comparison of environmental sustainability indicators in the forestry sector in Lao PDR and Thailand. Increasing deforestation is mainly due to logging and unregulated commercial exploitation, unsustainable exploitation practices, shifting agriculture and poverty, as well as lack of sufficient enforcement of forest management policies and regulations (STEA/UNEP, 2006). For example, commercial logging is limited to specific production areas and based on annual quotas assessed at the provincial level.

Forests provide an important source of income to rural communities in Lao PDR through, for example, the collection of non-timber forest products (IUCN, 2007; SNV, 2006; GTZ, 2005). Recognizing the contribution

3 The GMS countries adopted a Strategic Development Framework in 2001 to guide the next 10 years of development cooperation focusing on five areas: (i) infrastructure; (ii) cross-border trade and investment; (iii) private-sector participation; (iv) human resource development; and (v) environmental protection.

4 There are significant discrepancies in data, such as with respect to forest cover between the ADB, World Bank and ASEAN.

of forests as a source of livelihood, the government’s *Forestry Vision to 2020* aims to enhance sustainable forest management through logging quotas, shifting cultivation plans, enforcement of production areas and value-added activities (Lao PDR, 2004a). These efforts have been put in place to address the wide-spread practice of shifting agriculture which has led to declining land productivity, soil erosion and nutrient depletion, as well as to deal with slash-and-burn agricultural techniques that encroach on forests (World Bank, 2006c).

**Figure 2: Hydropower project developments in Lao PDR**



Source: Nam Theun 2 Power Company in World Bank, 2006c.

In 2001, a ban was placed on the export of raw logs and shortly thereafter on exports of sawn wood from natural forests with provision for specific export quotas. The purpose of the ban is to provide an incentive for the development of the downstream wood processing industry in Lao PDR to add value to exports from the wood products sector, thereby creating a virtuous circle in the forestry sector for livelihoods and conservation.

**Table 4: Selected environmental sustainability indicators in Lao PDR and Thailand**

| Environmental indicators | Proportion of land area covered by forest (%) |        |      | Ratio of area protected to maintain biodiversity by surface area (%) |        |      | Carbon dioxide emissions (per capita metric tonnes) |      |      |
|--------------------------|---|--------|------|--|--------|------|---|------|------|
|                          | 1990  | (2004) | 2005 | 1990   | (2004) | 2005 | 1990  | 2000 | 2003 |
| Lao PDR                  | 75.0  | (41.3) | 69.9 | 0.9  | (14.0) | 16.0 | 0.1   | 0.2  | 0.2  |
| Thailand                 | 31.2  |        | 28.4 | 13.0   |        | 19.0 | 1.8   | 3.3  | 3.9  |

Source: ADB, 2007b; MAF, 2004 figures in brackets from World Bank, 2006c.

*Biodiversity and protected areas* – There have been recent efforts in Lao PDR to protect its rich biodiversity and wetland resources. Since 1993, the government has established 20 National Biodiversity Conservation Areas to improve forest management practices and agricultural land-use techniques, and has finalized a National Biodiversity Action Plan and Strategy (2003) (STEA/UNEP, 2006). Biodiversity conservation is

also included under the Forest Law of 1996. As indicated in Table 4, the ratio of protected areas has increased significantly from under one per cent in 1990 to 16 per cent in 2005 (ADB, 2007b).

Of particular relevance is the ADB’s biodiversity corridors initiative to complement the development of economic corridors in the GMS as set out above. An increase of transport projects in the GMS—with Lao PDR at the heart—will greatly increase transit trade through Lao PDR. While facilitating trade and investment, economic integration will rely on “linked natural systems” as set out in Box 2. Increased transportation links (e.g., roads and bridges) may have unintended negative spill-over effects, such as an increase in illegal exports (timber, endangered wildlife and plant species) and imports (drugs, disease). For example, the recently opened Lao-Thailand “Friendship Bridge” over the Mekong River between Savannakhet and Mukdahan will facilitate commercial exchange between the two countries, while, at the same time, place a new source of stress on local biodiversity (Lazarus *et al*, 2006).

### Box 2: Economic and biodiversity corridors in the GMS

The economy as well as the environment of the GSM will be transformed as the economic corridors are constructed over the next decade as illustrated above in Figure 1. The ADB has already indicated some trends to illustrate the dependence of productivity in the following sectors on “linked natural systems” (ADB, 2005):

- *Forestry* – increasing forest product demand with increasing cost of production and 50 per cent decline in resource base.
- *Fisheries* – increasing effort but decreasing catch per unit effort (due to the decline of stocks in coastal and freshwater systems).
- *Hydropower* – increasing demand and investment in electricity supply, and increasing real cost per unit of energy (due to a failure to fully account for watershed maintenance and other environmental services).
- *Agriculture* – increasing production costs (due to soil loss, chemical inputs and fluctuation in water supply).
- *Industry* – increasing cost of water supply and treatment (due to reduced water quality and access).
- *Nature-based tourism* – rapidly increasing demand and investment, leading to diminishing quality of “products.”

Source: ADB, 2005.

Despite the attention to sustainable management of the country’s natural resources, including in the government’s *National Growth and Poverty Eradication Strategy* (2004), the state of the environment in Lao PDR is being increasingly impacted by rapid growth and uneven enforcement of environmental laws, as well as the rising demand for natural resources from countries in the region. As outlined above, several environmental threats are critical: increased deforestation, increased threats to protected areas and biodiversity, as well as rising urban environmental concerns related to land, water and waste (World Bank, 2006c).

Efforts at the national level are being supported at the regional level to address these impending environmental threats. The key intergovernmental regional environmental body—the GMS Working Group on Environment<sup>5</sup>—has recognized the need to address potential environmental stresses from economic development, specifically in the economic corridors, to ensure environmental issues are properly addressed (ADB, 2004b).

## 2.4 Background on the current trade context in Lao PDR

The framework for trade liberalization in Lao PDR is being set as this report is being written. As will be discussed in greater depth below, Lao PDR is engaging in bilateral, regional and multilateral trade negotiations and undertaking commitments to open its economy to trade and investment. Lao PDR has committed to

5 This Working Group was established in 1995 to help mainstream environmental considerations in the GMS Economic Cooperation Program. Each GMS country is represented by two officials from the environment or natural resource management agency.



implementing tariff reductions under AFTA by 2008. The country is expected to have completed the accession process to join the World Trade Organization (WTO) by 2010, if not earlier. The ASEAN-China Free Trade Agreement (FTA) will come into full effect for Lao PDR in 2015. Thus, the bilateral, regional and multilateral context is on course. However, the mechanisms for Lao PDR to implement these commitments at the domestic level are only just beginning to be put in place. In this light, the RTEA comes at a crucial juncture in the trade policy-making process in Lao PDR.

The economic performance of Lao PDR throughout the 1990s was extensively based on timber and garment exports, taking advantage of the abundance of unexploited forests, water and mineral resources, as well as preferential quota access for garments under the Multifibre Arrangement and the WTO Agreement on Textiles and Clothing, which terminated at the end of 2004. In 2006, the mining and hydropower sectors were the main contributors to GDP (World Bank, 2007).

The need to diversify its export base has been recognized and is reflected in the government's *National Export Strategy* (2006–2008). This action-oriented strategy identifies the following six priority sectors for export promotion: silk handicrafts; wood products; organic agricultural products; medicinal plants and spices; tourism; and garments. As a direct result, the current analysis chose to examine the potential environmental impacts of trade liberalization in the sectors included in the *National Export Strategy*.

The *National Growth and Poverty Eradication Strategy* (NGPES) (2006–2010) further prioritizes the reform process to improve competitiveness in the hydropower, mining and construction sectors. This strategy recognizes poor infrastructure as one of the main impediments to the development of an “integrated domestic market” in Lao PDR. Particularly given that Lao PDR is a landlocked country, infrastructure constraints also hinder access to export markets. The NGPES also endeavours to encourage the development of small and medium-sized enterprises (SMEs) by improving the business climate and rationalizing transaction costs, such as cumbersome customs procedures.

While the country's geographical location at the centre of the Mekong region may offer opportunities, it also presents challenges, such as high transportation costs to get its exports to market and difficulty in monitoring trade along the Mekong River borders with its neighbours (Cambodia, China, Myanmar, Thailand and Vietnam). While it may have a natural source of trading partners in the neighbourhood, the distance from other major trading partners places it at a disadvantage for expanding its market reach. Moreover, consumers in the region have relatively low purchasing power, and passing through the region to get to port presents difficulties for getting goods to farther-flung markets, such as the European Union and the United States. Nevertheless, as will be discussed below, trade with these markets is developing and offers opportunities for the sustainable development of niche products.

Based on a survey of the literature, a development strategy based on export-led growth in the context of AFTA tariff reductions in 2008 combined with membership in the WTO by 2010 is expected to lock in economic reforms and assist Lao PDR in integrating into the global economy and attracting FDI (World Bank, 2006a; Fukase and Winters, 2003; Martin, 2001; Menon, 1998). Given the extent of preferential market access conferred on Lao PDR as an LDC, tariff erosion is a particular consideration for growth potential in several sectors, notably garments (Thephavong, *et al.*, 2005).

The expected economic impact scenarios arising from trade liberalization developed in the next section are based on the tariff reductions—conferring market access opportunities for Lao PDR—arising from the commitments undertaken in, or preferences flowing from, the following initiatives:

## 2.4.1 Regional and subregional trade agreements

### 1. Association of Southeast Asian Nations (ASEAN) Free Trade Area (AFTA)

In 1997, Lao PDR became a member of ASEAN and AFTA. Under the Common Effective Preferential Tariff (CEPT) policy of AFTA, effective since 1998, ASEAN countries have agreed to reduce import tariffs for Lao PDR to 0–20 per cent. By 2008, Lao PDR is scheduled to implement tariff reductions on 98 per cent of its tariff lines on imports from ASEAN member countries to 0–5 per cent. This includes all manufactured

products. The remaining tariffs are to be reduced by 2015. Lao PDR has also committed to remove non-tariff measures that act as restrictions to imports, such as licensing and other requirements.

The CEPT consists of four lists. The *Inclusion* list contains items that AFTA members must reduce their tariff to 0–5 per cent within the AFTA timeframe. The *Temporary Exclusion* list contains items that members can delay tariff reduction within a certain timeframe. The Sensitive list allows for special consideration for certain specified products. Finally, AFTA members have stipulated a *General Exceptions* list for national security, and ethical and health considerations. Lao PDR has 88 items on the Sensitive list for which tariffs remain high—the largest number in ASEAN. Table 5 sets out the CEPT for Lao PDR.

**Table 5: List of AFTA Common Effective Preferential Tariffs, Lao PDR**

|                    | Inclusion List | Temporary Exclusion List | General Exception List | Sensitive List | Total |
|--------------------|----------------|--------------------------|------------------------|----------------|-------|
| Number of products | 1,673          | 1,716                    | 74                     | 88             | 551   |

Source: MIC, 2007.

A recent study undertaken by the National University of Laos concludes that Lao PDR's membership in AFTA will effectively increase exports and decrease average prices, but also decrease tariff revenues (Kyophilavong, 2007). Since 1998, the CEPT rate in Lao PDR has been five per cent. Table 6 provides a comparison of average CEPT rates in ASEAN countries.

**Table 6: Comparison of average AFTA / CEPT rates in ASEAN, 1998–2003**

|             | 1998  | 1999 | 2000 | 2001 | 2002 | 2003 |
|-------------|-------|------|------|------|------|------|
| Brunei      | 1.35  | 1.29 | 1    | 0.97 | 0.94 | 0.87 |
| Indonesia   | 7.04  | 5.85 | 4.97 | 4.63 | 4.2  | 3.71 |
| Lao PDR     | 5     | 5    | 5    | 5    | 5    | 5    |
| Malaysia    | 3.58  | 3.17 | 2.73 | 2.54 | 2.38 | 2.06 |
| Myanmar     | 4.47  | 4.45 | 4.38 | 3.32 | 3.31 | 3.19 |
| Philippines | 7.96  | 7    | 5.59 | 5.07 | 4.8  | 3.75 |
| Singapore   | 0     | 0    | 0    | 0    | 0    | 0    |
| Thailand    | 10.56 | 9.75 | 7.4  | 7.36 | 6.02 | 4.64 |
| Vietnam     | 6.06  | 3.78 | 3.3  | 2.9  | 2.89 | 2.02 |
| ASEAN       | 5.37  | 4.77 | 3.87 | 3.65 | 3.25 | 2.68 |

Source: US-ASEAN Business Council, <http://www.us-asean.org/afta.asp>.

Based on a survey of the literature, expected impacts of the AFTA Common Effective Preferential Tariffs are likely to include:

- *increasing export opportunities* in the sectors examined in this research;
- *increasing import competition* from the ASEAN region. This has the potential to lower costs for Lao producers and consumers, for example for fertilizers and electronic and electrical products (water pumps, electric fans). It is also likely to make it more difficult for domestic small-scale producers to compete (e.g., intermediate goods—fertilizers, cement—and consumer goods—garments, motorcycles, processed food and wood products);
- *increasing contribution of Lao PDR to the regional supply chain*, for example in the wood products, textiles and electronics sectors in Thailand and Vietnam;
- *increasing FDI* linked with integration into the regional supply chain and to source cheaper labour, for example to supply the Thai electronics sector; and
- *increasing tourists* from the region.

## *2. ASEAN Investment Area (AIA)*

The objective of the Framework Agreement on the ASEAN Investment Area signed in 1998 is to promote flows of FDI from both ASEAN and non-ASEAN sources. The aim of the AIA is to progressively reduce or eliminate investment regulations and conditions. The AIA provides for the removal of restrictions or controls through granting National Treatment and Most-favoured Nation (MFN) treatment to ASEAN investors by 2010 in the original six members and 2015 for new members (such as Lao PDR), with potential extension to non-ASEAN investors by 2020. The AIA will be dealt with in greater detail in Section 5 below on investment.

## *3. ASEAN Integrated System of Preferences (AISP)*

Lao PDR benefits from the ASEAN Integrated System of Preferences, whereby the six original ASEAN members provide trade preferences to the new entrants—Lao PDR, Cambodia, Myanmar and Vietnam. To date, three ASEAN countries—Malaysia, the Philippines and Thailand—have implemented AISP. The AISP granted by Thailand since 2004 provides a preferential tariff rate of 0 to 5 per cent on over 300 exports from the Lao PDR to Thailand, including: fruits and vegetables; wood and wood products; furniture; and textiles and apparel accessories (Thai Ministry of Foreign Affairs/UNDP, 2005). Malaysia extends preferential treatment to 12 products from Lao PDR, which includes: agriculture; wood; plastics; ceramics; iron articles; and electrical products. At the request of Lao PDR, Malaysia will add 73 products to the list, including vegetables, wooden furniture, textiles and garments. As of July 2005, The Philippines grants preferential treatment to 12 products (see Tariff Commission, 2005).

## *4. Early Harvest Program (EHP) of the ASEAN-China Free Trade Area*

The commitments undertaken in the Early Harvest Program of the China-ASEAN FTA are scheduled to come into force for the original six members by 2010; in 2015 for the newer members, including Lao PDR. This FTA—comprising a significant number of developing countries—promises to create an economic area with 1.7 billion consumers. Tariff reductions between China and ASEAN countries began in July 2005. Commitments have been undertaken to gradually reduce or eliminate tariffs on over 7,000 products. China provides duty-free treatment to Lao PDR on 297 products, including mainly agricultural and fisheries products, but also garments, footwear and furniture.

## *5. Asia-Pacific Trade Agreement (APTA)*

The APTA was signed in 1975 as an initiative of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). It is a preferential tariff arrangement that aims to promote intra-regional trade through the exchange of mutually-agreed concessions by member countries. Membership in APTA consists of Bangladesh, China, India, Korea, Lao PDR and Sri Lanka.

## *6. The Tenth Joint Commission of Cooperation and the ADB Economic Corridors initiative in the Greater Mekong Subregion (GMS)*

Subregional integration is also increasing. The GMS, through its program of infrastructure development and the promotion of a freer flow of goods and people has emerged as a significant regional forum for cooperation across a variety of themes including trade, investment, energy and the environment.

In September 2006, Lao PDR, Vietnam and Thailand reached a series of cooperative trade and investment agreements in the context of the Tenth Joint Commission of Cooperation to promote their goods and opportunities for investment, tourism and trade. This trend towards regional integration is expected to continue with the Asian Development Bank set to stimulate significant investment through the “Economic Corridors” initiative that will build transportation networks to connect the GMS countries (ADB, 2006).

## *7. The “One Way Free Trade Agreement” of the Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS)*

This economic subregional cooperation framework including Cambodia, Lao PDR, Myanmar, Thailand and Vietnam was created in November 2003 to “act as a building block and move ASEAN forward at a more even pace, on the basis of self-reliance and mutual prosperity” (www.acmecs.org). The objectives are to

bridge the economic gap between the five countries and to promote prosperity on a sustainable level. One of the main aims is to build partnerships to transform the border areas of the five members into zones of economic growth and social progress and achieve sustainable development through South-South cooperation. The ACMECS framework has initiated over 40 common development projects as well as over 200 bilateral projects to enhance trade and investment, agriculture and industry, transport linkages, tourism and human resources development. In the framework of ACMECS, Thailand applies a zero tariff rate on nine agricultural exports from Lao PDR: feed corn, sweet corn, eucalyptus logs, cashew nuts, castor oil beans, soy beans, ground nuts, potatoes and pearl barley (Thai Ministry of Foreign Affairs/UNDP, 2005).

### *8. Cua Lo Agreement*

The Cua Lo Agreement was signed in 1999 with Vietnam covering tariff reductions to be agreed annually and preferential tax policies. In July 2005, a bilateral Memorandum of Understanding set out a list of products to receive zero tariffs and a 50 per cent reduction in AFTA tariffs. For example, as Lao exports of wood and wood products are permitted tariff-free entry into Vietnam, exports are likely to increase.

## **2.4.2 Bilateral trade agreements**

### *9. Normal Trade Relations (NTR) with the United States*

Lao PDR signed an agreement with the U.S. at the end of 2004 pursuant to which Lao PDR's exports have been granted MFN or NTR status since February 2005, which has lowered the average tariffs on Lao exports to the U.S. from 45 to 2.4 per cent. Of relevance to the sectors covered in this report: tariffs on handicraft and wood products decreased from 42.5 to 0 per cent; tariffs on silk textile exports decreased from 90 to 0.8 per cent (USTR, 2007). The implementation of NTR has already increased the export of garments, wood products, silk textiles and handicrafts. Non-NTR tariff rates are approximately 20 times higher than NTR rates; for example, the average NTR recipient country faced tariff rates of 2.4 per cent in 2003, while Lao PDR faced a rate of over 45 per cent on average. One estimate calculates that Lao businesses paid US\$1.8 million to the U.S. Customs Services in order to sell US\$3.9 million of goods in 2003 (Integrated Framework, 2005).

The establishment of NTR is credited with changing the trade balance in goods from a deficit of US\$6 million in 2005 to a surplus of US\$2 million in 2006, an increase of 108.8 per cent. Nevertheless, USTR lists Lao PDR as the 198th largest export market for U.S. goods in 2006 (USTR, 2007). The impacts on the pace of liberalization in the Lao services sector and protection of intellectual property rights (IPRs) are expected to be more rapid and rigorous following the agreement.

## **2.4.3 Preferential treatment**

### *10. EU Generalized System of Preferences (GSP) and "Everything But Arms" initiative*

As an LDC, Lao PDR has benefited from trade preferences under the EU GSP since 1995. While Lao exports are eligible for duty-free, tariff-free entry into the EU under the "Everything But Arms" initiative for LDCs in place since 2002, supply-side constraints impede the ability of Lao exporters to use this preferential treatment. Taking advantage of GSP entry to the EU, Lao garment exports increased rapidly until rules of origin constraints were applied. Despite trade friction caused by the application of rules of origin and quota allocations under the Multifibre Arrangement and the WTO Agreement on Textiles and Clothing, garment exports from Lao PDR to the EU have increased significantly. Since 1999, the EU now allows a more flexible Regional Cumulation of Origin, which allows garments made in Lao PDR with intermediary inputs, such as fabric from another ASEAN country, to be considered as having been produced in Lao PDR. This has facilitated Lao exports. Notwithstanding these rules of origin issues and supply-side constraints, as well as the high cost of getting products to port (as much as one third the cost of transport to European markets is estimated to go towards getting to port in Thailand or Vietnam), exports are likely to increase.

### 11. Other GSP schemes

As an LDC, Lao PDR benefits from duty-free, quota-free market access into the Australian (as of July 2003) and New Zealand (as of July 2001) markets. The Japan GSP duty and quota-free treatment for LDC products has been in place since April 2001; under this scheme, Lao PDR exports handicrafts, natural mushrooms, textiles and wood products.

#### 2.4.4 Multilateral trade agreement

### 12. World Trade Organization

In its ongoing negotiations for accession to the WTO, Lao PDR benefits from its status as an LDC and is accorded special and differential (S&D) treatment, which confers more gradual liberalization commitments for key sectors, such as agriculture. It is important to note that the Integrated Framework discussions under the leadership of the World Bank indicate that, notwithstanding benefits to the reform process in general, Lao PDR will not receive additional market access from WTO accession (World Bank, 2005). Nevertheless, the positive impact of the regulatory and institutional reform required for WTO membership should not be underestimated (WTO, 2004). In fact, these reforms are considered to be significant factors in the ability of Lao PDR to improve the efficiency and extent of export-led growth, as well as attract FDI.

#### 2.4.5 Summary

The range of trade relations set out above includes preferential access to the main trading partners of Lao PDR: (1) ASEAN (Thailand and Vietnam); (2) China; (3) Japan; (4) Australia; and (5) the European Union. The following Table 7 is presented to summarize the agreements and preferences for Lao PDR set out above.

**Table 7: Lao PDR's trade agreements and preferences, 2007**

| Trade agreement/<br>preference                                     | Type of agreement                            | Entry into force  | Fully effective                | Membership  |
|--|--|---|--------------------------------|---|
| ASEAN  | FTA  | Joined in 1997, tariffs to be reduced 0–5% by 2007            | 2015                           | Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Vietnam |
| ASEAN Integrated System of Preferences (AISP)                      | Preferences                                  | Granted preferences by Malaysia, the Philippines and Thailand | Until graduates to full member | Cambodia, Lao PDR, Myanmar, Vietnam   |
| AIA  | ASEAN investment                             | 2015  | 2015                           | ASEAN   |
| The Asia-Pacific Trade Agreement (APTA)                            | Preferential tariff arrangement              | 1975  | Effective immediately          | Bangladesh, China, India, Korea, Lao PDR and Sri Lanka  |
| Cu Lao Agreement   | Tariff reductions, preferential tax policies | 1999  | Annual negotiations            | Lao PDR, Vietnam  |
| ASEAN-China FTA  | FTA Early Harvest Program                    | July 2005   | 2015                           | ASEAN members, China  |
| Tenth Joint Commission of Cooperation                              | FTA  | Sept 2006   | Annual negotiations            | Lao PDR, Thailand, Vietnam  |
| Ayeywady-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS) | Economic partnership agreement               | 2003  | To be negotiated               | Cambodia, Lao PDR, Myanmar, Thailand, Vietnam   |

| Trade agreement/<br>preference       | Type of agreement             | Entry into force            | Fully effective                                | Membership   |
|--------------------------------------|-------------------------------|-----------------------------|--|--|
| Normal Trade Relations with the U.S. | Normal Trade Relations status | Feb 2005                    | MFN tariff treatment                           | Exports from Lao PDR receive the same MFN treatment as WTO Members |
| EU GSP                               | GSP quota-free preferences    | 1995                        | As an LDC                                      | LDCs   |
| EU Everything But Arms initiative    | Duty-free, quota-free access  | June 2005                   | As an LDC                                      | LDCs   |
| Australia GSP                        | preferences                   | July 2003                   | As an LDC                                      | LDCs   |
| New Zealand GSP                      | Duty-free, quota-free access  | July 2001                   | As an LDC                                      | LDCs   |
| Japan GSP                            | Duty-free, quota-free access  | April 2001                  | As an LDC                                      | LDCs   |
| WTO                                  | Multilateral trade agreement  | In the process of accession | To be determined in the accession negotiations | 151 WTO Member countries   |

Source: Compiled by the authors, as of August 2007.

