Current Status of Forest Concessions in Southeast Asia
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The purpose of these papers is to provide early information on ongoing activities and programmes, to facilitate dialogue and to stimulate discussion.

The Forest Economics, Policy and Products Division works in the broad areas of strengthening national institutional capacities, including research, education and extension; forest policies and governance; support to national forest programmes; forests, poverty alleviation and food security; participatory forestry and sustainable livelihoods.

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Comments and feedback are welcome.

For quotation:

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List of Acronyms

AAC Annual allowable cut
AMAN Aliansi Maeyarakat Adat Nusantara (a local social movement of indigenous peoples in Indonesia)
API Air Pollutant Index
APRODEV Association of World Council of Churches related Development Organisations
ASEAN Association of Southeast Asian Nations
BIG Geospatial Information Agency
BNPB National Agency for Disaster Management
C&I Criteria and indicators
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>CFI</td>
<td>Community Forestry Instruction</td>
</tr>
<tr>
<td>CSPO</td>
<td>Certified Sustainable Palm Oil</td>
</tr>
<tr>
<td>DoFI</td>
<td>Department of Forest Inspection</td>
</tr>
<tr>
<td>DP</td>
<td>Detailed Harvesting Plan</td>
</tr>
<tr>
<td>ELC</td>
<td>Economic Land Concessions</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>FDI</td>
<td>Foreign Direct Investments</td>
</tr>
<tr>
<td>FMA</td>
<td>Forest Management Agreement</td>
</tr>
<tr>
<td>FPIC</td>
<td>Free, Prior and Informed Consent</td>
</tr>
<tr>
<td>FSC</td>
<td>Forest Stewardship Council</td>
</tr>
<tr>
<td>GIA</td>
<td>Geospatial Information Agency</td>
</tr>
<tr>
<td>GP</td>
<td>General Harvesting Plan</td>
</tr>
<tr>
<td>HPH</td>
<td><em>Hak Pengusahaan Hutan</em> (HPH) or Forest Concessions and Forest Exploitation Rights</td>
</tr>
<tr>
<td>ITTO</td>
<td>International Tropical Timber Organization</td>
</tr>
<tr>
<td>IUPHHK-R</td>
<td>Licenses for Timber Utilization and Ecosystem Restoration (<em>Izin Usaha Pemanfaatan Hasil Hutan Kayu Restorasi Ekosistem</em>)</td>
</tr>
<tr>
<td>LDC</td>
<td>Least Developed Country</td>
</tr>
<tr>
<td>LPR</td>
<td>People's Democratic Republic</td>
</tr>
<tr>
<td>LULUCF</td>
<td>Land Use, Land-Use Change and Forestry</td>
</tr>
<tr>
<td>MAFF</td>
<td>Ministry of Agriculture, Forestry and Fisheries</td>
</tr>
<tr>
<td>MFCS</td>
<td>Myanmar Forest Certification Scheme</td>
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<tr>
<td>MoE</td>
<td>Ministry of Environment</td>
</tr>
<tr>
<td>MOECAF</td>
<td>Ministry of Environmental Conservation and Forestry</td>
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<tr>
<td>MOEF</td>
<td>Ministry of Environment and Forestry</td>
</tr>
<tr>
<td>MP3EI</td>
<td>Master Plan for the Acceleration and Expansion of Indonesia’s Economic Development</td>
</tr>
<tr>
<td>MSS</td>
<td>Myanmar Selective System</td>
</tr>
<tr>
<td>MTE</td>
<td>Myanmar Timber Enterprise</td>
</tr>
<tr>
<td>NCR</td>
<td>Native Customary Rights</td>
</tr>
<tr>
<td>NFP</td>
<td>National Forest Programme</td>
</tr>
<tr>
<td>NGPES</td>
<td>National Growth and Poverty Eradication Strategy</td>
</tr>
<tr>
<td>NSED</td>
<td>National Socio-Economic Development Plan</td>
</tr>
<tr>
<td>NTFP</td>
<td>Non-timber forest product</td>
</tr>
<tr>
<td>ODC</td>
<td>Open Development Cambodia</td>
</tr>
<tr>
<td>PEC</td>
<td>Permit to Enter Coupe</td>
</tr>
<tr>
<td>PFR</td>
<td>Permanent Forest Reserve</td>
</tr>
<tr>
<td>PNGFA</td>
<td>Papua New Guinea Forest Authority</td>
</tr>
<tr>
<td>REDD+</td>
<td>Reduced Emissions from Deforestation and Degradation</td>
</tr>
<tr>
<td>RGC</td>
<td>Royal Government of Cambodia</td>
</tr>
<tr>
<td>RIL</td>
<td>Reduced impact logging</td>
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<tr>
<td>RSPO</td>
<td>Roundtable on Sustainable Palm Oil</td>
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<tr>
<td>SFM</td>
<td>Sustainable forest management</td>
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<td>SFMLA</td>
<td>Sustainable Forest Management Licence Agreement</td>
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<tr>
<td>SILK</td>
<td><em>Sistem Informasi Legalitas Kayu</em></td>
</tr>
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<td>SLC</td>
<td>Social Land Concessions</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard Operating Procedure</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------</td>
</tr>
<tr>
<td>STA</td>
<td>Sarawak Timber Association</td>
</tr>
<tr>
<td>SVLK</td>
<td>Timber Legality Assurance System</td>
</tr>
<tr>
<td>TA</td>
<td>Timber Authority</td>
</tr>
<tr>
<td>TBI</td>
<td>Borneo Initiative in Indonesia</td>
</tr>
<tr>
<td>TCCM</td>
<td>Timber Certification Committee of Myanmar</td>
</tr>
<tr>
<td>TLAS</td>
<td>Timber Legality Assurance System</td>
</tr>
<tr>
<td>VPA</td>
<td>Voluntary Partnership Agreement</td>
</tr>
<tr>
<td>WALHI</td>
<td>Indonesian Forum for the Environment</td>
</tr>
<tr>
<td>WWF</td>
<td>World Wide Fund for Nature</td>
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</table>
EXECUTIVE SUMMARY

A typical characteristic of Southeast Asian forests is the prevalence of the *Dipterocarpaceae* family of trees, predominant in the forests of Borneo, Sumatra, Java, Peninsula Malaysia and moister parts of the Philippines. Timbers from the family dominate the Southeast Asian timber industry as it produces long, straight and knot free logs which are ideal for plywood and sawntimber.

The dense commercial stocking of forests in Southeast Asia have made it the world’s leading tropical log producing region (85.56 million m$^3$ in 2012 to be compared to tropical Africa that produced 28.50 million m$^3$ and Latin America 39.94 million m$^3$).

Forest concessions for logging natural forests are more known than other types of concessions like those for establishing rubber, coffee and other agricultural plantations.

Concession size vary from small areas to areas larger than 100,000 ha, given in contract for periods ranging from one to a hundred years. In some cases the land under forest concession is allocated for conversion to oil palm, rice, rubber, coffee and other crops. Some concessions over forest lands are given for mining operations or the development of hydropower. In almost all countries of the region forests are owned by the State, with exception of Papua New Guinea where local communities own 97% of the forests.

The predominant silvicultural regime in production forests is selective logging first pioneered by the Myanmar Selective System. The forest management plan is based on annual coupes, blocks, allowable cuts and guidelines on environment management. Log skidding by bulldozer is the usual though Myanmar also uses elephants. The logging business model is based on contract work. Logging is carried out by a main contractor who may sub-contract out harvesting, road construction, maintenance, log skidding, etc. It is debatable whether these guidelines are actually followed by loggers. There is hardly any third party checking.

In a qualitative survey of opinions, experts in the region were asked: Have the forest concessions met their institutional, economic, social, and environmental goals? They were also asked for Three Positive Aspects which they like to introduce to improve the system, and also Three Negative Aspects in the current system which they like to address and correct. Their replies are grouped under five main headings:

**Transparency.** There is a severe lack of transparency in the award and running of forest concessions in the region. In many cases the information available is inadequate and out of date. There are cases where there is simply no information or data on forest concessions available for sharing. This opaque process has attracted accusations of unsavoury cronyism, mismanagement of public properties, abuse of power, political patronage and all manner of ill dealings. Further questions and speculations abound over the possibilities of political or government bureaucracy manipulations over rents, stumpages, annual allowable cuts, etc.
Local communities and rights. User and ownership rights of indigenous peoples, forest dependent people and people living in or near a concession have been and are abused. Local communities have very little legal rights to land and are therefore subjected to many abuses over conflicts of land claims. Some local communities are displaced or evicted from their own land and this adds severe difficulties to an already impoverished lot. On the other hand, there are examples where logging and plantation companies build roads and bridges and install gravity fed water supply for local communities and provide simple clinics, primary schools and generation of jobs for the locals.

Forest management. The biggest obstacle to SFM seems to be the security of tenure of the logging concession. The fear of losing a concession for whatever reason does not encourage investments for the long term. In the worst case scenario, there is a perverse incentive to ‘cut and run’ before losing the concession. Also, more focused multiple-use like ecotourism, carbon, water, payment for environmental services, etc should be further enhanced and encouraged, so as to improve financial earnings to defray some expenses of carrying out sustainable forest management.

