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2 Executive summary

The 2011 Australia–Laos Timber Chain of Custody Capacity Building Project was designed to promote development and improvement of sustainable forestry systems in the Lao People’s Democratic Republic, and focused on

1. Improving approaches to sustainable forest management practices
2. Strengthening compliance and governance approaches and processes
3. Improving supply chain efficiencies for both state and private forest resources
4. Improving engagement with private industrial and smaller plantation manager
5. Improving market access and address issues of legality for small forest managers
6. Strengthening professional links between Australian and Lao PDR foresters.

The project was delivered in two parts: a study tour for three senior officials from the Departments of Forestry (DOF), and Forest Inspection (DOFI) in Tasmania and Queensland from 31 October to 18 November 2011, and a follow-up meeting in Laos 1–9 December 2011 to finalise outcomes, recommendations, and further outreach to provincial and district offices.

The project participants achieved a broad appreciation of the importance of a strong governance and compliance system that demonstrates legality and improves market access. The participants summarised their experience into key lessons and recommendations for immediate and future funding, and have developed presentations for knowledge transfer within their respective agencies.

Key Lessons

1. Benefits arise in establishing standard approaches to compliance by having clearly defined investigation and enforcement, and monitoring and assessment protocols which are applied consistently, transparently and efficiently.
2. The importance of having clearly defined roles and responsibilities across supply chains defined under legislation, and a Code of Forest Practices which is enforced through an independent (from the forest manager) regulator that undertakes monitoring and assessments, as well as compliance activities against which planning objectives, operational outcomes and compliance are assessed.
3. Codes of Forest Practices are important for forest management in that they provide a minimum and consistent standard against which planning objectives, operational outcomes, and compliance and monitoring are assessed.
4. Certification and Chain of Custody systems are valuable across supply and value chains and can improve forest management systems where Codes of Forest Practices do not exist. These systems are also effective within markets as a mechanism which demonstrated a commitment to sustainability. Chain of Custody systems from forest to end-consumer can provide financial returns across supply chains. Importantly, such systems do not necessarily have to be complex but they do require consistency, transparency and accountability.
5. While FSC is currently the only certification system in Lao, there are credible and simpler alternative certification systems which are comparable to FSC.
6. Recognition of the importance of small integrated and high value-focused forest owners as contributors to the supply chain and providers of economic benefits to individuals. However, issues such as group certification, coordinated marketing, resource quality and compliance costs must be addressed to remove unfair or disproportionate cost burdens.

7. The benefit of consistent and comprehensive operational and management data files for individual forest management agreements that provide ready access to information that would provide efficiencies within DOF and for compliance by DOFI
8. Detailed, consistent and easily understood mapping systems can support decision making for planning, assessment and operations.
9. Private wildlife protection and conservation parks and organisations can support government efforts when undertaken in a cooperative manner that avoids duplication and incorporates agreed priorities.

Recommendations

Participants identified 12 actions to be progressed within the GoL: Nine of these recommendations can be actioned by DOF and DOFI within existing funding, while three require further external funding. Recommended actions for DOFI include scoping the development of a Code of Forest Practices, establishing protocols for assessment of forest resource use against forest management plans and establishing closer relationships with private plantation developers and conservation agencies. Actions for immediate implementation by DOF include investigating alternative FSC audit organisations, trialling more efficient data management, investigating coordinated mapping capability across GoL agencies and engaging more closely with private forest owners. Actions that require further funding include developing and implementing a Code of Forest Practice, establishing an independent forest regulator and/or expanding DOFI's role as an independent monitoring and assessment organisation, developing Chain of Custody arrangements with retail and tourist outlets, and further development of monitoring, assessment, compliance and enforcement protocols.

The project was successful in strengthening professional links between Australian and Lao foresters. In addition to the relationship established between the Institute of Foresters of Australia, DOFI and DOF, over 30 individual forest managers and practitioners provided contact details and extended offers for ongoing assistance to participants of the project.

3 Introduction

In January 2011, in country discussions with the Government of Lao (GoL) Department of Forest Inspection (DOFI), Sustainable Forestry and Rural Development Project and other organisations indicated that examination of forest management and certification expertise and approaches outside Lao would assist DOFI, the GoL Department of Forestry (DOF) and Ministry of Agriculture and Forestry (MAF) to build capacity to address deficiencies in forest law enforcement capacity, to review existing approaches to certification and Chain of Custody, industrial and small scale plantation development, and in doing so develop and deliver improved approaches to current forest resource management and development.

This project was developed to

- establish closer professional relationships between Lao PDR and Australian forestry officials
- support Lao PDR officials to visit Australia as a capacity building opportunity
- promote improvements to sustainable forest management
- improve supply chain efficiencies and governance arrangements.

The funding was provided to the Institute of Foresters of Australia (IFA) and used to support the costs of Lao officers coming to Australia for the study tour and an Australian officer spending some time in Laos after the study tour to work with the Lao officers to prepare a report on possible improvements to their current system. This two-way support was an important part of the overall capacity building assistance provided to the Lao officers.

3.1 Lao PDR

The Lao People's Democratic Republic (Lao PDR, Laos or Lao) was declared in December 1975 with the establishment of a communist government under the control of the Lao People's Revolutionary Party. Like Australia, the Lao PDR is essentially a federation which, under Article 75 of the *Constitution of the Lao PDR (amended) 2003* provides authority divided into three levels of local administration: provinces, districts and villages (Siphandone 2003). The Constitution defines national government rights and provides districts (states in Australia) with strong and independent authority for land management. Unlike Australia, a village (local government) is also a recognised authority vested in locally elected representatives. There are 16 provinces (*khoueng*), one prefecture (*kampheng nakhon*) and the capital city municipality (*nakhon luang*), 142 districts (*muang*), and over 11,500 villages (*baan*) (UNESCO 2000).

Lao's population is 6.2 million, of which 63% live outside urban centres and 33% live in poverty (World Bank 2010). It has a growing population with ongoing migration from rural to urban centres estimated to be 5.6% annually (CIA 2010). Encouragingly, its population is also increasingly literate, with adult literacy rates increasing from around 5% in 1977 to 69% in 2004 (ILO 2007). However, a United Nations Development Group (Confidential 2011) report identified many areas where 80% of the population of education age was reported as having no educational qualifications, and correspondingly literacy rates were less than 20%. In these areas, annual incomes were usually below US\$50, or 6% of the national average income.

Lao is ethnically and linguistically diverse. Lowland Lao (*Lao Loum*) constitute the majority ethnic group (estimated at 55–68% of the total population) and dominate political and economic structures (LaoPDR 2006). Ethnic minority and/or language groups are estimated at between 100 (CIA 2010) and 236 groups (Hodgdon 2009) depending on distinctions made by researchers. Many of these groups are tribal and have strong regional kinship links. For example, along Lao's eastern border there are many Lao with Vietnamese background (*sao viet*), while Thailand's northern region has a strong Isan population whose language is a dialect of Lao, but written in the Thai alphabet. These links often promote cross border trade/exchange, including agricultural and forest goods (LoC 2009).

As elsewhere in the Asia region, the rise of an educated middle class and associated increase in disposable or discretionary income is also leading to an increase in the consumption of, and demand for, manufactured products such as motor vehicles, mobile phones, fridges and televisions (Morton and Applegate 2007). The majority of these goods are imported, placing further financial pressure on the Lao budget as Lao is now a net importer of goods.

Since 1986, the Government of Lao (GoL) has initiated a series of reform agendas designed to stimulate development while managing impacts on traditional cultural and economic systems. These are referred to as the *chin thanakaan mai*, or new thinking (Cleetus 2005), and *kanpatihup setthakit* (reform economy) initiatives (Blejer et al. 2001). Their overall objective is to alleviate poverty and they focus on changing the position of Lao as a Least Developed Country to one more akin with regional economies by 2020 (UNDAF 2002).