## 2.5 Background on the current investment context in Lao PDR

The Law on the Promotion and Management of Foreign Investment (2004) governs inflows of FDI in Lao PDR. FDI is divided into two categories: joint-ventures and wholly-owned companies. Foreign companies are permitted to wholly own and operate a company in Lao PDR. Feasibility studies are required for investment projects, with an annual review after a business license is extended. The law contains several environment-related provisions. Article 3 states that foreign investors may invest in all business sectors in Lao PDR, except in business activities which are detrimental to national security, cause a negative impact on the environment in the present or longer term or are detrimental to health or national traditions. Article 13(7) obliges foreign investors to protect the environment. Article 16(3) promotes those activities that protect the country's environment and biodiversity.

The recent influx of FDI has been an important source and guiding force for economic growth. Mining and hydropower have attracted significant investment and are forecast to continue to be major growth sectors. According to the Department of Geology and Mines of Lao PDR, since 1993 the number of mining projects throughout the country has reached nearly 140, with total investment of approximately US\$500 million (NERI, 2006).

FDI in the agriculture sector—specifically plantation production—is another main source of investment after mining, representing 15 per cent of FDI in 2004 (World Bank, 2007). FDI is focused on plantations of coconut, rubber, eucalyptus wood and sugar cane (Paseuth and Phimmahasay, 2006). FDI in tourism is also significant and rising (LNTA, 2006).

Membership in ASEAN has signalled to investors that the country's transition to a market economy would be more certain and rapid (Menon, 1998), with commitments to reform and to transparency of investment procedures in line with ASEAN requirements. Following its entry into AFTA, Lao PDR adopted the ASEAN Agreement on the Promotion and Protection of Investment and is improving its investment climate through the ASEAN Investment Area (AIA), to which it has committed to implement by 2010 (Lao PDR, 2000).

The ASEAN Investment Area described above will promote flows of FDI from both ASEAN and non-ASEAN sources into Lao PDR by progressively streamlining and reducing investment regulations and conditions. The AIA provides for the removal of restrictions or controls through granting National Treatment and MFN treatment to ASEAN investors by 2015 for Lao PDR, with potential extension to non-ASEAN investors by 2020. The National Treatment provisions extend to pre-establishment treatment—something

not granted to any of the parties to Lao PDR's 11 existing partners under bilateral investment treaties (BITs). In other words, ASEAN investors (other than those in sectors specifically listed by Lao PDR as exceptions) by 2015 will have free rights to establish investments no different than rights accorded to domestic investors. This is a major difference from *post-establishment* national treatment, which simply says *after* an investment has entered Lao PDR it will be accorded equal treatment. The AIA does not, however, establish an investor-state dispute resolution mechanism—a feature that exists in the other bilateral investment treaties to which Lao PDR is a party—nor does it offer explicit protection against expropriation.

The research undertaken for this project highlights the following issues:

- regional actors are key investors in Lao PDR—recent FDI inflows are mainly from Thailand, Vietnam and, increasingly, China;
- FDI is concentrated in mining and hydropower. In 2006, the government approved foreign investment of approximately US\$500 million, the majority of which went to the development of hydropower projects (World Bank, 2007);
- agriculture, agro-processing and other manufacturing sectors are drawing more investment from the region; and
- FDI is also being directed to the agricultural and agro-processing sectors, with land-leases signed recently to produce pulp from eucalyptus plantations and to produce rubber, sugar and palm oil from plantations, involving investors from Thailand, Malaysia, Vietnam and India.

As a so called “behind the border” trade policy measure, investment policy is fundamental to directing trade and determining the future composition of exports in Lao PDR in the 21st century and guiding investment towards sustainable development outcomes as discussed in this report.

### 2.5.1 Investment challenges: infrastructure and transparency

While Lao PDR offers considerable opportunities to develop key sectors, there are challenges related to the rule of law, infrastructure and services, as well as the transparency and implementation of regulations. Notably, FDI figures represent approved as opposed to actual investment in the country; the actual figures are significantly lower than those for approved projects.

According to a recently published assessment (ADB/World Bank, 2007), the following actions would enhance the investment climate in Lao PDR:

- improving infrastructure in general, particularly electricity provision and transportation;
- making investment laws and incentives public and easily available;
- removing unnecessary government regulations; and
- streamlining customs and investment procedures.

Notwithstanding the uncertainties that continue to burden potential investors as well as the lengthy list of necessary improvements recited by the private sector and recent reports (ADB/World Bank, 2007), the fact that FDI inflows are soaring is sufficient evidence of success. Moreover, it is sufficient incentive to put in place an institutional and regulatory framework to ensure sustainable development. At present, a comprehensive investment strategy has yet to be developed in Lao PDR.

In order to prepare the country to meet its investment-related commitments in the agreements set out above, the government is implementing key objectives to improve the investment climate through improving: transparency; compliance with investment-related regulations; and data collection and reporting. Many of the above concerns will also be addressed in the ongoing efforts to harmonize cross-border regulations through sub-regional cooperation in the GMS to facilitate trade and investment (Menon, 2005).

## Section 3: Expected Economic Impacts

The methodology for selecting the economic sectors to be included in the assessment takes into account the main exports, fastest growing sectors and key sectors for FDI for Lao PDR (see Annex III on the structure of trade in Lao PDR). This results in the inclusion in the current analysis of the following sectors:

- hydropower;
- mining;
- construction materials;
- wood products; and
- garments.

As set out in greater detail in Annex II, the methodology underlying the RTEA has the flexibility to include environmentally-sensitive sectors and those with “green” market niche potential. The analysis of the main exports should be supplemented by legitimate areas of potential environmental concern. The process of selecting the additional areas for analysis is determined by qualitative methods that take into account government and non-governmental expert opinion—provided in this case by the Expert Advisory Panel as well as a through broad ranging stakeholder interviews and a review of the relevant literature. On this basis, the RTEA can tailor the analysis, focusing on the areas of trade effects that are deemed to be most likely to raise environmental concerns or show potential for green growth.

Based on this approach, the following sectors were also included in the current analysis:

- tourism;
- organic agricultural products;
- silk handicrafts;
- medicinal plants and spices (non-timber forest products); and
- biofuels.

Moreover, four of these sectors are prioritized in the government’s recent *National Export Strategy* (2006–2010). The emerging biofuels sector was selected for inclusion given its potential to supplement costly imports of petroleum and given the fact that the government is currently developing a National Biofuels Strategy. It should be noted that while the textiles sector is discussed in this report, it is not among the sectors for which a background environmental research paper was commissioned. It is worth noting that the expiration of the Multifibre Arrangement in 1995 and the WTO Agreement on Textiles and Clothing in 2005 is likely to impact negatively on the continued export potential of the textiles sector (CPI/UNDP, 2006). As a direct result, the decision was made to focus on those sectors with potential as opposed to fading export significance.

In choosing the economic sectors to investigate, the potential impact on livelihoods was also taken into account. As noted in a recent study commissioned by IUCN, “the rural communities in Lao PDR remain largely reliant on subsistence agriculture and the use of natural resources, and are less able to benefit from emerging market changes; in fact, local communities often appear to bear a disproportionate burden of the costs, both economic and environment” (Lazarus *et al.*, 2006). Thus, while the increase in the GDP of Lao PDR may be concentrated on revenue from a few major sectors—hydropower, mining and wood and wood products—the livelihoods of the majority of the population remain centered on other sectors of the economy, such as agriculture, handicrafts and non-timber forest products (Riggs, 2005). As a result, potential environmental impacts in these sectors are considered to be significant.



In permitting a degree of flexibility in the selection of the sectors included in this assessment, consideration was also given to the fact that Lao PDR's exports are concentrated in a few sectors—hydropower, wood and wood products, garments and agriculture. While recent government strategies to diversify the country's export basket have shifted export promotion priorities and provided incentives for value creation in emerging sectors with export potential, the risk remains that a high concentration on exports of raw materials may lead to a “Dutch disease,” whereby the natural resource base is depleted at the same time as the competitiveness of a natural resource-fuelled economy is eroded (World Bank, 2004). The government is concentrating on developing its comparative advantage in order to add value to its current exports and to promote emerging sectors. In this light, including emerging sectors, such as tourism, silk handicrafts, medicinal herbs and spices and organic agricultural products, in this assessment was considered by the Expert Advisory Panel to be a strategic input into the policy-making process in Lao PDR.

### 3.1 Emerging economic scenarios

This section builds possible economic scenarios based on the current and planned trade and investment liberalization commitments of Lao PDR in the agreements set out in Section 2. This section also brings together the recent literature on development in Lao PDR. A survey of the literature reveals that there is a dearth of writings on the impacts of trade and investment liberalization on the Lao economy, and there exists little by way of analysis of the concomitant changes on the environment. In this respect, the *Third Human Development Report for Lao PDR* takes an important first step towards integrating socio-environmental factors into the country's emerging trade equation (CPI/UNDP, 2006).

The expected economic scenarios developed in this section are based on the potential to increase exports in light of facilitated market access in the main export markets of Lao PDR. This potential is based on a pragmatic examination of the scope and extent of tariff reductions and preferential treatment in key markets for the export sectors covered by the analysis. There is also an attempt to include the potential impacts of imports and trade diversion in building the economic scenarios. While gaining access to export markets is less of a concern than supply constraints in the Lao economy, it needs to be emphasized that a host of non-tariff barriers to trade and rules of origin are capable of eroding even the most favourable preferential treatment extended to Lao PDR by its main trading partners. There are also political considerations that come into play in maintaining secure trading relations, such as those exemplified by the controversy in the U.S. surrounding the establishment of Normal Trade Relations in 2004. Nevertheless, currently Lao PDR is under-utilizing the preferences granted to its exports, particularly in the context of ASEAN (CEPT and AISP), EU-GSP and U.S. NTR (CPI/UNDP, 2006).

Despite the opportunities offered to Lao PDR through an expansion of market access by way of its FTA partners, reasonable predictions on the impact on exports are constrained by several factors, such as local supply capacity, quality, transportation costs, certification of origin and domestic customs clearance requirement (ESCAP, 2007; Kyophilavong, 2007). Given the lack of expected increase in market access for products from Lao PDR (World Bank, 2006), however, this report does not delve in detail into the ongoing process of Lao PDR's accession to the WTO.

This assessment is intended to be indicative and qualitative. The purpose is to provide some initial broad strokes to paint a picture of the expected economic impacts, and in turn, the potential environmental impacts of liberalization. It will be necessary to reassess the actual economic and consequent environmental impacts to determine the nature and extend of the linkages. It is useful, at this juncture, to recall that there is vociferous debate over whether the increase in FTAs will be able to meet the expectations of contributing substantial gains to global trade with minimal trade diversion effects. Moreover, there are important mitigating factors when it comes to potential environmental impacts. The response of environmental management to changes in the structure of the Lao economy stimulated by export opportunities is a key factor—both positively and negatively.

This assessment benefits from the following research relevant to assessing the implications of trade reform in Lao PDR.

- A recent econometric modelling exercise was undertaken by the Faculty of Economics at the National University of Laos to estimate the results of trade liberalization in Lao PDR (Kyophilavong, 2007). This exercise attempted to clarify the impact of AFTA on the Lao economy by using a macro-economic model simulation—the LAOMACROMODEL. Notwithstanding serious data limitations in Lao PDR, this simulation resulted in the following preliminary observations:
  - AFTA membership decreases import prices and general prices;
  - AFTA membership increases both exports (and increasing Lao PDR’s already large trade deficit); and
  - ensuring AFTA benefits Lao PDR is greatly dependent on whether government policies are implemented to support SMEs. Also important is whether incentives are increased to support the expansion and diversification of the export base through FDI, the domestic tax collection system is reformed (to counter the loss of revenue from tariffs), and the transport oligopoly that governs transit trade through neighbouring countries is addressed.
- A Global Trade Analysis Project (GTAP)<sup>6</sup> model simulates a general and comprehensive reduction in trade and output distortions—all tariffs and export subsidies are eliminated from a 2011 baseline—in the GMS (Strut and Lim, 2005):
  - drawing broad implications of trade reform for poverty and highlighting key drivers of change, Strut and Lim find that over 60 per cent of the total welfare gains flowing from trade reform are due to the elimination of trade barriers and output taxes by GMS countries. Simply put—while trade reform alone will not solve all the poverty problems, Lao PDR has much to gain from reforming its own market.
- While more general in nature, the conclusions derived from three economic growth scenarios developed by the World Bank (2004) are also taken into consideration:
  - three baseline scenarios were constructed to provide indicative simulations of the impact of growth on poverty, social outcomes and public revenues. The macroeconomic model is based on “top-down” estimates of sectoral growth rates for agriculture, industry and services, with “bottom-up” estimates for the GDP and public revenue contributions of selected natural resource sectors, including hydropower, mining and forestry. Even excluding mining and electricity—top export earners—the industrial sector makes an increasing contribution to growth. Agriculture continues to make an important but declining contribution to growth, eventually being surpassed by services. These baseline scenarios emphasize elements that also emerged in the course of the RTEA project:
    - highlighting the importance of establishing a solid institutional and policy framework for sustainable resource management, the scenarios lead to the conclusion that “the development contribution of natural resources will come mainly from how the public revenues generated are used;” and
    - emphasizing the need to diversify both the economy in general and the export basket in particular, the report notes that: “the lack of diversification and high concentration of economic activity in Lao PDR indicates that growth will continue to be based on the performance of a few key sectors.”
- While the availability and accuracy of economic and trade data have hampered efforts, there is a growing body of literature to assess the potential economic impacts of AFTA and GMS membership on Lao PDR. One salient point that emerges is that the process of implementing AFTA in itself and greater openness in general are likely to contribute to accelerating domestic reform. This, in turn, leads to efficiency gains for the economy as a whole, the removal of non-tariff barriers to facilitate increased trade and investment; and increased technology spillovers (Fukase and Winters, 2003;

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6 GTAP is a multi-regional, applied, general equilibrium model, see [www.gtap.agecon.purdue.edu](http://www.gtap.agecon.purdue.edu).

Martin, 2001). One paper concludes that joining AFTA is likely to increase exports (also due to a likely integration of previously informal trade, in particular with Thailand and Vietnam); decrease government revenue only slightly (again due to the high share of informal trade and low levels of trade diversion associated with AFTA); and, as Lao PDR adopts a legal, administrative and institutional framework in line with ASEAN standards, strongly increase FDI flows (Menon, 1998).

Further research and analysis is needed to illuminate the impacts of trade and investment liberalization on the GMS economies in general and specifically the Lao economy. Modelling of specific trade agreements will serve to better enable Lao PDR to understand the possible impacts flowing from trade agreements (Strut and Lim, 2005). Clearly, a first step is to improve the quality and quantity of data available in Lao PDR, which has limited quantitative modelling exercises.

With the above considerations in mind, the following section outlines select expected economic scenarios for Lao PDR flowing from the trade agreements and preferences described above. These scenarios are constructed for each sector identified for inclusion in the RTEA project. Market access facilitated through the trade agreements and preferences is considered to be a key determinant of export opportunity.

### 1. Hydropower

Exports of electricity have not been included in the regional FTAs, nor are they covered in the WTO. However, the provision of electricity is covered as a services sector. Nevertheless, investment liberalization will impact significantly on the hydropower sector as it expands to supply the rapidly growing energy needs in the region. The general institutional and structural reforms undertaken by Lao PDR to complete the accession process and become a WTO member as well as a full member of the ASEAN AIA will facilitate FDI in this sector. Plans to construct over 40 hydropower projects in Lao PDR over the next decade indicate that there will be capacity to increase power generation substantially. On average 65 to 80 per cent of the annual production of hydropower is exported to neighbouring countries (World Bank, 2006c). With the completion of the Nam Theun 2 dam in 2010, exports are expected to increase to US\$354 million, generating government revenue from electricity exports of approximately US\$100 million per annum (CPI/UNDP, 2006). Exports will continue to increase given the numerous hydropower projects under development.

### 2. Mining

Since 2004, mining has been singled out in the government's *National Growth and Poverty Eradication Strategy* as a priority sector for investment in order to stimulate economic growth and increase government revenue to combat poverty. Growth in this sector, which focuses on metal minerals, industrial minerals, construction materials, gems and fossil fuels, is largely fuelled by demand for raw materials in the construction sectors of neighbouring countries, such as Thailand, China and Vietnam. A steady flow of FDI is likely to substantially increase exports of metals and minerals (World Bank, 2006b). Investment will be facilitated by the trade and liberalization agreements set out above. FDI in the sector has grown by approximately 34 per cent over the past five years and in 2006 the sector contributed nearly 10 per cent of GDP (World Bank, 2007).

### 3. Construction materials

The removal of trade barriers is expected to lead to rising imports and increased foreign competition, placing pressure on domestic production in the construction materials sector to increase efficiency and find niche high-value markets. It is anticipated that increased FDI in general infrastructure in Lao PDR will act to stimulate growth in this sector. Given that this is another priority growth sector in the *National Growth and Poverty Eradication Strategy*, it is reasonable to expect that FDI will be channelled into making this sector more competitive. It has been predicted that when AFTA tariff reductions are fully implemented in 2008, quantitative import restrictions in the cement and roof panel industries will be eliminated (CPI/UNDP, 2006). The result is likely to provide a strong incentive to improve competitiveness in this sector.

#### 4. Wood and wood products

There is potential for increasing exports given the opportunities to take advantage of preferential tariffs on wood and wood products that exist for Lao PDR in the agreements outlined above, but the final results will depend to a large degree on whether it is possible to stimulate value-addition in the forestry sector and whether the government can remove structural impediments to export, (i.e., requirements for export permits and imposition of export fees). Exports are likely to be fostered given the priority placed on the wood and wood products sector in the government's *National Export Strategy*. The barriers that will need to be overcome relate to the increasing requirement for wood products to be certified as coming from sustainably managed forests. The recent *Third Human Development Report* asks whether it would be better to legalize sustainable harvesting in order to contribute to formalizing the timber trade and supporting the local wood processing industry (CPI/UNDP, 2006).

#### 5. Garments

The garment sector in Lao PDR relies almost exclusively on imports of cotton and woven fabric, dyes, thread and yarn, and sewing machines and packaging materials. On average, 70 per cent of the export value of a garment comes from imported inputs (MIC/ITC, 2006). Notwithstanding the termination in 2004 of the Multifibre Arrangement and the WTO Agreement on Textiles and Clothing, which phased-out the allocation of quotas for textiles and clothing products, Lao PDR is expected to continue to export significant quantities of garments in the medium-term. The reduction of import tariffs on intermediate goods required to manufacture the final garment is likely to enhance the competitiveness of the sector, which relies primarily on intermediary imports. Exports in this sector have been prioritized in the government's *National Export Strategy*. The export target for 2010 is to increase growth in this sector by five to 10 per cent per year through the development of higher value-added knit, cut and sew garments and knitwear (MIC/ITC, 2006).

This sector is highly dependent on exports to the EU. In 2004, 91 per cent of garment exports from Lao PDR were destined for the EU; thus, maintaining market access is vital to this sector. Notwithstanding notable challenges, Lao garment exports have the potential to grow to also take advantage of GSP benefits in Australia, Canada, Japan and Korea, as well as the recently opened U.S. market. Despite these predictions for growth, the scenarios set out by UNDP predict that garment exports may decrease by 50 per cent due to the termination of the WTO Agreement on Textiles and Clothing in 2005 or, at best, remain constant (CPI/UNDP, 2006). Strict rules of origin in the main export market of the EU have made it difficult for Lao PDR to take advantage of preferential market access. Moreover, preference erosion is cause for concern; WTO accession is expected to provide Lao exports with predictable market access to major markets (Thephavong, *et al.*, 2005).

#### 6. Tourism

Particularly given the strategic location of Lao PDR, increases in international tourism are expected to flow from the greater integration of the GMS as well as the ASEAN region. Between 1990 and 2004, international tourist arrivals increased exponentially from 14,400 to nearly 900,000. In 2004, tourism was a main contributor to GDP with US\$120 million (CPI, 2006). The *National Tourism Development Strategy* (2006–2020) has identified three main parts of Lao PDR which have the greatest potential to attract tourists, starting with Luang Prabang in the North, Vientiane, Khammouane, Svannakhet in the Middle and Champasak, Attapue and Salavanh in the South (MIC/ITC, 2006:4–5). The tourism industry is likely to require greater use of intermediate goods, which can more easily be imported as a result of tariff reductions. Opportunities might also arise from linking the tourism sector to other sectors of the economy, in particular for niche products, such as organic agricultural products or sustainably-produced handicraft products, which could be sold to the tourists. Exports in this sector have also been prioritized in the government's *National Export Strategy*.

#### 7. Organic agricultural products

At present, agriculture in Lao PDR uses minimal chemical inputs in the production process. It is well placed to supply the increasing demand for high-quality organic products, particularly in overseas markets such

as Japan, the EU and the U.S.. Exports in this sector have been prioritized in the government’s *National Export Strategy*. Strengthening capacity and increasing exports in this sector will require security-of-supply and adherence to and certification of internationally-recognized standards. A recent project to promote organic farming in Lao PDR (PROFIL) has contributed to building capacity in this sector (Helvetas, 2006). The sector is hampered by domestic supply constraints and the ability to meet strict requirements in main export markets for the certification of organic agricultural products, as well as the lack of national infrastructure to support the industry, including the absence of a national certifying body.

#### 8. Silk handicrafts

While this is a long-standing traditional sector in Lao PDR, it is only relatively recently that silk handicrafts have been exported. Since 2000, exports have steadily increased, albeit from a low level at a rate of 13 per cent per year (MIC/ITC, 2006). Exports in this sector have been prioritized in the government’s *National Export Strategy* and are expected to increase to meet the demands of and favourable market access in major export markets. The significant decrease in the U.S. tariff rate (90 per cent) on silk handicrafts offers considerable opportunities for Lao exports in this sector. The development of the “Chai Lao” label for silk handicrafts under the guidance of the Lao Handicraft Association has already proven to be instrumental in enhancing the quality and marketability of this sector in export markets. Nevertheless, the prospects for this sector are likely also to depend on the ability to increase the domestic silk context for handicrafts. At present, most of the raw silk used in weaving is imported (MIC/ITC, 2006). As with other sectors dominated by SMEs, overcoming quality and economies of scale constraints are variables that are likely to determine the ability of this sector to take advantage of opportunities in foreign markets.

#### 9. Medicinal plants and spices

Exports of medicinal plants and spices are relatively recent (over the past decade) and go to few regional partners, mainly Thailand and China. At present, most medicinal plants and spices are collected from wild sources and are considered to be non-timber forest products. An increase in the demand—particularly in the region—is driving cultivation of medicinal plants and spices (GTZ, 2005; SNV, 2006). Exports in this sector have been prioritized in the government’s *National Export Strategy* in order to regulate quality, stimulate regular supply and build entrepreneurship among the small number of micro- and small-scale producers developing the export potential. Medicinal plants and spices are almost exclusively exported and do not face import competition. Exports in this sector are expected to grow in response to increasing demand. Examples of traded non-timber forest products (NTFPs) include benzoin, turpentine and rosin, damar oil, honey and wax, cardamom, rattan, bamboo and sugar palm.

#### 10. Biofuels

As a landlocked country, Lao PDR it is particularly vulnerable to dependence on external energy sources, raising the need to look into new and environmentally-friendly alternatives. One such alternative—biodiesel derived from vegetable oils or animals fats—has seen significant increases in production around the world, which is expected to continue expanding rapidly in particular in developing countries where biodiesel can often be produced at a lower cost. As in other Southeast Asian countries, Lao PDR is switching large areas of land to cultivate crops for biofuels, notably jatropha for biodiesel (ADB, 2007b). As a first step to stimulate biofuel production, the government is currently in the process of drafting a framework to develop the biofuels sector in an effort to find alternative domestic energy sources to replace high-cost imports of petroleum.

