



*This issues brief series is developed by the Poverty-Environment Initiative of Lao PDR to address poverty and environment issues in the current development and national planning processes. The purpose of the briefs is to provide evidence-based information and practical options to support transformation of the Lao economy towards a sustainable pro-poor development path.*

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**BRIEF** Lao PDR's forests are one of the country's greatest resources. Its forests support the livelihoods of Lao PDR's large rural population in addition to rich biological diversity, including many rare and endemic species. The forests are also a source of government revenue, as timber is extracted, processed and exported and land is cleared to be used as agricultural land and for plantations. In the context of climate change, the country's forests can also contribute to mitigation and potentially provide an additional revenue stream from carbon credits – if sustainably managed and conserved.

However, Lao PDR's forests are shrinking and will be unable to support the Lao people, economy and biologically diverse species in the future if they continue to be degraded and fragmented. Although there is some disagreement between sources, in 1992, forests covered approximately 47% of the country's land area. Today, forest cover has decreased to about 40%.

The overarching objective of the Government of Lao PDR's *National Forestry Strategy to 2020* is poverty eradication. The strategy's specific targets include improving the quality of existing forested areas and increasing the country's forest coverage to 70% by 2020. This issues brief will examine how Lao PDR makes the most out of one of its most important endowments, meeting its targets for increasing and improving forests, while also responding to increasing investments in the sector. Investments in forestry involve a range of activities, from timber extraction, processing and export, to industrial tree plantations, to the cultivation of non-timber forest products, to emerging markets for carbon and other ecosystem services.



Photo: IUCN Lao PDR

## 1. Lao PDR's forest sector

Lao PDR's forests are one of the country's greatest resources and Lao PDR remains heavily forested in comparison to other countries in the Asia-Pacific region. The country's forests continue to play an important role in contributing to economic development, supporting the livelihoods of Lao people and providing vital environmental services. Forest resources in the country range from dry evergreen forest, scattered tropical and sub-tropical mountain deciduous forest, tropical mountain evergreen forests, small areas of pine forest and limestone forest, dry dipterocarp forest and mixed deciduous forest (see Box 1 for more detail).

The system of National Protected Areas (NPAs) in Lao PDR consists of 21 NPAs and 2 corridors. The total area within the NPA system now covers more than 3.5 million ha, which is equivalent to almost 15% of the country's land area. In addition to the NPAs, there are many provincial and district level conservation and protected areas established country-wide, which together with NPAs constitute more than 20% of the total land area<sup>1</sup>.

All natural forest and forestland in Lao PDR is designated as the property of the national community, with the state acting as representative in its management and allocation (such as through the issuance of concessions<sup>2</sup>). Lao PDR has a comprehensive framework of laws, regulations and strategies related to forest protection, management and utilization. These include the *Forestry Law* (1996, revised 2007), the *Environmental Protection Law* (1999) and a range of specific decrees on aspects such as logging and the wood processing industry. In 2005, the Government of Lao PDR (GoL) developed a *National Forestry Strategy to 2020* that analyzes the status of the sector and provides targets and recommendations for its development. The Strategy (known commonly as FS2020), sets out categories of forests in Lao PDR, with reference to their purpose and permitted utilization.

FS2020 also puts forth key targets for the forest sector, including but not limited to:

- The stabilization of shifting cultivation by 2005 and its eradication by 2010;
- The improvement of forest cover and quality,

<sup>1</sup> IUCN Lao PDR. 2010. "Forests and Protected Areas: Background Issues Paper for CoP 10" [Draft].

<sup>2</sup> Prime Minister's Office. 2005. *Forestry Strategy to the Year 2020 of the Lao PDR*. Vientiane, Lao PDR.