These demographic and economic drivers are leading to reliance on expanding and intensifying land use activities to generate wealth to fund an increased demand for services such as health and education, stable food supplies and better infrastructure (Chatterjee 2007). Consequently, pressure is increasing to add value to forests and their associated manufacturing and processing capacity (Midgley 2009; B. Adams, pers. comm.).

These changes are also impacting on the forest estate, with areas being cleared to support the development of infrastructure (such as hydro-electricity dams, roads, and urban and industrial development), expansion of agriculture land and increased food production, or diversification into cash crops such as plantations for wood, oil or rubber. The extent of impacts associated with such clearing or conversion is not fully understood, and remains a challenge for the GoL, and one it is addressing through agencies such as DOFI and supported by legislation (Section 7.3).

3.2 The forest sector in Lao PDR

Forests and forest products are an integral part of Lao society and economy. Fifty per cent of GDP is derived from agriculture, forestry, livestock and fisheries. In 2006, around 12% of total government revenue (US\$60 million) was derived from the sale of timber (Barney et al. 2010). Up to 80% of the Lao population is dependent on forests and forest products, and 73% of the rural population is reliant on agriculture and forests for its livelihood. In some rural communities more than 50% of family income is derived from non-timber forest products. Wood accounts for 80% of the country's energy consumption, and 99% of households use wood for cooking and heating, consuming about 3.9 million cubic metres annually.

Sixty-eight per cent of the country's 26.68 million ha is classified as potential forest. The majority of this forest is classified as 'natural, modified' (89%), with only 9% classified as 'natural, primary'. Of these forests, 41.5% are closed (defined as having a minimum 20% canopy density). Lao's 18.14 million ha of potential forest is composed of mixed deciduous forest (over 35%), dipterocarp forests (5%), dry evergreen forests (5%),

coniferous or mixed coniferous forests (23%), un- or under-stocked forests (25.6%), bamboo forest (2.3%), and fallow land (2.2%).

Under the *Land Law* 1997 land is classified into eight categories according to use: agricultural land, forest land, water-area land, industrial land, communication land, cultural land, land for national and security defence, and construction land. The *Land Law* vests responsibility for zoning and demarcation of boundaries for each land category with the GoL. However, owing to the lack of a coordinated system, both macro- and micro-scale land-use plans have yet to be developed. The Ministry for Agriculture and Forestry (MAF) is responsible for further classification, management and development of agricultural land, forest land and water bodies.

Forests in the Lao PDR are classified into five categories, the first three relating to function and the last two to the current situation (Forestry Law, Articles 16 to 21; Table 1).

Production Forests are forests and forest lands used in regularly providing timber and other forest products on a sustainable basis for national economic and social development requirements and for people's livelihoods without significant negative environmental impacts.

Conservation Forests are forests and forest lands classified for the purpose of protecting and conserving animal and plant species, natural habitats and various other entities of historical, cultural, touristic, environmental, educational or scientific value.

Protection Forests are forests and forest land classified for the protection of watershed areas and prevention of soil erosion. They also include areas of forest land with national security significance, areas for protecting against natural disaster and areas for protection of the environment.

Regeneration Forests are young or fallow areas of forest classified for regeneration and maintenance of forest cover with a view to reaching a natural equilibrium as trees increase in maturity.

Degraded Forests are forests that have been heavily damaged, to the extent that they are without forest or barren, that are classified for tree planting and/or allocation to individuals or organizations for tree planting, permanent agriculture and livestock production or other purposes in accordance with national economic development plans.

Table 1 Area of Production, Protection and Conservation forest in Lao PDR

Forest Category	Administrative Level*	Number	Area (1,000 ha)
Production	National	106	3,207
Protection	Province	23	461
	District	52	56
Sub-total		75	517
Conservation	National	22 [§]	3,391
	Province	57	932
	District	144	504
Sub-total		223	4,827
Total			8,551

* Regeneration and Degraded Forests have also been identified through the village land and forest allocation process but no data are available.

§ Two national conservation forests are corridors.

Large areas of Lao's forests have become fragmented and less productive. They are often degraded and fragmented, which reduces biodiversity as reflected in reduced species composition and size structure, losses of wildlife and plant diversity, and an overall decline in wildlife and plant population.

While facing many similar pressures of a developing country with a growing population, Lao PDR is unique in that its forests have been heavily modified through conflict. Over the last 100 years, the people and forests of Lao have been subject to:

- French and British colonial occupation (1893–1954)
- a number of critical battles during World War II, including a quasi-civil war between pro-Japanese independence and pro-French forces (1939–1945)
- post war independence movements (referred to as the First Indochina War, 1946–1954)
- large scale anti-communist campaigns during the Vietnam War (the Second Indochina War, 1954–1975)
- civil war and the defeat of Royalist troops by the Pathet Lao (1974–1976)
- influx of people fleeing the genocide of Pol Pot in Cambodia (1975–1979)
- occupation by Vietnam during the Vietnam-China War (the Third Indochina War, 1979).

These conflicts have had severe effects on the commercial and environmental value of Lao's forests. During periods of conflict, forest products provide a convenient and liquid revenue resource, act as a refuge, supply food and shelter which are often heavily exploited to supplement a loss in agricultural production, and are subjected to destruction through bombing, chemical applications or intensification of fire.

The largest, most intense and longest-lasting of these impacts was from the Second Indochina War. During this conflict the United States dropped more than two million tonnes of bombs on Lao between 1964 and 1969. Today there remains an estimated three to four unexploded bombs per hectare in some areas, and around 30 people are killed, and 300 injured annually from unexploded bombs through agricultural or other activities (P. Fogde, pers. comm.).

As a consequence of historical conflicts and the current GoL capacity constraints, forest information is incomplete and inconsistent. Contributing to this situation is that the collection, reporting and archiving of data is undertaken by different organisations at national and provincial levels, often using different or contradictory methods, definitions, imageries, technologies and systems (Confidential 2011). Consequently, classification of the first three forest categories is often established at a large scale and areas may include other land use types in addition to forest. In a strict sense they are not 'forest' as defined in the *Forestry Law*, however, resource constraints within MAF means that it is not feasible to map forests in the strict sense, to fully and sustainably manage the forests, or to develop and implement deforestation and forest degradation initiatives.

3.2.1 Native production forest resources

Lao has over 3 million ha of native forests that are designated for production (Table 1), of which 1.7 million ha are considered to be potentially productive. There are 106 production forest areas with the main production provinces: Vientiane province (503,000 ha), Savannakhet (429,000 ha), Bolikhamxay (350,000 ha) and Sayaboury (350,000 ha). The remaining area is degraded but, with suitable management and investment, could become productive within 20+ years (X. Samonity, pers. comm.).

Under the *Forestry Law*, the Department of Forestry (DOF) is responsible for issuing sustainable native forest harvest quotas, which are estimated at 200,000–300,000 m³ annually. However, the quota incorporates around 50% from timbers which are not currently used by the processing sector (in particular crepe myrtle or *Lagerstroemia*) due to market preferences or a lack of appropriate skills or technology (T. Vannasouk, pers. comm.).

Between 2006 and 2009, DOF had approved collective quotas of around 300,000 m³ to Lao timber-based processing facilities, of which only 80,000 m³ was sourced from sustainable natural forest production. The remainder was from:

- hydropower electric dam projects: 200,000 m³
- plantation forests: 2,280 m³ of which the majority was teak (*Tectona grandis*) plantations in Luang Prabang (1,000 m³) and Saravane (570 m³) provinces
- clearing of land for agriculture and road construction projects: 1,200 m³.

In comparison with the sustainable yields determined by DOF, trade data reports from importing countries indicate Lao export volumes of 800,000 m³ to 1.1 million m³ per annum between 2001–2007 (Barney et al. 2010). In addition, infrastructure development associated with forest harvesting has generated unsustainable higher volumes of timber as many of these developments result in forest loss and land use changes. These high volumes of timber have supported a number of processing facilities whose capacity is greater than the capacity of the native forest resources to supply at a sustainable level (DOFI 2010).