### 3.2 Summary

The trade and investment-induced economic impact scenarios are summarized in Table 8.

**Table 8: Trade and investment-induced economic scenarios for Lao PDR, June 2007**

| Sector                        | Current or planned trade agreement  | Expected economic scenario resulting from increased market access for exports from Lao PDR   |
|-------------------------------|---|--|
| Hydropower                    | Not covered specifically in any current or planned FTA; investment framework impacted by the AIA, ADB GMS electrical grid | Incentive to take advantage of increased demand from regional trade integration and increased FDI to develop electricity exports.  |
| Mining                        | Not covered specifically in any current or planned FTA; investment framework impacted by the AIA                          | Incentive to take advantage of increased demand from regional trade integration and increased FDI to develop mineral exports.  |
| Construction materials        | AFTA, ASEAN-China FTA   | Incentive to take advantage of increased demand from regional trade integration and increased FDI to develop construction materials.   |
| Wood and wood products        | AFTA, ASEAN-China FTA, Japan GSP, AISP, ACMECS, Cua Lo  | Incentive to take advantage of preferential tariff treatment.  |
| Garments                      | EU GSP, Everything But Arms Initiative, U.S. NTR  | Incentives to develop exports reduced with the termination of the protected market share for LDCs under the WTO Agreement on Textiles and Clothing in January 2005. Lao PDR now has to compete with other LDC exporters for GSP market. Incentive to take advantage of GSP tariff treatment in the EU. |
| Tourism                       | AIA, ADB GMS Sustainable Tourism Strategy   | Incentive to develop industry based on increased tourism from regional integration initiatives. This is one of the most promising sectors in Lao PDR.  |
| Organic agricultural products | AFTA, ASEAN-China FTA, AISP, ACMECS, Australia/New Zealand DFQF access, EU GSP, Japan GSP                                 | Incentive to take advantage of preferential tariff treatment.  |
| Silk handicrafts              | AFTA, ASEAN-China, U.S. NTR, Australia/New Zealand DFQF access, EU GSP, Japan GSP   | Incentive to take advantage of preferential tariff treatment.  |
| Medicinal plants and spices   | AFTA, ASEAN-China FTA, AISP, ACMECS, U.S. NTR, Japan GSP  | Incentive to take advantage of preferential tariff treatment.  |
| Biofuels                      | AFTA, ASEAN-China FTA   | Incentive to develop alternative energy sources to substitute oil imports to fuel domestic demand.   |

Source: Compiled by the authors based on tariff schedules, GSP preferences, CPI/UNDP, 2006 and World Bank, 2007.

From the preliminary assessment in this section, it is clear that, while there are likely to be potential gains from taking advantage of the export opportunities arising from the implementation of liberalization commitments in Lao PDR, there may also be costs, including decreases in revenue from tariffs—notwithstanding the fact that tariffs are already low in Lao PDR. The country will also face increased competition from its FTA partners in the form of imports in certain sectors (e.g., fertilizer and pesticides, garments, paper, processed food). The current analysis does not take into account the consequences of increased competition from imports as fully as would be worthwhile in a subsequent assessment.

Flowing from the establishment of the current and planned trade and investment liberalization initiatives described in this section, there is likely to be an increase in products for which tariffs have been reduced (e.g., silk textiles, handicrafts, wood products), as well as enhanced incentives for FDI flows into Lao PDR (e.g., hydroelectricity, mining, wood products). However, several recent reports emphasize that Lao PDR will have to increase its competitiveness in these sectors in order to compete in its traditional and emerging market, such as AFTA and the U.S. (EIU, 2007; World Bank, 2007). With the likely increase in trade flowing from Normal Trade Relations (NTR), Lao PDR will also face the challenge of meeting U.S. demands to increase protection on intellectual property rights (IPRs) and to open more rapidly its service sectors to FDI.

Importantly, the ability of Lao PDR to overcome supply-side constraints on the expansion of a value-added, diversified basket of exports is likely to be a key factor in how the economy develops. As such, Lao PDR finds itself in a highly unusual situation—no lack of market access, but severe lack of both capacity to supply and domestic infrastructure. Exports from Lao PDR benefit from GSP treatment in most OECD countries, a factor which should facilitate a growth in exports in the sectors outlined in this report. In fact, the Lao National Chamber of Commerce and Industry (LNCCI) invites investors to invest in Lao PDR to “reap the benefit of GSP concessions” for Lao exports (see [www.lncci.laotel.com](http://www.lncci.laotel.com)).

With its long and porous border with four Mekong Subregion countries, as well as an increase in the inhabitants living along the borders, it is not surprising that Lao PDR has a significant informal trade sector—for example for agricultural products (e.g., sugar cane with China, garlic with Vietnam, timber and live-stock with Thailand). There are also burgeoning imports from Thailand in consumer goods and electrical equipment, which cross the border without inspection.

To take advantage of preferential access to the EU in particular, informal imports of clothing from Vietnam have also reached high levels—causing trade friction over rules of origin between Lao PDR and the EU. The extent to which trade and investment liberalization will change the nature of informal trade needs to be assessed. A case study of the garment sector indicates that this sector faces several challenges as noted above, including complex rules of origin requirements and the possibility of preference erosion (Thaphavong *et al.* 2005).

In the process of acceding to the WTO, Lao PDR is expected to accelerate the reform process and necessitate concerted efforts to put in place the necessary regulatory and institutional structures to facilitate trade and investment. The development of a national regime for standards is a prime example. Currently, Lao PDR has few standards in place. However, a Food Safety Law was agreed in 2004 and the preparations to implement the Technical Barriers to Trade (TBT) and Sanitary and Phytosanitary Measures (SPS) Agreements in the framework of the WTO will provide a stimulus to developing the standards regime.

With these economic impact scenarios completed, the next section will assess the potential environmental impacts of the predictions on whether trade is expected to increase or decrease as a result of liberalization initiatives.

## Section 4: Expected Environmental Impacts

### 4.1 Policy and institutional framework

In order to assess the expected environmental impacts of the trade liberalization scenarios, it is essential to discuss: the current policies and regulations in Lao PDR which may help reduce, or mitigate potential environmental impacts; and the institutional capacity of Lao PDR to deal with trade and environment issues. In general, the literature on the policy interplay between trade and environment emphasizes the importance of the domestic environmental framework and the institutional capacity to manage trade-induced change on the natural resource base. The legislation needs to be in place and, importantly, implemented. Empirical evidence to date confirms that rigour of implementation acts to mitigate environmental harm and accentuate environmental benefit (STEA/UNEP, 2006).

Lao PDR has just started the process of utilizing its vast natural resources as a source of economic growth. The government of Lao PDR is in the process of elaborating a broad environmental policy and assigning a specific institution with the responsibility of ensuring the integration of environmental issues in a comprehensive manner. For the time being, the Science, Technology and Environment Agency (STEA) under the Prime Minister's Office holds the main responsibility related to the environment and conservation of natural resources, in coordination with the newly established Water Resources and Environment Agency (WREA).

The *National Growth and Poverty Eradication Strategy (NGPES)* (2004) is the government's umbrella policy document. This Strategy governs the development and implementation of economic growth and poverty eradication in Lao PDR. The NGPES recognizes that "solutions for environmental conservation have to be founded in the broader context of national development, wherein each sector integrated environmental principles in its policies, programmes and projects." The NGPES also makes reference to:

- the underlying goal of sustainable growth, coupled with continuous social progress and equity;
- the vital importance of environmental conservation in achieving long-term sustainable economic growth and poverty eradication; and
- the importance of the private sector as "the main engine of growth," recognizing the role of the private sector in promoting development.

In terms of the regulatory framework for environmental protection, in 1999, the Lao PDR National Assembly passed a comprehensive *Environmental Protection Law*, supported by an Implementing Decree in 2002, which specifies "necessary principles, rules and measures for managing, monitoring, restoring and protecting the environment in order to protect public, natural resources and biodiversity, and to ensure the sustainable socioeconomic development of the nation" (Article 1). This Law outlines protocols for:

- conducting environmental impact assessments (Article 8);
- greening production processes (Article 9) and construction projects (Article 10);
- protecting natural resources (Articles 11–14), biodiversity (Article 15) and cultural and historic sites (Article 16); and
- preventing and mitigating natural disasters (Articles 17–19).

It is estimated that Lao PDR spends approximately 0.6 per cent of total government spending on environmental expenditures, approximately US\$600,000 per year (World Bank, 2006c). By comparison, Thailand spends around 1.2 to 1.4 per cent and Vietnam 0.8 to 1 per cent of total government expenditures. Established by prime ministerial decree in 2005, the Environment Protection Fund is to serve as an



autonomous source of financing to support environmental management, protection and conservation as well as to coordinate donor funds. Financing for environmental protection is dependent on donor funding, primarily from the Swedish International Development Agency, ADB and the World Bank (World Bank, 2006c). Lao PDR has in place national legislation for protecting the environment (see Table 9).

**Table 9: Key environmental and socio-economic laws and regulations, Lao PDR**

| Laws and regulations                                     | Year      | Key provisions   |
|--|-----------|--|
| New Economic Mechanism                                   | 1986      | Begins restructuring toward a market-oriented economy  |
| Tropical Forest Action Plan                              | 1991      | Forest management plan for the country, emphasizing community involvement and alternatives to shifting cultivation                 |
| Science, Environment and Technology Agency (STEA)        | 1993      | Established under the Prime Minister's Office as the principle government agency for formulating and guiding environmental policy  |
| Forestry Law   | 1996      | Classification of land, management and planning, biodiversity conservation   |
| Water and Water Resource Law                             | 1996      | Regulates the management and sustainable use of water and water resources  |
| Land Law   | 1997      | Allocation of land to individuals and companies  |
| Mining Law   | 1997      | Regulations concerning development of land for mining operations   |
| Environmental Protection Law                             | 1999      | Advocates public participation and the use of EIAs in project planning   |
| Industrial Law   | 1999      | Establishes the requirement for environmental assessments in industries and development projects                                   |
| Environmental Impact Assessment Regulation               | 2000      | Decree to undertake EIAs for approval of development projects  |
| National Protected Areas Regulations                     | 2001      | Clarifies the concept of National Protected Areas  |
| National Environment Committee (NEC)                     | 2002      | Coordinating body mandated to provide advice on environment-related matters and coordinate environmental management and monitoring |
| National Growth and Poverty Eradication Strategy (NGPES) | 2004      | Five-year strategic plan for national growth and poverty reduction   |
| National Biodiversity Strategy and Action Plan (NBSAP)   | 2004      | Plan for biodiversity conservation   |
| Law on the Promotion of Foreign Investment               | 2004      | Framework for foreign investment   |
| Environment Protection Fund                              | 2005      | Decree to finance projects to conserve or protect the environment or to strengthen environmental management                        |
| National Socio-Economic Development Plan (NSEDPP)        | 2006–2010 | Five-year plan to reform the economy   |
| Water Resources and Environment Agency (WREA)            | 2007      | Responsible for managing water and environmental resources to ensure sustainable development                                       |

*Source: Compiled by the authors based on STEA/UNEP, 2006.*

Lao PDR is a party to the main multilateral environmental agreements (MEAs), including the Convention on Biological Diversity (and the Cartagena Protocol on Biosafety), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the United Nations Framework Convention on Climate Change (and the Kyoto Protocol); the UN Convention to Combat Desertification; the United Nations Convention on the Law of the Sea; the Montreal Protocol on Substances that Deplete the Ozone Layer; the Basel Convention on the Transboundary Movement of Hazardous Wastes; the Stockholm Convention on Persistent Organic Pollutants (POPs); and the International Plant Protection Convention.

Implementation of these MEAs will provide an institutional framework to better enable trade liberalization in relevant areas to be supportive of environmental conservation and protection. For example, pur-

suant to the Basel Convention and CITES, Lao PDR prohibits the import and export of certain goods, including hazardous waste and endangered wildlife and plant species. Nevertheless, implementation is an issue of concern. For example, following Lao PDR’s accession to CITES in 2004, the wildlife trade monitoring network reported that wildlife trade has become less visible, but local and regional demand has continued to flourish unabated (TRAFFIC, 2004). Improved access to remote areas has facilitated the commercialization of the trade in wildlife, primarily for traditional medicine. As wildlife populations decline, the value of wildlife products increases and the lure of lucrative profits make it even more difficult to curb illegal trade along long and porous borders. Moreover, a significant source of this trade comes from in or around National Protected Areas (Than, 2006; ICEM, 2003).

## 4.2 Potential environmental impacts: sectoral analysis

The following analysis sketches the possible environmental impacts of trade liberalization in the chosen sectors. Quantitative precision is not the objective. Rather, the analysis aims to identify key areas that will require particular attention and further study. Based on the environmental research papers prepared for this project, this section will discuss how the expected economic impacts will play out in environmental terms (looking at both potential negative and positive effects) for each chosen economic sector and provides some strategies for minimizing potential negative impacts. A summary of the main environmental impacts is contained in Table 10 (which is the same as Table 1 but reproduced here as Table 10 for the reader’s convenience).

**Table 10: Environmental impacts of trade liberalization in Lao PDR**

| Sector                 | Trade and investment drivers   | Main environmental impacts   | Mitigating factors (environmental management framework)  |
|------------------------|--|--|--|
| Hydropower             | Priority investment and growth sector; industrial development in the GMS; ASEAN Investment Area (AIA)  | -ve: flooding of forested areas; impacts on natural water flows; biodiversity loss (including fisheries resources)<br>+ve: increased government revenue to contribute to sustainable development; increased possibility to leap frog outdated approaches to environmentally-sound technologies (ESTs); mitigate climate change | National Growth & Poverty Eradication Strategy (2004) (NGPES); National Policy: Environmental and Social Sustainability of the Hydropower Sector in Lao PDR (2005) |
| Mining                 | Priority investment and growth sector; overseas demand, especially from China and India; AIA   | -ve: forest clearance; water, land and air pollution; habitat loss<br>+ve: increased government revenue to contribute to sustainable development; leap frog to ESTs  | NGPES; environmental impact assessment (EIA) required under the Mining Law (1997)  |
| Construction materials | Priority investment and growth sector; AIA   | -ve: pollution; impacts from mining raw materials<br>+ve: efficient materials can mitigate resource use; leap frog to ESTs   | NGPES; Medium-term Strategy and Action Plan for Industrial Development (2003)  |
| Wood and wood products | Prioritized for export in the National Export Strategy (NES); government focus on developing processing industry; various trade agreements and preferences | -ve: deforestation; forest degradation; habitat and biodiversity loss; fewer non-timber forest product (NTFP); land-use change for plantations<br>+ve: market opportunities for sustainable products enhance forest management   | National Export Strategy (NES) (2006–2010); Forest Strategy 2020, export ban on raw logs; sustainable forest management (SFM) certification                        |
| Garments               | Prioritized for export in the National Export Strategy; various trade agreements and preferences   | -ve: transport pollution to get to the product to port<br>+ve: leap frog to ESTs   | National Export Strategy   |

| Sector                        | Trade and investment drivers   | Main environmental impacts  | Mitigating factors (environmental management framework)   |
|-------------------------------|--|---|---|
| Tourism                       | Prioritized for export in the National Export Strategy; growth of tourism sector overall; AIA  | -ve: pollution, habitat loss, unsustainable resource use (waste and water)<br>+ve: value environment as a business asset; increased funds for conservation; local employment; awareness raising, including through corporate social responsibility (CSR)  | National Tourism Development Strategy 2006–2020; Nation Export Strategy – Tourism; National Ecotourism Strategy and Action Plan 2005–2008; GMS Strategy for Sustainable Tourism |
| Organic agricultural products | Land-use management, impacts on NTFPs; growing overseas demand, particularly the EU and U.S.; various trade agreements and preferences   | -ve: deforestation; forest degradation; shifting cultivation<br>+ve: fewer chemicals; less land degradation; maintain landscapes and agro-biodiversity; increased awareness through high sanitary and phytosanitary measures (SPS) in export markets  | NGPES; National Export Strategy – Organic Agricultural Products; organic certification  |
| Silk handicrafts              | Prioritized for export in the National Export Strategy; to be integrated in the tourism sector; various trade agreements and preferences | -ve: water discharge and consumption; land-use change for plantations<br>+ve: less pollution from natural dyes; leap frog to ESTs; more sustainable production and processing methods   | National Export Strategy – Silk Handicrafts; Industrial and Handicraft Development Strategy toward 2020   |
| Medicinal plants and spices   | Prioritized for export in the National Export Strategy; overseas demand primarily in Asia; various trade agreements and preferences      | -ve: unsustainable resource use; land-use change for plantations; pollution; biodiversity loss<br>+ve: value of products coupled with sustainable harvesting can help protect forests; contribution to pro-poor strategies, rise in incomes of local communities; increased environmental awareness                                   | NGPES; Forestry Strategy 2020; NES – Medicinal Plants and Spices  |
| Biofuels                      | Development of domestic energy alternative source considered to be key to supplement expense of petroleum imports                        | -ve: land-use change for plantations; less land for food crops; mono-cropping; soil erosion; pesticide use; water consumption<br>+ve: less costly energy source increases government revenue to contribute to sustainable development; mitigate climate change; reduce air pollution; use of biodegradable outputs from other sectors | Strategy for development of alternative biofuels (under development)  |

Source: Compiled by the authors based on research and stakeholder interviews conducted for the RTEA project.

### 1. Hydropower, mining and construction materials

Investment has been booming in the industrial sectors of hydropower, mining and construction materials—a trend that is expected to continue well into the next decade. All three sectors can be viewed as large footprint sectors with substantial impacts on the environment because of their use of, and reliance on natural resources: impacts on forest resources (e.g., flooding of forest areas for dams and forest clearance for mining operations, roads and infrastructure); water resources (e.g., impacts of dams on natural flows and pollution from mining and processing activities); and biodiversity (e.g., habitat loss, pollution and impact of dams on fisheries resources). At the same time, hydropower can positively contribute to mitigating climate change by lowering greenhouse gas emissions from energy generation. Moreover, there is potential for the construction materials sector to take advantage of demand for “green” building materials, notably in China. Trade and investment liberalization in these sectors increases the possibility for these sectors to leap frog outdated technologies and approaches given that infrastructure is in the process of being constructed in the GMS. Use of more environ-

mentally-sound technologies (ESTs) and eco-efficient methods of production and processing are also likely to be more readily available with accelerated regional development (ADB, 2007b; King and Mori, 2007).

### Background paper insight: hydro, mining and construction materials

*FDI is bringing renewable energy technology to the country and trade liberalization in the energy sector is helping to position Lao PDR as a net exporter of this 'clean' energy in the region. However the carbon offsetting benefits of this sector should be viewed in the context of the clearing and flooding of forests acting as carbon sinks, carbon emissions resulting from the construction of large power facilities .... (Callander, 2007).*

*A key risk to water quality in the mining sector is the use and management of cyanide, the disposal of slag and the tertiary treatment of water. The NHDR (CPI/UNDP 2006) reported that in 2005 a mining company mishandled and spilled cyanide which contaminated a water stream killing fish and affecting the health of some villages.....With the mining sector set to grow rapidly over the next few years it is of utmost importance that the best technology and management practices be encouraged and/or regulated to minimize these incidents from the outset (Callander, 2007).*

*...demand for energy efficient materials in China is on the rise. If trade liberalization pushes Lao PDR to improve the competitiveness of the construction materials industry perhaps one example of an emerging niche is the demand for green building materials from an energy conscious China. By encouraging eco-efficiency of its resources and helping others to do the same, Lao PDR has the potential to grow its economy and at the same time conserve its natural resources base (Callander, 2007).*

Addressing environmental concerns in these sectors will require strengthening environmental governance at the same pace as current investment trends in Lao PDR, including institutional capacity building and better coordination between affected stakeholder groups. At the same time, efforts will need to be made to engage the private sector and create an investment framework that attracts responsible business and international best practice, as well as voluntary implementation of corporate social responsibility (CSR). At the regional level, closer cooperation on investment could help ensure that environmental concerns are addressed across the region.

## 2. Wood and wood products

Continued growth of the wood and wood products sector has raised a number of serious environmental and social concerns in a country endowed with valuable, productive and ecologically unique forests compared to other countries in the region. Growing demand for wood products and increasing development of forest areas (such as construction of roads and infrastructure) has led to deforestation and forest degradation which in turn threaten habitats, watershed protection, biodiversity, the tourism industry and the availability of non-timber forest products. In recognition of some of these concerns, the government now strongly promotes downstream processing and export of finished and semi-finished wood products, including through a ban on the export of raw logs. However, Lao PDR's wood industry is still at an early stage of development, consisting mainly of small- and medium-sized sawmills, plywood mills and other wood processing plants. Growing demand for sustainably and legally produced wood products could provide the necessary economic incentive for putting in place effective management systems.

### Background paper insight: wood products

*Currently Lao PDR is experiencing the negative impacts of illegal trade and low value exports—the depletion of forests and for low economic gain. The issue here is that there is a demand for relatively unprocessed wood from other countries who want to use this wood to create higher value wood products for their own use and export (CPI/UNDP, 2006). While this issue has been recognized by the government and leading companies in the sector, Lao PDR has yet to produce higher value products on a significant scale (Sayakoummane and Manivong, 2007).*

While trade liberalization may create opportunities to increase value-addition in this sector, sustainable forest management and forest certification for the resulting expansion of exports of wood products is dependent on government regulations combined with private sector initiatives (Eureka, 2004). To gain access to export markets, Lao wood products will have to meet both voluntary and mandatory sustainability requirements. As part of this effort, national policy and regulatory frameworks will need to be strengthened.

ened and enforced in cooperation with the private sector and local communities (including to combat illegal logging and raw log exports), based on scientific assessments of maximum sustainable yields.

### 3. Garments

The garment sector in Lao PDR has been developed only recently compared to other countries in the region. One of the reasons cited for lack of the development of this sector is the lack of incentives provided through investment policies compared with other developing countries, such as Cambodia, Thailand and Vietnam. The garment sector has yet to develop manufacturing expertise in design or marketing. As a result, the industry has focused on manufacturing apparel, with the input of imported fabrics to trims. Consequently, environmental concerns commonly associated with the chemical dyeing process in many textiles industries in other countries are not an issue for Lao PDR currently. As value is added to the industry through expansion into the production of textiles, this may become a cause for concern. Other than pollution caused by transporting the final product to port to go to overseas markets, for the time being, there are not considered to be any significant environmental impacts in this sector.

### 4. Tourism

Expected continued growth in the tourism sector will bring much-needed revenue to the country, but is also likely to put significant pressure on the environment (IUCN, 2007). To address some of these potential negative impacts, ecotourism (i.e., tourism that minimizes the negative impacts on and supports the conservation of natural and cultural resources) has been an integral part of Lao PDR's tourism development strategy (LNTA, 2005).

#### Background paper insight: tourism

*While Vang Vieng has enjoyed rapid economic expansion, infrastructure improvements and increases in local income and living standards, at the same time there are also noticeable negative impacts in the district. For example, the once quiet, rural town is becoming quickly urbanized and crowded. Noise and air pollution are increasing, and the amount of solid waste produced by the district rises each year without the existence of a municipal landfill (Manivong and Sipaaseuth, 2007).*

Ecotourism projects can have important social and environmental benefits, such as making it economically worthwhile to protect the environment (as a business asset), generating funds for conservation projects, providing employment for local villagers, raising awareness and preventing illegal activities on project sites (e.g., illegal logging). However, poorly planned and managed ecotourism projects can be a double-edged sword with potentially adverse changes in culture and destruction of the environment through pollution, habitat loss and unsustainable resource use (e.g., water, energy, food).

Ensuring that ecotourism activities are indeed environmentally and socially sustainable will require effective input from a range of affected stakeholders, including by strengthening the involvement of and cooperation among private sector actors, investors, government agencies, local communities, environmental management bodies, civil society groups and development agencies. Opportunities for obtaining ecotourism certification could also be explored. Importantly, conservation measures will be needed to ensure that the natural assets on which the ecotourism sector depends are protected.