### Box 1. Key statistics

**Current forest cover:** app. 40%

**Main forest types:**

- Dry evergreen forest in the north
- Tropical montane evergreen forest along highland areas of the Annamite Mountains and Bolaven Plateau
- Lowland semi-evergreen dipterocarp forest at the Mekong River Plain
- Tropical montane deciduous forest scattered in the north
- Dry dipterocarp forest in the south
- Mixed deciduous forest in the south
- Limestone forest in the Annamite Mountains
- Pine forest in the Annamite Mountains
- Subtropical montane forest in the north (*Source: Clarke 2008 in Tong 2009*)

**Percentage of population dependent on natural resources:** app. 80%

**Land area under protection:** app. 20% (incl. provincial and district protected areas)

**Total value of wood product exports in 2007/2008:** app. US\$1.3 billion

**Accumulated FDI in plantations sector in 2007:** app. US\$665 million

**Main plantation crops:** Acacia, Eucalyptus, Teak, Rubber, Sugarcane, Maize

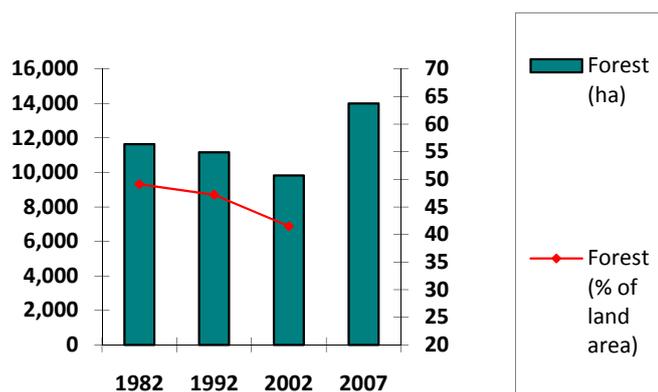
with the regeneration of up to 6 million hectares (ha) of forest and the planting of up to 500,000 ha of tree plantations, with a target of 500,000 ha of planted forest by 2020;

- The provision of a sustainable flow of forest products for domestic consumption and to generate household income.

Despite the country's comprehensive legal framework and the targets of FS2020, deforestation and forest degradation remain important challenges in Lao PDR. Drivers include the conversion of natural forests to agricultural land and commercial plantations, infrastructure development, as well as unsustainable and illegal logging. Although figures differ somewhat across sources, it is generally understood that forest cover has declined from about 70% of Lao PDR's land area several decades ago to a most recent estimation of 40%<sup>3</sup>. Conflicting data, alternative definitions, and changes in the resource base make it difficult to form

<sup>3</sup> A 2002 study calculated Lao PDR's forest cover to be 41.2% (based on natural and planted forests with a canopy density of 20% or more), in Tong, Pei Sin. 2009. "Lao People's Democratic Republic Forestry Outlook Study". Working Paper Series, Asia-Pacific Forestry Sector Outlook Study II. Food & Agriculture Organisation (FAO), Bangkok.

**Fig. 1. Forest Cover in Lao PDR ('000 hectares and percentage of total land area), 1982-2007**



an accurate picture of the extent and condition of the country's forest statistics over the last three decades.

Figure 1<sup>4</sup> (above) shows forest cover data over the past two decades, with estimates for 2007 showing a rise. According to Tong<sup>5</sup>, an average of about 91,200 ha of forest per annum has been lost over the past two decades. Other estimates put the deforestation rate at 53,000 ha per year<sup>6</sup>. Forest quality has also deteriorated, with dense forest decreasing from 29% in 1992 to 8.2% in 2005, while open forest increased from 16% to 24.5%<sup>7</sup>. As well as posing environmental problems, deforestation and forest degradation affects the poorest sections of Lao society most severely, particularly women and ethnic groups whose livelihoods are more dependent on forests<sup>8</sup>, and is a prime concern for the sustainability of one of Lao's important industries.

## 2. The value of Lao forests

FS2020 notes that the country's forests provide a range of services, including economic, nutritional and environmental services.

<sup>4</sup> Figures for graph are from the Department of Forestry, cited in Phongoudome, Chanhsumone, et al. 2008. "Current status of forest cover in Lao PDR", presentation at the *Symposium on Preparing for Mitigation of Climate Change in the Mekong Region and the Workshop on Preparing for REDD*, Hanoi, 3-5 November 2008. Phongoudome et al note that the 2007 figure, showing a rise in cover, refer to a total of 14.9 million ha, incorporating conservation, protection and production forests, as stated in DoF 2007 and in the 2007 *Forestry Law*. The increase in forest cover in this 2007 figure may be due to the inclusion of forests with less than 20% closed canopy.

<sup>5</sup> Tong, 2009.

<sup>6</sup> The World Bank. 2007. *Lao PDR Environment Monitor*. Vientiane, Lao PDR.