3.2.2 Plantation resources

To provide a future forest-based industry with the resources necessary to support and attract new investments, the Lao Government has encouraged the establishment of plantation forests and associated processing capacity.

Plantation development is not a new concept in Lao. Small scale, village-focused plantation developments were encouraged under French occupation from the early 1940s, and included species such as teak, takian (*Hopea odorata*), and mahogany (*Swietenia macrophylla*). The promotion of rubber (*Hevea brasiliensis*) and *Eucalyptus* species was encouraged from the mid-1960s, with the Lao–Australian Reforestation Project (established in 1969) a catalyst for commercial development (S. Midgley pers. comm.; Samonity 2010).

While many of these early planting were unregulated, today plantation investments are regulated under the *1994 Foreign Investment Promotion Law* (updated in 2009) which details six principles under which foreign investments are approved. These principles are designed to promote domestic and international investments by creating a favourable investment environment and promote supportive policies which support investments, except those that may seriously affect the environment and jeopardize the future, affecting people's health or national culture (Chairman of the National Assembly 2004).

The value of early plantings is being realised as the estate matures. Unpublished provincial *Industry and Commerce*, and *Agriculture and Forestry* reports indicate that around 24,000 ha of teak plantations had been established by 2007 (Confidential 2011). If this estimate is accurate, this resource could provide 50–70,000 m³ annually by 2025 and support expanded investments (Midgley et al. 2007). However, progress on future investment decisions will require detailed information on quality, quantity, age and geographical location/accessibility of plantations (X. Samonity pers. comm.).

The opportunities for the development of commercial scale plantations were recognised in 1995 when Burapha Agroforestry Co. became the first commercial-scale plantation investor in Lao. Key investment drivers included:

- strategic location (close to port facilities in Vietnam and pulp mills in Thailand and China)
- access to suitable land (supported by low population density)
- low labour and taxation costs
- trade liberalisation agreements between the Greater Mekong Subregion countries and Association of South-East Asian Nations (ASEAN) partners
- maturing transportation networks, including friendship bridges linking Lao with Thailand, national highways into Vietnam, and proposals to develop a high-speed train link with China (P. Fogde, pers. comm.; X. Samonity, pers. comm.).

These benefits are actively promoted by the Lao Government and are well understood by investors. For example, Oji Paper Co Limited, indicate that:

“Laos is one of the most suitable regions for plantation businesses due to its geographical advantage as it is at a short distance from Japan, the current point of demand, and China, where the demand is expected to grow in the near future. In addition, the conditions in Laos are favourable for the growth of eucalyptus trees in terms of temperature, rainfall and soil conditions.” (Oji 2005)

There are currently 21 plantation investment companies which have collectively invested US\$973.5 million in establishing 210,366 ha of commercial tree plantations (Table 2).

Table 2 Foreign investment in plantations in Lao PDR

Company/Activity	Site	Area (ha)	Concession period (years)	Investment (US\$ mill)
Rubber plantations/ processing*				
Laklak Rubber Company.	Champasak/ Saravan/ Attapu	10,000	50	30.0
Viet- Lao Joint Stock Holding Company.	Champasak	10,000	50	22.0
Quang Minh Rubber Company.	Xekong/ Attapu	4,900	50	14.4
Bidina Rubber Company.	Xekong	9,485	30	24.1
LVF Rubber Company.	Xekong	8,000	50	10.0
Lao Quasa Geruco Joint Stock Holding Company.	Savannakhet	8,650	30	18.7
Goeco Rubber Company	Bolikhamxay	2,092	30	7.4
Hochiminh City Rubber	Champassak	2,000	30	30.5

Company.				
Huang Anh Attappu	Attapu	10,000	35	40.0
Dautieng Viet Lao Rubber Joint Stock	Champasak/ Saravan	5,419	40	35.4
Foodinco Danang Savannakhet Company.	Savannakhet	925	30	6.0
KunninGaoshen Group Company.	Bolikhamxay	500	30	4.5
Lao Rongxiang Rubber Company.	Savannakhet	2, 407	45	4.6
Ruifeng Rubber Investment Management Company.	Luang NamTha	10,000	30	50.0
Lao Thai Hua Rubber Company.	Vientiane/ Vientiane Capital/ Bolikhamxay/ Khammouane/ Savannakhet/ Saravanh	2,610	50	34.5
Wood Plantations				
Sun Paper	Savannakhet	9, 235	50	199.8
Birla Lao Pulp & Plantation Company.	Savannakhet/ Khammouane	50,000	75	350.0
Oji Lao Plantation Forest Company.	Bolikahamxay, Khammouane	50,000	50	49.0
Oji South Lao Plantation forest Company.	Savannakhet/ Champasak/ Saravanh/ Xekong/Attapu	24,974	40	40.0
Stora Enso Company.	Savannakhet/ Saravanh	811	50	3.7
<i>TOTAL</i>		<i>222,008</i>		<i>974.60</i>

* Note that rubberwood investment figures are likely to be under-reported as data on Chinese plantation investments in the northern Louang Namtha province are unreliable (Samonity 2010). For example, two Chinese companies are in the process of establishing at least 40,000 ha of rubberwood in this region (Mann 2009).

The 2020 Forestry Strategy (Lao PDR 2005) targets a forest plantation estate of 500,000 ha by 2020. Current plantings are based on both smallholder and corporate growers, of which the majority are industrial in scale and underpinned by foreign capital through direct ownership or joint venture initiatives. However, the development of the teak estate demonstrates there is a capacity for small farm- or village-based developments which could provide significant financial benefits to these growers.

A report to the Asian Development Bank estimated that larger industrial plantation growers could produce up to 500,000 m³ by 2015 and over 1 million m³ by 2025 (Fraser 2009). The ‘farm gate’ value of a mature plantation estate has been estimated at US\$200 million. Further benefits would be achieved if appropriate domestic processing capacity is developed with an emphasis on export markets (S. Midgley, pers. comm.). However, to achieve the full benefits of such investments, existing challenges, constraints and opportunities need to be addressed in order to maximise returns to investors and land managers.

While the opportunities for plantation investments are favourable, there remain challenges which may restrict further development. For example:

- **The Forestry Law.** This law bans the export of whole logs. Therefore plantation investors must integrate value-adding options into their business plans, which requires a resource that has the capacity and critical mass to support processing investments.
- **Inconsistent development requirements.** There is no national standard or code for the conversion of forest land, nor for the establishment of plantations. This provides for inconsistent approaches to the identification and protection of natural and cultural values which in turn increases sovereign risk and may disadvantage companies or organisations who seek to establish higher standards for such developments.
- **Increasing competition for land.** This is due to a number of factors, including that the ‘easier and cheaper to develop’ land is no longer available, and there is increased competition from new and expanded agricultural crop investments (such as rubber, palm oil, sugar cane or expanded irrigated land for rice cultivation). New plantation investments must now compete for land, become established in less accessible locations, or in locations which have high concentrations of unexploded ordnance from historical conflicts.
- **Engagement and approval of local communities.** The forestry and investment laws require local community approval before concessional land (which is granted by the government) can be developed. The requirement to engage, and to provide real and tangible benefits to local communities, involves a commitment by plantation companies if they are to gain approval.

3.2.3 Wood processing sector

The GoL considers that increased use of forests resources through value-adding along supply chains is essential if the sector is to sustainably contribute to generating the wealth necessary to reduce poverty and pay for increased services, including improvements in health and education.

The wood processing industry is currently structurally inefficient. The industry is characterised by poor occupational health and safety standards, limited business and accounting skills, variable product quality standards, out-dated or poorly maintained machinery, and low labour skills and productivity. These structural inefficiencies significantly undermine the profitability of the sector and its capacity to market value-added products on international markets, and limit its ability to attract investment capital necessary for expansion and modernisation.