### 5. Organic agricultural products

Agriculture can play a positive role in ecosystem management by maintaining landscapes and biological diversity. At the same time, agriculture—in particular shifting agriculture—has the potential to cause a range of negative environmental impacts, such as forest clearance, freshwater use, land degradation, use of uncontrolled fires and agricultural runoff. While agricultural production in Lao PDR is still mainly characterized by small family farms, environmental impacts are likely to increase as production is increasingly moving from subsistence to commercial production. To mitigate some of these impacts, the Lao PDR government is promoting the production of organic agricultural products, especially organic rice. However, if not carefully managed, growth in the organic agriculture sector can also cause environmental damage, in particular deforestation, protected area encroachment and other land-use change for agricultural production.

Organic production could provide Lao PDR with a crucial competitive edge *vis-à-vis* other agricultural producers in the region. To take advantage of these “green” market opportunities, efforts will need to focus on strengthening certification systems and bodies. In this context, organic standards and certification criteria also need to include key criteria for environmental protection. Other measures include ensuring regular and predictable supply, facilitating access to necessary technologies and improving transport infrastructure. It has even been suggested that Lao PDR declare the whole nation to be “organic” to ensure a competitive edge in agricultural products based on a natural advantage (Dubbeldam, 2006).

### Background paper insight: organic agricultural products

*Lao PDR already produces much of its agricultural products organically by default. In this case it could be argued that a structural effect of trade is not one of changing the agriculture sector to produce in other ways, but enhancing and standardizing the agriculture that is already currently practiced. Ensuring and certifying organic agriculture production therefore has the ability to reduce or prevent the take up of agricultural practices from abroad that often come hand-in-hand with environmental pollution. This benefit is found in all crops under organic production (Manivong, 2007).*

## 6. Silk handicrafts

While the silk handicrafts sector is viewed as having a relatively low environmental footprint at present due to predominately organic sericulture and natural/traditional methods of production, environmental impacts are likely to worsen as the sector attempts to scale-up its production to meet increasing demand. The key environmental concerns related to this sector are water consumption and wastewater discharge containing chemicals used for bleaching. Other potential impacts include land-use changes to make way for mulberry tree plantations to cultivate silk, and the temptation for Lao farmers to turn to chemical inputs instead of traditional practices in an effort to increase silk yields.

### Background paper insight: silk handicrafts

*At present silk production methods use a significant amount of water in the process of bleaching and dyeing, and these activities create wastewater. [...] This wastewater and chemical use will invariably increase when production is increased. In order to maintain water and environmental quality in Lao PDR, appropriate measures and management practices will need to be adopted in relation to increased production in the silk handicraft sector (Soulivanh, 2007).*

Future marketing efforts could try to capitalize on the currently low environmental impact of the Lao silk handicraft sector by exploring market opportunities and certification schemes for “green” products. At the same time, wastewater treatment and recycling systems should be developed to increase the efficiency of water use and reduce pollution. In addition, efforts should focus on: simulating research in other environmentally-sound production and processing methods to reduce raw material and energy consumption; raising awareness and building capacities to help improve environmental performance; and strengthening value-addition and diversification by linking this sector with other sectors, such as agriculture and tourism.

## 7. Medicinal plants and spices

### Background paper insight: medicinal plants and spices

*... large increases in exports of forest products such as medicinal plants can lead to a number of issues such as unsustainable harvesting of forest products leading to loss of biodiversity, deforestation as a result of need for cultivation land and increased production-related pollution (air, water, soil) (STEA/UNEP, 2006). If not managed, these issues will ultimately have negative economic and livelihood effects in Lao PDR as the ability of the natural environment to provide resources for trade and economic prosperity diminish (Sydara, 2007).*

As international demand for medicinal plants and spices continues to grow, the inappropriate and unman-

aged harvesting and processing of medicinal plant could have a number of negative environmental consequences, such as: the unsustainable harvesting of medicinal plants (including illegal harvesting and trade) leading to losses of biodiversity; deforestation to meet the need for cultivated land; and increased production-related pollution (air, water and soil). Indeed, some important medicinal plants, such as *Coscinium* and *Anoectochilus*—a rare species of orchid—are already under threat.

To address some of these concerns, effective laws and regulations to ensure the sustainable management of the forestry sector as a whole, and non-timber forest products (including medicinal plants) in particular, will need to be developed and enforced. Such measures should be informed through improved statistics on resource harvesting and exports. Cooperation among the different stakeholders will be crucial and include activities such as engaging local communities in forest management, encouraging the private sector to pay greater attention to environmental sustainability and fostering regional cooperation to combat illegal trade (SNV, 2005). In addition, government efforts should focus on supporting value-addition to obtain greater monetary returns while using fewer resources.

### 8. Biofuels

Compared to other energy sources, biofuels have a number of environmental advantages, including significantly lower carbon dioxide and sulphur dioxide emissions, safe handling and transport, and the efficient use of biodegradable outputs from other sectors. However, biofuel production can also have negative environmental and social consequences, such as: the conversion of forests and other natural environments to monocrop plantations (with associated impacts related to water consumption, soil erosion and contamination from pesticides and fertilizers); a shift from food to biofuel production; and pollution from processing plants.

The national biofuels policy should clearly outline environmental and social policies to address some of the above-mentioned concerns. Efforts should also be made to attract investment in this area, favouring investors with a proven environmental and social track record, while the private sector should be encouraged to take on board environmental and social objectives. Environmental impact assessments of biodiesel projects should be carried out. Moreover, further training and capacity building in this area is urgently required to help stakeholders understand and manage the positive and negative impacts of biofuel production.

#### Background paper insight: biofuels

*With the developing interest in biodiesel as a sustainable alternative to fossil fuels in Lao PDR, it is important to recognize that the potential benefits may be undermined if forests are cleared for biodiesel crops for example. ... As a direct result, the environmental benefits of biodiesel as a non-CO<sub>2</sub> emitting alternative to fossil fuels may be undercut by the loss of forests for carbon absorption. These interlinkages will have to be further studied in order to allow for a complete assessment, on a case-by-case basis of the impacts of biofuel development in Lao PDR (Sengmany, 2007).*

## 4.3 Potential impacts of the investment framework

Lao PDR is party to eleven bilateral investment treaties (BITs) as well as to the ASEAN Investment Agreement, as described above. The major environmental impacts from investment agreements fall into two broad categories: structural/scale impacts; and regulatory impacts.

The *structural/scale impacts* stem from the flows of investment into sectors such as mining and hydropower. The impacts here are the same as those described elsewhere in this report with respect to the export of the products of that investment—mostly relating to land-use impacts and the loss of biodiversity. It should be noted that Lao PDR's BITs are not so much a concern in this respect as they do not allow for pre-establishment rights for investors (see also Section 2.5). Thus, if there is excess investment and undesirable impacts in these areas, concern should focus on domestic regulations covering these sectors, rather than on the investment agreements. Of course, those domestic regulations include the Law on the Promotion of Foreign Investment (2004), which some studies indicate does not result in adequate environmental impact assessment before approval to new investments is granted. A basic result of integrating environmental and economic poli-

cies in Lao PDR would be that the law on investment should help to provide the basis for deciding whether an incoming investment makes environmental sense, or at least for making a judgment that balances environmental damage and economic development; thereby contributing to sustainable development.

The AIA may be a concern since it does grant pre-establishment rights to ASEAN investors after 2015. This will make it more difficult to implement measures such as the current prime ministerial moratorium on investment in land concessions over 100 hectares, unless sectors are specifically listed as “sensitive.”

The *regulatory impact* of investment agreements primarily come from how they define expropriation. Most of the older BITs, including all 11 of Lao PDR’s existing BITs which were signed in the 1990s, have an expansive definition, or a vague one. Some newer agreements are careful to specify that non-discriminatory measures of general application, undertaken in good faith, cannot constitute expropriation. This follows several successful arguments by investors that a measure (in several cases, an environmental measure), which made them less profitable, amounted to expropriation, even if the measure was simply intended to promote a public good and had no discriminatory intent.<sup>7</sup> The language in Lao PDR’s existing BITs, then, leaves it open to this kind of argument, which if successfully made can act to constrain the full exercise of environmental regulatory oversight, and the development of any new environmental measures that might have significant economic impacts on existing investors.

#### 4.4 Summary of research findings

Lao PDR has the potential to capitalize on its rich natural assets and relatively low environmental impacts in certain sectors to take advantage of “green” market opportunities such as organic agriculture, sustainably harvested timber and non-timber forest products, sustainably-produced silk handicrafts or ecotourism. At the same time, if not carefully planned, export growth, particularly the growing regional and international demand for natural resources, can cause significant pressure on the environment, including increased pollution, deforestation, land degradation and biodiversity loss. The rapidly increasing demand in the GMS in itself is cause for considerable alarm if not sustainably managed. With the above considerations in mind, the following summary of the research findings has been compiled based on the analysis contained in the background environmental research papers, as well as input from the Expert Advisory Panel:

- Lao PDR is undertaking commitments to liberalize trade in a wide range of agreements at the bilateral, regional and multilateral levels. Liberalization commitments to bring down import tariffs—even from currently low levels—are expected to increase imports. The broad spectrum of trade agreements to which Lao PDR is a member—notably AFTA and the ASEAN-China FTA, as well as several bilateral FTAs with main trading partners in the region (Thailand, China and Australia)—are likely to lock-in market access for exports from Lao PDR.
- The ability of Lao PDR to take advantage of these market access opportunities lies predominantly in: (1) overcoming supply-side constraints; and (2) meeting the host of potential non-tariff barriers to its exports in the main traded sectors, such as certification requirements for wood and agricultural products.
- Non-tariff barriers to trade are particularly significant as Lao PDR attempts to diversify its economy to sectors other than the current key contributors to export-led growth—wood, electricity, garments and mining.
- Efforts are underway to stimulate value-addition in traditional sectors, for example by developing the downstream wood processing industry, and providing incentives to emerging sectors with niche export growth potential (organic agriculture, silk handicrafts, and medicinal plants and spices).
- The development of the tourism sector, including ecotourism, holds promise as well as challenges in so far as Lao PDR is able to provide the necessary services in a sustainable manner to the rapidly increasing number of tourists visiting the country.

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7 See the discussion of the *Tecmed* and *Metalclad* cases in Cosby *et al.* (2004: Section 2.2.5).



- Trade liberalization pursuant to the WTO and ASEAN is expected to lock in reforms that will ease administrative burdens and secure a more predictable investment framework in Lao PDR. While the Integrated Framework assessment concludes that WTO membership will not provide additional market access for Lao exports, the institutional and regulatory reform it has set in motion in the country will make a substantive contribution in general to securing the rule of law and regulatory framework. By increasing transparency and regulatory certainty, this process is also anticipated to provide a stimulus for the implementation and enforcement of regulations governing natural resources and the environment, for example, to undertake sustainability assessments for major hydroelectric and mining projects, particularly for FDI-funded activities.
- The fact that a large share of FDI emanates from companies that meet and are accountable to higher international standards, including, for example, the environment in the mining sector, is an aspect that the government can build on to encourage sustainable investment in large infrastructure projects in Lao PDR. If the temptation can be avoided to “sell out the shop” to the first bidder, the exploitation of the country’s abundance of natural resources can continue to fuel the economy for some time to come.
- The impacts of trade liberalization on the informal sector of the Lao economy are worthy of note given that more than 50 per cent of the population live in districts bordering China, Myanmar and Vietnam (CPI/UNDP, 2006). There will now be greater access to trading opportunities—also facilitated in general by economic cooperation with bordering countries, but also by the extensive ADB-led transportation and electricity corridors under construction in the GMS. However, as trade flows become more formalized and customs services stronger and more effective, the challenge will be to encourage small-scale traders while discouraging large-scale illegal trade, which has long flourished in areas such as timber (raw logs), and endangered wildlife and plant species (Lazarus *et al.*, 2006; Pholsena and Banomyong, 2006).
- Environmental management and regulations need to respond to changes brought about by trade reform and liberalization (Strut and Anderson, 2000). For example, if competitiveness and productivity in certain natural resource industries can be linked with the quality and enforcement of resource management, it is appropriate to put in place stricter regulations.
- The private sector has a vital role to play in the sustainable development of Lao PDR. This report has included potential “green” niche export sectors where opportunities exist for “win-win” gains for the economy and the environment. Whether Lao PDR can take advantage of this export potential will depend to a great extent on private-sector initiatives. The success of the private sector in capturing opportunities arising from trade liberalization, in turn, depends on the institutional and regulatory setting of a country (King and Mori, 2007). The ADB report *Doing Business 2007: How to Reform* situates Lao PDR as one of the most difficult countries in which to operate, with a ranking of 159 out of 175 economies in terms of an “ease of doing business index” (ADB, 2007a).<sup>8</sup>
- Given the magnitude of the institutional capacity necessary to monitor and implement regulations that seek to put in place sustainable resource management in the mining, hydroelectric, forestry, agriculture and tourism sectors, the opportunity is now to undertake a detailed assessment of institutional gaps.

Lao PDR is at a crucial stage in its path to development in light of the reforms currently taking place in the context of both trade and environmental policies and regulations. Whether this process is a success depends on whether Lao PDR is able to harness the opportunities created by openness and integration into the global economy, while maintaining the sustainability of its rich natural resources and environment. As development in Lao PDR progresses, it is not inevitable that environmental quality will worsen. The overall aim of this project is to increase policy-makers’ understandings of trade and environment linkages so as to avoid “grow now, clean up later” approaches. It is clear that designing a solid institutional and regulatory framework to guide trade and investment is vital to achieving sustainable development. Policy responses that accentuate the net benefits and minimize the negative impacts of trade liberalization through complementary socio-environmental policies will equip Lao PDR with the tools necessary to tackle the challenges ahead.

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8 The ADB index ranks economies based on the average of country percentile rankings in each of the following indicators: (i) starting a business; (ii) dealing with licenses; (iii) hiring and firing workers; (iv) registering property; (v) getting credit; (vi) protecting investors; (vii) paying taxes; (viii) trading across borders; (ix) enforcing contracts; and (x) closing a business (ADB, 2007a).

## Section 5: Strategic Policy Recommendations and Conclusions

The recommendations laid out in this section are a combination of those which emerged from the stakeholder interviews (see Annex IV), research (see Annex V), input from the Expert Advisory Panel and those gathered from the final National Workshop (see Annex VII). These recommendations are more general in nature and are areas which Lao PDR may examine as a means of making patterns of production and consumption more sustainable for the environment and the people of Lao PDR, who often depend heavily on the environment and its natural resource base for their livelihoods.

Specific recommendations highlighted in the sectoral research papers are presented in Annex V. The recommendations offered in the following section include those that are overarching, and those specific to each sector examined in this report. These recommendations are not meant to be directive, but offer areas where policies or capacities may need to be reviewed and revised to meet the challenge of scaling-up Lao PDR's production and export activities in the sectors examined in this report. It is hoped that these specific recommendations may act as a stimulus for the relevant policy-makers and practitioners in each sector to examine policies to ensure they are able to meet the emerging challenges. The recommendations are also intended to provide a point of departure for discussion and debate on the priority of needs for Lao PDR to ensure that trade-led growth is sustainable.

The fundamental premise behind this “rapid” trade and environment assessment—as opposed to a more detailed and extensive analysis over a longer duration—rests on its ability to highlight areas of particular and immediate environmental concern arising from trade liberalization. These are areas where further analysis is warranted to mitigate potential environmental damage or ensure environmental benefits. This section summarizes the research findings and leads to the select strategic policy recommendations put forward in the following section.

It must be kept in mind that this project did not attempt to undertake a detailed institutional assessment of government capacity to reveal vital institutional gaps necessary to take on these recommendations. This is an aspect that is left for future research on trade and environment in Lao PDR. This project did not attempt to outline a definitive forecast of the environmental impacts arising from trade liberalization initiatives for Lao PDR. This report, however, does seek to make some projections and arrive at a set of policy options for the Lao government to take into account when formulating policy dealing with the dynamic linkages between trade, investment and sustainable development.

### 5.1 General policy recommendations

The following general policy recommendations arise from the research findings as well as the input of the Expert Advisory Panel and the National Workshop.

- **Continue to raise awareness in diverse constituencies from the local to the national levels.**

Discussions at the RTEA workshop revealed that for many people involved in this project, this was the first time they had formally considered both trade and environment in their work and there was a strong recommendation that this work continue to be integrated throughout trade and environmental organizations, companies and agencies in the future.

- **Enhance policy coordination and coherence in trade and environment among the relevant policy-makers in government by assessing gaps in institutional capacities and strengthening institutional abilities to meet changing priorities in Lao PDR.**

The issue of policy coordination and coherence in the trade area has already started to be addressed in Lao PDR in various fora, including through the Integrated Framework. The government’s *National Export Strategy* proposes coordination schemes involving the relevant governmental and industry actors in each of the six sectors identified for priority development.

It was also recommended at the RTEA Workshop that awareness-raising and coordination on trade and environment be extended from the national level to the provincial and district levels where many of the decisions regarding impacting on the environment are made.

- **Recognize that economic growth based solely on natural resources is not a panacea for development.**

The extent to which the natural resource base is sustainably managed will determine longer-term growth potential. Debate at the RTEA Workshop accentuated the point that natural resources are not a panacea for economic growth. Moreover, the revenue from natural resource exports needs to be managed properly to maintain prosperity in mining and hydropower. Increasing the contribution to the development of the natural resource base is a vital point that emerged.

- **Enable an inclusive domestic trade policy-making framework and explore options for institutionalizing a trade and environment body.**

A coordinating trade and environment body, such as the Expert Advisory Panel piloted during the RTEA process, would allow input on trade and environment issues from key stakeholders—related government ministries, private sector representatives and non-governmental organizations, such as research and academic institutions.

- **Enable an inclusive domestic trade policy framework that allows input from the key stakeholders—related government ministries, private sector representatives and non-governmental organizations, such as research and academic institutions.**

An issue that has been raised in several recent documents—notably the government’s *National Export Strategy* and the World Bank’s *Diagnostic Trade Integration Study for Lao PDR* (2006) and *Action Matrix*—deals with trade policy coordination within and amongst government agencies in Lao PDR. In essence, what is the domestic trade policy-making process? This is also an important question that the current RTEA has sought to address. How are trade policy-makers able to incorporate broader socio-economic and environmental considerations into policy formulation and decision-making? How are environmental officials involved in the decision-making process? How does the voice of the private sector resonate in trade and environment policy-making?

As a general statement, implementing well-thought out trade-oriented development strategies requires a delicate balance between various government bodies, as well as the involvement of the private sector and non-governmental actors such as research institutions (Cosbey, 2004); hence the priority given in the RTEA methodology to involve key stakeholders in the trade and environment policy nexus. During the Workshop, some participants noted that the Expert Advisory Panel, set up by the RTEA, represented a solid step towards enhanced policy coordination and dialogue; there was general agreement that options for institutionalizing similar bodies should be further explored.

- **Strengthen the role of the private sector in addressing environmental challenges in key sectors and facilitate a domestic environment that attracts responsible business and international best practice.**

As the process of trade and investment liberalization unfolds, it is important to encourage the private sector to address environmental issues and promote best practices and corporate social responsibility in integrating sustainable natural resource use, production and investment. The success of the RTEA Workshop and LNCCI dinner illustrates the “win-win” opportunities for enhancing trade and environment in terms of dialogue with, and an engagement of, the private sector. In sum, a two-way dialogue between government and the private sector is vital to ensure that sustainable development is implemented in Lao PDR.

■ **Strike the right balance between large environmental “footprint” and environmentally/people sensitive industries.**

Lao PDR is presented with an opportunity to chart its development in a manner which finds a balance between economic activities that can negatively impact the environment and the people who make their livelihoods from subsistence and natural resource-based activities, and those that can be undertaken by these same people, allowing them to increase their economic security. Finding this balance requires solid coordination and effective policy-making among ministries. It also needs to strike a balance between FDI into those sectors which entail immediate benefit to the government and those activities which may take longer to foster but result in real gains for the people of Lao PDR.

■ **Ensure the appropriate institutional and regulatory frameworks are solidly in place and comply with regulations and policies for environmental management.**

In order to provide an environmentally-optimal enabling framework for trade liberalization to take place, it is vital to ensure that a solid institutional and regulatory framework is in place. Reference was made at the RTEA Workshop to the importance of not only enacting legislation and designing policies, but ensuring compliance with environment-related regulations and policies to facilitate sustainable development.

■ **Undertake strategic impact assessment of new policies, regulations, investments and projects in all sectors.**

Assessing the strategic socio-environmental impacts of new policies, regulations and investments and projects will better enable policy-making to incorporate sustainable development. The process of SIAs will also serve to raise awareness among stakeholders of the environmental and social impacts and possible mitigation measures.

■ **Strengthen regional cooperation to address the environmental impacts of economic integration.**

Continuing to strengthen regional agreements concerning the environmental impacts of greater economic, trade and investment integration is important to ensuring sustainable development in the region. Of particular importance is managing the growing demand for natural resources in the GMS as infrastructure to facilitate the freer movement of goods, services and investment is developed.

It is recommended that Lao PDR continue to engage in regional processes through the GMS and ASEAN mechanisms such as the ASEAN Ministerial Meeting on the Environment or the GMS Regional Working Group on the Environment. The government could also seek further regional cooperation on issues related to trade and the environment through bilateral and regional relationships.

■ **Enhance monitoring and assessment of the environmental impacts from trade liberalization.**

In order to ensure that investment and economic development priorities do not cause undue or avoidable environmental and social damage, there is a need to have a process for ongoing monitoring and evaluation of both projects, and the strategic policies which support sector development. Information gathered from this monitoring can provide a feedback loop of information which can be used to apply effective adaptive management. This information can also be used to make changes in policy or practice where environmental impacts are severe, and to adopt more environmentally-friendly approaches relevant to Lao PDR.

■ **Continue to collect data on the current state of the environment, trade flows and potential environmental impacts.**

Improvement in the collection of relevant data on key environment and trade indicators is vital to better inform policy-making and environmental management. With the relevant information at hand, policy-makers will be well placed to enact appropriate policies and regulations to sustainably manage growth and development in Lao PDR.

## 5.2 Sector-specific recommendations

The analysis of 10 sectors that have been identified as promising areas for trade promotion in Lao PDR has shown that further trade liberalization can have both positive and negative impacts on the environment. A number of issues emerged from the background research papers on how such impacts could be mitigated while tapping into lucrative overseas markets, including the need to:

- ensure the appropriate **institutional and regulatory frameworks** are solidly in place and enforced;
- engage and **foster cooperation among stakeholders** at the various levels of policy-making towards sustainable development and environmental management;
- **raise awareness among stakeholders** of the environmental and social impacts and possible mitigation measures;
- encourage **the private sector and investors** to include environmental and social consideration in business and investment decisions;
- provide incentives for and facilitate access to **environmentally-sound technologies**;
- require **strategic impact assessments** of relevant projects and industries;
- create **certification bodies** or strengthen existing systems that fully take into account environmental and social considerations to help “green” exports meet international standards;
- encourage **value-addition** in the various sectors to obtain greater monetary returns while minimizing resource use; and
- enhance **data collection** for trade flows and on the current state of the environment to better inform policy-making and environmental management in each sector and enable assessment of the environmental impacts of trade liberalization.