Governance. Some agencies and departments have overlapping powers. A department can award a concession which is in conflict with another concession over the same area but awarded by a different department. There is a need for inter agency coordination for a unified and consistent policy and execution. Monitoring of forest operations is generally very lax. Standard operating procedures are not practised on the ground. Independent monitoring by third parties or certification bodies might help ineffective governing.

Timber certification. Barely 2% of the world’s certified forests, by PEFC and FSC, are in Southeast Asia. The introduction of voluntary certification as part of the concession agreement should be considered when the governing is weak. The first step in certification, legality, got a push with the EU FLEGT Action Plan. Timber producing countries should move towards timber certification by first working on a legality system.

National summaries

Lao PDR. An estimated 77% of the total population works in the agriculture sector mostly in self subsistence farming. The national development plans have successfully grown the economy by more than 7% a year between 2001 and 2011. The high GDP growth is due to high Foreign Direct Investments in Lao PDR’s natural resources: mining, hydropower and plantations (mainly palm oil and rubber). Since 2000, almost 5% of the territory of Lao PDR (roughly 1.1 million ha) has been leased out, mainly to foreign investors from Vietnam, China and Thailand. The national logging quota is very small but it can be shown that the country’s timber exports have increased eightfold from 2009 to 2014, to reach a value of USD 1.7 billion. In 2014, Vietnam and China took 96% of all Lao timber exports in terms of value. In September 2015, Lao PDR signed a Memorandum of Understanding to work towards a Voluntary Partnership Agreement (VPA) under the EU Timber Regulation which are to ensure timber entering EU is legally sourced.
Cambodia. The National Forest Programme 2010 – 2029 established a policy framework and strategy for sustainable management of Cambodia’s forests. Cambodia is classified as a “high forest cover, high deforestation country” under REDD+ with an average loss of 145,000 ha per year since 2000 (when forest cover was 10.09 million ha). Economic Land Concessions (ELC) and Social Land Concessions (SLC) are important pillars in the 2001 new Land law when Cambodia modernised its legal system. But ELCs and SLCs are accused for their big part in land grabbing and stripping of forests by allowing concession owners management rights over the land. Illegal logging has been reported over the years in Cambodia. There is an ongoing process in Cambodia to address the legality of ELCs granted in part to address the grievances of the villagers. By September 2015, 23 out of 113 ELCs under the Ministry of Environment were cancelled.

Myanmar. Since a new era of civilian rule commenced in 2011, there were claims of widespread land grabbing. By 2013, 2.14 million ha of land had been leased out to investors in commercial agriculture, the majority without the consent of its owners. In July 2015, the Sixth Draft of the National Land Use Policy was discussed in Nay Pyi Taw and there is expectation that this will be the basis of a long awaited new land law which will solve many of the problems caused by over-lapping land uses. Land conversions, particularly in large industrial estates and plantations, are significant sources of ‘conversion timber’. Myanmar banned log exports in April 2014 and also lowered the Annual Allowable Cut for teak and hardwood. It is now working on its national timber certification scheme and chain-of-custody.

Indonesia. In 2011 the country launched a drive towards production of commodities in order to meet ambitious plans to uplift GDP. Transmigration, logging, tree and oil palm plantations, and other agriculture crops are the main drivers of forest losses. By 2015, production forests cover 69.0 million ha, conservation forests 27.4 million ha and protected forests 29.6 million ha. Another 10.2 million hectares of land is licensed for oil palm cultivation. There is a proliferation of land conflicts between companies and local communities. However, the Constitutional Court has sided with the local communities in claims over customary forests in one landmark case. Indonesia is the first in Southeast Asia to make its Timber Legality Assurance System (SVLK) mandatory, and a signed VPA with EU came into force on May 1st 2014.

Malaysia. Different forestry laws apply for Peninsular Malaysia, Sarawak and Sabah. Peninsular Malaysia has the least forest resources since its early (1950s) conversions to rubber and recently, oil palm. Logging is typically on short term and small licence areas. Sarawak has almost 6 million ha of PFEs and awards large concessions for harvesting, with cycles of 25 years. Native Customary Claims over concession areas have brought land conflicts to the courts. Sabah has converted its short term harvesting licences to Sustainable Forest Management Licence Agreements (SFMLAs), which provide long-term tenure of 100 years and cover areas that average 100,000 ha each. Currently 28 SFMLAs cover 2.14 million ha.

Papua New Guinea. This is the only country in Southeast Asia where local communities own the land and the forests on it. It has lost 4 million ha of forests over a 30 year period due to shifting agriculture, conversion, logging, mining and natural disasters. The forestry Act 1991 stipulated that landowners (‘lands group’) must willingly transfer rights over timber resources before a forest management agreement can be made. However, there are reports of conflicts between landowners and development proponents.
Recommendations

Some issues with forest concessions need complex solutions which will take a long time to achieve. The consultant concurred with experts in the region that it would not be realistic to address all the issues related to forest concessions. This study does not set out to identify and fix all the issues in the region’s forest concessions but it prioritised issues which are deemed fixable. The short listed recommendations below could be readily adopted by countries in the region as they are based on existing examples.

Restoration and rehabilitation

Huge expanses of forests were badly degraded - and are still being degraded - by extensive bad logging techniques, agricultural conversion, mining and other economic activities. Indonesia has devised a concession for ecosystem restoration with 13 licenses already issued, covering a total area of 515,270 ha. This innovative form of concession forestry should be promoted with an eye on financial viability.

Certification

The benefits of third party verification and monitoring in timber certification are recognised. However, there are technical barriers in implementation and not all markets reward certified timber by a price premium. The Borneo Initiative in Indonesia (TBI) is a foundation which forges links between logging companies and consultants who provide mentorship all along the process of certification, with certifying bodies as independent auditors. This working model should be promoted (by 2014, 12 concessions are FSC certified with TBI help).

Land use policy

Conflicts in the region are often, if not always, sparked by the government, central or provisional, granting access or permission for companies to use land without Free, Prior and Informed Consent (FPIC) of local communities. A clear land use policy with a One Map approach will minimise many conflicts over land. Indonesia is leading the way in One Map and its lessons should be shared.

Capacity building and training

The issue of capacity is critical and the scale of need is enormous, but appreciation of the problem is low. Over the years, countless ‘capacity building’ and ‘training’ projects have not closed the gap. In Sarawak, Malaysia there is an ongoing programme to train SFM managers under a post graduate diploma arrangement with a New Zealand university. The programme started in 2006 and 50 participants have graduated so far. This working model should be promoted.

Governance issues

Governments must govern forest concessions. Government agencies award concessions with relevant legal terms which must be satisfied. And if not, the concession holders must face the full brunt of the law. No failure is so obviously demonstrated for tens of millions living in Indonesia, Malaysia and Singapore to see (and experience) as the failure in managing the Indonesia forest fires and the smoke from the fires. There are many reasons why forests burn but it is clear that agricultural plantations play a big part in the forest fires. Governments must charge concessionaires for not following the laws.
Introduction

This report on forest concessions in Southeast Asia is part of a global initiative to improve forest concession policies and practices, particularly for tropical natural production forests. FAO, in partnership with ITTO, CIFOR and CIRAD, is leading this initiative entitled *Making forest concessions work to sustain forests, economies and livelihoods*. Tasks and objectives are stated in Appendix 1.

The report has been prepared based on information from a desk study, an electronic survey and visits to four pre-identified countries (Lao PDR, Cambodia, Myanmar and Indonesia) to interview experts, a big proportion of whom were from the government.

The desk study on recently published material was conducted to scope out the main points to be considered, concentrating on the ‘goods and bads’ of forest concessions in general. The readily available publications are mostly from civil society entities working in the region, universities and researchers from intergovernmental organisations. Very few official documents are published or distributed freely. Also, the private sector has very little contributed to publications.

An electronic survey was conducted to elicit opinions from experts who are working on Southeast Asian forestry issues. The feedback was collated into parameters which were used to gauge the situation of forest concessions in the region.

About Southeast Asia

Southeast Asia, by convention, is a geographical region which covers 12 countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam, Timor Leste and Papua New Guinea.

Economy

The economies of Southeast Asian nations are mostly vibrant. World Bank calculation of GDP per capita shows very healthy improvements over the last five years (Table 1).