Wood processors and manufacturers are required to operate under a licence issued by the Ministry of Industry and Commerce. These licences are issued independently of sustainability quotas established by DOF and therefore can contribute to unsustainable forestry practices (Samonity 2010).

There were reportedly 2,096 licensed wood processing and manufacturing businesses in 2009, whose products had a value of US\$143,557,072 (Confidential 2011). Only two have

Chain of Custody systems. Between 2006 and 2009, these facilities possessed approved collective quotas of around 300,000 m³—around 1,500 m³ per facility with an end value of US\$45 for each cubic metre of input. The majority of reported processed wood products were exported, with domestic consumption accounting for less than 1% by value.

This highlights that while the timber processing sector is large, the export value of processed wood products to the GoL has yet to be fully realised, and while squared logs or basic sawnwood remain dominant in the export market, the potential gains from the production of high value secondary processed products, such as furniture and flooring, has yet to be realised. ACIAR has been assisting the Lao PDR wood processing sector through its project FST/2005/100 "Value-adding to Lao PDR plantation products".

Encouragingly, the GoL has recognised that the number of existing processors must be rationalised (potentially by over 50%) to address illegal harvesting, and to achieve efficiencies of scale without major intensification of forest harvesting and utilisation (X. Samonity, pers. comm.).

3.3 Management of forestry/forest resources in Lao PDR

3.3.1 Forestry Law

The management and conservation of forest resources in the Lao PDR is complex and contested. To address concerns over illegal and unsustainable trade in forest products from native forests, including wildlife, the GoL is responding to trade and market requirements and establishing a legal framework that is designed to guarantee and promote the sustainability and legality of their forest products (Table 7.3).

The GoL has demonstrated a long term commitment to improving forest management and promoting sustainable practices across all forest types (T. Ratanalangsy, pers. comm.) and its forest policy framework is robust and evolving (B. Adams, pers. comm.). They have achieved voluntary certification under the Forest Stewardship Council (FSC) for 85,000 ha of natural forests, including village forestry organisations in Savannakhet and Khammouane Provinces, and are progressing initiatives such as Reducing Emissions from Deforestation and Forest Degradation.

In 1989, the GoL sponsored a national forestry conference which identified a need to achieve sustainable forest management outcomes based around three objectives:

1. preservation of forests and improvement of management to increase production
2. rationalisation of the use of forests to increase their economic value
3. ending shifting cultivation and establishing permanent settlement for the 1.5 million people affected (Kingsada 1998).

Action was initiated in the same year through the issuing of Council of Minister's Decree No. 117: *Management and Use of Forest and Forest Land* which defined the roles and responsibilities for forest use of the Ministry of Agriculture and Forestry, and No. 118: *Control and Management of Aquatic Animals, Wildlife, Hunting and Fishing* which placed the management and ownership of wildlife under government control (LaoPDR 2005).

Importantly, Decree 117 also incorporated community provisions which:

- allocate 2.5 ha of forest and forest land to each household adult over the age of 18 and 100–500 ha to each village for each family
- allow villagers to manage and use allocated forests sustainably
- allow villagers to inherit or transfer allocated forests to others

- recognise ownership by individuals and groups of degraded land where they must plant trees, regenerate native forests, grow crops or raise livestock (LaoPDR 2005; Manivong and Sophathilath 2007; Samonity 2010).

These initiatives have been refined through Prime Ministerial Decrees *No 164/PM – Decree on the National Forestry Reservation over the Country* (Siphandone 1993), *No. 169/PM – Decree of the Prime Minister on the Management and Use of Forests and Forest Lands* (Keobualapha 1993), and *No. 186/PM – Decree on the Allotment of Forests for Plantation and Preservation* (Siphandone 1994).

Lao has followed these decrees with action, declaring 3.31 million ha as National Biodiversity Conservation Areas. There are now 20 conservation areas, ranging in size from 20,000 ha at *Dong Ampham* to 353,200 ha at *Nakai Nam Theun* (Nature Worldwide 2010).

However, the establishment of reserves and conservation areas does not, in itself, protect forests or promote sustainable forest management. To address this issue, Decree 169 provided the framework for the development of the *1996 Forestry Law* which clarifies responsibilities for the administration, maintenance, use of forestry resources and forest lands (Inoue and Hyakumura 1999).

Under the *Forestry Law*, harvesting is only authorised in production forests with management plans approved by local communities and must meet three national criteria based around a logging quota managed by central government; infrastructure development quota; and a domestic consumption quota (Phanvilay 2008). While the export of whole log is banned under the *Forestry Law*, exemptions may be made, including significant projects which are conducted in the national interest, such as roads, transmissions and hydro electrical projects (B. Adams pers. comm.; Samonity 2010).

Under the *2007 Forestry Law* and the *Wildlife and Aquatic Law 2007* the GoL has vested specific departments with legislative responsibility for sustainable forest management, monitoring and compliance at national, provincial, district and village levels. This approach provides mechanisms that demonstrate a commitment to sustainability and legality. They also promote the value of forests in supporting conservation, social, economic and national objectives such as the United Nations Millennium Development Goals.

Table 3 Key Lao environmental laws and initiatives relating to forestry.

Adapted from Siphandone 1993; Inoue and Hyakumura 1999; Cleetus 2005; Manivong 2005; PEMSEA 2010)

<i>Laws and Regulations</i>	<i>Year</i>	<i>Key Provisions</i>
New Economic Mechanism	1986	Begins restructuring toward a more market-oriented economy
Decree No. 117: Management and Use of Forest	1989	Defined the roles and responsibilities for forest use of the Ministry of Agriculture and Forests, and provided for community and individual land use rights.
Decree N° 118: Control and Management of Aquatic Animals, Wildlife, Hunting and Fishing	1989	Placed the management and ownership of wildlife under government control.
Tropical Forest Action Plan	1991	Developed forest management plans for the country, emphasising community involvement and alternatives to traditional shifting cultivation.

Decree No 164/PM: National Forestry Reservation over the Country	1993	Established National Biodiversity Conservation Areas, with a total land area of 3 million ha.
Decree No. 169/PM: Management and Use of Forests and Forest Lands	1993	Placed all forest and forest land under the control of MAF, and excluded permanent agricultural land use activities. It also acknowledged the traditional use of the forest according to village customs.
Decree No. 186/PM: Allotment of Forests for Plantation and Preservation	1993	Formalised land and forest allocation, divided into two categories. One is the land for planting trees, the other is the land for the conservation of existing forest.
Agreement on the cooperation for the sustainable development of the Mekong River Basin	1995	An agreement between the Kingdom of Cambodia, the Lao PDR, the Kingdom of Thailand, and the Socialist Republic of Vietnam that established the Mekong River Commission. It promotes a constructive and mutually beneficial sustainable development, utilisation, conservation and management of the Mekong River Basin. It recognises the need to protect, preserve, enhance and manage the environmental and aquatic conditions and maintenance of the ecological values within the Basin.
Forestry Law	1996	Formalised the classification of land, management and planning, biodiversity conservation.
Water and Water Resource Law	1996	Established principles, rules, and measures relative to the administration, exploitation, use and development of water and water resources. To preserve sustainable water and water resources and to ensure its quantity and quality providing for peoples living requirements, promoting agriculture, forestry, and industry, developing the national socio-economy and ensuring that no damage is caused to the environment.
Land Law	1997	Provides for the classification of land, as well as mechanisms for the allocation of land to individuals and companies.
Environmental Protection Law	1999	Established a framework to advocate public participation and the use of Environmental Impact Assessments in project planning.
National Poverty Eradication and Growth Strategy	2001	Developed five-year strategic plans for poverty reduction and eradication.
NPA Regulations	2001	Clarifies the concept of National Protected Areas.
National Biodiversity Strategy and Action Plan	2004	Established a framework for the planning for biodiversity conservation.