<sup>7</sup> FS2020.

<sup>8</sup> FS2020.

The Lao forest sector plays a vital role in the economy, through revenues from timber, employment, investment in plantations and processing, provision of energy and support to rural livelihoods. In the 1990s, the forest sector grew faster than the rest of the economy, accounting for about 40% of export earnings<sup>9</sup>. This reflected an increase in log extraction. In 2001, forests contributed 3.2% of Lao PDR's gross domestic product (GDP) through log production, not including subsistence use, wood processing and NTFPs<sup>10</sup>. In 2010, the agriculture and forestry sector is expected to account for about 0.9 percentage points of GDP growth<sup>11</sup>.

Relative value of wood exports has also decreased as a share of the national total, but still accounted for 4.5% of total exports value in 2007/2008 (Table 1, following page, provides more detail on Lao PDR's wood and wood product exports)<sup>12</sup>. Official figures for log extraction decreased from 260,000m<sup>3</sup> in 2000 /2001 and 2001/2002 to 150,000m<sup>3</sup> in 2004/2005<sup>13</sup>. Ministry of Information and Commerce (MOIC) data on log supplies indicates that the annual quota has been around 300,000m<sup>3</sup> over the past three years, with about two-thirds coming from land clearance for infrastructure projects, and the remainder from natural forest production and a small contribution from plantations<sup>14</sup>.

There are contradictions among Lao export statistics at different levels and agencies, and compared to the import statistics of its trading partners. According to the MOIC, the total value of exports of wood and wood products from Lao PDR in 2007/2008 was approximately US\$1.3 billion (see Table 1 for more detail). This is significantly higher than the MOIC figure for total wood exports in the previous year (2006/2007) worth US\$72.53 million, which in turn contrasts with the Customs Department data showing US\$45.86 million in exports<sup>15</sup>. In accordance with GoL policy, there has been increased production of furniture and other processed products and a reduction in sawnwood production.

<sup>9</sup> CPI, NSC and UNDP, 2006, in Tong 2009.

<sup>10</sup> Statistical Year Book 2003 and Economic and Monetary Statistics, September 2002, Bank of the Lao PDR, cited in FS2020.

<sup>11</sup> The World Bank. 2010. *Lao PDR Economic Monitor: Mid-Year Update, May 2010*.

<sup>12</sup> MOIC data from 2007, cited in Ministry of Agriculture and Forestry (MAF) and Sustainable Forestry for Rural Development (SUFORD) Project. 2009. "Opportunities to Restructure Wood Industries in Lao PDR".

<sup>13</sup> FS2020.

<sup>14</sup> MAF & SUFORD, 2009.

<sup>15</sup> MAF & SUFORD, 2009. In addition to inconsistencies in the records, the increase in wood exports may possibly be due to other factors, such as increased log exports from infrastructure projects.

Items	ASEAN		ASIA-OCE-USA		EU		Total		
	m <sup>3</sup>	\$ US'000	m <sup>3</sup>	\$ US'000	m <sup>3</sup>	\$ US'000	m <sup>3</sup>	\$ US'000	
<b>Finished products</b>	190,020	35,345	10,840	3,420	46	573	200,906	<b>39,428</b>	
<b>Semi-finished products</b>	31,487	7,487	95	43	32	26	31,614	<b>7,557</b>	
<b>Timber (log)</b>	46,579	6,753	2,359	208	-	-	48,938	<b>6,962</b>	
<b>Wood Furniture</b>	Unknown no. sets	2,966	Unknow n no. sets	2,506	-	-	Unknown no. sets	<b>5,473</b>	
<b>Total</b>	<b>268,086</b>	<b>52,552</b>	<b>13,294</b>	<b>6,180</b>	<b>78</b>	<b>599</b>	<b>281,458</b>	<b>59,422</b>	
<b>Export value of whole country</b>								<b>1,307,459</b>	
<b>Import value of whole country (including equipment for investment, aid)</b>								<b>1,364,824</b>	
<b>Balance</b>								<b>- 57,365</b>	
<b>Share of wood export with export value of whole country</b>								<b>4.5 %</b>	

**Table 1. Lao PDR wood product exports in 2007/2008**

Demand for wood products remains high in the Mekong region and in the Asia-Pacific region more broadly, and the main destinations for Lao timber and wood products (apart from the domestic market) are Thailand, Vietnam and China, with a small amount going to European countries. Exports to China from Lao PDR have increased substantially, with the total jumping from 14 to 45 million cubic meters of wood and wood products in just 10 years<sup>16</sup>. Production of eucalyptus and acacia for pulp and paper processing in the region (and eventually within Lao PDR) is another growth area.