Table 1. GDP per capita and country (late 2015, in USD)

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</thead>
<tbody>
<tr>
<td>Myanmar</td>
<td>N/A</td>
<td>1,197</td>
<td>Singapore</td>
<td>38,577</td>
<td>56,286</td>
</tr>
<tr>
<td>Thailand</td>
<td>3,978</td>
<td>5,560</td>
<td>Brunei</td>
<td>27,212</td>
<td>40,776</td>
</tr>
<tr>
<td>Laos</td>
<td>930</td>
<td>1,707</td>
<td>Philippines</td>
<td>1,832</td>
<td>2,843</td>
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<tr>
<td>Cambodia</td>
<td>735</td>
<td>1,084</td>
<td>Indonesia</td>
<td>2,272</td>
<td>3,514</td>
</tr>
<tr>
<td>Vietnam</td>
<td>1,232</td>
<td>2,052</td>
<td>Timor Leste</td>
<td>779</td>
<td>1,280</td>
</tr>
<tr>
<td>Malaysia</td>
<td>7,278</td>
<td>10,829</td>
<td>Papua New Guinea</td>
<td>1,208</td>
<td>N/A</td>
</tr>
</tbody>
</table>


The combined GDP of the Association of Southeast Asian Nations (ASEAN)\(^1\) members is in the order of USD 2.4 trillion in 2013. ASEAN, in itself a major market with its combined population of 600 million,

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\(^1\) The Association of Southeast Asian Nations (ASEAN) comprises all the nations in Southeast Asia except Timor Leste and Papua New Guinea. By the end of 2015, the ten countries in ASEAN plan to launch a single market, the ASEAN Economic Community (AEC) for goods, services, capital and labour.
is one of the most open economic regions in the world with total merchandise exports of over USD 1.2 trillion - nearly 54% of total ASEAN GDP and 7% of global exports (ADB, 2014). The ASEAN Free Trade Area is about to be launched.

Population

The total population of Southeast Asia in five years, from 2009 to 2014, grew 6.2% from 595 to 631 million. Southeast Asia nations are predominantly rural (Table 2). Countries with a lower GDP and a higher percentage of their population living in the rural areas indicate a pronounced lean towards an agrarian economy. In cases when the absolute numbers of their population living in the rural areas are very high, it can be expected that there is severe population pressure on forests. As a matter of fact, shifting cultivation is practised widely in some countries.

Table 2. Total population and percentage of total population in rural areas

<table>
<thead>
<tr>
<th>Country</th>
<th>2009 Total Population</th>
<th>2009 % in rural areas</th>
<th>2014 Total Population</th>
<th>2014 % in rural areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myanmar</td>
<td>51,540,490</td>
<td>69</td>
<td>53,718,958</td>
<td>66</td>
</tr>
<tr>
<td>Thailand</td>
<td>66,277,335</td>
<td>57</td>
<td>67,222,972</td>
<td>51</td>
</tr>
<tr>
<td>Laos</td>
<td>6,257,968</td>
<td>68</td>
<td>6,894,098</td>
<td>62</td>
</tr>
<tr>
<td>Cambodia</td>
<td>14,144,225</td>
<td>80</td>
<td>15,408,270</td>
<td>79</td>
</tr>
<tr>
<td>Vietnam</td>
<td>86,025,000</td>
<td>70</td>
<td>90,730,000</td>
<td>67</td>
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<tr>
<td>Malaysia</td>
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<td>30</td>
<td>30,187,896</td>
<td>26</td>
</tr>
<tr>
<td>Singapore</td>
<td>4,987,600</td>
<td>0</td>
<td>5,469,700</td>
<td>0</td>
</tr>
<tr>
<td>Brunei</td>
<td>394,400</td>
<td>25</td>
<td>423,205</td>
<td>23</td>
</tr>
<tr>
<td>Philippines</td>
<td>91,886,400</td>
<td>54</td>
<td>100,096,496</td>
<td>56</td>
</tr>
<tr>
<td>Indonesia</td>
<td>237,486,894</td>
<td>51</td>
<td>252,812,245</td>
<td>47</td>
</tr>
<tr>
<td>Timor Leste</td>
<td>1,049,156</td>
<td>71</td>
<td>1,212,107</td>
<td>68</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>6,704,829</td>
<td>87</td>
<td>7,476,108</td>
<td>87</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>594,544,621</strong></td>
<td><strong>631,652,055</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: World Bank

Natural forest resources

Differences in the logging and timber industries in the three major tropical regions are reflective of the differences in their tropical rainforests. Approximately half of the world’s tropical rainforests are in tropical America (centred in the Amazon basin), while the rainforests of Southeast Asia (Indo-Malayan rainforests) are considered the second most extensive and larger than the third block, the African Rainforests (centred in the Congo Basin). More importantly, the Indo-Malayan rainforests are richer in tree species than similar areas in Africa and most similar areas in tropical America (Whitmore, 1997).

The tree family *Dipterocarpaceae* (dipterocarps) is important to the timber industry like no other tree family in Southeast Asia. It dominates the Southeast Asian timber industry. Dipterocarp trees are predominant in the forests of Borneo, Sumatra, Java, Peninsular Malaysia and the wetter Philippines (Primack, 2005).

---


The commercial value of dipterocarp timber is obvious by looking at the trees. The trees are very tall with a long, straight and clean bole. Dipterocarps have canopy heights often up to 50 m and can have no branches until a height of 20 m. Their logs can be sorted into a small number of groups of rather homogenous wood properties (e.g. red, white and yellow seraya/meranti, kapur, keruing etc). This makes their logs ideal for the timber industry. For example, the plywood industry demands raw logs which are straight for maximum recovery and knot-free (no branches) for blemish free veneers.

The stocking of the dipterocarp forests makes them attractive targets for developers of agricultural plantations (or mines or even hydropower). Clear cutting of forests in such ‘developments’ produce substantial volume of timber for immediate sales. Although clearing of land for estate crops like rubber trees and oil palms has greatly contributed to the development of the region, there are unfortunately cases where “development” stops after the conversion timber has been sold.

Table 3 provides an overview of the forest area and its annual change rate, the area classified under permanent forest estate (PFE), the area of certified forest and the area under sustainable forest management (SFM) for the most forested countries in Southeast Asia.

**Table 3. Forest resources in the region (2000 – 2010)**

<table>
<thead>
<tr>
<th>Country</th>
<th>Forest area ('000 ha)</th>
<th>% of land area</th>
<th>Annual change rate 2000 – 2010</th>
<th>Publicly owned (%</th>
<th>PFE (%)</th>
<th>Area with FMP (%)</th>
<th>Certified Forest Area (%)</th>
<th>Area under SFM (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>10,094</td>
<td>57</td>
<td>-1.15</td>
<td>100</td>
<td>82</td>
<td>16</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Indonesia</td>
<td>94,432</td>
<td>52</td>
<td>-0.51</td>
<td>91</td>
<td>70</td>
<td>19</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>15,751</td>
<td>68</td>
<td>-0.48</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Malaysia</td>
<td>20,456</td>
<td>62</td>
<td>-0.54</td>
<td>98</td>
<td>68</td>
<td>69</td>
<td>26</td>
<td>47</td>
</tr>
<tr>
<td>PNG</td>
<td>28,726</td>
<td>63</td>
<td>-0.48</td>
<td>3</td>
<td>36</td>
<td>3</td>
<td>n.s.</td>
<td>1</td>
</tr>
<tr>
<td>Philippines</td>
<td>7,665</td>
<td>26</td>
<td>0.74</td>
<td>85</td>
<td>79</td>
<td>28</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Vietnam</td>
<td>13,797</td>
<td>44</td>
<td>1.64</td>
<td>72</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Myanmar</td>
<td>31,773</td>
<td>47</td>
<td>-0.81</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Adapted from Sabogal et al, 2013. Note: ns = not significant.

**Forest concessions**

A concession is basically a legal arrangement whereby a government (or authority in control) concedes a grant or privilege which allows the concession holder economic, or some form of benefits. The World Bank categorised forest concessions into two kinds: utilisation and management. A forest concession is a contract between a forest owner and another party permitting the harvesting in the case of a forest utilisation contract and/or managing, in the case of forest management contract, of specified resources from a given forest area. Utilisation covers harvest of both timber and non-timber products, as well as forest services such as watershed protection, profit from biodiversity or tourism (Gray, 2000).

Forest concessions for logging natural forests are better known than other types of concessions like for rubber, coffee or other agricultural plantations. In some cases the land under forest concession is allocated for conversion to oil palm, rice, rubber, coffee and other crops. Moreover, some concessions in forest lands are given for mining operations or development of hydropower.
The overall striking feature in Southeast Asia is the ownership of the forests. In most countries, the government is the biggest if not the only owner, except in Papua New Guinea where local communities own 97% of the forests (see Table 3).

There is generally no transparency in the process of forest concession allocation, no publicly announced auctions or bidding systems.

**Logging**

Countries with substantial forest resources have pushed the region to the forefront in logging and timber industries. The approach to logging is similar in the different countries as forests are also generally similar, except for the drier northern parts of Southeast Asia.

In the 1990s, the logging practices in Southeast Asian countries were somewhat influenced by two innovative documents: the *ITTO Guidelines for Sustainable Management of Natural Tropical Forests Management* (1992) and the *FAO Code of Practice for Forest Harvesting in Asia-Pacific* (1999). The way the logging industry have since developed, it is debatable whether these guidelines have been/are actually followed by loggers as there is hardly any third party checking.

The *ITTO Guidelines for the Establishment and Sustainable Management of Planted Tropical Forests* were used by Indonesia and Malaysia in their logging procedures. These two countries went on developing their own national timber certification schemes based on another ITTO publication, the *ITTO Criteria and Indicators for SFM* (1998). Currently, Myanmar is working on its own national certification scheme using the same ITTO C&I as the framework.

Some countries used the FAO Code of Practice to develop country-specific codes of harvesting (Cambodia, Indonesia, Lao PDR, Malaysia and Myanmar). Indonesia and Malaysia went further and developed their own guidelines for reduced impact logging (RIL) to supplement the code of harvesting.