### Box 3: Summary of key background paper recommendations (see Annex V)

- *Mining, hydropower and construction materials sectors:* Improve environmental governance at the same pace as current trends in FDI by encouraging companies to enhance their environmental and social performance and ensuring clear investment laws and coordination mechanisms specifically related to environmental impact assessments.
- *Wood and wood products sector:* Encourage value-addition to stimulate processing industries and obtain greater economic returns while minimizing resource use, including the promotion of forest certification and chain of custody verification.
- *Tourism sector:* To encourage sustainability, strengthen the Lao National Tourism Administration’s ability to engage with the private sector and investment decision-makers to promote the development of successful ecotourism models.
- *Organic agricultural products sector:* Promote quality assurance in this sector through the creation of certification bodies or by strengthening existing systems that fully take into account environmental and social considerations to help “green” exports meet international standards.
- *Silk handicraft sector:* The government should implement the National Export Strategy for the silk handicrafts sector and work with the Lao Handicraft Association and the Lao National Chamber of Commerce and Industry through the creation of a silk handicraft fund to promote value-addition and foster the diversification of the sector, particularly traditional silk textiles.
- *Medicinal plants and spices sector:* Develop and enforce laws and regulations related to the forestry sector as a whole, especially non-timber forest products, such as medicinal plants and spices, which are in increasing demand. Encourage more scientific and community-orientated management of forest resources to ensure sustainable supply.
- *Biofuels sector:* Draft a national biofuel policy that clearly outlines environmental and social policies and is integrated with, and included in a national energy production and management plan.

Source: Compiled by the authors based on the background research papers prepared for the RTEA project, IISD/IUCN, 2007.

Taken together, the above recommendations linked with the more specific suggestions in Annex V present a possible “road map” for Lao PDR to investigate and examine in order to strengthen its policies and capacities. The suggestions to map a way forward aim to ensure that the increasing use of natural resources as a basis for export-led growth can be accomplished in a sustainable manner. The recommendations also recognize that the development of the main resource and investment-intensive sectors of hydropower, mining and construction materials need to be sustainably managed so as to enable the diversification of the economy through the growth of emerging sectors, such as tourism, organic agricultural products, medicinal plants and spices, and silk handicrafts.

### 5.3 Conclusions

The research in this report maps largely uncharted territory. The exploration of the impacts of trade liberalization on the environment conducted as part of the RTEA reveals the political imperative to implement sustainable development to ensure that the twin processes of economic transformation and environmental protection are not contradictory. Further research is needed relative to the functioning of management regimes and supporting policies to balance sector priorities. For example, how can forest management be designed so as to foster both timber and non-timber forest products, while supporting tourism, and in harmony with plantation development for biofuels and timber? How is it best to manage water resources to ensure adequate irrigation for both organic farmers and those who use chemical inputs in balance with water utilization for electricity generation, as well as for mining and construction material activities? How is it best to support agricultural and market-development research to ensure that both small- and medium-scale farmers benefit from trade-led growth? These are challenging questions with multiple linkages within and between sectors.

Lao PDR does have a current policy framework in place that addresses some of the policy demands of increasing resource use and production for export. This is a solid starting point, and represents the government’s efforts to manage its resource base with due consideration to sustainability. Research and policy analysis is now needed to ensure these policies are sufficient to meet emerging demands and pressures on the country’s resources as trade and investment liberalization commitments are phased-in. It will also help to determine, as appropriate, where policies should be revised, or new policies put in place to bridge policy gaps.

This preliminary assessment process has enabled an initial exploration of the impacts of trade liberalization on the environment and sustainable development in various sectors. The project illuminates the need for a better understanding and heightened awareness of the potential linkages between these interdependent variables. As Lao PDR develops a policy framework to cope with the demands of economic growth and trade and investment liberalization, it is well advised at this stage of its development to put appropriate emphasis on the environmental quality of production and consumption patterns—the way in which goods are produced and dealt with throughout their life cycles. Research and policy analysis is needed at this present juncture to ensure these policies are sufficient to adjust to shifts in Lao PDR’s comparative advantage as trade and investment liberalization commitments are phased-in. It will also help to determine where domestic standards and best practices can be strengthened in the sectors included in this report to ensure that Lao PDR is able to take advantage of market access opportunities created by trade liberalization.

Recognition of the linkages between trade, investment and the environment is growing in Lao PDR. As discussed in this report, the structure and composition of trade and investment in Lao PDR will be shaped by ongoing and future liberalization initiatives. The ongoing structural adjustment in Lao PDR accentuated by trade reform will accelerate growth and development. It will also have correspondingly significant environmental impacts. These linkages deserve further research in order to ensure the government’s objectives to achieve sustainable development.

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\* For the individual National Export Strategies for each sector – garments, medicinal plants and spices, tourism, organic products, silk handicrafts, and wood – see [http://www.mekongtpprojects.com/lao\\_repo.htm](http://www.mekongtpprojects.com/lao_repo.htm).

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# Annex I: Members of the Expert Advisory Panel

## *Chairman*

- Mr. Bounthavy Sisouphanthong succeeded by Dr. Kikeo Chanthaboury (CPI – Committee for Planning and Investment)

## *Members*

- Dr. Leeber Leebouapao (NERI – National Economic Research Institute)
- Mme Keobang Keola and Mr. Kongsaysi Phommaxay (STEA – Science, Technology and Environment Agency)
- Mme Banesaty Thephavong (MoCI – Ministry of Industry and Commerce)
- Mr. Khamphan Sengthongkham and Ms. Niddavone Douangphonexay (LNCCI – Lao National Chamber of Commerce and Industry)
- Dr. Phouphet Keophilavong (NUoL – National University of Laos)
- Mr. Khampho Khaykhamphithoune (MoFA – Ministry of Foreign Affairs)
- Mr. Thongkhoun Sengphachanh (MoFA – Ministry of Foreign Affairs)
- Mr. Khame Phalakhone (MAF – Ministry of Agriculture and Forestry)

## *Project Staff*

- Mme Latsamay Sylavong, IUCN – Lao PDR
- Ms. Sabrina Shaw, IISD
- Mr. Tom Callander, IUCN – Lao PDR
- Dr. Phoukhong Thepkaysone, NERI
- Dr. Sounadeth Souchaleun, STEA

With the direction of the RTEA research team, STEA coordinated background environmental research papers in the following nine sectors.

- *Wood and wood products* – Mr. Sousath Sayakoummane and Mr. Vongxay Manivong, Department of Forestry, Ministry of Agriculture and Forestry (MoAF)
- *Tourism* – Mr. Sounh Manivong, Director General, Planning and Cooperation Department and Mr. Somxay Sipaaseuth, Technical Officer, Lao National Tourism Administration (LNTA)
- *Organic agricultural products* – Ms. Phengkhouane Manivong, Faculty of Agriculture, National University of Laos (NUoL)
- *Silk handicrafts* – Mr. Somphong Soulivanh, Deputy Director, Department of Industry, Ministry of Industry and Commerce (MoIC)
- *Medicinal plants and spices* – Mr. Kongmany Sydara, Deputy Director, Traditional Medicine Research Centre (TMRC), Ministry of Health
- *Biofuels* – Mr. Phaychith Sengmany, Deputy Director, National Council of Sciences
- *Hydropower, mining and construction materials* – Mr. Tom Callander, Programme Officer, IUCN – The World Conservation Union – Lao PDR

## Annex II: The Methodology

The methodology for undertaking the *Rapid Trade and Environment Assessment (RTEA)* is comprised of the following six steps.

### *Two indispensable prerequisites*

- A dedicated project leader on the ground (in the country or region).
- A lead partner in country, preferably an institution with knowledge of trade and environment dynamics, and solid contacts with all the relevant stakeholders, particularly in the government.

### *Step I: Partnership building and establishment of an Expert Advisory Panel*

- Contact the ministries of trade/commerce and environment to inform them of the project and requesting their assistance in establishing the Expert Advisory Panel.
- Contact the Chamber of Commerce to inform them of the exercise and seek private sector input and expertise from the outset of the project.
- Establish an Expert Advisory Panel composed of a representation of key stakeholders (governmental and non-governmental as well as private sector representatives).
- Describe the timeline, process and objectives of the RTEA, nature of trade and environmental linkages.
- Seek input on the methodology; advice on how it could usefully be adapted to the domestic context; advice on which stakeholders should be interviewed.

### *Step II: Setting the context*

Given the large range of interactions between trade liberalization scenarios and potential economic and environmental impacts, the focus of the assessment needs to be on those areas of particular environmental importance. The context setting phase of the methodology is vital to distill a selection of key sectors for analysis from all potential interactions.

The role of the Expert Advisory Panel is essential to guide the initial scoping exercise based on a solid appreciation of the domestic trade and investment context and potential environmental consequences of liberalization initiatives.

- To set the context, undertake statistical and empirical research in order to prepare:
  - a brief economic profile of the country including main exports, fastest growing exports and FDI recipients, growth potential and challenges; and
  - a brief environmental profile of the country including status of natural resources and major environmental challenges.

#### *Statistical research:*

- identify top 10 exports; top 10 fastest growing exports; and top 10 sectors for FDI.

#### *Empirical research:*

- what agreements is the country currently party to?
- what commitments are scheduled as a result of those agreements (tariff reductions, commitments on investment, services and IPRs)?

- what trade/investment agreements are currently being negotiated or planned? If possible, list the sectors of interest in those agreements;
- what is the current legal investment framework? (What is the governing domestic investment law, what bilateral and regional agreements have been signed, what commitments do they contain on national/MFN treatment, rights of establishment, expropriation, minimum standards of treatment?); and
- in those agreements under negotiation or planned, what investment commitments are likely?

*Step III: Expert input – stakeholder interviews and literature review*

- Carry out a literature review.
  - What published sources have been written concerning the prospects for economic growth in this country? The challenges? What are the key points made in the literature? Have there been any studies undertaken on the possible economic scenarios resulting from trade liberalization? Any studies commissioned by the ministry of commerce/trade or the Chamber of Commerce?
  - What published sources can help determine the key environmental challenges in this country? What recommendations do they offer? Any studies or assessments undertaken by the ministry of environment/natural resources or key environmental NGOs, research institutes?
- Based on guidance from partner organizations and input from the Expert Advisory Panel conduct interviews with all the relevant stakeholders (government, non-governmental and private sector representatives), based on the following set of indicative questions:

*Stakeholder interviews – economic (government ministries, trade experts including academia and research institutes, business community)*

- What sectors are likely to see large import or export growth as a result of commitments in trade agreements, or likely commitments in ongoing negotiations?
- In those agreements under negotiation or planned, what investment commitments are likely or possible?
- What types of investments are likely as a result of investment commitments? What sectors? What volume? What host countries?
- What export sectors might be ripe for pursuit of green niche markets? What magnitude of potential is there? What obstacles would have to be overcome to achieve that success?

*Stakeholder interviews – environmental (government ministries and environmental experts including NGOs, research institutes, academia)*

- What are the key hotspots for environmental threats in the country at present? Locations, type of threats?
- What economic activities, social conditions and institutional failures might be driving those threats?
- What are the key threats for the future? What trends can be identified?
- What export sectors might be ripe for pursuit of green niche markets? What obstacles would have to be overcome to achieve that success? What would be the environmental costs and benefits?
- Are there any noteworthy success stories in environmental protection? How did they come about?

*Step IV: Scenario building*

*Sector selection:*

- from the top-ten lists identified in the statistical background work, identify environmentally-sensitive export sectors based on an environmental filter adapted from the Toxic Release Inventory (TRI)

of industrial pollution intensity (USEPA, 1994). This brings the current major sectors into the scope of the analysis;

- based on the stakeholder interview process, and the context of ongoing economic integration (empirical research, above), identify any sectors that are not currently important, but are likely to become key exports/imports/recipients of investment in the future. This brings prospective sectors into the scope of the analysis. This addition also allows for the inclusion of illegally traded sectors; and
- identify, as part of a separate list, any significant potential green niche export markets. This selection should be based on stakeholder interviews and the literature survey.

*Scenario development:*

- for the list of sectors identified, what are the likely trends in growth? Will planned or likely trade and/or investment liberalization increase or decrease activity in the sector? Have there been any studies undertaken to assess the potential impacts of trade and investment liberalization? Will other trends be important? What is the institutional structure in place (e.g., the infrastructure necessary to increase exports)? This step should reveal the potential future importance of the sector—the sector’s scenario.

At this stage, there should be a clear picture emerging of the major sectors of environmental and economic importance, as well as their future growth paths. Check these results with, and ask for input from the Expert Advisory Panel.

*Step V: Analysis of the impact scenario building*

- For each chosen sector, identify the environmental implications of the scenario identified in the previous step.
- Ideally, this will involve the preparation of a background paper for each sector by an in-country consultant, including the previous economic analysis and the follow-on environmental implications.
- Analyze the nature of planned or likely investment regime commitments, and run them against the known risk areas, based on IISD’s experience with international investment agreements and sustainable development.

*Step VI: Preliminary conclusions and recommendations*

*Conclusions* – As a result of the work and the input of the Expert Advisory Panel on the draft results, compile conclusions:

- in what traded sectors are there possible significant environmental impacts? Describe the nature and extent of those impacts, specifying in detail the conditions on which the conclusions depend (e.g., institutional factors, such as stringency of environmental regulatory regime);
- what environmental or social problems might result from the characteristics of the planned or likely investment legal regime? and
- what niche green market opportunities exist in the country?

*Strategic policy recommendations* – As a result of the analysis, and primarily based on input from the Expert Advisory Panel, compile recommendations:

- what sorts of policy measures or institutional strengthening might be employed to avoid or mitigate any identified environmental problems?
- what sorts of policy measures or institutional strengthening might be undertaken to help exploit any opportunities that have been identified?
- in what areas is there a need for additional research to help quantify the risks or opportunities identified? and

- convene a meeting of high-level stakeholders to contribute to discussions on trade/investment and environment, for example, a national workshop. The draft national report circulated in advance of the meeting should be essentially complete. The purpose of the meeting is to solicit comments on the draft national report, but more importantly, to present the background research papers and the results of the project and raise awareness of, and stimulate debate and discussion on the main emerging trade and environment issues.

## Annex III: Structure of Trade in Lao PDR<sup>9</sup>

The structure of trade in Lao PDR is highly concentrated as illustrated in Table 11—83 per cent of its exports go to only four trading partners—Thailand, the EU, Vietnam and China; nearly 90 per cent of imports come from the same four trading partners. The composition of exports is also concentrated—74 per cent of exports are garments, wood, tourism and electricity. This high degree of concentration makes Lao PDR more vulnerable to economic downturns. The export composition of Lao PDR is expected to change rapidly by 2010, with the implementation of bilateral and regional trade agreements.

**Table 11: Lao PDR trading partners and trading patterns, 2004**

| Trading partner | % of Lao exports | Major exports  | % of Lao imports | Major imports  |
|-----------------|------------------|--|------------------|--|
| Thailand        | 36.3             | Electricity, timber, cattle, agricultural goods, tourism, non-timber forest products | 60.3             | Capital goods, vehicles, fuel, fabric, other intermediate and consumer goods           |
| EU              | 28.0             | Garments, coffee   | 7.6              | Capital and consumer goods   |
| Vietnam         | 16.7             | Wood and wood products, minerals (gypsum), forest products, animal feed              | 11.2             | Consumer goods, plastic products, processed foods, construction materials and garments |
| China           | 2.2              | Timber, minerals, agricultural goods, non-timber forest products                     | 10.1             | Capital, intermediate and consumer goods   |
| Total           | 83.2             |  | 89.2             |  |

*Source: CPI/UNDP, 2006 (calculated from IMF, 2005).*

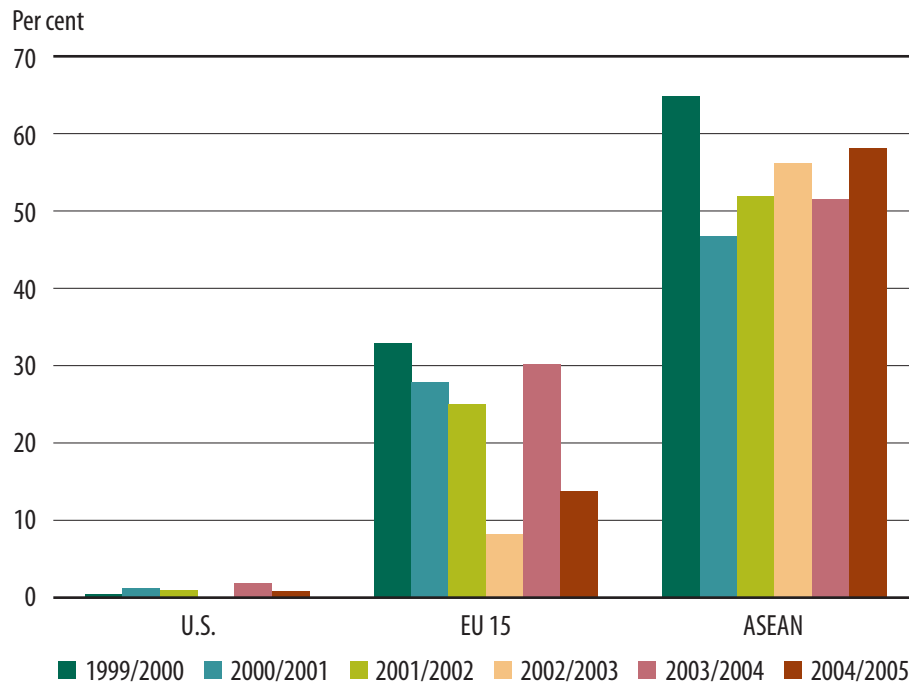
The Greater Mekong Subregion neighbours—Thailand, Vietnam, Cambodia and China—represent a natural market for Lao PDR. However, emerging long distance markets (notably the EU and U.S.) are showing increasing promise (see Figure 3).

While Lao PDR continues to export heavily to regional trading partners, as illustrated in Figure 4, Europe has emerged as a key export markets over the past decade. For example, 41 per cent of exports went to Thailand in the early 1990s, compared with only 27 per cent in 2000.

<sup>9</sup> Trade data for Lao PDR is limited and should be treated with caution. As noted in the *Diagnostic Trade Integration Study* for Lao PDR, there are large statistical discrepancies provided by different agencies in Lao PDR (World Bank, 2006a).

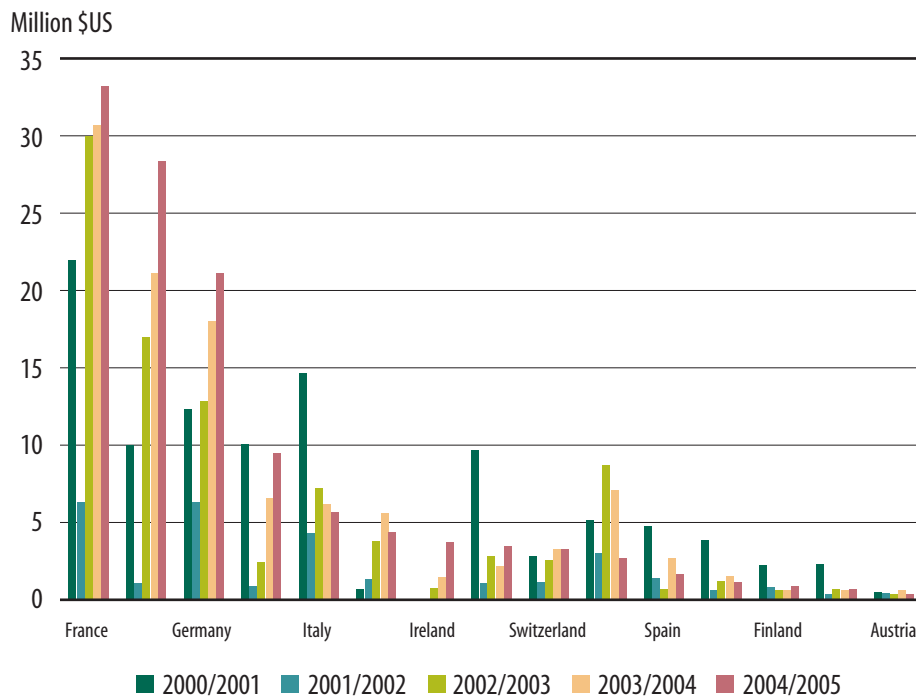


Figure 3: Percentage of exports by region, 2000–2005 (as a percentage of total value)



Source: Compiled by NERI based on National Statistics Centre data (NSC, 2006).

Figure 4: Exports from Lao PDR to EU countries, 2000–2005 (ranked by value in 2005)



Source: Calculated by NERI based on National Statistic Centre data (NSC, 2006).

### Main exports

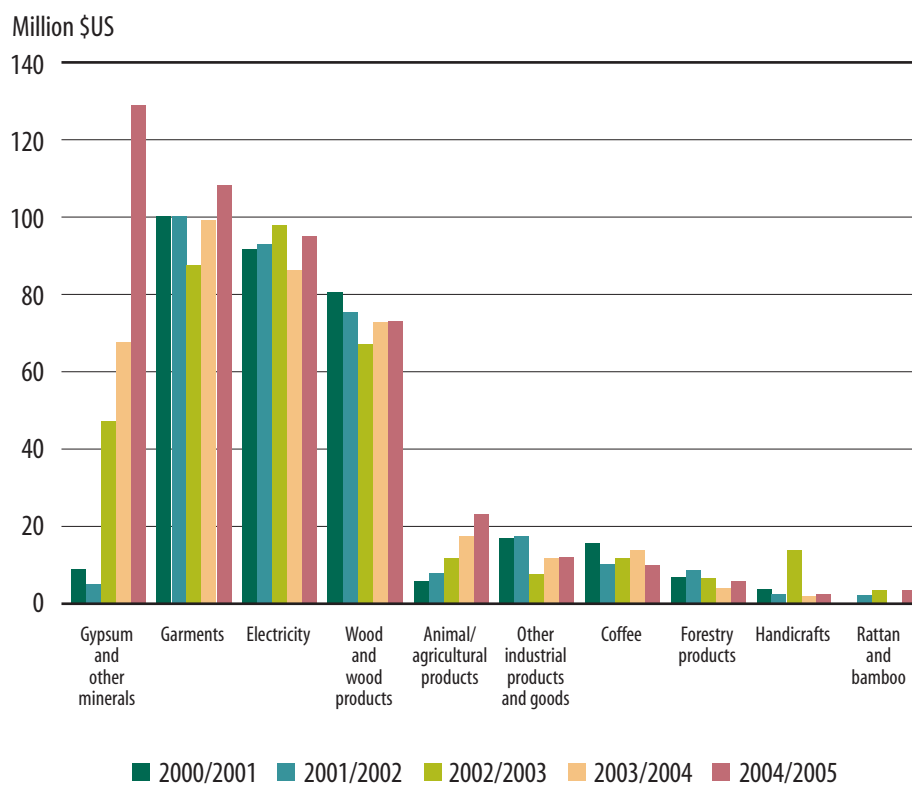
Exports from Lao PDR are gradually increasing and their composition is changing. Over the past five years, the 10 main exports (ranked by value in 2005 as classified by the National Statistic Centre) were: minerals, garments, electricity, wood and wood products, animal and agricultural products, industrial products, coffee, forestry products, handicrafts, rattan and bamboo (see Figure 5).

Exports have been primarily driven by an expansion of gold and copper exports in the mining sector. Exports of minerals (gold and copper) and electricity are expected to continue to increase. Exports from other sectors—tourism, wood products and agricultural products—are also expected to grow (World Bank, 2007). The tourism sector, for example, has increased by an annual rate of 24 per cent since 1993 (ADB/World Bank, 2007).

The main agricultural export in 2003 was coffee, accounting for approximately 80 per cent, followed by vegetable products, raw hides, skins, leather, furs, foodstuffs and animal and animal products (World Bank, 2006a). Agricultural exports have already begun to face major hurdles related to strict and complex sanitary and phytosanitary procedures and quality certification in export markets. The increasing concern for food safety and certification of production and processing methods is an issue for expanding exports in this sector—particularly as Lao PDR expands the market for its products into OECD countries.

Data in Lao PDR does not include service exports, such as electricity and tourism, which are key export sectors. Tourism has increased by an annual rate of 24 per cent since the sector opened in 1993 (ADB/World Bank, 2007; LNTA, 2006).

**Figure 5: Top 10 exports from Lao PDR in 2000–2005 (ranked by value in 2005)**



Source: Compiled by NERI based on National Statistics Centre data (NSC, 2006).