Prime Minister’s Order No. 30	2007	Proclaimed it illegal to harvest rare species such as May Kha Nhung (<i>Dalbergia cochinchinensis</i>), May Khamphi (<i>Dalbergia cultrata</i>), May Dou Lai (<i>Pterocarpus macrocarpus</i>), May Longleng (<i>Cunninghamia spp</i>), and May Dou Leaug (<i>Pterocarpus pedatus</i>).
Review Forestry Law	2007	Establishment of the Department of Forest Inspection and clarification of roles and responsibilities between enforcement agencies.
Wildlife and Aquatic Law	2007	Established principles, regulations and measures on the protection and management of natural wildlife and aquatic life, and establishes the framework for declaring species endangered and protected.

In addition to domestic laws and policies, the GoL is an active member of the United Nations and a signatory to a number of international agreements which bind the government to principles of sustainable development. These include

- Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin
- Convention on International Trade in Endangered Species of Wild Fauna and Flora
- ASEAN Wildlife Law Enforcement Network
- Forest Law Enforcement, Governance and Trade – Asia program (FLEGT), and the associated 2001 Ministerial declaration and Memoranda of Understanding on illegal logging and associated trade
- Association of South-East Asian Nations Forest Law Enforcement and Governance (ASEAN-FLEG) initiative
- European Commission Regional Programming for Asia program (FLEGT 2001; EU_ECP 2006; Lawson and MacFaul 2010).

These structures and agreements, in combination with other domestic environmental laws and policies (such as the National Five Year Plan (2011-2015), National Biodiversity Strategy to 2020, and National Forest Strategy 2020), and international treaties provide a robust framework for managing forest wood harvesting and addressing illegal trade of these commodities within Lao and with its neighbours.

3.3.2 Department of Forestry

The Department of Forestry is an agency within the Ministry of Agriculture and Forestry. It has overall responsibility for coordinating preparation of production forest management plans in association with relevant sectors and local authorities to ensure an effective and sustainable use of native forest resources throughout the country. This includes the identification of conservation and protection forest areas.

DOF is also responsible for defining the principles, technical and legal prescriptions for logging and harvesting of forest products, criteria for log measuring and grading, sustainability yields and harvesting quotas for native trees, as well as the development of codes of harvesting which incorporate continuous improvement objectives for forest harvesting standards and practices.

DOF works with Provincial Agriculture and Forestry Offices (PAFOs) and other local authorities to undertake specific field surveys and assessments related to the development and implementation of approved forest land use development or conservation status. District Agriculture and Forestry Offices (DAFOs) are then entrusted with responsibility for ensuring compliance of implementation by the district Forest Management Units (FMU) with approved forest management plans. As yet, the responsibility for compliance is not a fully separate activity within districts, and this may create the potential for conflict until such time as a clear separation of roles and responsibilities are achieved across and within agencies.

Importantly, the role of Village Forestry Organizations (VFOs) is to organise villagers' participation in implementation of forest management activities under a Village Forest Management Agreement (VFMA) signed between the VFO and the respective FMU. The VFMA specifies the rights and responsibilities of signatories, the scope of village participation, and the revenue-sharing arrangement. The DOF publication *Village Rights and Responsibilities to Manage and Use Forest, Forestland and Aquatic-Wild Animals* (2009) is an easy-to-read guidebook that outlines (in text and illustrations) these roles and responsibilities and is used as a basis for extension activities.

3.3.3 Department of Forest Inspection

The Department of Forest Inspection (DOFI) was established in 2008 and has primary responsibility under the *Forestry Law* and the *Wildlife and Aquatic Law* for legal enforcement of forest policies, regulations and legislation, including illegal logging, smuggling of timber and wildlife, forestry related corruption, and illegal land encroachment. The department is also responsible for the development of a comprehensive compliance system to prevent, detect and prosecute forest crimes over all forest landscapes, resources and supply chains.

DOFI is a department of MAF and its Director General reports to the Minister for Agriculture and Forestry. DOFI has three divisions: Human Resources Development; Operations; and Planning and International Relations (Figure 7.1). There are 449 staff working across 17 provinces, and the department manages five international checkpoints.

DOFI's budget is currently financed through the government Forest and Forest Resource Development Fund and a Japanese Policy and Human Resource Development (PHRD) grant. Future funding will come through revenue-sharing allocations from the Nam Theun 2 Power Company and forest development initiatives.

DOFI is a unique agency as it has powers of arrest and confiscation, as well as the authority to issue fines or prepare cases for prosecution. However, it has limited resources and enforcement capacity as it has few vehicles which limits patrols and investigation capability. Consequently, most investigations are reactive, and there is no systematic system of monitoring or auditing activities.

The department is still relatively new and its roles and responsibilities are yet to be fully developed. Encouragingly, there is now clear recognition and acceptance across jurisdictions of the department's role and responsibilities under the *Forestry Law* and *Wildlife and Aquatic Law*.

The department is also encouraging staff to be proactive and introduce more regular visits to mills and forest operations to increase awareness of the department's role, and provide opportunities to establish good relationships and cultivate informants. This approach will also assist in identifying and promoting good practices by private and public firms working legally and responsibly.

Within these limitations, DOFI is strengthening its enforcement role. In January 2011 the department launched the Forest Inspection Strategy to the Year 2020 which formalises the department's structure (Figure 1) and identifies strategies for reform that are designed to provide for full departmental independence. This change is designed to demonstrate a

transparent governance process and law enforcement capability. The strategy focuses on five core capacity-building initiatives which are:

1. **Planning.** Establish international and domestic partnerships to focus on combined approaches to reduce illegal activities. This is supported through internal restructuring which will develop four divisions to focus on forests and mills, wildlife, transportation, and international borders.
2. **Operations.** An intelligence-led approach to law enforcement is being developed which incorporates education and community engagement strategies, as well as a complaints handling process, designed to foster support and compliance. A proactive and targeted communication strategy is also proposed to promote the role of DOFI. Law enforcement training will be provided to staff, and their roles and responsibilities will be clarified. The establishment of a rapid response team is also favoured where specialist skills are required.
3. **Human Resource Development.** Focusing on the need to attract and retain the right people into the right job. Consequently, a skills- and experience-based approach is being developed for current staffing and future recruitment. It will develop effective training and leadership initiatives, and performance standards and succession planning strategies, to address the short, middle and long term needs of the organisation.
4. **Administration.** The development of transparent and independent governance arrangements are proposed to promote autonomous approaches to the management of resources and enforcement of legislation.
5. **Infrastructure Development.** Improvements are focused on buildings, safety and security, transportation, communications and technology. These improvements are necessary to support staff in carrying out their responsibilities, as well as fostering a professional approach to law enforcement.