All countries in Southeast Asia have developed their own selective logging “systems”. Preparing a forest management plan is the first step, when the licensed area is divided into annual coupes (or areas to be logged in a year). Coupes are divided into smaller blocks for better management and control. Log skidding is done by bulldozers, except in Myanmar where elephants are used too. The procedures to harvest and move logs out of the forest have similar checks and balances in paperwork and physical inspections (see Box 1).

The business model for logging in the region is based on contracts with payments based on volume (for log harvesting) or kilometres (for road construction, maintenance and transport). The main contractor for harvesting is usually supported by a few sub-contractors. This is often the weak link in the chain of command when it comes to SFM. Sub-contractors are production focused and not SFM-oriented.

Logging workers are mainly drawn from local communities. There seems to be no widespread reports of labour abuses and generally locals are happy for the job opportunities. Health and sanitary conditions in the logging camps are under the control of forest departments. The most common complain is related to public health like incidences of malaria (though malaria also strikes outside logging camps).
There are many reported cases of conflicts between loggers and local communities due to overlapping land claims. These conflicts are ongoing in Indonesia, Malaysia, Cambodia and Myanmar (see country profiles below).

**Box 1. Harvesting and log transport in Sarawak, Malaysia**

A General Harvesting Plan (known as the GP) must first be prepared to show the layout and size of annual coupes, harvesting sequences, logging roads, camps and log dumps for the licensed area. The GP needs to be studied and approved by the Forest Department.

The second step is to prepare a Detailed Harvesting Plan (DP) with operational prescriptions at the coupe level, including logging blocks, surveyed road alignments, identified protected or conservation areas (including areas of shifting cultivation), and the proposed harvesting method.

Logging operators have to apply for a Permit to Enter Coupe (PEC) as a safeguard to ensure compliance with the approved GP and DP. The Forest Department will then verify satisfactory compliance on coupe and block demarcation on the ground. A topographical map of the required scale has to be prepared to show road alignment and construction (subject to approved engineering specifications). Tree enumeration done before the PEC is endorsed to start logging.

Logs are property marked, scaled and graded before getting a Log Production Identity tag. The operator then submits a production report for checking purposes. A physical inspection of the logs is made before a transit removal pass is issued to allow logs to be transported out of the logging area.

Lastly, the operator applies for the assessment of royalty of the logs by submitting a Log Specification Form. A Royalty Removal Pass will be issued to allow further log movements to indicate that they have been assessed for royalty and dues to be paid.
Box 2. Logging concessions in Malaysia

The 13 State governments in Malaysia have jurisdiction over agriculture, land and soil conservation, rivers, water and forest resources under the Malaysian Constitution. The National Land Council was established in 1972 to promote a common approach in forest management in the different states and the national Forestry Act was passed in 1984. This Act provided a basis for forest development and protection, and with provisions made to strengthen enforcement and introduce penalties for infringements. Despite this, each State continues to have variations in management practices but all practise the selective management system based on diameter limits.

Peninsular Malaysia. In general, forest concessions are categorized according to size of the area and the length of the tenure. In Peninsular Malaysia, forest concessions are short term logging licenses usually on small areas with duration of 1 – 2 years. These allocations are based on the annual coupe or annual allowable cut for each State. However, some States allocate larger areas for long term concessions given on a longer duration of 20 – 30 years. By 2015, the total area of such long term licenses totalled 620,025 ha of which 422,742 ha have already been harvested (Personal Communication, Shaharuddin Ismail. 03 Nov 2015). Concessions in Peninsular Malaysia can be said to resemble logging permits, with sizes ranging from 80 – 130 ha, sometimes bigger. Forest management is largely carried out by the State Forest Department.

Sabah. As of December 2013, the total area of Permanent Forest Reserve (PFR) was 3.61 million ha. The percentage of PFR in relation to Sabah’s total landmass of 7.362 million ha is about 49%. The PFR includes the Commercial Forest Reserve of 2.17 million ha. In 1997, short term timber harvesting licences were phased out to make way for Sustainable Forest Management Licence Agreements (SFMLAs), which provide long-term tenure of 100 years and cover areas that average 100,000 ha each. Currently, 28 SFMLAs have been awarded to private sector companies and a quasi-government organization (Yayasan Sabah), covering a total of about 2.14 million ha of mostly logged-over forest of the State’s production forest reserves. The SFMLA holders are to carry out their forest management activities based on a 10-year Forest Management Plan which details how the FMU area can be sustainably managed through multiple-use use forest management (Mashor J., 2014).

Sarawak. Forests in Sarawak are divided into three categories: Permanent Forest Estate (PFE), Stateland Forest and totally protected area (TPA). Six million ha (out of 12.4 million ha) have been designated as PFEs which are set aside for commercial production of timber. Out of these 6 million ha, one million ha has been set aside for ‘planted forests’ (306,486 ha planted by 2012). Within the 5.0 million ha PFEs, about 50% of the forests will be excluded from logging due to steep slopes (over 35 degrees), communal land, shifting agriculture, etc.

Stateland forest occupies 5.7 million ha and includes water catchment areas, urban areas, etc. There is an ongoing gazetting exercise to increase the size of TPAs to one million ha from the current 774,819 ha. Local communities have Native Customary Rights (NCR) over 1.6 million ha of land.

The Sarawak selective management system was derived from early FAO work (1960s until mid-1970s). Logging licenses range from small short term license for clearing (few hundred ha) to big license (up to 100,000 ha) for long term harvesting cycles of 25 years. (Forest Department Sarawak, 2012). The 2012 Department Annual Report shows 141 FTL F30 licenses and another 169 other FTL licenses renewed.
Box 3. Landownership and forest management, Papua New Guinea (PNG)

The system of land and resource ownership in PNG is unique and the natural forests and the land on which they grow on are owned by the people through their tribal clan groupings. This amounts to approximately 97 percent of the land being owned by the tribal groups. There are very few Government-owned lands or forests as distinct to the rest of Southeast Asia.

The Papua New Guinea Forest Authority (PNGFA) estimates the forested areas to be 29 million ha with 24 million ha still intact. This is a decline from the 33 million ha estimated in 1975. The loss of some 4 million ha over a 30-year period is partially attributed to shifting cultivation, conversion of forested lands to agriculture, logging, urban development, infrastructure development, mining developments, and various natural disasters (Personal communication, R McCarthy. 31 Oct 2015).

The area and number of timber concessions had increased over the years from an area of a little over 1,000 hectares in 1940 to over 11 million in 2009. Forest resources in many of these concessions have been almost exhausted in terms of their resource base. Concessions played the important role of acting as “vehicles” for immediate development. Timber concessions that have been acquired since 1991 are intended to facilitate SFM. As such, a 35-year cutting cycle has been prescribed into the currently executed Forest Management Agreements (FMAs).

In order to facilitate development of any forest area, especially through logging operations, the Forest Act 1991 stipulates that the rights over timber resources must be willingly transferred by the landowners to the State. This is undertaken by applying the provision of the Act that relates to a FMA for a period of 50 years. There are also other legal means to harvest timber from customary-owned lands, i.e. through the allocation of a Timber Authority (TA). This is mostly for a short-term period (annual) and restricts the harvestable volume to 5,000 m$^3$ annually. In most cases, the timber harvested is only for domestic processing.

Under the Act, before a forest management agreement is made over customary land, the title of the landowners must be vested in a land group or groups under the ‘lands group’ incorporation act and registered under a law providing for the registration of title to customary land. The Act provides that forestry operations may only be permitted on customary land where a forest management agreement has been entered into between customary owners (‘lands group’) and PNGFA.

The successful project proponent will submit the results of its feasibility study to the provincial forest management committee (PFMC) in the form of a draft project agreement. The PFMC with assistance from PNGFA will then be responsible for negotiating the project agreement and submitting the final draft to the National Forest Board. Once the project agreement and environment permit are approved, the successful forest industry participant can apply for the timber permit. The Timber Permit confers rights on the permit holder to carry out forest management and harvesting operations within the project area for the terms of the permit.

Upon approval of the Timber Permit, a five year working plan is prepared following PNGFA’s Manual which covers five year plans, project statements, annual plans, set up plans and clearance, and approvals.