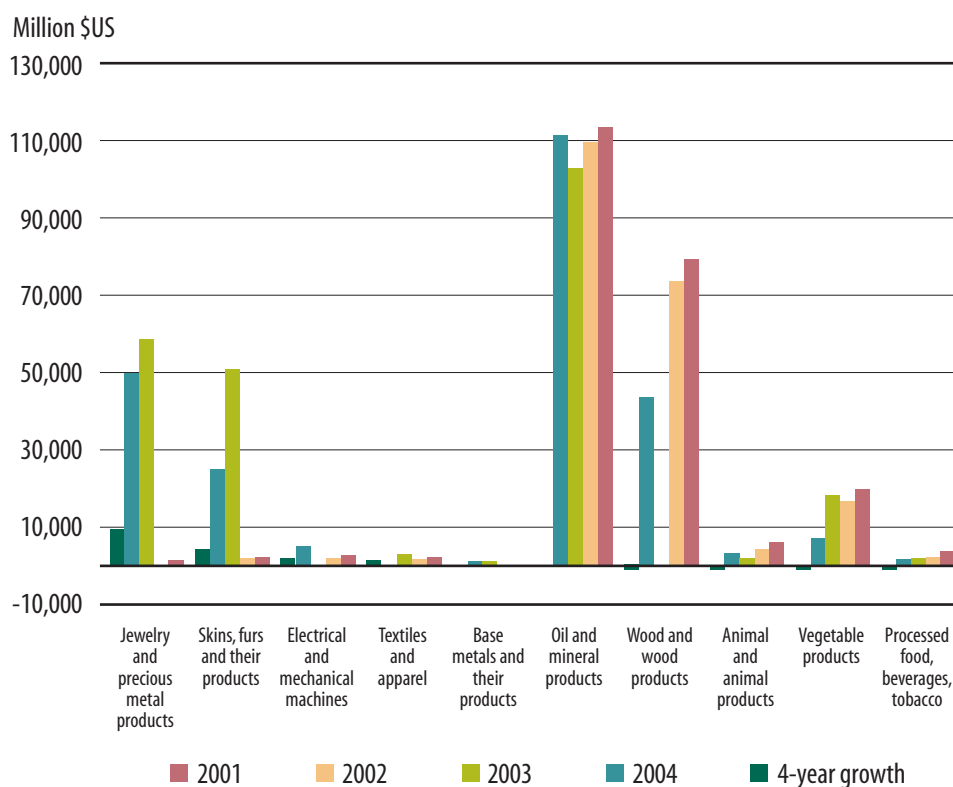
While garments have been a significant export for Lao PDR in the 1990's, this sector is likely to encounter increasing competition with the accession of China to the WTO and the termination of both the Multifibre Arrangement and the WTO Agreement on Textiles and Clothing in December 2004. Trade in textiles and clothing has been integrated into WTO rules and now takes place in a competitive environment. For countries, particularly LDCs such as Lao PDR that relied on quota protection to maintain market access for export of their textiles and clothing, the elimination of quotas is likely to have adverse impacts (Thephavong *et al.*, 2005). Moreover, the competitiveness of the garment sector in Lao PDR remains relatively low in comparison to neighbouring countries (CPI/UNDP, 2006).

Wood and wood-processing is another key export sector, accounting for 19 per cent of the total value of exports in 2005. This sector is characterized by limited value-addition and low efficiency (World Bank, 2006a). As highlighted in this report, the possibility of adding value to the wood processing sector represents an opportunity to generate higher income earnings for Lao PDR from this renewable resource base.

#### Fastest growing sectors

As illustrated in Figure 6, the fastest growing sectors of the Lao economy include: oil and mineral products; wood and wood products; jewelry and precious metals; skins, furs and their products; vegetable products; textiles and apparel; animals and animal products; processed food, beverages, tobacco; electrical and mechanical machines; and base metals.

**Figure 6: Top 10 fastest growing sectors in Lao PDR, 2001–2004  
(based on an average four-year growth rate)**



Source: Compiled by NERI based on National Statistics Centre (NSC, 2006), with data omissions in several sectors for various years.

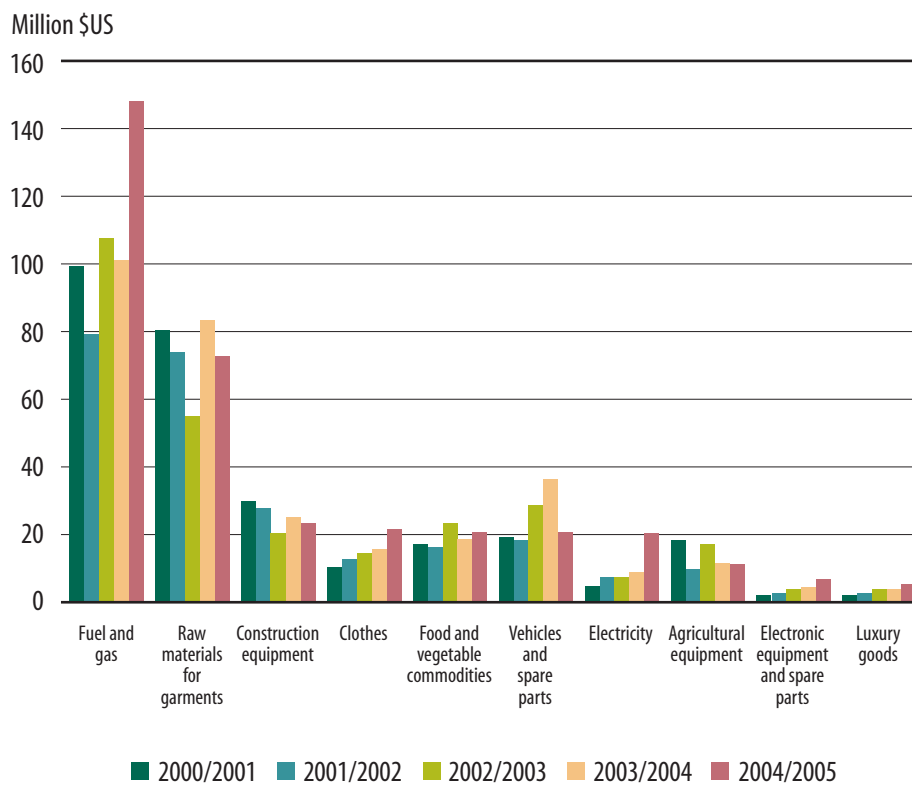
Sectors with high export potential include: wood products, textiles and apparel, electrical and mechanical equipment and parts, and vegetable products. The *National Export Strategy* selected the following six sectors with export potential: garments, medicinal plants and spices, organic products, tourism, silk handicrafts, and wood (MIC/ITC, 2005).

There is a burgeoning informal intraregional trade in the GMS. It has been estimated that unofficial trade may equal or even exceed official trade in Lao PDR (Than, 2006), including consumer goods, medicine, vehicles and spare parts, cattle, tobacco, liquor and electrical appliances, particularly from Thailand. Cross-border contract farming contributes to informal exchanges in the agricultural sector whereby Thai contractors provide seeds, fertilizer and financing to Lao farmers and purchase their products for processing in Thailand (Thai Ministry of Foreign Affairs/UNDP, 2005). The extent of informal trade is likely to diminish with the infrastructure and institutional reforms currently underway in the context of the Economic Corridors, as well as the fact that Lao PDR is preparing for AFTA implementation and WTO accession.

### Main imports

The country’s main imports between 2000 and 2005 include: fuel and gas, raw materials for garments, construction equipment, clothing, foodstuffs, vehicles and spare parts, electricity, agricultural equipment, electronic equipment and parts, and luxury goods (see Figure 7). Imports have grown at an average rate of two per cent per annum over the last five years (World Bank, 2007). Between 2004 and 2005, imports of raw materials for industrial and agricultural production increased significantly, from US\$33 million to US\$145 million. Intermediate goods, including machinery, equipment and raw materials for construction, mining and the garment industry represented around 75 per cent of total imports in 2005 (NERI, 2006).

**Figure 7: Top 10 imports in Lao PDR, 2000–2005 (ranked by value in 2005)**



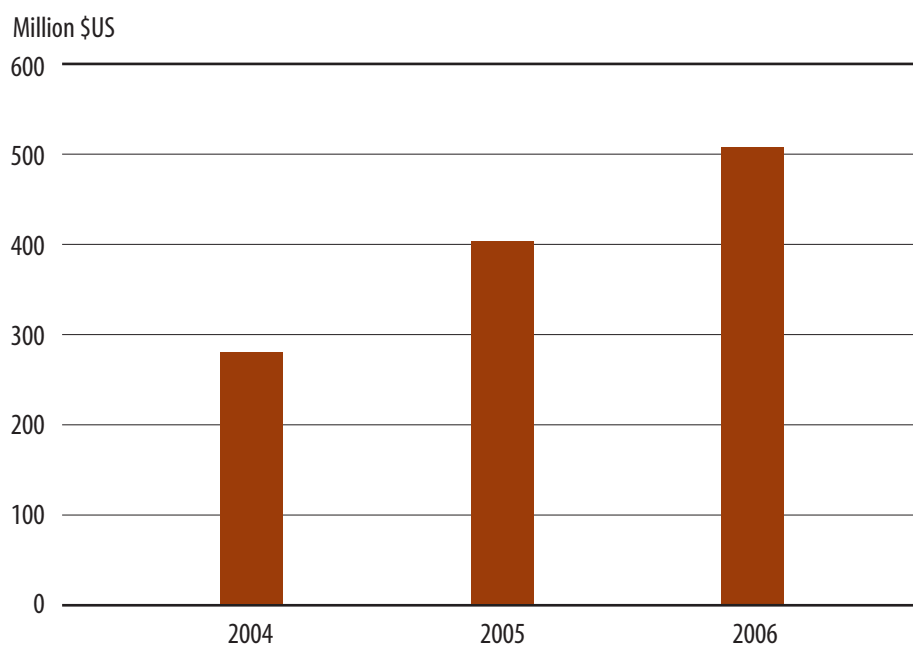
Source: Compiled by NERI based on National Statistics Centre data.

*Top sectors for foreign direct investment*

Foreign direct investment has increased significantly in large part due to mining and hydropower projects. FDI is estimated to have reached approximately US\$500 million in 2006 (see Figure 8).<sup>10</sup> Hydropower investment accounted for over 80 per cent of total FDI in 2006 (World Bank, 2007). Investment is concentrated in the industry sector, followed by services and agriculture (see Figure 9).

As outlined in the government’s *National Socio-Economic Development Plan (2006–2010)*, the objective is to diversify the economy, focusing domestic and foreign investment on emerging sectors, such as tourism and construction materials. Intra-regional FDI is a key aspect of economic cooperation. Thailand is the main investor in the Mekong followed increasingly by China. From 1995 to 2001, Thailand was the largest single investor in Lao PDR, with annual flows of approximately 30 per cent of total FDI and 1.3 per cent of GDP over that period (Thai Ministry of Foreign Affairs/UNDP, 2005).

**Figure 8: FDI in Lao PDR**

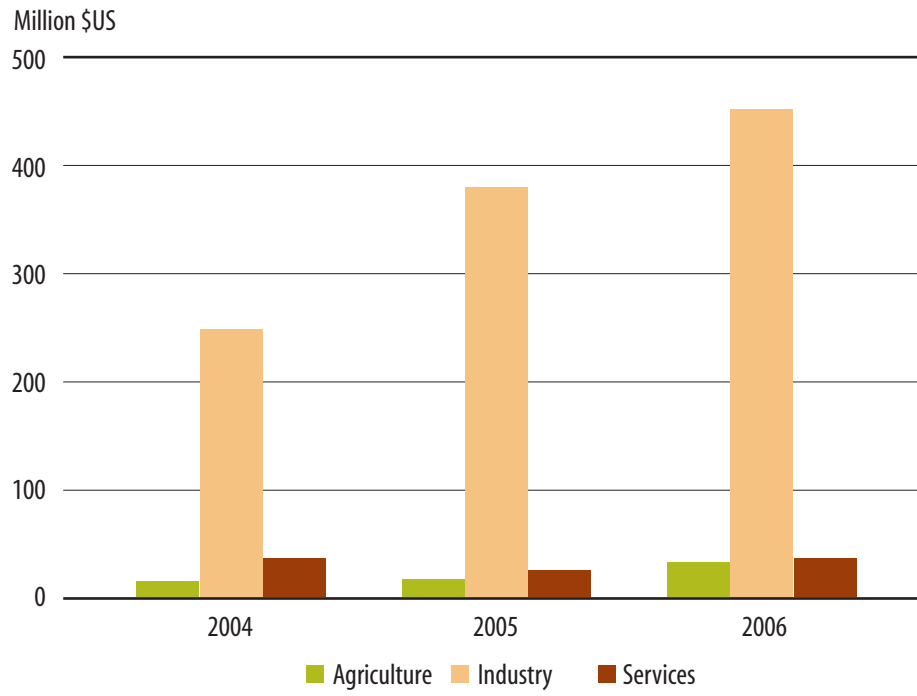


Source: WB staffs estimates (preliminary for 2006)

Source: World Bank, 2007.

<sup>10</sup> Foreign investment approvals data does not provide an accurate indication of actual or implemented investment.

**Figure 9: FDI by sector (Million \$US)**



Source: WB staffs estimates (preliminary for 2006)

Source: World Bank, 2007.

## Annex IV: Stakeholder Interviews

- A *first* round of 18 stakeholder interviews for Lao PDR was undertaken by the research team from August 15–17, 2006, back-to-back with the convening of the first meeting of the Expert Advisory Panel to the RTEA project.
- A *second* round of 26 interviews was carried out from September 12–15, 2006 in addition to the second meeting of the Expert Advisory Panel.
- A *third* round of 12 interviews took place from November 8–10, 2006 in conjunction with the third meeting of the Expert Advisory Panel.
- *Select follow-up* interviews were held on the occasion of the fourth meeting of the Expert Advisory Panel from May 21–23, 2007.
- Based on the framework questions set out in Step III of the methodology for the project (see Annex II), the following stakeholders were interviewed.

### First round of stakeholder interviews (August 15–17, 2006)

- Dr. Malaithong Kommasith, Faculty of Economics and Business Management, National University of Laos
- Dr. Sithiroth Rasphone, Research Officer, National Economic Research Institute
- Dr. Somnuk Davading, Economist, World Bank
- Mr. Bounthanh Bounvilay, Vice-Director, Centre for Environment and Development Studies, National University of Laos
- Ms. Pascal Rouzies, Lao Business Forum Coordinator, International Finance Corporation (IFC), Mekong Private Sector Development Facility (MPDF)
- Mr. Sengxay Phousinghoa, Business Development Officer, IFC, MPDF
- Mr. Somphanh Chanphengxay, Deputy Director General, Department of Livestock and Fisheries, Ministry of Agriculture and Forestry
- Mr. Khampanh Sengthongkham, Secretary General, Lao National Chamber of Commerce and Industry
- Mr. Rol Rieland and Mr. Phantouleth Louangrai, Poverty and Economics Unit, United Nations Development Programme (UNDP)
- Dr. Leeber Leebouapao, Acting Director General, National Economic Research Institute (NERI)
- Mme Banasaty Thephavong, Deputy Director General, Ministry of Industry and Commerce
- Dr. Daniel Gray, Consultant, United Nations Conference on Trade and Development
- Mr. Andrew Bartlett, Chief Technical Advisor, Laos Extension for Agriculture Project, Helvetas/Swiss Agency for Development Cooperation and Advisor, Ministry of Agriculture and Forestry
- Mr. Andy Inglis, Country Programme Director, World Conservation Union (IUCN) – Lao PDR
- Ms Buakhai Phimmavong, Managing Partner, Enterprise and Development Consultants (EDC)
- Mr. Chantho Milattanapheng, Chief of Division, Ministry of Energy and Mines

- Mr. Michael Waters and Mr. Keu Moua, Environmental Policy and Management Specialists, Environment Division, Mekong River Commission
- Ms. Pauline Gerrard and Mr. Marc Goichot, Living Mekong Programme, World Wide Fund for Nature (WWF)

### Second round of stakeholder interviews and second meeting of the Expert Advisory Panel (September 12–15, 2006)

At the National Validation Workshop for the Integrated Framework for Lao PDR held on September 12, 2006, interviews were conducted with:

- Ms. Maika Oshikawa, Counsellor, LDC Unit, Development Division, World Trade Organization, Geneva
- Dr. Mona Haddad, Regional Trade Coordinator and Lead Economist, Poverty Reduction and Economic Management, East Asia and Pacific Region, World Bank, Washington
- Dr. Kazi Matin, Lead Economist Southeast Asia, World Bank, Bangkok
- Dr. Katia Vostroknutova, Economist, World Bank, Vientiane
- Dr. Mitthavsouk Rattana, Japan International Cooperation Agency, Lao PDR
- Mr. Fabio Artuso, European Commission, Bangkok
- Mr. Sam Rao, Advisor, UNDP and the government of Lao PDR
- Ambassador Krirk-Krai Jirapaet, Executive Director, International Institute for Trade and Development (ITD), Chulalongkorn University, Bangkok
- Dr. Barbara Boni, Head and Mr. Nithsa Vongphanakhone, Programme Officer, Swiss Agency for Development and Cooperation (SDC), Vientiane

Further interviews were conducted with:

- Mr. One-Sy Boutsivongsakd, President, Association of Lao Garment Industry
- Expert Panel Meeting: Mr. Bounthavy Sisouphanthong, Committee for Planning and Investment (CPI), Dr. Leeber Leebouapao, Dr. Phokhong Thepkaysone, NERI, Tom Callander, Mme Latsamay Sylavong, IUCN, Mme Banesaty Thephavong, Ministry of Industry and Commerce (MoIC), Mme Keobang Keola, Science, Technology and Environment Agency (STEA), Mr. Thongkhoun Sengphachanh, Ministry of Foreign Affairs (MoFA), Mr. Khampho Khaykhamphithoune (MoFA), Ms. Niddavone Douangphonexay, Lao National Chamber of Commerce and Industry (LNCCI)
- Dr. Vilayvanh Phummasone, General Secretary and Mrs. Chanthao Pathammavong, President, Lao Handicraft Association
- Dr. Phouphet Kyophilavong, Deputy Director, Department of Economics, Faculty of Economics and Business Management, National University of Laos (NUoL)
- Dr. Phokhong Thepkaysone, Research Officer, NERI
- Ms. Buakhai Phimmavong, Managing Partner and Ms. Luz Rio, Senior Advisor, Enterprise and Development Consultants, Organizers of the Lao Business Forum
- Mr. Sumphorn Manodham, Wood Products Association and Chairman, Burapha Group
- Mr. Kham Phalakone, Deputy Director General, Department of Planning, Ministry of Agriculture and Forestry (MAF)
- Mr. Franck Caussin, Trade Promotion Advisor, International Trade Center (ITC) Trade Promotion Project, Lao Trade Promotion Centre



- Mr. Alain Chevalier, Senior Trade Promotion Advisor, Mekong Trade Promotion, Swiss Secretariat for Economic Affairs (SECO) and ITC, Hanoi, Vietnam
- Mr. Jorgen Persson, Counsellor, Ms. Lisbet Bostrand First Secretary, Swedish International Development Agency (Sida) and Dr. Carl Mossberg, Advisor to the Lao National Agriculture and Forestry Research Institute (NAFRI)
- Mr. Nheune Sisavad, Department of Intellectual Property, Standardization and Metrology, STEA
- Dr. Manfred Matzdorf, Programme Director, Lao-German Technical Cooperation (GTZ)
- Mr. Joost Foppes, Senior Advisor, Non-timber Forest Products and Mr. Auke Koopmans, International Renewable Energy Advisor, SNV – Netherlands Development Organisation
- Dr. Charles Alton, Rural Development Specialist, Advisor to STEA
- Mr. Boun Yenh Siththisakd, Director and Mr. Vinod Paratkar, Advisor, Lao-India Entrepreneurship Development Centre
- Mr. Sisouphanh Semgsavamj, President, Lao Agro-processing Association
- Mr. Peter Albert, Executive General Manager, Mr. Khamsouk Sundara, Senior Advisor and Ms. Viengmany Vongkhamsao, Government Relations Manager, Oxiana, Lane Xang Minerals Ltd.

### **Third round of stakeholder interviews in conjunction with the third meeting of the Expert Advisory Panel (November 8–10, 2006)**

- Mr. Bounthavy Sisouphanthong, Director General, CPI and Dr. Manothong Vongsay, Deputy Director General, Department for Promotion and Management of Domestic and Foreign Investment, CPI
- Mr. Ruedi Luethi, Senior Technical Advisor, Laos Extension for Agriculture Project (LEAP) and Mr. Phonesavanh Luangsouphom, Officer Manager, PRORICE/PROFIL, Helvetas – Swiss Association for International Cooperation
- Mr. Phouvang Chittanavanh and Mr. Khamxay Sipaseuth, Project Co-Managers, Promotion of Organic Farming and Marketing Project PROFIL, Helvetas – Swiss Association for International Cooperation and Ministry of Agriculture and Forestry
- Mr. Franck Caussin, Trade Promotion Advisor, ITC Trade Promotion Project, Lao Trade Promotion Centre
- Mr. Thiphavong Boupha and Dr. John Connell, Officers, International Center for Tropical Agriculture (CIAT)
- Mrs. Nongnut Foppes, Xaoban Inc.
- Ms. Kate Lazarus, Senior Program Officer, Regional Wetlands and Water Resources Program, IUCN – Lao PDR
- Dr. Richard Friend, Programme Manager, Mekong Wetlands Biodiversity Conservation and Sustainable Use Programme, IUCN – Lao PDR
- Dr. Madhusudan Bhattarai, Environmental Economist, Mekong Wetlands Biodiversity Conservation and Sustainable Use Programme, IUCN – Lao PDR
- Mr. Jean Foerster, Advisor, Nam Theun 2 Dam Project
- Mme Banesaty Thephavong, Deputy Director General, Ministry of Industry and Commerce

- The LNCCI organized a private sector dialogue with: Mr. Sisanouk Sisombat, President, *Lao Coffee Association*, Mme Manivong Viravong, President, *Lao Plantation and Cash Crop Business Association*, Mr. Thongsavanh Soulignamat, *Lao Wood Products Industry Association* and Ms. Niddavone Douangphonexay, LNCCI.

**Fourth round of follow-up stakeholder interviews in conjunction with the fourth meeting of the Expert Advisory Panel (May 21–23, 2007)**

- Dr. Kikeo Chanthaboury, Permanent Secretary, CPI

## Annex V: Background Research Recommendations

Background research papers prepared for the RTEA project have provided overarching and sector-specific recommendations to be considered as Lao PDR promotes the development and expansion of the following nine sectors:

- mining, hydropower and construction materials (addressed in one paper);
- wood and wood products;
- tourism;
- organic agricultural products;
- silk handicrafts;
- medicinal plants and spices; and
- biofuels.

These recommendations are based on a rapid assessment of the country's trade and environment linkages, and thus deserve further research and investigation to look at gaps in policies and practices, national capacities and infrastructure, and to measure the potential of trade in each sector in relation to the resource base. Ensuring an integrated approach to planning and impact assessment allows the country to develop this potential while ensuring the natural resource base continues to provide for the Lao people's livelihoods and economic development for the long term.

### A. General recommendations

Overarching recommendations include the need to consider several factors noted below.

- There should be continued engagement with the regional and international community to facilitate and promote regional adoption of policies, practices and approaches to promoting sustainable trade in Lao PDR's exports, and investment in Lao PDR for the development of the government's *National Export Strategy*.
- There should be an improvement in overall environmental governance and policy coordination in Lao PDR at the same pace as current trends of FDI and trade in the country.
- The government's policies, regulations and capacities in strategic environmental assessment (SEA), environmental impact assessment (EIA), and integrated planning and assessment among the various policy areas should be strengthened.
- A scientifically-based, coherent approach to the use and management of forests should be implemented that aims to ensure the sustainable use of Lao PDR's forest resources in the face of pressures posed by the various economic sectors (such as agriculture, tourism, wood products, non-timber forest products, mining, hydropower and biofuels).
- The production of food crops and products for export should be balanced with ensuring food security and reduced dependence on imported foods.
- Incentives should be provided to attract investments to export sectors from both domestic and foreign sources that are supportive of economic, environmental and social goals.
- In the context of further trade and investment liberalization, the private sector should be encouraged to put in place corporate social responsibility (CSR) and increase resource efficiency and management throughout the production process.