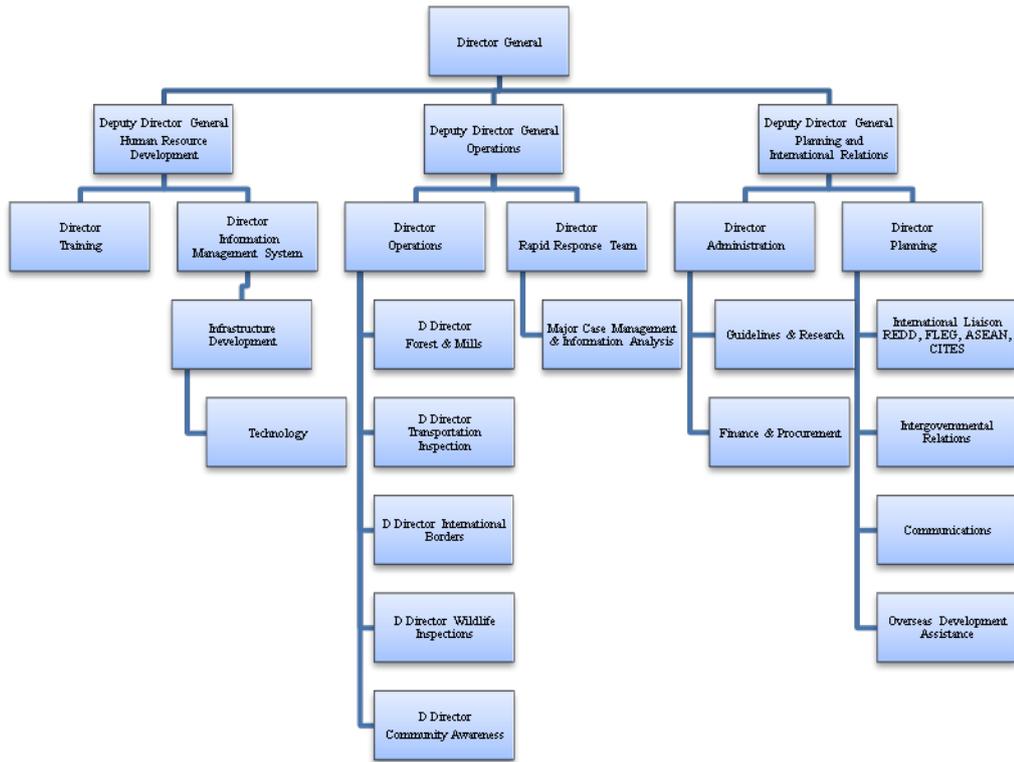


Figure 1 Structure of DOFI

4 Objectives

The 2011 Australia–Laos Timber Chain of Custody Capacity Building Project was designed to promote development and improvement of sustainable forestry systems in Lao PDR, and focused on

1. Improving approaches to sustainable forest management practices
2. Strengthening compliance and governance approaches and processes
3. Improving supply chain efficiencies for both state and private forest resources
4. Improving engagement with private industrial and smaller plantation manager
5. Improving market access and address issues of legality for small forest managers
6. Strengthening professional links between Australian and Lao PDR foresters.

5 Project delivery

The project was delivered in two parts: a study tour in Tasmania and Queensland from 31 October to 18 November 2011, and a follow-up meeting in Laos to finalise outcomes, recommendations, and further outreach to provincial and district offices. These meetings were held 1–9 December 2011.

5.1 Participants

The participants in the study tour were senior officials from the two Lao government agencies that are responsible for forest management: the Department of Forest Inspection (DOFI) and the Department of Forestry (DOF). They were

- Mr Khamphout Phandanouvong, Deputy Director General, DOFI
- Mr Phomma Pathoummavong, Coordinator of Forest Certification, Division for Forest Production, DOF
- Mr Bounthanh Philachanh, Director Investigation Division, Wildlife and Aquatic life Inspection Division, DOFI.

The Australian coordinator was Mr Aidan Flanagan, General Manager of the Forests and Forest Industry Council of Tasmania, and the Chairman of the Institute of Foresters of Australia Tasmania Division.

5.2 Study tour

This project supported representatives from GoL DOFI and DOF agencies to participate in field-based supply and value chain operations and assessments in Tasmania and Queensland. Presentations by visiting and practising experts provided strategic training in forest management and policy development. Topics included Australian forest management, certification and Chain of Custody systems, research and development, market development, regulations, law enforcement and governance.

Field inspections of Tasmanian forest practices provided participants an opportunity to examine an established Australian system whose Code of Forest Practice requirements are applied equally across all land tenures, and which is supported through an independent regulator and audit and compliance system. The Tasmanian Forest Practices Authority's (FPA) responsibilities and authority are similar to that being developed within DOFI.

The project provided Lao participants with access privately and publicly certified forests, and examined the role and benefits of Chain of Custody along the forests-to-consumers supply and value chains. Participants had opportunities to discuss private and public landowners' experiences in obtaining accreditation under both the Forest Stewardship Council (FSC) and the Australian Forestry Standard (AFS) certification systems. Participants also examined market access and development issues with a range of forest managers, processors, exporters and designers. Responsibilities across supply chains under the forest practices system, and funding mechanisms for biodiversity conservation and forest compliance were also examined.

Forest practices in Queensland provided a contrast to the Tasmanian approach. In Queensland, there is no Code of Forest Practices for private forest managers, nor an independent regulatory body akin to the FPA. In addition, the Queensland Government has a policy to phase out public native forest use by 2020 under the *South East Queensland Forests Agreement*, replacing it with plantation forestry. In Laos there is great interest in developing tropical plantations to reduce the pressure on native forests. There is currently around 135,000 ha under plantation established by private companies at a cost of around US\$750 million (see Appendix 1 for more detail).

Queensland's reliance on remote satellite land use assessments for compliance provided participants with a useful example of an alternative approach to compliance activities. However, as the GoL mapping capability is spread across a number of un-coordinated agencies, and the cost of on-ground compliance activities is currently prohibitive (see Section 7.3) this approach has, in the short term, limited application. As the GoL's capacity in this area increases, such approaches may become viable.

Overall, consideration of Queensland's approach provided benefits to the participants in that it has climatic similarities to Laos, is actively promoting an expansion to existing industrial plantation resources, and has yet to develop a Certificate of Compliance for private forestry. Queensland's approach to plantation development and processing diversity also provided a broader understanding of different approaches to the management of private and public forests which should assist the GoL to improve their plantation systems, and encourage the development of private plantation forest estate.

Table 5.1 presents an outline of the program, organisations visited, topics and issues.

5.3 Progressing discussions in Lao to build on participant's experience and transfer knowledge

The Australian counterpart travelled to Laos for in-country discussions 1–9 December 2011 to develop an agreed position on outcomes arising from the exchange, to agree on progress actions, and to develop a framework for disseminating new knowledge to provincial and district offices.

Extensive discussions were held between authors and the Directors General of DOFI and DOF to reach agreement on the key lessons arising from the exchange and to identify which elements were consistent with GoL objectives and policies. Actions were developed to improve current approaches to forest management, compliance, certification, and the engagement of private individuals and companies (see section 6.2).

Co-authors also developed a series of presentations for provincial and district officers which highlight the key messages and benefits arising from the exchange. These were presented to a meeting of 14 senior central and provincial DOFI and DOF officers in Vientiane on 8 December, 2011. Four presentations were delivered, including one from Aidan Flanagan. At the meeting's conclusion, there was strong agreement by representatives of both organisations to provide further briefing to provincial and district offices in 2012.

Table 5-1 Overview of study tour program, presenters, topics and issues

Day	Topic	Style	Presenters	Issues
TASMANIA				
31 October	Overview of Australian and Tasmanian forest management and supply chain interactions	Presentations	Prof Peter Kanowski Australian National University	Australian forestry, research and policy
			Mr Andrew Blakesley Director, Forest Policy Department of Industry and ER	Tasmania's forests and practices system
			Mr Martin Stone Senior Manager, Forest Management Forestry Tasmania	Tasmanian forests and management, Forestry Tasmania's policies, objectives and approaches to sustainable forest management.
			A Prof Gregory Nolan Centre for sustainable architecture with wood University of Tasmania	Supply chain interactions, building codes and standards, architects and specifiers' requirements
			Ms Ann LaSala Sustainability and Systems Manager, SFM Forestry Services	Certification (Australian Forestry Standard, Programme for Endorsement of Forest Certification, Forest Stewardship Council), chain of custody and group certification for smaller private forest managers
1 November	Tasmania's forest practices	Presentations	Mr Graham Wilkinson, Chief Forest Practices Officer	Tasmania's forest practices and the Forest Practices System

Day	Topic	Style	Presenters	Issues
	system		Forest Practices Authority	
			Mr Mick Scofield Manager Compliance Forest Practices Authority	Monitoring, compliance, law enforcement, and Code of Forest Practices
			Dr Peter McIntosh Specialist in soils and geology Forest Practices Authority	Approaches to monitoring and protecting natural and cultural values under the Forest Practices Code, research approaches and cooperative work with private forest owners
	Wildlife management	Field	Ms Anne Chuter, Specialist in biodiversity Forest Practices Authority	Field visit to Bonorong Wildlife Park. Discussions on endangered species protection, role of private organisations and research
2 November	Tasmania's compliance system	Field	Mr Mick Scofield Manager, Compliance Forest Practices Authority	Field investigation of reported illegal and unauthorised native forest operations using Tasmania's Investigation and Enforcement Protocols Discussions of private forests standards and obligations under the Tasmanian Code of Forest Practices
3 November	Tasmania's auditing system	Field	Mr Mick Scofield Manager Compliance Forest Practices Authority	Field investigation of reported illegal and unauthorised native forest operations using Tasmania's Investigation and Enforcement Protocols