The Lao forest sector is also an important generator of employment. Although exact estimates are not provided, FS2020 claims that the sector provides several thousand jobs in log extraction, transportation and processing. Rural people benefit most from this employment. Employment in the wood processing industry is estimated at about 22,000 jobs (one quarter of the national total of 93,400 jobs in the manufacturing sector)<sup>17</sup>.

Forests act as a safety net for rural people by providing timber and non-timber forest products both for home consumption and sale. Approximately 80% of the Lao population is reliant on natural resources, including forests, for timber, food, fuel, fibre, medicines and spiritual observances<sup>18</sup>. In rural areas, forests continue to provide a source of additional food and income when other activities fail.

On average, a rural family consumes the equivalent of US\$280 per year in non-timber forest products (NTFPs), which is significant given that the per capita GDP of Lao PDR was about US\$880 in 2009<sup>19</sup> (and average income may be lower in rural and remote areas). Charcoal and fuelwood remain the dominant source of energy in Lao PDR, even in the cities.

Forests support development of other areas such as hydropower generation, navigation, irrigation, agriculture and fishing through soil protection and water regulation and protect communities from natural disasters. Put in monetary terms, the worldwide value of ecosystem services that could be preserved via an effective network of protected areas has been estimated at USD 38 trillion per year<sup>20</sup>. For example, the watershed provided by the Nakai Nam Theun National Protected Area helps to maintain the water source of the Nam Theun 2 hydropower project.

Further, forests contain and protect biodiversity of national, regional and international significance. For example, the Nakai Namtheun NPA mentioned above also contains some of the richest human, animal and plant biodiversity in the country - according to studies in the 1990's, the NPA contains at least 430 bird species, which is 1/25 of all bird species worldwide.

<sup>16</sup> White et al, 2006, cited in Tong 2009.

<sup>17</sup> FS2020

<sup>18</sup> FS2020.

<sup>19</sup> IUCN Lao PDR. 2010. "Biodiversity and Livelihoods: Background issues paper for CoP 10" [Draft]. Figure for current Gross national Income (GNI) per capita is from the World Bank, <http://data.worldbank.org/indicator/NY.GNP.PCAP.CD>.

<sup>20</sup> Quintela, et al, 2004, cited in Latsamay Sylavong, IUCN Lao PDR. 2009. "Public Investment in the Environment". Presentation to PEI National Workshop, Vientiane, 5-6 March 2009.

Groups living in the NPA also speak 28 languages, which is 12% of all Lao PDR's language groups<sup>21</sup>.

Lao PDR's forests can also be valued for their contribution to other important sectors of the economy, such as tourism. In 2006, for example, the tourism industry earned more than US\$170 million for Lao PDR, of which eco-tourism forms a growing component. According to the Lao National Tourism Administration (LNTA), around half of all arrivals are interested in the natural environment and, by 2013, Lao PDR hopes to

**Box 2. Sustainable forest management for profit – making Malva nuts bear fruit**

In the villages of southern Lao PDR, non-timber forest products (NTFPs) are essential to survival. In some villages in Pathoumphone District of Champassak Province, NTFPs account for up to 89% of cash income. One of the most important products in the flooded forests of Pathoumphone is malva nut, a medicinal forest nut. But the popularity of the nuts in Pathoumphone was leading to their destruction: demand is so strong that whole trees were being cut down, often by outsiders, with no thought for future sustainability. Product quality was low, the malva nut stands were disappearing, conflicts were increasing, and local communities were getting a poor price for one of their greatest resources. Working with villagers and the local authorities, IUCN organized and trained malva nut village groups, who are now responsible for managing the malva nut stands, harvesting and selling, resolving conflicts and making sure the benefits are evenly shared. The success of the project is clear: only 2 malva nut trees were cut down in 2009, compared to 2000 in 2008; villagers are making more money and now have control over their most important source of income; and the model is expanding to other villages.