Timber industries

The timber industry in Southeast Asia is the strongest and most developed in the world’s three tropical forest regions. The latest five-year (2008 – 2012) production statistics available shows that Southeast Asia produced 55.8% of the three regions’ logs, 35.8% of the sawntimber, 58.3% of the veneer and a massive 84.7% of the plywood (Table 4).
Table 4. Production of logs, sawn timber, veneer and plywood (in ’000 m³)

<table>
<thead>
<tr>
<th>Region</th>
<th>Logs</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>Logs</td>
<td>29,588</td>
<td>29,388</td>
<td>28,580</td>
<td>28,335</td>
<td>28,504</td>
</tr>
<tr>
<td></td>
<td>Sawn</td>
<td>5,069</td>
<td>4,948</td>
<td>5,210</td>
<td>5,524</td>
<td>5,490</td>
</tr>
<tr>
<td></td>
<td>Veneer</td>
<td>961</td>
<td>954</td>
<td>1,044</td>
<td>1,059</td>
<td>1,068</td>
</tr>
<tr>
<td></td>
<td>Plywood</td>
<td>512</td>
<td>462</td>
<td>413</td>
<td>431</td>
<td>461</td>
</tr>
<tr>
<td>Latin America</td>
<td>Logs</td>
<td>39,221</td>
<td>39,485</td>
<td>39,687</td>
<td>39,611</td>
<td>39,904</td>
</tr>
<tr>
<td></td>
<td>Sawn</td>
<td>18,049</td>
<td>18,609</td>
<td>18,712</td>
<td>18,832</td>
<td>18,940</td>
</tr>
<tr>
<td></td>
<td>Veneer</td>
<td>363</td>
<td>369</td>
<td>367</td>
<td>368</td>
<td>365</td>
</tr>
<tr>
<td></td>
<td>Plywood</td>
<td>1,162</td>
<td>958</td>
<td>906</td>
<td>873</td>
<td>900</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>Logs</td>
<td>96,400</td>
<td>87,097</td>
<td>80,727</td>
<td>85,057</td>
<td>83,568</td>
</tr>
<tr>
<td></td>
<td>Sawn</td>
<td>13,534</td>
<td>12,879</td>
<td>13,721</td>
<td>13,411</td>
<td>13,049</td>
</tr>
<tr>
<td></td>
<td>Veneer</td>
<td>1,770</td>
<td>1,845</td>
<td>1,884</td>
<td>2,151</td>
<td>2,010</td>
</tr>
<tr>
<td></td>
<td>Plywood</td>
<td>8,031</td>
<td>7,580</td>
<td>7,987</td>
<td>7,613</td>
<td>8,056</td>
</tr>
</tbody>
</table>


Plywood manufacturing is a more sophisticated process than sawmilling and requires a significantly higher capital outlay, often running into tens of millions of US dollars per factory. Production of face veneer must have good quality input logs which means the forest resources available must be of matching quality too.

The two biggest plywood producers in Southeast Asia are Indonesia and Malaysia. The huge investments in plywood production in these two countries reflected the re-investments made by earlier timber industrialists who were typically loggers (and log sellers) in the early days. A typical plywood factory in Southeast Asia running on three shifts can employ well over 1,000 workers so plywood is a major contributor of employment in both countries.

Historical developments

After the Second World War, Southeast Asian countries played a significant role as suppliers of timber and timber products to mainly Japan, South Korea and Taiwan, and to a lesser extent to Europe and the United States. China became a big importer only in recent years.

In Southeast Asia, the first country to exploit its forest resources commercially, and in a big industrial way, was the Philippines. Apart from its comparatively good quality logs, it was its proximity to the major importing country of Japan which played a significant role for this early start. The Philippines became a major supplier of tropical logs to Japan in the 1950s.

When, in the early 1960s, the log supply in Philippines started to dwindle, logging activities started to pick up in Sabah (Malaysia). Sabah was joined by Indonesia and by the 1970s, Sabah and Indonesia had replaced Philippines as the main log suppliers to Japan. And by 1973, Indonesia had replaced Philippines as the world’s leading hardwood exporter.
Sarawak (Malaysia) started late in the logging business mainly due to a perception that its logs are not as good quality as those of Philippines, Sabah and Indonesia. Logging volumes in Sarawak started to pick up only in the late 1980s and by then another significant development took place in the region: log export bans.

Indonesia banned log exports in 1985 and started going downstream following a major change in its national policy. Plywood factories mushroomed as a result to consume the enormous volume of logs coming out of the forests. At its peak, there were 115 plywood factories operating in Indonesia and its plywood became a major supplier to the Japanese market as well as in Europe.

Sabah also banned the exports of logs in 1993 though in 1996 the ban was reversed and logs were back in the international markets. In 1992, Sarawak initiated a Log Export Restriction Quota which essentially brought the export volumes slowly down as the State developed downstream mills, primarily plywood, to produce value-added products to replace log exports.

In response to the curtailing of regional log supply, major importers like Japan and South Korea began to rationalise their use of tropical logs and to look for alternative supplies. Japanese plywood manufacturers started experimenting with temperate logs from New Zealand and successfully developed compound plywood made from tropical and temperate timber using good tropical veneer for face and cheaper pine veneer for core. Papua New Guinea saw the opportunity and increased its logging activities and started to export logs to Japan and elsewhere.

The comparative size of the timber industries in Southeast Asia today can be seen in Table 5. The table has no data from Lao PDR which is not a member of ITTO and Vietnam only became a member in June 2014; however, by way of comparison, Smirnov (2015) estimated the timber exports from Lao PDR in 2014 to be around USD 1.7 billion. Also, the export figures did not include furniture which would distort the relative position of the countries, e.g. Malaysia exported about USD 2.55 billion worth of furniture in 2011. For 2015 the Vietnam Timber and Forest product Association predicted the export of Vietnamese wood products, mainly furniture, to reach USD 7.0 billion.4

Table 5. Relative size of timber industries (2011)

<table>
<thead>
<tr>
<th>Country</th>
<th>Log production (m$^3$)</th>
<th>Total Exports$^3$ (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myanmar</td>
<td>5,290,000</td>
<td>1,053,284</td>
</tr>
<tr>
<td>Thailand</td>
<td>8,700,000</td>
<td>658,663,000</td>
</tr>
<tr>
<td>Cambodia</td>
<td>275,000</td>
<td>61,416,000</td>
</tr>
<tr>
<td>Laos</td>
<td>na</td>
<td>Na</td>
</tr>
<tr>
<td>Vietnam</td>
<td>na</td>
<td>Na</td>
</tr>
<tr>
<td>Philippines</td>
<td>3,627,000</td>
<td>124,928,000</td>
</tr>
<tr>
<td>Malaysia</td>
<td>17,170,000</td>
<td>3,695,633,000</td>
</tr>
<tr>
<td>Indonesia</td>
<td>45,587,000</td>
<td>2,571,763,000</td>
</tr>
<tr>
<td>PNG</td>
<td>4,418,000</td>
<td>755,736,000</td>
</tr>
</tbody>
</table>


5 Total exports refer to logs, sawn timber, veneer and plywood. No furniture.
State of the industry

A snapshot of the industry in Southeast Asia today shows the former log exporters like Thailand and Philippines are now importing logs. Former major log exporters like Indonesia, Sabah and Sarawak are now major exporters of plywood. Vietnam, not a significant logging country in the past, is now a big exporter of wooden furniture.

In recent years, Southeast Asian forestry is mentioned more in the same breath as climate change than sustainable management; where carbon is seemingly more important than biodiversity in some circles, and legality has somehow become more important than SFM. Oil palm plantations are replacing logging concessions as revenue generators. However, it is still the Indonesian forest fires which are catching all the international attention as smoke, at times dangerously thick and unhealthy, spreads over a few neighbouring countries.

Questionnaire on Concession Forestry in the Region

An electronic questionnaire with the purpose of capturing the opinion of a much larger spectrum of stakeholders on a set of few selected issues/propositions was carried out in accordance with the ToR (see Appendix 1).

In August 2015, the questionnaire was sent to selected experts identified as having work experience on forestry issues in Southeast Asia. These experts are from the government, the civil society, timber certification organisations, private sector and inter-government organisations who work in the region (see Appendix 2).

This is a qualitative questionnaire that asks: Have forest concessions met their institutional, economic, social, and environmental goals?

(a) The Positives. What good/positive aspects (e.g., legality, fiscal, social, environmental, transparency, economic, institutional, land use, tenure security, etc) that you would like to introduce into the current concession system?? Which three positive aspects you would like to introduce to improve the system?

(b) The Negatives. What are the bad/negative aspects (e.g., legality, fiscal, social, environmental, transparency, economic, institutional, land use, tenure security, etc) of the current concession system? What are your three negative aspects you would like to be addressed and corrected?

All respondents have very strong opinions which is to be expected considering the wealth of knowledge from their working experience in Southeast Asia. Some said their opinions are on both sides of a coin: what they saw as a negative can be considered a desired positive. Most gave specifics on what they saw as negatives and what aspects are lacking in the positives.

All opinions captured are summarised under five main headings and reported below in no particular order. They should all be considered important. However, it is important to note that there is a convergence of opinions with many experts stating the same points vigorously.
Transparency

There is a severe lack of transparency in the award and running of forest concessions in the region. This is not only a strong perception but a reality as research on the profiles of the four countries for this study was hindered considerably by a lack of openness in some sectors. Generally, information on the allocation of forest areas by way of concession arrangements is very hard to come by.

Firstly, the lack of information flows from the authorities to the interested public. In many cases the information available is inadequate and out of date. In some cases, the information is inaccurate. Secondly, there are cases when there is simply no information available for sharing and this is not because the officials do not want to share. They have nothing to share because no data was recorded (eg. number and size of forest concessions).