Day	Topic	Style	Presenters	Issues
				Discussions of private forests standards and obligations under the Tasmanian Code of Forest Practices
4 November	Forestry Tasmania	Field	Mr Gary Button, Forestry Tasmania	Overview of the Huon District
	Private speciality timber craft manufacture		Mr Lindsay Wilson, Forestry Tasmania	Outline of occupational health and safety
			Mr Richard Russell, Forestry Tasmania	Outline of contractor compliance practices
			Mr Chris Emmet, Island Speciality Timber	Outline of special species timber management
			Mr P. Voss, Forest Contractor	Discussion of ground-based harvesting operation, responsibilities, compliance and chain of custody system in native forest coupe AR054H
			Mr T.P Bennett Logging, Forest Contractor	Discussion of cable harvesting operation in native forest coupe AR060D
			Mr Peter Pepper, Community Liaison Officer, Huon District	Southwood site and tour of Forestry Tasmania's merchandising yard and the Ta Ann rotary peel veneer mill

Day	Topic	Style	Presenters	Issues
			Forestry Tasmania	
7 November	Private exotic plantation and paper mill	Field	Mr Arnold Willems, Managing Director Norske Skog Australia	Overview of Norske Skog Tasmanian operations and tour of pulp and paper mill facilities
			Ms Katy Edwards and Ms Sandra Hetherington Norske Skog Australia	In field examination of certification and Chain of Custody processes, discussion of approaches adopted by AFS and FSC, and how forest practices are being adapted to reflect these systems requirements.
				In-field examination of plantation harvesting and re-establishment, development of forest practices plan, and community engagement
	National park management and tourism development		Visit to Mt Field National Park tourist centre. Discussion included the role of national parks within Tasmania’s Regional Forest Agreement, and priorities for forest conservation	
8 November	Forest conservation and protection	Presentations	Mr Shane Breen, Regional Operations Manager - South Parks and Wildlife Service	Overview of park and reserve management structure, objectives and programs
			Ms Shannon Fox, Planning Officer Parks and Wildlife Service	Overview of park and reserve planning requirements, research and programs

Day	Topic	Style	Presenters	Issues
			Mr Justin Helmich, State Coordinator Compliance Parks and Wildlife Service	Overview of compliance / technical surveillance practices, remote surveillance technologies, authority and legal processes.
			Mr James Wood, Manager, Seed Bank, Royal Tasmanian Botanical Gardens	Examination of the Royal Tasmanian Botanical Gardens seed bank facility and the development of an endangered species nursery.
	Fire management		Mr Barry Hunt and Mr Ben Merritt, Forestry Tasmania, Derwent District	Overview of fire management, and fire fighting and detection technologies.
9 November	Private mill operations	Field	Mr Robert Torrenius, Torrenius Mill	Native forest mill processing
			Mr Brett McKay, McKay Mill	Discussions on certification, chain of custody and compliance under the Forest Practices System
				Discussion on market demands for sustainability and value-adding benefits
				Discussion on the role of private forestry resources, contribution and challenges
10 November	Private forestry	Field	Mr Ian Dickenson, Private Forests Tasmania	Examination of integrated plantation, native forest and agricultural grazing and cropping farm
			Mr Arthur Lyons,	Discussion on market access, certification, financial returns and quality issues

Day	Topic	Style	Presenters	Issues
			Regional Forester, North East Private Forests Tasmania	Discussion on compliance under the Code of Forest Practices, the cost of compliance and benefits
				Discussion on the role of Private Forests Tasmania, funding and objectives
11 November	Export markets	Field	Mr Andrew Wye, Smart Fibre Tasmania's Fine Timbers Centre	Examination of export facility for woodchips
				Discussion on market demand for legality, certification (FSC and PEFC), chain of custody systems and the role of private forestry in supply chain
	Retail outlet and chain of custody			Examination of a private retail outlet whose forest products are certified under a chain of custody system, the benefits of such systems and price differentiation in the market
QUEENSLAND				
14 November	Overview of Queensland forestry system	Presentations	Mr Barry Underhill, Principal Policy Officer Department of Employment, Economic Development and Innovation	Overview of forest policy and objectives, including discussion on transition out of public native forestry by 2020
			Mr Geoffrey Kent, Director Forest Products	Native forest management, biodiversity protection, land classification and compliance system

Day	Topic	Style	Presenters	Issues
			Mr Dave Barbour Acting Manager, Sustainability & risk management, Forest Plantation Queensland	Industrial plantation management
			Mr Jim Burgess, Resource and environment manager, Timber Queensland	Private sector forestry and forest processing
			Dr Kevin Harding, Science Leader, Forestry Science Agri-science Queensland	Forest research and development initiatives, Salisbury Research Centre
15 November	Role of Local Government	Field	Cr Ron Dyne, CEO Regional Council	The support role of Local Government for private forestry, legislative authority and general benefits from mature forest growing and processing sector
	Role of private industrial plantation development		Forestry Plantations Queensland P/L	Forest certification (AFS, FSC) and chain of custody, internal standards, community engagement and access to land, fire and forest management
16 November	Forest mills	Field	Mr Greg Mawn, Resources Manager, Hyne Imbil Mill	Discussion on private native and plantation resources for mill processing, chain of custody, certification, regulations and markets

Day	Topic	Style	Presenters	Issues
			Mr Ross Lakin, Resources Manager, Parkside, Wondai	Discussion on supply variability from small private forest owners
17 November	Small private native and plantation forest management	Field	Mr Sean Ryan, Executive Officer, Private Forestry Services Queensland	Examination of small private native and plantation forest development, discussion of role of PFSQ in group certification under AFS and FSC, challenges for market access and consistency of quality
	Role of private conservation organisations	Field	Australia Zoo	Examination of the role of private companies in biodiversity conservation and breeding programs for endangered species
18 November	International demand for sustainability and legality	Meeting	Mr Tadahiro Kinoshita, General Manager, Forest Products and Plantation Department, Sojitz Australia Limited	Discussion on changing requirements for certification, sustainability and legality.
				Discussion on the role of Lao resources in meeting requirements to attract investment and supply the Japanese market

6 Project outcomes

6.1 Capacity building

The project participants achieved a broad appreciation of the importance of a strong governance and compliance system that demonstrates legality and improves market access. Such systems require clear and consistent standards across all land tenures that incorporate commitment to sustainability and continuous improvement, and that protect cultural and natural values.

The participants have summarised their experience into key lessons and have developed recommendations which have been presented to their respective agencies. The Directors General of both DOF and DOFI acknowledged the benefits of the exchange.