(For more information, visit the IUCN Lao PDR website at: [www.iucn.org/lao](http://www.iucn.org/lao))



Collecting malva nuts  
(Photo: IUCN Lao PDR)

attract 3 million visitors with expected revenues of US\$500 million each year<sup>22</sup>.

### 3. Investments in the forest sector

Foreign direct investment (FDI) flowing into Lao PDR is predominantly in the natural resource sector, which accounted for about 80% of all FDI in 2008<sup>23</sup>. In the agriculture and forestry sector, tree planting and wood processing are the largest areas for foreign investment<sup>24</sup>.

The GoL has promoted investment in the plantation sector in particular, as a way to reduce pressure on natural forests, replace shifting cultivation and offer new income streams for rural farmers. Accumulated FDI in the Lao plantation sector has increased substantially in recent years, from \$18.6 million in 2001 to almost \$665 million in 2007, representing 11% of total foreign investment in the period<sup>25</sup>. Increased investment in the wood and wood products industries and better integration into regional and global markets have also been seen as a way to increase technical and managerial capacity in Lao PDR through technology and knowledge transfer.

Investments in sustainable forest products may also constitute more important areas in future, such as sustainable certified timber, agroforestry products and NTFPs. Current examples include the promotion of sustainable forest management and forest certification in Production Forest Areas (PFAs) through the Sustainable Forestry for Rural Development (SUFORD) project and the cultivation and sale of certified rattan through the WWF Sustainable Rattan Project<sup>26</sup>. NTFPs with strong local and regional demand, such as cardamom and malva nut, have also proven interesting schemes to increase local incomes and improve sustainability of NTFP management (see Box 2 for more information).

### 4. Challenges for the Lao forest sector

Despite recognition of the value of forests for the country's economic, environmental and social well-

<sup>22</sup> LNTA 2004, 2006, cited in Tong 2009.

<sup>23</sup> The World Bank. 2008. *Lao PDR Economic Monitor 2008*.

<sup>24</sup> Tong 2009.

<sup>25</sup> Voladet, Saykham. 2009. *The Plantation Industry in Laos: An Examination of the Role of the Ministry of Planning and Investment*. National Economic Research Institute (NERI), International Institute for Sustainable Development (IISD), and International Union for Conservation of Nature (IUCN).

<sup>26</sup> See

[http://www.panda.org/what\\_we\\_do/where\\_we\\_work/greatermeko/our\\_solutions/sustainable\\_rattan/](http://www.panda.org/what_we_do/where_we_work/greatermeko/our_solutions/sustainable_rattan/) for more information.

<sup>21</sup> Sylavong, 2009.

being, as well as expanded efforts to increase the sector's profitability and sustainability, the Lao forest sector faces a number of serious challenges:

**Illegal and unsustainable logging.** The Lao forest sector faces an ongoing challenge from both illegal and unsustainable logging practices, despite growing recognition of the problem and increasing efforts to tackle it (such as the recent creation of the Department of Forest Inspection, tasked with controlling and investigating timber, forest products and wildlife utilisation and trade). Based on Lao laws and regulations, the country's logging regime has been summarized as: logging is only allowed in Production Forest Areas (PFAs) that have an approved management plan; forest management must involve local communities in planning and operations and must give them 25% of the so-called additional timber revenue (i.e. difference between actual sales price and the minimum sales price set by the government); and export of unprocessed roundwood and sawnwood is illegal, as is the harvesting of a select list of valuable tree species. Based on this, a significant portion of the timber removed and exported from Lao forests is technically illegal<sup>27</sup> (e.g. it was harvested from a PFA with no management plan, it is unprocessed, or the community did not receive its mandated share of additional revenue).

However, progress is being made on addressing these issues. Of the 51 PFAs in the country, as of 2010 eight had approved management plans; in these areas half of the villages received a share of income from logging



<sup>27</sup> Environmental Investigation Agency (EIA) and Telepak. 2008. *Borderlines: Vietnam's Booming Furniture Industry and Timber Smuggling in the Mekong Region*; and FAO/TNC 2008, cited in Forest Trends and DFID. 2010. *Timber Markets and Trade between Laos and Vietnam: A Commodity Chain Analysis of Vietnamese-Driven Timber Flows*.