## B. Sector-specific recommendations

The diverse mix of sectors in Lao PDR's *National Export Strategy* offers great potential for utilizing its natural and human resources to further economic development. The strategy does rely heavily on the country's natural resources, its land and water base, and thus requires specific policies and management approaches for each sector. It also requires solid planning and coordination among sectors to ensure natural resources are managed sustainably and can benefit the Lao people for many decades to come. The following specific recommendations are offered for consideration and action in each sector in order to promote sustainable development as trade is liberalized.

### Mining, hydropower and construction materials sectors

*Background research paper by Tom Callander, IUCN-Lao PDR*

To ensure that environmental concerns are best addressed and that opportunities for environmental conservation are realized in these key sectors, key recommendations are expressed below.

#### ■ Improve environmental governance at the same pace as current trends of FDI in Lao PDR.

Improving environmental governance includes developing the commitment of the government and private-sector managers to address environmental concerns; strengthen institutional capacity, especially at the provincial and district level to implement government policies; and ensure better coordination/collaboration between all levels of Lao PDR society.

It is clear that the current governance structures are under pressure from the increase in investment and growth over recent years. Substantial time and resources need to be allocated to strengthening governance to assist in sustainable development, not only in the government but across Lao PDR society.

The critical importance of integrating policy and strategy commitments has been recognized at the highest levels; this recognition now needs to be translated into real action on the ground. Of utmost importance is the government's commitment to ensuring that policies and regulations—and, as early as possible, international best practices—are respected by foreign investors, including through improved EIA/SIA. While much effort has been made to integrate these requirements across government and build institutional capacity, there is insufficient clarity and direction on the mechanisms for coordinating a response to the recommendations of such assessments and the need to ensure that foreign investors are accountable for adhering to appropriate standards. Thus, it is recommended that:

- further research and analysis is carried out on the link between investment and EIA/SEA processes, including an analysis of gaps and current weaknesses;
- the process of taking necessary action on EIA/SIA recommendations is strengthened and the roles, responsibilities and capacities of relevant government agencies are clarified, for instance by amending the *Law on the Promotion of Foreign Investment* (2004) to better reflect the roles and responsibilities of the Committee for Promotion and Management of Investment (CPMI) and investor obligations concerning EIA/SIAs; and
- leadership is strengthened within key government agencies in order to increase the awareness of the importance of EIA/SIAs at all levels and devise realistic ways of mitigating socio-environmental impacts of projects and activities.

#### ■ Build closer regional cooperation on investment to ensure environmental concerns across the region are addressed.

Continuing to strengthen regional agreements concerning the environmental requirements of foreign direct investment, both from outside and within Asia, is important to ensure sustainable development in the region. To this end, it is recommended that:

- Lao PDR continue to engage in regional processes through ASEAN mechanisms, such as the ASEAN Investment Area Council, the ASEAN Coordinating Committee on Investment, and various environmental institutional structures, such as the ASEAN Ministerial Meeting on the Environment and the ASEAN Senior Officials on the Environment. One possibility may be to establish a regional trade and environmental research and policy network under ASEAN or the GMS consisting of representatives from each member country to further information exchange, collaborative research and strategic policy advice on issues concerning trade and the environment.
- the Lao PDR government seek further regional cooperation on issues relating to trade and the environment through bilateral relationships and continue to incorporate these aspects into bilateral trade agreements.

■ **Facilitate a domestic business environment that attracts responsible businesses and international best practice.**

Improving the implementation of policies and the enforcement of regulations creates an environment of certainty which is conducive to attracting investment. While the government plays a lead role in the enforcement of policies and regulations, the private sector is responsible for adhering to them and in many instances can raise or even go beyond national standards. Attracting those companies that have a proven track record of good practice elsewhere during the initial investment stages may ease the burden on government agencies that are tasked with ensuring the implementation of environment-related policies and regulations. In this light, it is recommended that the government:

- provide investment incentives to private companies that are committed to implementing new approaches to managing environmental issues, such as Corporate Social Responsibility, that go beyond national standards; and
- encourage and facilitate more input from the private sector on the development of laws and policies by increasing engagement with associations, such as the Lao Chamber of Commerce and Industry and the Lao Business Forum.

■ **Realize growth-led environmental conservation: green market opportunities.**

Recognizing the environmental opportunities that will result from trade liberalization is vital for the sustainable development of Lao PDR. Identifying these opportunities should be a priority for government decision-makers, trade negotiators and industry representatives. Green market opportunities should be integrated into current development policies, such as research and development in the construction-materials sector and niche-market creation.

## Wood and wood products sector

*Background research paper by Sousath Sayakoummane and Vongxay Manivong,  
Department of Forestry, Ministry of Agriculture and Forestry*

The government's goal is to ensure a balance between the supply and demand of timber and reduce impacts on forest resources and the environment. To this end, wood processing factories need to be reformed with proper criteria and transparent procedures. Recommendations for the government are listed below.

■ **Encourage value-addition to stimulate processing industries and obtain greater economic returns while minimizing resource use, including the promotion of forest certification and chain-of-custody verification, through:**

- continuing to reform the national wood processing sector;
- developing proper criteria and procedures for wood processing factories;

- stimulating investment in semi-finished and finished products;
- in addition to regulatory measures, developing incentive schemes to encourage the local wood processing industry to use wood from forest plantations and from sustainably-managed production forests; and
- developing appropriate incentive schemes to encourage improvements in processing technologies to reduce the consumption of raw materials from natural forests.

■ **Strengthen dual policies on plantations and production forests to ensure a sustainable supply of timber for the wood and wood products sector through:**

- establishing a nationwide sustainable management plan for each Production Forest Area (PFA) together with law enforcement;
- continuing to support the formation of Village Forest Management models;
- ensuring logging operations are calculated on scientifically-based annual harvesting quotas;
- declaring the temporary closure of forest areas where heavy logging beyond supply capacity of forests has occurred. Permanent closure would apply to riparian or watershed areas; and
- improving data collection and monitoring and the implementation of forest management policies.

■ **Ensure the scaling-up of forest management certification.**

Certification is an increasingly important requirement for wood and wood products in the global market, and presents another tool for the government to ensure that the nation's forests are sustainably managed. Possibilities of strengthening this work include:

- continuing to promote and scale-up forest management certification through the development of a network on forests and wood exports, based on sustainable forest management; and
- developing a national forestry certification strategy, and build capacities in the sector to meet national and international certification standards.

■ **Strengthen implementation of polices and regulations on illegal logging and illegal log export through:**

- strengthening monitoring of logging outside authorized areas and implementing measures to discourage unauthorized logging; and
- strictly implementing the ban on the export of raw logs in order to ensure that only processed wood products are exported, contributing to the objective of adding value to downstream processing industries in the sector.

■ **Promote cooperation mechanisms between public and private sectors, including in forestry, plantations and wood processing, through:**

- continuing to work with the Lao Wood Processing Association on quota allocation schemes;
- creating private/public sector fora in order to better engage all actors on forestry, plantations and wood processing issues;
- improving funding and incentive mechanisms for activities that promote sustainable management practices undertaken by the private sector; and
- developing strategies for ensuring environmental concerns are incorporated into the private-sector decision-making process.

## Tourism sector

*Background research paper by Souh Manivong and Somxay Sipaaseuth,  
Lao National Tourism Administration*

The Lao National Tourism Administration (LNTA) (2006) forecasts two million tourist arrivals in 2010. This is a doubling of tourist arrivals in just five years and therefore it is important that the country is well equipped to handle the environmental impacts of the increased numbers. While current policies, legislation and projects all provide good direction, they will need to be strengthened to meet this growing market. Key recommendations are explained below.

■ **Strengthen the Lao National Tourism Administration’s ability to engage with the private sector and investment decision-makers:**

- the government’s relatively new “one-stop” investment policy has the potential to provide further encouragement to foreign investors and, if forecasted tourist arrivals are going to be met with services, investment will have to increase;
- during the next five years, it will be important to improve ways of engaging with the private sector to ensure that the ecotourism ideas presented in the National Ecotourism Strategy (2005–2008) are effectively implemented and government/civil society projects, such as the Nam Ha Ecotourism project, are maintained. This could be done through a mixture of regulatory (monitoring) and incentive-based tools (for example, certification);
- the LNTA could usefully facilitate national and international investment in ecotourism activities, including the identification of sites with strong ecotourism potential, liaising with regional actors concerned with tourism promotion (Pacific Asia Travel Association), organizing and participating in investment workshops nationally and regionally, and seeking to develop partnership agreements to link investors with local communities, protected area management bodies, non-governmental organizations and development agencies; and
- increased cooperation between the Committee for the Promotion and Management of Investment and relevant sections of the LNTA at central and provincial levels will be required. Currently two staff members have been delegated this liaison task. It is recommended that staff resources and media of communication/collaboration be strengthened.

■ **Continue to engage closely with the regional and international community to facilitate and promote regional adoption of approaches to ecotourism.**

Through mechanisms such as the ASEAN (ASEAN Tourism Agreement), the ADB Greater Mekong Subregion Sustainable Tourism Strategy, the Mekong Tourism Development Project and the World Tourism Organization, representatives from the LNTA, senior levels of government and the private sector should actively engage in the development of the sector at international tourism meetings.

It is recommended that provincial and district stakeholders be given the opportunity to bring experiences from the ground to this international level. It is also suggested that environmental governance at the regional level be strengthened so as to deal with cross-border concerns related to tourism, foster the regional development of ecotourism strategies and harmonize environmental standards.

■ **Explore the potential of certification for the tourism industry in Lao PDR.**

Certification can be a useful tool in ensuring that core principles of ecotourism are being met by stakeholders in the sector. In addition to current standards such as the minimum standard of guest houses, it is recommended that the government explore and test options such as international and national certification and the institutional arrangements needed for successful programs. Such a scheme would not only yield benefits in ensuring a high standard of ecotourism practice, but also help attract more visitors to Lao PDR.

■ **Strengthen central/provincial cooperation in the tourism sector.**

The LNTA together with the Netherlands Development Organisation (SNV – Lao Ecotourism Advisory Program) have put great effort into ensuring cooperation between central and provincial institutions not only in the tourism sector but also with the conservation community and forestry officials through the multi-sector Ecotourism Taskforce and the Sustainable Tourism Network (Ashley, 2006).

It is recommended that fora bringing together provincial and central government officials, civil society representatives and the private sector continue to be supported. To this end, knowledge- and experience-sharing should be scaled-up to the regional and international levels.

■ **Continue to support conservation with particular emphasis on National Protected Areas and regional initiatives that promote tourism and conservation in the Greater Mekong Subregion and ASEAN.**

It is crucial that the ecotourism sector in Lao PDR continues to contribute to the conservation of its key asset—the environment, including through:

- working with provincial and district government authorities to ensure that knowledge of the benefits of ecotourism are considered in land-use planning decisions;
- continuing to raise local awareness of the relationship between ecotourism activities and conservation practices;
- developing and promoting ecotourism funding mechanisms for protected area management. One possibility is to develop and test the concept of a government-led, community-administered Environmental Trust Funds in key tourist areas, such as Vang Vieng, which could be used to improve and maintain natural assets; and
- strengthening conservation advocacy at the national and local levels and increase vigilance against illegal activities.

## Organic agricultural products sector

*Background research paper by Phengkhouane Manivong, Faculty of Agriculture, National University of Laos*

The government is committed to supporting the development of organic agriculture. It is recommended that the government and other concerned stakeholders in the agriculture sector work together to develop strategies, policies and regulations appropriate to organic agricultural products. Factors to take into consideration are listed below.

■ **Promoting quality assurance in this sector through the creation of certification bodies or strengthening existing systems that fully take into account environmental and social considerations to help “green” exports meet international standards.**

Setting up a national certification body for organic products in Lao PDR should continue to be explored as a priority in order to strengthen the potential of the organic agricultural products sector as a whole. Facilitating certification of organic agricultural products would increase the value of Lao products and enable these products to meet the increasingly rigid requirements in foreign markets. This project has highlighted the need to consider options for addressing quality control and assurance, including legislation to set up an accreditation board and policies to support Lao producers to obtain certification, such as ISO 9000 and ISO 14000.

■ **Strengthening supply.**

While the Lao government continues to address supply-side constraints by organizing farmers’ group or farmers’ association, it is still proving difficult to have the quantity and quality of products



in conformity with the increasingly rigid sanitary and phytosanitary standards required for agricultural products to gain market access. It is recommended that the Lao government consider developing policies and programs to support the supply chain to increase the quantity of organic products sold in domestic and international markets with premium prices for organic and fair trade products.

■ **Promoting and organizing “farmers’ groups.”**

To take advantage of export opportunities, Lao producers may consider forming groups to lobby for support of the sector. Establishing farmers’ groups would make it easier for exporters and trade partners to contact producers and could also increase awareness of the requirement for organic certification to enhance export potential.

■ **Seeking and obtaining organic certification.**

The Lao government, through relevant agencies, such as the Ministry of Agriculture and Forestry, should strengthen ways to support Lao producers to enable them to better compete in international markets by obtaining organic certification. For example, since 2004, Helvetas (the Swiss Association for International Cooperation) and the Department of Agriculture and Forestry initiated projects on “the promotion of organic rice from Lao PDR” (ProRice) and “the promotion of organic farming and marketing in Lao PDR” (PROFIL). It is recommended that these types of programs be expanded to new areas and producers. Rice production in Lao PDR is based largely on traditional methods with limited inputs of fertilizers and chemicals. While the country has a wide diversity of rice varieties, with over 3,000 varieties, production is primarily for national consumption and markets are poorly developed (Helvetas, 2007).

■ **Building a supportive regulatory and policy environment.**

Current policies and regulations related to this sector are inadequate and require urgent strengthening. A key next step for the Lao government and the development of the organic agricultural sector would be to draft laws and regulations to implement policies for organic agriculture, food safety and food quality assurance. This is a major task which requires a thorough examination and understanding of international standards and the regulations of Lao PDR’s main trading partners.

■ **Ensuring the organic sector is environmentally friendly.**

The above recommendations all support the development of the organic sector with the assumption that organic is environmentally friendly. However, some negative impacts may result from an expansion of organic agriculture, such as deforestation, protected area encroachment and other land-use change. It is important that these impacts are recognized and minimized. Some recommendations include:

- incorporating environmental and social considerations into the regulatory and policy environment in the sector; and
- ensuring organic standards and certification include key criteria for environmental protection.

## Silk handicrafts sector

*Background research paper by Somphong Soulivanh, Department of Industry,  
Ministry of Industry and Commerce*

There is significant potential to develop the Lao silk handicrafts sector, particularly traditional silk textiles, and to add value and foster diversification in the sector. Several recommendations below outline actions the government could take to realize this potential.

- **Implement the *National Export Strategy* and work with the Lao Handicraft Association and the Lao National Chamber of Commerce and Industry through the creation of a silk handicraft fund to promote this sector.**

The government and private sector may consider developing training programs for members of the Lao Handicraft Association to encourage members to improve processing and natural dyeing techniques and ensure quality certification to make silk products more competitive and help producers meet international standards.

- **Redesign waste-water treatment systems, reduce water used in the production process by using recycled waste water and upgrade to technologies that have fewer environmental impacts.**

Possibilities for future work include:

- reusing water from the various rinsing steps in order to increase the efficiency of water use in the processing of silk handicrafts;
- further research on other environmentally-sound production and processing methods to reduce raw material and energy consumption; and
- working with the Lao Handicraft Association to promote cleaner production and processing techniques and technologies.

- **Enable the Lao silk handicrafts sector to grow sustainably through:**

- creating awareness of environmental management practices and encouraging their use;
- ensuring that small to medium-scale silk handicraft centres employ or have access to environmental specialists to monitor quality and control wastes;
- providing market information as to quality and designs for silk handicraft products;
- fostering value-addition and diversification by linking this sector to other sectors, such as agriculture and, importantly, tourism;
- establishing a National Production Center for sericulture to improve and develop as well as disseminate traditional and improved techniques;
- creating annual environmental performance awards to recognize quality and raise awareness of Lao brand-name silk products following the example of “Chai Lao.” The Lao Handicraft Association and the Lao National Chamber of Commerce and Industry are well-placed to establish such an award each year;
- facilitating quality control systems for raw silk and fabrics as well as finished silk handicraft products through certification, including the “G-Mark” and ISO 14000, in order to capture premium niche markets both at the domestic (through tourism) and international levels;
- increasing capacity building and training in this sector to improve environmental performance and techniques for weaving, making silk string, dyeing, marketing and quality control; and
- establishing a Silk Handicraft Fund to encourage the development of the “One Village One Product Movement,” given the importance of this sector to rural agricultural family businesses and to preserve traditional techniques.

## Medicinal plants and spices sector

*Background research paper by Kongmany Sydara, Traditional Medicine Research Centre*

The goal of the government is to ensure the sustainable growth of the medicinal plants and spices sector through cultivation, sustainable harvesting and value-addition through processing and marketing (MIC/ITC, 2006). To this end, recommendations for the government are listed below.

- **Develop and enforce laws and regulations related to the forestry sector as a whole, especially non-timber forest products, such as medicinal plants and spices, to further sustainable growth in the**

**sector.** For example, the Ministry of Agriculture and Forestry (MAF) has outlined harvesting quotas for specific medicinal plants, yet enforcement of these quotas could be improved.

- **Collaborate with neighbouring countries on the conservation of bordering protected areas and the control of illegal trade in endangered wildlife and plant species.** This not only helps to protect rare and endangered species, but contributes to the implementation of the Convention on International Trade and Endangered Species of Wild Fauna and Flora (CITES). Activities could include pilot projects in collection sites on sustainable harvesting and fair market access in accordance with CITES regulations, and improved customs procedures (through training on legislation enforcement) at the border.
- **Work towards more scientific and community-oriented management of forest resources in order to generate timber and non-timber forest products at sustainable levels.** This could be done by pilot work at the district level with local communities and co-management agreements in and around protected areas that provide access to forests for sustainable non-timber forest product collection.
- **Improve statistics on resource harvesting and exporting to guide future policy in the sector.** The first step in the process should be to gather responsible agencies, increase collaboration and define roles and responsibilities.
- **Raise awareness of the potential environmental impacts on rural communities.** This could be done by increased scientific research concerning collection methods and education for local communities on the importance of and methods for conservation. The Traditional Medicine Research Centre could be supported to continue work on medicinal plant reserves which provide better information on local resources, opportunities for learning and raising awareness about these resources.
- **Improve the quantity and quality of exported medicinal plants and spices to meet the demands of foreign markets, through:**
  - strengthening infrastructure, especially the construction of laboratories for quality control of exported raw and processed materials;
  - enhancing research and development, marketing and certification;
  - training personnel in taxonomy and photochemistry; and
  - drafting new laws and regulations, especially for the protection of intellectual property rights and traditional knowledge of the country. Particular attention should be paid to legislation to implement the Convention on Biological Diversity. This would include access and benefit-sharing under the Bonn guidelines, so that local communities and the country can benefit from any potential commercialization of traditional medicinal plants.
- **Encourage the contribution of the private sector in addressing environmental concerns by establishing incentives, including the possibility of:**
  - lowering taxes for a period of time for the plantation of medicinal plants and spices dedicated to export in an effort to reduce the unsustainable harvesting of wild plants;
  - lowering the cost of the unused land that could be used for sustainable plantations;
  - ensuring market access for natural Lao products in export markets; and
  - reducing bureaucratic barriers to doing business in the sector.
- **Encourage the private sector to consider the environmental impacts of unsustainable harvesting and plantation cultivation.** The private sector should take on the responsibility of gaining permission to bio-prospect, with assurance of benefit-sharing of any commercialized products from traditional medicines and spices, through:
  - working with the government and civil society to explore the option of certification. An initial scoping study could be completed on the opportunities and current status of certification in the medicinal plants and spices sector in Lao PDR and abroad.

## Biofuels sector

*Background research paper by Phaychith Sengmany, National Council of Sciences*

The objective of the government is to increase the domestic supply of energy to provide an alternative to high-cost petroleum imports. To do this in a sustainable manner will require integrated planning, assessment of potential impacts and benefits with a strategy for mitigating impacts, and a forward-looking national energy strategy which realistically includes biofuels within the overall energy context of national development. It is recommended that the government:

- **Draft a national biofuel policy that clearly outlines environmental and social policies and is integrated with, and included in a national energy production and management plan, through:**
  - mainstreaming environmental considerations into biofuel policy and regulations development processes;
  - conducting environmental impact assessments of jatropha as well as other biofuels in order to promote environmentally-sustainable and integrated rural development as part of developing a national policy;
  - drafting the government’s “Master Plan” for the utilization of land to encourage biodiesel plantations to integrate crops rotation with other crops, such as rubber and rice, and to incorporate natural resource-use considerations;
  - establishing a centralized institution to address current gaps in knowledge, skills, equipment and capital to carry out integrated planning and management of a standard biodiesel program. One possibility would be to develop a training program on the environment and social aspects of the industry. This training curriculum could then be expanded to include other educational institutions, such as the National University of Laos; and
  - establishing a government-supported system to check the quality of biofuels produced and to ensure the equipment is operated efficiently during production and delivery.
- **Encourage the private sector to adopt best practices, through:**
  - strengthening the EIA process to ensure the private sector address the environmental and social issues of their operations in Lao PDR;
  - providing incentives to attract investment from both domestic and foreign sources to develop suitable biodiesel crops in line with EIA findings; and
  - providing incentives for and investor preference to those investors with a proven environmental and social track record.

# Annex VI: National Workshop Program



ກອງປະຊຸມລະດັບຊາດ  
National Workshop

ຜູ້ສຳເລັດກາຍພັດທະນາແບບຍືນຍົງ ອະດີດພາກພື້ນແມ່ຮຳຂອງ:  
Achieving sustainable development in the GMS:

ກາຍຕີລາຄາກາຍຄ້າ ແລະ ສິ່ງແວດລ້ອມແບບຮີບດ່ວນຂອງ ສປປ ລາວ  
A Rapid Trade and Environment Assessment of the Lao People's Democratic  
Republic (Lao PDR)

ຈັດໂດຍຄະຸກອາຍກາຍແຜ່ກາຍ ແລະ ກາຍລົງທຶນ  
Hosted by the Committee for Planning and Investment

Novotel Hotel, Samsenthai Road  
Vientiane, Lao PDR

(Simultaneous translation Lao-English)

ວັນທີ: 21 / 6 / 2007

ສະໜັບສະໜູ້ໂດຍ/Supported by:



### Workshop objectives

- To foster a better understanding of the potential environmental impacts of trade liberalization in Lao PDR and to identify opportunities to address these impacts.
- To enhance policy coordination and dialogue on trade and environment issues among policy-makers and other policy stakeholders.
- To identify priority areas for further analytical policy work on trade and environment in Lao PDR.

To inform discussion, the workshop will draw on the findings of the *Rapid Trade and Environment Assessment* (RTEA) project, which has developed a practical tool to help integrate sustainable development considerations into trade and environment policy-making.

At the end of each session, there will be time allotted for participants to comment and ask questions.

### Introductory session

|            |   |
|------------|---|
| 8.00–8.30  | Registration  |
| 8.30–8.40  | Welcome Remarks:<br>Dr. Kikeo Chanthaboury, Permanent Secretary, Committee for Planning and Investment  |
| 8.40 –9.10 | Opening Address:<br>Mr. Sirisamphan Vorachit, Director General, Cabinet, Ministry of Commerce and Industry<br>Mr. Sitha Phouyavong, Director General, Cabinet, Science, Technology and Environment Agency |

### Session 1: Mainstreaming environment into trade and investment

9.10–10.00 As Lao PDR embarks on an ambitious path to liberalize trade and investment regimes, the impacts on the natural environment will be significant. In this context, the keynote speeches will explore the main linkages between trade and environment, addressing the way in which trade and environment policies need to go hand-in-hand to promote a sustainable base for development.