Most questionnaire respondents point out the lack of information on forest concessions over land, forested or otherwise. The process of awarding a concession is not public; citizens of a country do not know how certain parties are awarded concessions. There is no apparent open tender or bidding, and if there are such processes, they are not made known to the public. Unfortunately, this opaque process has attracted accusations of unsavoury cronyism, mismanagement of public properties, abuse of power, political patronage and all manner of ill and/or illegal dealings. In such an opaque situation, further questions and speculations abound over the possibilities of political or government bureaucracy manipulations over rents, stumpages, annual allowable cuts (AAC), etc.

Local communities and rights

In this study, the term ‘local community’ is used as a shorthand reference to indigenous peoples, forest dependent people and to people in general who live in or near a concession. In the context of forest concessions, the issue is really over rights of the local community: user rights and ownership rights.

Most experts said this is one of the most glaring negatives of many concession programmes, and as one expert described concessions: running roughshod over local people. Local communities have very little legal rights to land and are therefore subjected to many abuses over conflicts of land claims. Some local communities are displaced or evicted from their own land and this adds severe difficulties to an already impoverished lot.

On the other hand, few experts have pointed out that there are positive contributions that some concessionaires make to local communities. In the rural areas there is a lack of infrastructure as the government’s reach is limited by budget and influenced by the low population densities. It is not unusual for logging and plantation companies to build roads and bridges and even install gravity fed water supply. Simple clinics with medical facilities are provided by the concessionaires and, in some bigger camps, primary schools are built and run too. There is also job generation for the local communities and uplifting of vocational skills. Market gardening and husbandry are encouraged to feed to workers in the camp while providing cash incomes. Some scientists are thankful of logistics support when doing field research in concessions.

However, the negatives overwhelmed the positives from expert feedbacks.
Forest management

Some experts said most forest management, in the form of logging, in Southeast Asia are not sustainable, pointing out at incorrect logging methods which damage the environment and create social conflicts while ignoring the AAC and other logging guidelines which are supposedly put in place by the authorities. The quality of logging differs widely through the region mainly due to the level of expertise and expectations of the authorities in charge.

a) Tenure. Experts say the biggest obstacle to SFM is the security of tenure of the logging concession. The fear of losing a concession for whatever reason causes uncertainties for the concession holder and in turn, does not encourage investments for the long term. In the worst case scenario, there is a perverse incentive to ‘cut and run’ before losing the concession. The duration or period of tenure is also a major consideration: if it is too short, again there is no incentive to invest in better and more expensive logging methods and equipment. The period has to be long enough so that the concessionaire has a reasonable chance of recouping his investments. In Sabah, Malaysia concessions are given for 100 years though researchers have said too long a period can also be detrimental to SFM (Gray, 2002).

b) Multiple-use approach. The approach to logging needs a fresh model. Experts suggest a multiple-use forest management concession might be more conducive to promote SFM. Multiple-use management does take place in some logging concessions (especially collecting NFTP, hunting and fishing), but there are few examples of planned multiple-use management concessions in Southeast Asia (Sabogal, 2013). More focused multiple-use like ecotourism, carbon, water, payment for environmental services, etc. should be further enhanced and encouraged, so as to improve financial earnings to defray some expenses of carrying out SFM.

Damage to the environment and lack of conservation efforts are observed by experts and are well documented by civil societies. Instead of contributing to the degradation of the environment and wildlife, concession operators can be guided to contribute positively if there are appropriate requirements and legal instruments specified in the concession agreement. Wildlife experts want legal obligations on concessionaires to work with government agencies on conservation and poaching of wildlife, and management of threatened and endangered species. Some said environment degradation is not from the lack of rules and regulations but from poor monitoring.

Governance

In Southeast Asia there are accusations of corruption in general, particularly concerning concessions with their economics benefits. The lack of transparency in the award and running of forest concessions support such accusations. However, in many cases there is governance in the sense that laws are in place, legal institutions are there to execute the laws and agencies like the forestry department and police are on hand to enforce the laws. However, the seeming lack of will by the government to carry out its fiduciary duties of governing by its own laws supports accusation of corruption, or at least a breach of duty.

a) Inter agency coordination. Experts pointed out that in some countries, government agencies and departments have overlapping powers. A department can award a concession which is in conflict with a concession over the same area but awarded by a different department. There is a need for
inter agency coordination, a clearing agency or at least some form of management which pulls the various sectors and disciplines into a unified and consistent policy, for and during implementation. Inconsistent policies have been known to harm the development of community forestry and small-scale concessions.

b) Monitoring. There is a common perception amongst experts in the region that monitoring is very lax. Agreements covering concessions, especially those slated for logging, spell out operational procedures including guidelines on environment and local communities. All these standard operating procedures are good only when they are practised on the ground, and if they are not practised, the authorities should throw the book at them.

Further, there is a need to make sure the concessionaire works within its demarcated boundary and does not intrude into adjoining areas. One expert has called for independent monitors though the government is the biggest stakeholder and should play the biggest part in monitoring.

Timber certification

The usefulness of timber certification is the part played by independent third parties especially when there is a breakdown in a country’s governing system. Experts have called for introduction of voluntary certification as part of the concession agreement. The area certified by the two leading systems in the world, FSC and PEFC (Table 6) indicates that certification in the region is still very low. As a matter of fact, merely 2% of the world’s certified forests are in Southeast Asia.

Table 6. Total area certified by FSC and PEFC by country

<table>
<thead>
<tr>
<th>Area</th>
<th>FSC</th>
<th>PEFC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>12,746</td>
<td>---</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2,028,963</td>
<td>610,798</td>
</tr>
<tr>
<td>Laos PDR</td>
<td>132,702</td>
<td>---</td>
</tr>
<tr>
<td>Malaysia</td>
<td>673,334</td>
<td>4,661,816</td>
</tr>
<tr>
<td>Vietnam</td>
<td>133,613</td>
<td>---</td>
</tr>
<tr>
<td>SEAsia Total</td>
<td>2,981,358</td>
<td>5,272,614</td>
</tr>
<tr>
<td>World Total</td>
<td>181,207,602</td>
<td>268,331,160</td>
</tr>
<tr>
<td>SEAsia/World</td>
<td>1.65%</td>
<td>1.96%</td>
</tr>
</tbody>
</table>

Sources: FSC & PEFC, 2015.

Legality. All forms of timber certification starts with the issue of legality. The push for legality got a boost when the EU FLEGT Action Plan came into force in March 2013. The action plan seeks a Voluntary Partnership Agreement (VPA) between the EU and a timber-exporting country outside the EU. Experts said there is an urgent need for timber producing countries to move towards timber certification by first working on a system to assure timber is legally produced. Indonesia has its Timber Legality Assurance System (Indonesian acronym, SVLK) to ensure timber products and raw materials obtained or derived from sources that meet the legal standards. Malaysia has its Timber Legality Assurance System. Myanmar is working on theirs.
Four country profiles

Visits were made in August/September 2015 to Lao PDR, Cambodia, Myanmar and Indonesia to meet government officials and experts. It must be acknowledged that the many officials interviewed were mostly forthcoming in sharing whatever information and data they have. This is important since much of the information and data were not published or readily available (see Appendix 3).

Lao PDR

The Lao People’s Democratic Republic (PDR) has a total land area of about 236,800 km$^2$ and a population of 6.61 million (2005 Census). The nominal GDP is USD 11.676 billion (2014 estimate) and GDP per capita is USD 1,692. The Gini coefficient is medium at 36.7 and poverty rate is 20.5% (UNDP).

Much of Lao PDR is mountainous, which restricts access, communications and the development of modern irrigation systems. The country is divided administratively into 17 provinces and one special zone. These are in turn divided into 138 districts with 11,640 villages and 748,529 households.

Economy and livelihoods

Agricultural production in upland areas is still dominated by subsistence cropping under shifting cultivation, and this can only produce enough rice for seven to nine months of their annual consumption. Rural poverty in the uplands is directly linked to land degradation which resulted from inappropriate agricultural systems.

Farmer families are considered the heart of Lao PDR’s agricultural production. They sustain agriculture’s contribution to the economy of around 30% of the total GDP. An estimated 77% of the total population works in the agriculture sector; most of them are farming families, usually working their own fields. Today Lao farmer families are facing economic hardship and remain vulnerable to the rapidly changing economic world. In the last ten years, Lao PDR has seen a shift from subsistence to market oriented agriculture. Currently, 33% of family farmers are producing mainly for sale (FAO, 2014).

The government has recognised that poverty, alternative livelihoods, food security, and security of land tenure must be addressed before shifting cultivation in the uplands can be managed. This has to be done before the government can focus on conserving the environment.

An estimated 83% of the country’s population is rural and relies heavily on forests for their livelihoods, from food, fuel to building material and NTFPs. The growing competing interests over land and natural resources between local communities and large-scale investments seem a foregone conclusion.
Figure 1. Map of Lao PDR. Land concessions and protected forests

Policies

The Government of Lao PDR considers decentralized forest management a key national strategy to alleviate poverty in the upland areas. A number of policy and legal frameworks and decentralized land management approaches were formulated, adjusted and tested to support these efforts. However, one major deficiency is the limited capacities at the provincial and district levels for carrying out management and development activities. Continued training and establishment of support services are needed at provincial and district levels (Pravongviengkham, 2003).\(^6\)

The Government of Lao PDR undertakes a series of five-year development plans (National Socio-Economic Development Plan, NSEDP) and the current one is the 7th NSEDP (2011-2015). The Plan is

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\(^6\) Deputy Permanent Secretary, Ministry of Agriculture and Forestry, Lao PDR.
expected to create new changes by taking firm steps to graduate from Least Developed Country (LDC) status by 2020, and widen and deepen regional and international integration.