(on average US\$261 per village per year)<sup>28</sup>. Management plans are in preparation in another eight PFAs and the government has committed funds to prepare them for 16 more PFAs. The GoL has also improved coordination among the various departments and agencies involved in the sector, such as holding Annual Inter-Agency Meetings on forestry.

Reports differ as to the extent and cost of illegal logging and timber smuggling in Lao PDR and the region, thus making it difficult to form an accurate picture. In the late 1990s, log royalty collection rates were estimated to be as low as 50% and they remain relatively low today<sup>29</sup>. The Asian Development Bank (ADB) estimated in 2000 that illegal and/or poorly regulated logging caused annual losses of US\$20 million for the GoL<sup>30</sup>. A more recent report claims that in 2006 an estimated 600,000 m<sup>3</sup> of timber was cut illegally, with a market value of US\$250 million<sup>31</sup>. A 2010 study on timber flows between Lao PDR and Vietnam found that, on average, extra payments made at various levels are worth an estimated US\$13/m<sup>3</sup> of timber exported to Vietnam. If the estimate of 600,000m<sup>3</sup> of timber exported to Vietnam is used as a base, this would amount to approximately US\$7.8 million per year<sup>32</sup>. Although the exact figures remain in doubt, it is apparent that, in addition to causing financial losses for the GoL, communities and legally operating enterprises, illegal logging and timber smuggling contribute to the potentially greater loss of the environmental services of forests and all of the negative impacts that this implies.

**Constraints for the promotion of sustainable forest management.** There are a number of conditions in the forest sector and associated industries that add to the difficulty of promoting sustainable forest management, particularly verifiable or certifiable legality and sustainability. Implementation of sustainable forestry schemes requires a significant upfront investment, which can be daunting for many forest enterprises. A certain level of managerial, technical and enforcement capacity is also required which must be built up in Lao PDR. Moreover, an uneven playing field in the Lao forest sector is a disincentive to invest in sustainable forest management and logging: why should a company invest

<sup>28</sup> SUFORD. 2010. *Annual Report 2009-10 [Draft]*.

<sup>29</sup> FS2020.

<sup>30</sup> Cited in Tong, 2009.

<sup>31</sup> EIA and Telepak, 2008.

<sup>32</sup> Forest Trends and DFID, 2010.

### **Box 3. Recommendations for reforming the wood industry**

According to a joint study by SUFORD and the Ministry of Agriculture and Forestry (MAF), the Lao wood industry is in a difficult situation - it is barely profitable and is therefore not viewed as creditworthy. There are a large number of small to medium sized companies competing for a limited supply of raw material, which is being inefficiently utilized, and some companies that have been closed continue to operate illegally. Major changes are needed, but how can change and modernization be brought about without too much hardship and conflict? The study includes the following recommendations:

1. As a first step, the GoL needs to open a consultation process with all stakeholders in the industry to debate the options and develop a consensus on a “vision” for the future. This should not only focus on production, but should also establish goals for factors that contribute to a modern and efficient industry such as Chain of Custody, quality standards, health and safety, efficiency and business management. “Business-as-usual” is not an attractive option; changes must be implemented quickly to avert the slow collapse of the industry due to lack of capital and materials. A clear vision will also help the GoL to seek funding for a substantial programme of investment in re-designing factories and training managers and workers.
2. It is already difficult to enforce existing closures, which has a detrimental effect on the companies that operate legally. A less disruptive approach is to provide incentives for mergers and acquisitions among the companies. Placing conditions on the allocation of logs, such as having sufficient capacity to process a minimum volume, and requiring that a proportion of the sawnwood produced should be available for small and medium enterprises (SMEs) should also encourage medium-sized firms to merge.
3. It is urgent that the GoL carry out an assessment of the area, age class, yields and forecasted production of all plantation crops by species, including rubber, and publish the information by district. This will help the industry to decide on appropriate locations for future production facilities. Natural forest production forecasts under sustainable management conditions by species classes should also be prepared and published.
4. The GoL should begin discussions with the major international companies engaged in establishing plantations to review future production plans, in the light of recent changes in the global economic climate. It is important to assess the possibility of using part of the output as raw material for saw-milling as well as for supplying a fibreboard plant. The implications of processing the wood within Lao PDR as compared to exporting pulpwod or chips should be analyzed and discussed.