6.2 Key lessons

1. Benefits arise in establishing standard approaches to compliance by having clearly defined investigation and enforcement, and monitoring and assessment protocols which are applied consistently, transparently and efficiently. Such systems also detail responsibilities of individuals and corporations, and promote a culture of continuous improvement. They also provide a high level of confidence within markets that resources are sourced sustainably and legally.
2. The importance of having clearly defined roles and responsibilities across supply chains defined under legislation, and a Code of Forest Practices which is enforced through an independent (from the forest manager) regulator that undertakes monitoring and assessments, as well as compliance activities against which planning objectives, operational outcomes and compliance are assessed. The Code of Forest Practices is also important for establishing standards for the protection, conservation and enhancement of cultural and natural assets, including biodiversity, soils and water, rehabilitating riparian zones and establishing buffers to protect natural values. Such systems should also detail responsibilities of individuals and corporations, and in doing so promote a culture of continuous improvement.
3. Codes of Forest Practices are important for forest management in that they provide a minimum and consistent standard against which planning objectives, operational outcomes, and compliance and monitoring are assessed. Industrial plantation developments, and the conversion of forest land to alternative land uses, should have minimum standards applied (as defined under a Code of Forest Practices that applies equally across land tenures) to ensure the protection, conservation and enhancement of cultural and natural values. This activity is effective where pre- and post-operational assessments are undertaken.
4. The role and value of certification and Chain of Custody systems was clarified across supply and value chains and how such systems can improve forest management systems where Codes of Forest Practices do not exist. These systems were also demonstrated to be effective within markets as a mechanism which demonstrated a commitment to sustainability and that Chain of Custody systems from forest to end-consumer can provide financial returns across supply chains. Importantly, such systems do not necessarily have to be complex but they do require consistency, transparency and accountability.
5. While FSC is currently the only certification system in Lao, it was demonstrated that there are credible and simpler alternative certification systems which are comparable to FSC, and that different FSC audit firms apply different criteria.

6. Recognition of the importance of small integrated and high value-focused forest owners as contributors to the supply chain and providers of economic benefits to individuals. However, issues such as group certification, coordinated marketing, resource quality and compliance costs must be addressed to remove unfair or disproportionate cost burdens. Small holders should also be required to meet minimum management standards, which in turn adds value and credibility.
7. The benefit of consistent and comprehensive operational and management data files for individual forest management agreements that provide ready access to information that would provide efficiencies within DOF and for compliance by DOFI. They also support monitoring for certification and Chain of Custody systems.
8. Detailed, consistent and easily understood mapping systems can support decision making for planning, assessment and operations.
9. Private wildlife protection and conservation parks and organisations can support government efforts when undertaken in a cooperative manner that avoids duplication and incorporates agreed priorities.

7 Conclusions and recommendations

7.1 Conclusions

Identified strategies and actions have been refined to reflect commitments agreed to by the Directors General of DOFI and DOF, and able to be implemented within current budgetary constraints, and those requiring additional resources to achieve.

The agreed actions represent significant progress as they reflect a change in approaches within the two agencies and reflect a broadening view of their roles and responsibilities for forest management. If fully implemented, there are broad benefits that are likely to arise. For example

- Improved transparency and certainty for private and public forest managers, investors and markets through the development of clear and transparent processes, including codes and standards
- Improved environmental and social outcomes by engaging with private forest managers to ensure appropriate and consistent standards are enforced
- Greater role for private forest managers in supply chains, and transparency in price structures as certification and Chain of Custody systems are implemented
- Improved knowledge of forest resources, their management, and legality.

7.2 Recommendations

7.2.1 DOFI: Improvements to current systems (self-funded)

1. Examine the options for preparing the development and eventual implementation of a national Code of Forest Practices which applies across all land tenures.
2. Engage with DOF to establish protocols for assessment of forest management plans to ensure compliance with legislative requirements, including that suitable assessments have been undertaken to protect cultural and natural values, and as a basis for post-operational assessments.
3. Extend DOFI's role as an independent monitoring and assessment organisation in consultation with DOF and the Department of Industry and Commerce (DIC). This role should include compliance activities across all forests that cover national natural, industrial plantation, village and private forests, as well as standards for protecting natural and cultural values where conversion activities are undertaken. This approach will develop clear roles and responsibilities across supply chains and agencies. To be effective, DOFI will need clear authority and a right of access to inspect converted forest associated with private concession. Training and promotion of such a system would be required once developed.
4. Engage with private plantation development owners and those who undertake conversion activities, both small and industrial scale, to ensure the legislative requirements for the protection of cultural and natural values and rights are understood and met.
5. Establish closer partnership arrangements with private wildlife and aquatic conservation agencies and organisations (such as Save the Bear) to identify cooperative activities to address illegal trade in wildlife and aquatic species, as well as methods and approaches to enhance the conservation and protection of such assets.

7.2.2 DOF: Improvements within current systems (self-funded)

6. Examine whether auditing efficiencies and cost savings can be achieved by engaging different FSC auditing organisations.
7. Trial development of consistent and comprehensive operational and management data files for individual forest management agreements. Undertake this within certified forest areas. Develop the trial in cooperation with DOF, DOFI and DIC.
8. Review existing mapping capacity across GoL agencies with a view to identifying whether existing systems can support decision making for planning, assessment and operations. Engage with the recently established Forest Resource Information Centre within the Ministry of Planning and Investment to investigate the use of satellite imaging to develop nationwide forest management and operational maps at a scale that is useful and easily understood.
9. Engage with small integrated and high value-focused forest owners to
 - a. examine the feasibility of extending DOF group certification and Chain of Custody through the development of joint management plans
 - b. assist in identifying impediments to markets and the development of coordinated marketing opportunities
 - c. develop a standard for resource quality assessment to promote a focus on adding value, and reducing compliance costs.DOF to discuss with DOFI and DIC.

7.2.3 Future initiatives which require external funding

Proof of legality is increasingly determining market access within mature economies. Initiatives such as the United States 2008 amendments to the *Lacey Act* 1900, the European Union's Forestry Law Enforcement, Governance and Trade **Action Plan** and Australia's **illegal logging policy** are examples of such approaches. The current policies and approaches of both DOF and DOFI could be enhanced through the development and adoption of improved approaches that demonstrate legality and incorporates an independent monitoring and assessment system across production forest management areas.

The following initiatives are outside the current funding capacity within the GoL and would require additional, external funding to progress to implementation.

10. Develop systems which improve the approaches that demonstrate legality and a commitment to sustainable forest management or, where conversion occurs, a high level of protection, conservation and enhancement of cultural and natural values. Such systems should incorporate:
 - a. an independent (of the forest operational manager) regulator
 - b. monitoring and assessment protocols against which DOFI can assess the implementation and effectiveness of representative samples of forest management and operational activities
 - c. investigation and compliance protocols which detail the policy and procedures employed when conducting investigations of alleged breaches of legislative requirements and departmental/concessional approvals, responsibilities and obligations, and provide guidelines for enforcement.

Responsibility: DOFI and DOF, in consultation with relevant GoL agencies,

11. Develop a Code of Forest Practices for natural and plantation forests that covers national, industrial, village and private forests, as well as standards for protecting natural and cultural values where conversion activities are undertaken. Training and promotion of such a Code would be required once developed.

Responsibility: DOF in consultation with industrial plantation developers and other GoL agencies

12. Develop Chain of Custody/legality arrangements with retail/tourist outlets. This should initially focus in Laung Prabang and Vientiane as these are focal areas for tourism. The system should be focused on low compliance costs, and promote legality.

Responsibility: DOF, DOFI, DIC and the Lao National Tourism Administration (a Ministry which forms part of the Prime Minister's Office).

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ⁱ The Institute of Foresters of Australia was established in 1935. The IFA is a professional body with over 1200 members engaged in all branches of forest management and conservation in Australia.

The Institute is strongly committed to the principles of sustainable forest management and the processes and practices which translate these principles into outcomes.

The membership represents all segments of the forestry profession, including public and private practitioners engaged in many aspects of forestry, nature conservation, resource and land management, research, administration and education. Membership is not restricted to professional foresters and other professionals are welcome to join IFA.

ⁱⁱ Established in 1987 by The Australian Academy of Technological Sciences and Engineering, it is named in honour of the late Sir John Crawford, who played a prominent role in shaping post-war Australia and was a fervent supporter of international agricultural research. The Fund depends on grants and donations from governments, private companies, corporations, charitable trusts and individual Australians. It also welcomes partnerships with agencies and organisations in Australia and overseas.

The Crawford Fund's purpose is to encourage investment in international agricultural research by governments and the private sector, in the belief that it is an essential, high priority, international activity.

The Fund also has a training program that fills a niche by offering practical, highly focused non-degree instruction to men and women engaged in agricultural research and management in developing countries.