The National Growth and Poverty Eradication Strategy (NGPES) is the framework under which the government plans to develop and implement its initiatives to end poverty and sustain national growth, particularly in the rural areas. The 7th NSEDP targeted a GDP growth of at least 8% annually. And in order to achieve such a high growth, the Plan relies heavily on Foreign Direct Investments (FDI). The FDI are invested in Lao PDR's natural resources: mining, hydropower and plantation sectors of the economy.

This policy of turning land into capital in the development of land-intensive economic activities is one corner stone of Lao PDR's long term development strategy and history might judge this as the double edged sword. It is promoted by both the government and some development partners. At the same time, international markets have encouraged investors from neighbouring China, Vietnam and Thailand to produce agricultural crops in Lao PDR which are in high demand. These investors are attracted by the cheap land and cheap labour (LiWG, 2012).

The NSEDPs have successfully grown the economy more than 7% a year between 2001 and 2011. The high GDP growth has become increasingly capital intensive at the expense of job creation for Laotians and this has created significant income inequality. Some segments of the population have not enjoyed the economic success which came with the growth.

Forest resources

The total forest area in Lao PDR was 15.75 million hectares or 68% of land area in 2000. The reduction of forests was calculated at an average of 78,000 ha/year over the period 2000 – 2010, or a reduction of 0.49% over that period (ITTO, 2011).

The national forest estate is divided into three types:

i. Production Forest Areas. There are 51 such areas which are legally established but very few have been properly demarcated with management plan. The Forestry dept wants to complete national inventories and develop plans for SFM in all 51 areas.

ii. Conservation Forest Areas. There are 21 such areas with a total area of 3.5 million hectares. Provinces and districts have also established their own areas.

iii. Protection Forest Areas. There are 262 State Protection Forests with a total area of 4.76 million ha.

Forest concessions

Since 2000, almost 5% of the territory of Lao PDR (roughly 1.1 million ha) has been leased out, mainly to foreign investors from Vietnam, China and Thailand for mining (50% of the leased area), tree plantations and agriculture. These investments create a risky dependence on export of raw materials and may have limited benefits to the local people (who mainly supply cheap labour). The concessions generate few secure jobs but trigger conflicts over land tenure. Also, the concessions may result in environment problems like pollution, forest loss, monocultures (palm oil, rubber plantations) and increased carbon emissions (CDE, 2013; Heinimann A, 2014).
By 2007, the negative effects like environmental degradation and social conflicts of large scale plantations (and their land clearing) became serious enough for the government of Lao PDR to impose a ban on granting concessions larger than 100 ha. However, more large-scale concessions were soon granted after the ban as, under certain scenarios, conversion activities were allowed. The ban was followed by a moratorium on mining concessions in 2009 and in 2011. The government also set limits on the size of rubber plantations (at 300,000 ha). Another moratorium in June 2012 implied that no new concessions in mining, rubber and Eucalyptus plantations will be considered before the end of 2015 (LIWG, 2012).

A 2012 report shows that only 0.97 million ha of Lao PDR is designated as rice cultivation even though rice is a local staple diet and is the main crop grown in the country. In contrast, 2,642 land deals\(^7\) have been struck covering 1.1 million ha. An analysis of the deals shows that 1,291 deals (covering a total area of 995,005 ha, or 90.5% of the total area) are in the primary sector: agriculture, forestry (tree plantations), and mining (exploitation). The tertiary sector of communications, services/utilities, tourism, transport and wholesale/trade attracted 520 deals (total area 77,557 ha). The secondary sector of construction, electricity and manufacturing/processing attracted 829 deals with a total area of 26,966 ha (Schonweger O, 2012).

The same 2012 report shows the impact of foreign direct investments in land deals and how they play a big part in land conversion (Table 7). In this table, Lao PDR investors include joint-venture companies with foreign equities, as well as local companies (the breakdown is unclear) but their investments are small hectares on average compared to Vietnam, Japan and South Korea.

Table 7. Overview of investment projects in Lao PDR by country

<table>
<thead>
<tr>
<th>Investor country</th>
<th>Number of Deals</th>
<th>Total Area (ha)</th>
<th>Average area (ha)</th>
<th>% of all deals</th>
<th>% of total area</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>299</td>
<td>199,015</td>
<td>777</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>Thailand</td>
<td>127</td>
<td>73,637</td>
<td>701</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Vietnam</td>
<td>191</td>
<td>307,169</td>
<td>1,862</td>
<td>7</td>
<td>28</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>1,705</td>
<td>181,477</td>
<td>117</td>
<td>65</td>
<td>17</td>
</tr>
<tr>
<td>South Korea</td>
<td>75</td>
<td>27,114</td>
<td>405</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Japan</td>
<td>21</td>
<td>29,595</td>
<td>1,480</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>224</td>
<td>278,787</td>
<td>1,245</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td>1,096,794</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Schonweger, 2012.

Local community

Rural communities in Lao PDR have low levels of education and therefore lack the ability to prevent exploitation of their lands. There are reports of officials profiting from land sold at a fraction of the market value, with little or no returns to the villagers. In southern Lao PDR, there are similar reports of companies claiming village and communal lands and then erecting fences to keep communities out; again with little or no compensation (Moore C., 2012). The total area under investment projects

\(^7\) Deals are understood as ‘business arrangements’.
came up to 1,096,794 ha (see Table 6) so the number of rural communities displaced off their land must be substantial.

Land deals with foreigners are generally cast in very negative light but there are shining examples of exemplary behaviour. Stora Enso’s trial plantation project in the Saravane and Savannakhet provinces of Southern Laos was established in 2006 to test growing Eucalyptus and Acacia trees. The trial project is small in size (about 400 ha) but the company is planning to expand to 2000 ha. The land is leased from the local communities. By clearing the land of bombs from the Vietnam war, it creates a safe space for the local communities to grow food and stop doing shifting cultivation. The company also teaches modern cultivating techniques to the locals to improve their productivity. Stora Enso’s efforts in social development could be a best practice for foreign investments in Lao PDR.

**Forest and timber industry**

There is no reliable information on logging licenses, the harvest quota, official harvested volumes and export volumes. By working backwards from the importing countries, it can be deduced that Lao PDR timber exports have grown exponentially from the end of 2000s. Exports increased by eight times from 2009 to 2014, and reached a value of USD 1.7 billion. In 2014, Vietnam and China took 96% of all Lao timber exports by value terms (63% to China and 33% to Vietnam). The sheer volume of undocumented timber suggested that harvesting and transportation were conducted by big companies with implicit ‘permits’. The huge volumes of undocumented timber followed an increase in Chinese and Vietnamese investments in Lao PDR. A WWF study concluded that the permits for harvesting ‘conversion’ timber during development of projects became a legitimate way of obtaining high grade timber (Smirnov, 2015).

Timber exports from Laos almost doubled (89%) in 2011 compared with 2010 and then again in 2013 increasing by 62% compared to 2012 and in 2014 by 70% compared to 2013. The export of timber to China increased 24 times from 2008 to 2014 (from USD 44.7 million to USD 1,045 million). In 2014 it increased by 140% compared to 2013 and China overtook Vietnam as the biggest importer of Lao wood. Imports to Vietnam in the same period increased by 4.2 times from $US 131.7 million to $US 559.5 million (Smirnov, 2015).

An ITTO Report has identified a notable trend in China’s diversification in log sources, with significant supplies also imported in 2013 from Mozambique, Benin, Ghana, Democratic Republic of Congo, Central African Republic, and Lao PDR (ITTO, 2014).

In September 2015, the government prohibited the export of logs and instructed that all timbers must be processed in Lao PDR before exporting. Previously, the government banned the export of logs but exceptions were allowed when the government approved special cases. The government said the ban was to add value to wooden products by processing the timbers before exporting them, while supplying more logs to fulfil increasing demand for raw materials to local wood processing and furniture plants. Some domestic furniture business operators have already suffered from the shortage of timber.

A local newspaper report on 2011 data from the Ministry of Industry and Commerce showed that there were 1175 sawmills, wooden furniture factories and wood processing plants across the
country. The illegal trade in timber topped all cases uncovered in 2014 by the economic police (or police in charge of economic-cases) according to its report. In 2014, the economic police registered 391 illegal cases nationwide including 169 that involved the illegal trade of timber (Vientiane Times, 18 Sep 2015).

The deterioration of forest quality and fragmentation of large forest compartments meant that it would be very difficult to carry out SFM. The prospects of SFM are considered low as the logging quota for 3.5 million ha is set at 150,000 m$^3$ a year. No cutting permits were issued in recent years. All timber exported come from conversion of forests in various activities like mining, plantations, hydropower and infrastructure development.