*(Source: Ministry of Agriculture and Forestry (MAF and Sustainable Forestry for Rural Development (SUFORD) Project. 2009. “Opportunities to Restructure Wood Industries in Lao PDR”.)*

resources in legal and/or sustainable wood when its competitors may not even be following the law? Loopholes and clauses allowing special permits for log exports, such as those from land clearance for plantations and infrastructure projects, can make legality and/or sustainability unclear in numerous cases.

In addition, the destination markets for Lao timber and timber products generally lack consumer or mandated requirements for legality or sustainability. These include the large domestic market and regional markets like China and Vietnam. However, on a positive note, as both China and Vietnam are major re-exporters of finished wood products, new regulatory regimes in the USA and EU are putting more pressure on companies to pay attention to the legality and sustainability of their timber supplies. Eventually, this effect is expected to reach suppliers in Lao PDR. Forest Trends and the UK Department for International Development (DFID) already note that

“Vietnamese companies that want to continue to export to EU and North American markets report that they no longer acquire wood from Laos due to reputational risks”<sup>33</sup>.

**Lack of community/village level participation and incentives.** Although participatory forest management is a goal of Lao PDR policy in the forest sector, progress has been slow in establishing a truly participatory and equitable forest management approach. Forest resources are essential to the livelihoods of a large proportion of the Lao population, in terms of food, energy, shelter and cash income. Village authorities have also been increasingly tasked with obligations for the management of production and protection forests. However, not all villages receive a share of logging income (mainly because not all villages in PFAs have harvestable timber at the moment).

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<sup>33</sup> Forest Trends and DFID, 2010.

Combined with the ability of the authorities at higher levels to allocate village forest and farming land to companies for plantations or other projects, this constitutes a disincentive for villagers to engage in sustainable forest management or protection. In addition, the potential of forest enterprises to provide local employment is not always fully realised. For example, Forest Trends and DFID note that Vietnamese firms and labour play an important role in the Lao timber industry, particularly in southern Lao PDR. These firms hire few local staff; for example, in Attapeu Province, it was found that all of the companies interviewed were run by Vietnamese managers and using Vietnamese labor (sometimes without a contract)<sup>34</sup>.

**Unsustainable plantation development.** Industrial tree plantations form a key element of the GoL's plans for the forest sector and efforts to attract investment. Agriculture and agroforestry form one of the GoL's four priority sectors for investment and industrialization<sup>35</sup> and the Lao National Forestry Strategy envisages 500,000 hectares of tree plantations by 2020<sup>36</sup>. However, the benefits of plantations, such as increased investment flows, contribution to rural development and potential to replace shifting cultivation, are increasingly being weighed against negative environmental and social impacts. The large amount of land required for industrial plantations may pose a threat to forests, and plantations can replace fields used by local people for food production, raising concerns about food security. Large-scale plantations may also result in the importation of labour, increased child labour and a significant change to traditional livelihoods. Plantation development in Lao PDR to date has also raised concerns about poorly identified and managed environmental, social and economic impacts. Despite the legal requirements, few plantation projects so far have carried out Environmental and Social Impact Assessments (ESIAs) or put in place Environmental and Social Management plans (ESMPs)<sup>37</sup>.

**Continued inefficiencies in the wood processing industry.** Despite efforts to streamline and modernise the Lao wood processing industry, it still suffers from relative inefficiency, low recovery rates and low profitability. A transition to high value wood processing is hampered by limited and uncertain supplies of raw material, low efficiency in using supplies, little access to finance, few skilled workers and low levels of technology. Thus the export of high value wood



products such as furniture remains low, at between 1.7-3.2% of the total value<sup>38</sup>. On the issue of supply, the current capacity of the industry still exceeds supply, although the GoL has attempted to close down more inefficient and illegal businesses.