*Presenters:*

Mr. Aaron Cosby, Associate and Senior Advisor, IISD: The Link between Trade and Environment

Mr. Manothong Vongsay, Deputy Director, Department of Foreign Investment, CPI: Mainstreaming Environmental Considerations into Investment Decisions

*Discussion:*

Moderator: Dr. Anders Granlund, Swedish International Development Agency

## Session 2: An assessment of the environmental impacts of trade liberalization

10.00–10.30 The RTEA for Lao PDR is a pilot project to assess the potential environmental impacts of trade liberalization in a GMS country. It has examined what the host of trade agreements that Lao PDR is entering into will mean for the environment and sustainable development. This is not a simple task—export-led growth involves dynamic processes and entails economy wide impacts. This project has put forward a tool—the RTEA—to provide input to decision-makers on how to set a course for sustainable development in an era of rapid growth and trade and investment liberalization, which takes into account potential environmental impacts.

*Presenters:*

Dr. Leeber Leebouapao, Deputy Director, NERI – Environment and Trade Research  
Ms. Sabrina Shaw and Mr. Tom Callander: The Rapid Trade and Environment Assessment

## Session 3: Trade and the environment in Lao PDR: drivers, pressures, impacts

10.45 –12.00 The trade liberalization commitments being undertaken by Lao PDR in the framework of AFTA and WTO accessions are significant. Trade will change the structure of the economy and the rate of growth in Lao PDR, which in turn, will have environmental impacts. This session will examine environmental impacts in nine sectors prioritized by the Lao National Export Strategy.

*Presenters:*

Mr. Franck Caussin, Trade Promotion Advisor, ITC: The Lao PDR National Export Strategy 2006–2008

Mr. Vongxay Manivong, Department of Forestry: Wood and Wood Products

Ms. Phengkouane Manivong, National University of Lao PDR: Organic Products

Mr. Somphong Soulivanh, Ministry of Industry and Commerce: Silk Handicrafts

Mr. Kongmany Sydara, Traditional Medicine Research Centre: Medicinal Plants and Spices

*Discussion:*

Moderator: Dr. Nathan Badenoch, Programme Coordinator, IUCN – Lao PDR

Commentators: Mrs. Latsamay Sylavong, Country Manager, IUCN – Lao PDR; Mme Keobang Keola, Deputy Director General of Cabinet, STEA; and Dr. Phouphet Keophilavong, Lecturer, Faculty of Economics and Business Mgmt, National University of Laos

13.00–14.45 *Presenters:*

Mr. Sounh Manivong, Lao National Tourism Administration: Ecotourism

Mr. Phaychith Sengmany, Science, Technology and Environment Agency: Biofuels

Mr. Tom Callander, IUCN: Hydropower, Mining and Construction Materials Sectors

Mr. Aaron Cosbey, Senior Associate and Ms. Sabrina Shaw, Associate, IISD – Presentation of RTEA Analysis

*Discussion:*

Moderator: Dr. Nathan Badenoch, Programme Coordinator, IUCN – Lao PDR

Commentators: Mrs. Latsamay Sylavong, Country Manager, IUCN – Lao PDR; Mme Keobang Keola, Deputy Director General of Cabinet, STEA; and Dr. Phouphet Keophilavong, Lecturer, Faculty of Economics and Business Mgmt, National University of Laos

## Session 4: Directions forward

14.45–15.30 Regional integration in the Greater Mekong Subregion (GMS) is increasing rapidly. The GMS neighbours—Thailand, Vietnam, Cambodia, Myanmar and China—represent a natural market for Lao PDR. In order to move forward towards sustainable development—“green growth”—this session will highlight the challenges and opportunities for integrating trade and environment in Lao PDR based on national experience in the GMS.

*Guest Speaker:*

Mr. Pattanachai Kulasirisawad, Member, Thai Chamber of Commerce – Regional Perspectives on Corporate Social Responsibility

Mr. Phouvong Chittanavanh, Project Co-manager, Promotion of Organic Farming and Marketing Project – Opportunities and Challenges Faced in the Organic Sector

*Discussion:*

Moderator: Mr. Kantavong Dalavong, Secretary General, LNCCI

Commentator: Ms. Shiranee Yasaratne, Country Representative, IUCN Sri Lanka and Head of Business and Biodiversity Programme in Asia

## Session 5: Conclusions and recommendations

16.00–17.00 Lao PDR is in the process of addressing many of the institutional and legislative aspects related to trade and environment issues. This session will build on the strategic policy recommendations that emerged from the RTEA process and agreed to by the Expert Advisory Panel. Based on input from the workshop participants, it will prioritize several opportunities to further integrate environmental considerations into trade and investment decision-making in Lao PDR.

*Presentation:*

Mr. David Boyer, Programme Manager, Trade and Environment, IISD: Strategic Directions

*Discussion Panel:*

Dr. Kikeo Chanthaboury, Permanent Secretary, CPI

Mme Banesaty Thephavong, Deputy Director General, FTD, MoIC

Mr. Kham Phalakhone, Deputy Director General, DoP, MAF

Mr. Sitha Phouyavong Director General of Cabinet, STEA

Mr. Kantavong Dalavong, Secretary General, LNCCI

17.00–17.15 Closing remarks:

Mr. Aaron Cosbey, IISD

Mrs. Latsamay Sylavong, IUCN – Lao PDR

17.15 Close



# Annex VII: Report on the National Workshop<sup>11</sup>

## A Rapid Trade and Environment Assessment of Lao PDR

June 21, 2007, Vientiane, Lao PDR<sup>12</sup>

The workshop *A Rapid Trade and Environment Assessment of Lao PDR* was hosted by the Lao Committee for Planning and Investment (CPI)—the lead partner throughout this project along with the Science, Technology and Environment Agency (STEA)—with the support of the International Institute for Sustainable Development (IISD), IUCN – The World Conservation Union and the Swedish International Development Agency (Sida). CPI is the government agency tasked with making the final decisions on foreign investment; STEA is the main environmental agency.

The workshop aimed to:

- foster a better understanding of the potential environmental impacts of trade liberalization in Lao PDR and to identify opportunities to address these impacts;
- enhance policy coordination and dialogue on trade and environment issues among policy-makers and other policy stakeholders; and
- identify priority areas for further analytical policy work on trade and environment in Lao PDR.

The findings of the Rapid Trade and Environment Assessment (RTEA) project—jointly undertaken by IISD, IUCN and CPI—provided analytical input to help inform the debate at the workshop. The RTEA aims to present a relatively fast assessment of potential environmental impacts of trade liberalization to identify and prioritize those trade policies, negotiations and sectors that have potential to negatively or positively impact the environment and deliver the associated policy advice. To this end, a series of background research papers were commissioned and presented at the workshop, which explored the environmental impacts of trade liberalization in nine key sectors: wood and wood products; silk handicrafts; tourism; medicinal plants and spices; organic agricultural products; biodiesel; hydropower; mining; and construction materials. These papers were undertaken by in-country researchers and provided important background information and strategic policy recommendations for the final report of the project.

Among the main points emerging from discussions at the workshop were the following:

- the Expert Advisory Panel, set up by the RTEA project and consisting of representatives from across government, the private sector and civil society, represents an important step towards policy coordination and dialogue on trade and environment;
- the project succeeded in introducing the main issues involved in the trade and environment area to key policy-makers in Lao PDR. This was the first time many of the officials involved in the project had considered both trade and environment in their work. There was a strong recommendation at the workshop that this work continue to be integrated throughout trade and environmental agencies in Lao PDR;
- the private sector was recognized as a key player in achieving sustainable development in Lao PDR. The dinner and workshop helped facilitate a better understanding of how this sector could be constructively engaged on trade and environment issues;<sup>13</sup>

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11 Prepared by Sabrina Shaw (IISD) and Tom Callander (IUCN – Lao PDR).

12 See “Laos Assesses Environmental Impacts of Trade,” *Vientiane Times*, June 22, 2007.

13 See “Chamber of Commerce Talks Green Markets,” *Vientiane Times*, June 21, 2007.

- environmental and social impact assessments should be strengthened, especially in order to provide the necessary information to ensure that export and FDI-driven projects contribute to sustainable development;
- in most sectors, monitoring, implementation and enforcement of regulations are considered to be key to addressing potential environmental impacts of trade; and
- there is a need to raise awareness about trade and environment linkages and to strengthen environmental management at all levels at this crucial juncture in the development process in Lao PDR.

### Opening session

*Dr. Kikeo Chanthaboury (Permanent Secretary, CPI)* stressed that this workshop provided an opportunity to raise awareness on trade and environment issues to enhance coordination between government ministries. He said that CPI considered this workshop to be an important input to policy-making in Lao PDR and to the mid-term evaluation of the six-year National Economic and Social Development Plan (NESDP).

Highlighting the role of trade in contributing to economic growth in Lao PDR, *Mr. Sirisamphan Vorachit (Director General, Ministry of Industry and Commerce)* noted the importance of including social and environmental considerations in development and the need to undertake environmental impact assessments (EIAs). *Mr. Sitha Phouyavong (Director General, STEA)* said it would be important for Lao PDR to open up to trade and investment while taking into account environmental considerations.

### Session 1: Linkages between trade and environment

Emphasizing that environment and economy were intricately linked, *Mr. Aaron Cosby (IISD)* said economic restructuring had environmental impacts, both positive and negative, with social welfare repercussions. He outlined the ways in which trade could impact on the environment—scale, structure, technology, direct and regulatory effects. He noted that trade liberalization worked best if it took place in the context of a solid environmental regulatory framework.

*Mr. Manothong Vongsay (CPI)* noted the political will and commitment in the NESDP to address environmental concerns regarding investment. He also recommended fostering the development of corporate social responsibility (CSR) to better manage natural resources and promote quality Lao exports. On mainstreaming environment into investment, he noted several challenges facing the government: (i) lack of effective coordination between government agencies; (ii) lack of clear guidelines for EIAs; (iii) lack of detailed environmental provisions for FDI; and (v) lack of sufficient monitoring capacities—both human and financial—to keep up with increases in investment.

Noting the need to build a framework for mainstreaming environment into trade and investment in the Greater Mekong Subregion (GMS), *Dr. Anders Granlund (Swedish International Development Agency)* said it was an opportune moment to address these issues in Lao PDR.

### Session 2: An assessment of the environmental impacts of trade liberalization

*Dr. Leeber Leebouapao (Deputy Director, National Economic Research Institute)* said the first step to achieving sustainable development was to implement existing regulations more effectively. Outlining the development of the RTEA project, *Mr. Tom Callander (IUCN – Lao PDR)* noted the preliminary nature of the assessment to identify potential environmental impacts of trade liberalization. Key issues to enhance exports were increasing security of supply and meeting non-tariff measures in export markets. In consultation with the project's Expert Advisory Panel, nine sectors had been identified for assessment, based on the *National Export Strategy (NES)*.

### Session 3: Trade and environment in Lao PDR

*Mr. Franck Caussin (International Trade Center)* explained that the *National Export Strategy* paved the way forward for export-led poverty reduction. He noted that a Trade Support Network had been set up to build capacity in the six sectors identified for export potential—garments, handicraft, organic agriculture, medicinal herbs, wood and wood products and tourism. Emphasizing cleaner production as economically more efficient, he said that sustainable resource management is essential for Lao PDR; export potential lay in competing in terms of quality as opposed to quantity.

Noting that increased trade liberalization is an opportunity for **organic agricultural products**, *Ms. Phengkouane Manivong (National University of Laos)* said the challenge is to supply export demand through the quantity and quality of organic agriculture, while ensuring that organic is truly environmentally friendly; this required regulations and quality assurance of Lao products.

On **silk handicrafts**, *Mr. Somphong Soulivanh (MoIC)* recalled the importance of this traditional sector in Lao rural communities. Environmental concerns focused on waste-water treatment of chemicals used in the dyeing process. The use of natural dyeing in the Nikone Handicraft Centre was highlighted as a success story for sustainable water management.

Noting the growing relevance of **medicinal plants and spices**, *Mr. Kongmany Sydara (Traditional Medicine Research Centre)* set out several environmental concerns in the sector, such as increases in unsustainable harvesting and deforestation. There is a need to conserve protected areas effectively in order to continue to harvest valuable non-timber forest products.

Emphasizing that the country's natural assets are the cornerstone of growth in **tourism**, *Mr. Somxay Sipaaseuth (Lao National Tourism Administration)* said ecotourism is a growing sector as a result of better regional integration. He noted that environmental impacts in this sector are related to water and waste pollution, as well as increased water, energy and food use.

On **biodiesel**, *Mr. Phaychith Sengmany (National Council of Sciences)* noted the search for alternative energy sources in Lao PDR, including jatropha, soya, palm, corn and rice. He said the key environmental concerns related to deforestation are due to the expansion of mono-crop plantations for biofuels, soil and watershed erosion, and food security.

On **hydropower, mining and construction materials**, *Mr. Tom Callander (IUCN – Lao PDR)* outlined several policy recommendations, including the need: (i) to improve environmental governance at the same pace as current trends of FDI; (ii) to enhance regional cooperation in investment to address environmental concerns; (iii) to realize growth-led environmental conservation—green market opportunities; and (iv) to facilitate a domestic private sector environment that attracts responsible business and international best practice. He set out the concept of corporate social responsibility as a way forward to attract responsible investment and best practice in Lao PDR.

Noting that the forestry sector is currently in crisis, *Mr. Vongxay Maniovong (Ministry of Agriculture and Forestry)* referred to the government's policy to support wood processing industries in order to build value-addition in the **wood and wood products sector**; to ensure sustainable forest management, wood processing factories will have to meet specified standards and improve production efficiency.

**DISCUSSION** – In response to a question on the opportunities for smaller investors in niche sectors in Lao PDR, *Mr. Manothong Vongsay (CPI)* said that a comprehensive investment strategy has yet to be developed in Lao PDR. Drawing on the Chinese experience, *Dr. Nathan Badenoch (IUCN – Lao PDR)* noted the pivotal role of small and medium-sized enterprises (SMEs) in the development process. In response to a question from *Mr. Ruedi Luethi (Helvetas/PROFIL)* as to which commodity chains have potential to reach markets, *Mr. Franck Caussin (ITC)* provided the examples of fruit and vegetables to Thailand and coffee to the EU. *Mr. Alain Chevalier (Mekong Trade Promotion)* said that it is possible to have clean production that is competitive. *Mr. David Boyer (IISD)* noted the importance of integrating organic products in the tourism sector.

Given the lack of funding for protected areas, *Mr. Jonathan Cook (WWF)* highlighted the idea to link PA funding with revenues from ecotourism. *Mr. Somxay Sipaaseuth (LNTA)* noted that tourism revenues are small but growing. With respect to coordination on environmental impacts, *Mr. Kongsaysy Phommamaxay (STEA)* said cost-benefit analysis is crucial.

**COMMENTARY** – *Mrs. Latsamay Sylavong (IUCN – Lao)* noted the pressing need to develop national guidelines and strategies for natural resource use and the need to engage proactively public and private sector decision makers to ensure sustainable trade and investment. Highlighting elements of the discussion on the RTEA analysis, *Mr. Aaron Cosby (IISD)* called for a comprehensive investment strategy to enable sustainable decisions on how to prioritize investment—the search for quality over quantity. He stressed the need to enhance capacity so that existing policies and regulations can be effectively implemented, monitored and enforced. He recalled that the RTEA project aims to develop solid policy recommendations to contribute to addressing the potential environmental consequences of trade liberalization. *Dr. Phouphet Keophilavong (National University of Laos)* emphasized the importance of data collection to provide constructive input into policy-making. Recalling *Mr. Manathong's* reference to political will, *Dr. Nathan Badenoch (IUCN – Lao)* noted the importance of engaging the private sector as standard practice.

#### Session 4: Directions forward

Concerning regional perspectives on corporate social responsibility, *Mr. Pattanachai Kulasirisawad (Thai Chamber of Commerce)* said CSR needs to be undertaken in a participatory framework with appropriate indicators. With reference to the Thai experience, he outlined ethical and legal aspects related to CSR; it will be necessary to think outside the box to increase economic efficiency and environmental conservation when implementing CSR. On the opportunities and challenges facing the organic sector, *Mr. Phouvong Chittanavanh (Helvetas/PROFIL)* shared his experience at the recent first organic trade fair in Shanghai and noted the potential for Lao PDR to promote organic agriculture, with appropriate certification.

**COMMENTARY** – *Mr. Kanthavong Dalavong (LNCCI)* highlighted the regional aspects of dealing with environmental issues. *Ms. Shiranee Yasaratne (IUCN)* said the political will is clearly present to promote CSR in Lao PDR, which will make a significant contribution to sustainable development.

#### Session 5: Conclusions and recommendations

Noting that the workshop discussions would contribute to the final report of the RTEA project and to refining the methodology to assess the environmental impacts of trade liberalization, *Mr. David Boyer (IISD)* set out several points emerging from the debate: the Expert Advisory Panel is a step towards policy coordination and dialogue; monitoring, implementation and enforcement of regulations are key; there is a need to strengthen provincial environmental management; further work on organic potential is vital; there is a need to build capacity for the Lao National Tourism Administration; the private sector is a key partner for sustainable development; there is a need to strengthen SIAs and SEAs; and consider a corporate governance code to ensure that best practices are put in place in the private sector.

**PANEL DISCUSSION** – Noting that trade liberalization can help export growth and consequently contribute to poverty reduction and environmental protection, *Mme Banesaty Thephavong (MoIC)* raised several questions: Does Lao PDR have the capacity to meet the objectives in the National Export Strategy for organic agriculture? How to improve environmental law enforcement? To reduce the regulatory burden, she said it is essential to raise awareness and knowledge about CSR. *Mr. Kongsaysy Phommamaxay (STEA)* and *Mr. Khame Phalakhone (MoAF)* noted the lack of financial and human capacity in Lao PDR to effectively monitor and implement environmental policies and enforce protected areas. *Mr. Kanthavong Dalavong (LNCCI)* said the Lao private sector needs to raise awareness on CSR to enhance competitiveness through sustainable methods and international best practice.

## Lao National Chamber of Commerce and Industry (LNCCI) Dinner

Due to the nature of the project—raising awareness about the linkages between trade and environment—the dinner brought together a unique blend of representatives from Lao society, ranging from trade and investment officials to environment officials, university representatives and private sector actors. During this process, the RTEA project team (IISD and IUCN) developed a strong relationship with the LNCCI and decided as part of the project to support a *Gala Dinner on Trade and Environment* on June 20, 2007, with the aim of promoting “green” export opportunities and providing a forum for the private sector to share their experiences.

The dinner drew around 70 participants including 30 private sector representatives. It was opened by the *Vice President of LNCCI, Dr. Sananh Chounlamany*, who stressed the importance of private sector involvement in conservation, (pursuant to the event, IUCN and LNCCI are drafting a Memorandum of Understanding to further cooperation).

*Ms. Shiranee Yasaratne (IUCN country representative, Sri Lanka)* gave a keynote speech on the green market opportunities resulting from trade and provided examples of how companies or private sector groups can partner with civil society groups such as IUCN to find “win-win” solutions for business and conservation.

There were also speeches from leaders in the Lao business community. Noting the importance of ecotourism in supporting the preservation of local communities and the environment, *Mrs. Vayakone Bodhisane (President, Tourism Business Association)* stressed that, after mining, tourism was the largest contributor to income earnings in Lao PDR and has a key role to play in sustainable development. Sharing his experience with exporting organic product to Japan, *Mr. Hom Songpadith (Lao International Group)* noted that Lao PDR faces problems with quantity and quality. Based on his experience with exporting organic coffee, *Mr. Sisanouk Sisombat (President, Lao Coffee Association)* called for the private sector to “try, try and try again” to gain access to export markets. He noted the difficulties in penetrating markets even if products are of good quality.

Several participants noted that this initiative was a new and innovative approach to bringing the message of sustainable development and conservation to Lao society; the private sector representatives were appreciative of not only being included, but the invitation to host the event, which provided an opportunity to exchange views in what is often a government/civil-society dominated debate.

# Annex VIII: Trade and Environment Fact Sheet for the Private Sector



## Trade & Environment Green Business Opportunities for Lao PDR



Photo: IUCN Business and Biodiversity Programme

The natural environment and its biodiversity is the life support system for our planet. There are more than six billion people and the world is heading for eight or nine billion by 2050. Their livelihoods depend on our planet's biodiversity, in the form of ecosystems, species and genetic material. There may be differences of opinion about the rate of loss, but there is no doubt that ecosystems, species and genes are being lost or damaged faster than ever before. Such a loss undermines the natural richness of our planet and threatens our future sustainability.

Business and society in general share responsibility for the current deteriorating situation as well as for solutions to improve it\*.

## Why should business get involved?

**Business is also about survival and in order to survive, companies across the globe are recognising that profits and long term sustainability are intrinsically linked to the environment and it's biodiversity\*.**

**Biodiversity and Risk:** Not adequately addressing biodiversity issues imposes risks on business operations such as challenges to its legal licence to operate, disruption to the supply chain and the natural resources a business relies upon, damage to brand image; and fines and 3rd party claims for environmental damages. A company's position in the marketplace - and indeed its profitability - can be threatened by such risks.

**Business and Opportunity:** Addressing biodiversity issues can provide multiple opportunities such as securing the licence to operate, ensuring availability and access to natural infrastructure, strengthening the supply chain, building stakeholder relationships, and appealing to ethical consumers.

## Green Business Opportunities

The International Institute Sustainable Development and the World Conservation Union (IUCN) in collaboration with the Committee for Planning and Investment and other key stakeholders recently conducted an assessment of the environmental impacts of trade liberalisation in Lao PDR. This assessment, whilst raising red flags on potential negative impacts of trade also revealed the vast potential in Lao PDR for environmentally positive impacts resulting from the increasing global demand for environmentally friendly products and services.

Companies operating in Lao PDR have a unique opportunity to embrace the global momentum of corporate social responsibility and 'go green'. Promoting sustainable development among Lao-based companies offers win-win opportunities for business as well as the sustainable use of the environment and natural resource base.

*"CSR is a company's commitment to operating in an economically, socially and environmentally sustainable manner whilst balancing the interests of diverse stakeholders". (CSR Asia)*

### Ecotourism

The country's 20 National Protected Areas are at the heart of Lao PDR's natural beauty. With tourist arrivals expected to reach 2 million per annum by 2010, ecotourism offers a highly lucrative business opportunity that at the same time can actively conserve the natural environment and meet the needs of local communities

### Sustainably harvested NTFPs

There is a growing global demand for certified sustainably harvested non-timber forest products (NTFPs) such as bamboo, rattan, orchids and traditional medicines and spices. Lao PDR has some of the most biologically diverse forests in the world and securing this competitive advantage sustainably is key to the country's development.

### Organic agriculture

Much of Lao PDR agriculture sector is 'organic by default' and therefore is in the unique position to leap frog lower value production and penetrate the high value organic markets. Organic agriculture products are in hot demand in countries such as Japan, China and Thailand and there is a growing local and tourist market.

### Eco-friendly silk handicrafts

Consumers in countries like the Japan, the United States and Australia who are buying handmade silk products from Lao PDR require an assurance that these products are of the highest quality and made using traditional processes – often with a low environmental impact. Maintaining these processes and reducing environmental impacts of growing operations will be vital for leading companies now and in the future.

### Sustainably harvested timber & wood products

In response to issues such as climate change and the depletion of the world's natural forests, there is a rising demand for sustainably sourced wood and wood products. With the largest forest cover in South East Asia, companies sourcing timber from Lao PDR's forests are expected to come under increasing pressure to certify that this wood is sourced legally and sustainably.

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\* Information directly sourced from the Earth Watch Institute, The World Conservation Union and World Business Council for Sustainable Development 2002 publication: *Business and biodiversity: The Handbook for Corporate Action* available at <http://www.iucn.org/themes/business/>