## 5. How to make the most of investments in Lao forests?

The vision for Lao PDR's forests set out in FS2020 is of a "sizeable, vigorous and robust forestry sector continuing in its role as one of the leading sectors advancing national socio-economic development, led by scientific management, sustainably developed, helping to reduce poverty and benefiting the whole society". In order to contribute to this vision, investments in the forest sector must be carefully governed and managed to maximise positive impacts and minimise the negative. The following policy options should be considered by decision-makers:

- **Promote different investment models and approaches for strength in diversity.** In addition to state-operated PFAs or concessions awarded to foreign-invested operators, there are a large range of forestry models and approaches that can help the GoL to achieve the far-reaching development objectives laid out for the Lao forest sector. Community and participatory forest management and forest enterprises can help ensure local commitment to forest management and better local benefit-sharing. The approach to Participatory Sustainable Forest Management developed by SUFORD is considered sustainable, particularly given the production rather than conservation purpose of PFAs, according to a recent preliminary assessment of biodiversity in PFAs<sup>39</sup>. SUFORD studies also show that inside the SUFORD PFAs, the rate of deforestation has either stabilized or is in

<sup>34</sup> Forest Trends and DFID, 2010.

<sup>35</sup> Voladet, 2009.

<sup>36</sup> FS2020.

<sup>37</sup> For example, see Hicks, et al, 2009.

<sup>38</sup> CPI, NSC and UNDP, 2006, cited in Tong, 2009.

<sup>39</sup> MAF & SUFORD (Additional Financing). 2010. *Preliminary Biodiversity Assessment and Management Recommendations of SUFORD-AF Production Forest Areas.*

decline whereas it continues to accelerate outside of PFAs<sup>40</sup>. Well-designed and managed smallholder plantations can help diversify rural income. New initiatives for trading the carbon stored in trees or other environmental services could also potentially provide additional money for leaving trees standing.

- **Reform the domestic wood processing industry.** As noted by SUFORD and MAF (2009) and in other studies of the Lao forest sector, urgent reform is required to prevent the potential slow collapse of the wood processing industry and reduce its contribution to the further degradation of Lao forests. As outlined in Box 3, the GoL may consider a consultative process with all actors in the sector to develop a vision and action plan for the industry, as well as develop incentives to streamline the industry and make it more efficient.
- **Promote schemes that provide incentives to protect standing forest.** It is clear that Lao PDR's forests contribute not only in terms of revenue from forest products but also the protection of biodiversity, the provision of ecosystem services and the support of livelihoods. The value of trees left standing can be high and there are emerging incentives to promote investment in protecting forests that can complement efforts to promote sustainable forestry. These include trading the carbon stored in forests through schemes such as REDD (Reduced Emissions from Deforestation and Forest Degradation) and receiving payments from developers or other resource users who benefit from the maintenance of the ecosystem services provided by forests, such as clean water and erosion control (Payment for Ecosystem Services or PES). Although such schemes are still in their infancy in Lao PDR, models such as the compensation arrangements made for the Nam Theun 2 hydropower project do exist.

- **Enforcement of forest-related laws and regulations is vital to the sustainability of the industry.** The establishment of the Department of Forest Inspection (DOFI), as well as the GoL's increased attention to enforcement capacity building and participation in regional initiatives like the ASEAN Wildlife Enforcement Network, are important positive steps. Further efforts to apply the rule of law evenly across the sector will help to improve its long-term prospects. There are also a range of approaches that decision-makers can consider to enhance enforcement efforts. These improve its long-term prospects. There are also a range of approaches that decision-makers can include utilizing local-level and communities more through peer monitoring, based on a better split of income from forests as an incentive. Third party monitoring of forest enterprises is another option, as has been trialed in countries such as Cambodia. Addressing corruption at all levels is also essential.



Photo: Charlotte Hicks

<sup>40</sup> Information provided by SUFORD, 2010.

### **What is PEI?**

The United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP) support the Poverty-Environment Initiative (PEI), a program that aims to mainstream poverty and environmental issues into national level planning and development processes. The objective of PEI in Lao PDR is to ensure that the country's rapid economic growth generates inclusive and sustainable development. PEI supports the strengthening of institutional capacity in national development planning and private investment management, the development of guidelines for social and environmental impact assessments and the generation of evidence-based research on the social and environmental costs of land use decisions. The project is coordinated by the Ministry of Planning and Investment with project components managed by the Department of Planning, Investment Promotion Department, National Economic Research Institute and the Department of Environmental and Social Impact Assessment of the Water Resources and Environment Administration.

[www.unpei.org/programmes/country\\_profiles/lao-pdr.asp](http://www.unpei.org/programmes/country_profiles/lao-pdr.asp)

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