### Legality and Certification

The national harvesting quotas are set very low. A report in 2011 tabulated the quota for the financial year 2008/9 at a total 150,000 m$^3$, of which 66,270 m$^3$ came from the Production Forest Area, 48,890 m$^3$ from Development Projects (approved by the Prime minister’s Office), 17,840 m$^3$ from Development Projects (approved by Provincial Governors), and 17,000 m$^3$ from Plantation Developments (Barney, 2011). The total annual logging quota for logging season 2013-2014 was only 580,072 m$^3$. According to Mr. Duangdy Outthachak, a member of the National Assembly, who spoke at the 7th ordinary session of the National Assembly in July 2014, “last year the government gave permission for a company to fell trees in Borikhhamxay province, amounting to some 600,000 cubic meters of timber”. The quota for this one company is bigger than the national quota (Smirnov, 2015).

With such a small supply of timber from state forests, it is not surprising that conversion timber is the predominant source of timber in Lao PDR. Illegal logging is reported to be significant. ‘Conversion timber’ is the predominant source of timber in Lao PDR as 1.1 million ha of the country is under some sort of land deal which require clear felling of the forests. Around 60% of timber extracted in 2008 came from quotas in hydroelectric dams and infrastructure projects. It was reported that one million cubic metres were logged to build the Nam Theun 2 dam alone (EIA, 2011).

In 2010, the government showed interest in negotiating a FLEGT VPA with the EU. Since then it has taken preparatory steps with support from international organisations including the European Forest Institute (through its EU FLEGT Facility) and the German Agency for International Cooperation. In September 2015, the Department of Forest Inspection (DoFI), under the Ministry of Agriculture and Forestry, and the World Wide Fund for Nature (WWF), signed a Memorandum of Understanding that aims to enhance Laos’ capacity to ensure domestic and trans-boundary timber flows are compliant with the EU timber regulations. WWF will support the Government in the preparation of a VPA.

A local newspaper which covered the signing ceremony, reported that in 2011 the forestry sector contributed USD 164.2 million to the national economy, which accounted for approximately 2.1% of GDP. The Government has set a target of 70 percent forest cover by 2020 (Vientiane times, 26 Sep. 2015).

The forest concessions in Lao PDR are not designed having in mind production targets under SFM, especially since the logging quota for 3.5 million ha of concessions is set at only 150,000 m$^3$ a year.

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8 http://www.vientianetimes.org.la/FreeContent/FreeContent_Govt_prohibits.htm
9 http://www.vientianetimes.org.la/sub-new/Previous_224s/FreeContent/FreeContent_DoFl.htm
Almost all the timber produced comes from conversion of forests into some other land uses like mining. Vietnam and China are leading foreign direct investors accounting for 46% of all total leased areas.

Cambodia

The Kingdom of Cambodia is roughly 181,035 km$^2$ with a population of 15.5 million (estimated 2014). The nominal GDP is USD 16.551 billion and GDP per capita is USD 1,080. The Gini coefficient is medium at 31.8 and the poverty rate is 19.8% (UNDP).

The nation is mainly low lying plains leading towards the Mekong Delta (Mekong is one of Southeast Asia’s great rivers with a length of 4,350 km). Cambodia has a coastline along the Gulf of Thailand. The climate revolves around the annual monsoons.

Economy

Cambodia is amongst the world’s poorest nations. The majority of rural population are subsistence farmers and it is thought that up to 75% of them are considered landless, and hence depend heavily on access to forest resources for their needs. FAO is implementing a four-year project in partnership with the Ministry of Agriculture, Forestry and Fisheries (MAFF) to improve food security and link smallholders to markets. Sustainable improvement of living standards and income generation in rural Cambodia is constrained by low productivity and profitability and by limited options in crops, livestock and fisheries. Smallholders are constrained by a lack of quality seed, fertiliser, plant protection and grain storage. There is limited mechanisation, lack of access to rural credit, poor market linkages and rural infrastructure. There is also a lack of extension services to provide technical and business advice for the smallholders.

Food security and a high deforestation rate set the background for the Royal Government to implement a National Forest Programme 2010 – 2029. The Royal Government has set significant and strategic goals on food security, income generation, job creation and health through improve productivity, agriculture diversification and trade. In this context, forestry and fisheries are key sectors that need reforms to support the agriculture sector.

Policies

The National Forest Statement of 2002 has recognised the importance of the agriculture sector. Subsequent development of the National Forest Programme was guided by the Forest Law 2002 and the Independent Forest Sector Review (2004), the establishment of the Technical Working Group on Forest and Environment (2004) and the formulation of the Action Plan for Forest and Environment (2007 – 2010). In 2007, a National Forest Programme Task Force was set up which serves as a platform for continued stakeholders dialogue and participation.

The National Forest Programme 2010 – 2029 (NFP) established a policy framework and strategy for sustainable management of Cambodia’s forests. It has detailed action plans with implementation based on a participatory approach. The NFP laid down approaches to reduce carbon emissions from deforestation and forest degradation.
**Forest resources**

The forest cover in Cambodia has been declining rapidly in recent decades due to logging, forest fires, land grabbing, encroachment, intensified shifting cultivation and expansion of cash cropping like rubber, cashew and cassava.

The total forest area in Cambodia was 10.09 million hectares or 57% of land area in 2000. The reduction of forests was calculated at an average of 145,000 ha/year over the period 2000 – 2010, or a reduction of 1.33% over that period (ITTO, 2011). As a consequence of this loss of forest cover, Cambodia is classified as a “high forest cover, high deforestation country” under REDD+.

**Forest concessions**

There is no better introduction to this complex and seemingly root of many land conflict problems facing Cambodia today than by quoting a statement made by the UN Special Rapporteur on the Human Rights situation in Cambodia (Subedi, 2012)\(^\text{10}\).

“At the outset, it should be noted that historical circumstances, including the policies of the Khmer Rouge regime and the widespread destruction and dislocation left in the wake of Cambodia’s lengthy civil war, have led to the proliferation of land disputes that the Government is trying to manage. Furthermore, it should also be noted that Cambodia as a developing country may wish to prioritize utilization of its land and natural resources in order for the country to develop and become more prosperous”.

The Rapporteur went on to say that the uneven access to information has contributed to concessions benefiting only a minority and a proliferation of land related conflicts which has the potential to contribute to instability.

During the Pol Pot regime, the Khmer Rouge abolished private ownership of property and destroyed all official land records. At this time, all the land belonged to the State and there were no private owners. After the Khmer Rouge fell, and for the next ten years, the right to own land was still not recognized and all land was owned by the State. This began to change towards the end of the 1980s, and in 1992, a Land Law was passed that recognized the right of all Cambodians to privately own and transfer land.

\(^\text{10}\) UN doc A/HRC/21/63/Add.1/Rev 1
In the early 1990s, Cambodia was fast changing from a centrally planned economy to a market economy. After the first general elections in 1993, the Royal Government of Cambodia (RGC) created more than 30 forestry concessions covering about 6.5 million ha. These were to be exploited by private companies.

A new Land Law was passed in 2001. Under this law, land in Cambodia is divided into three main classifications: State Property, Private Property and Collective Property. State property is divided into State public and State private property. Collective property is divided into monastery and indigenous community property (Grimsditch, 2013). Private forest concessions were cancelled in 2002 (after the Land Law was enacted in 2001) and the land reverted back to the RGC as “State public land”.

Economic Land Concessions (ELC) and Social Land Concessions (SLC) are important pillars in the 2001 Land law when international development banks pressured Cambodia to modernise its legal system. There are three types of concessions in this Land law: Economic (for agro-industrial use), Social (for residential and subsistence use), and others (e.g. Mining or industrial developments). Under this law, individuals and corporations can apply to occupy land as a concessionaire (Neef, 2013).

ELC allows a company to lease State private land for large scale farming known as “industrial agriculture”. ELCs can be granted for plantations, raising animals and building factories to process agricultural products. ELCs were granted for growing corn, sugar, cassava, pig breeding and processing factories. The Ministry of Agriculture, Forestry and Fisheries (MAFF) is responsible for granting ELCs.
There is conflicting data on the actual number of ELCs. The MAFF website lists all ELCs granted but it was last updated 08 June 2012, the Ministry of Environment (MoE) issues ELC under Protected Area Law (2008), the World Conservation Monitoring Centre has a different number of ELCs, and Open Development Cambodia (ODC) maintains a website of relevant data (see Table 8).

The law requires an EIA report to be completed before approval of a ELC. This is stated in Sub-decree No.146 on Economic Land Concessions 2005, Article 4(3). There is little evidence of compliance.

**Table 8. Economic Land Concessions**

<table>
<thead>
<tr>
<th>Source</th>
<th>Number</th>
<th>Area (million ha)</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODC</td>
<td>301</td>
<td>2.11</td>
<td>ODC, 2015</td>
</tr>
<tr>
<td>MAFF</td>
<td>118</td>
<td>1.20</td>
<td>MAFF, 8 Jun 2012</td>
</tr>
<tr>
<td>MoE</td>
<td>87</td>
<td>0.483</td>
<td>GIS-MoE, 2014</td>
</tr>
<tr>
<td>UNEP – WCMC</td>
<td>160</td>
<td>1.70</td>
<td>UNEP, 2010</td>
</tr>
</tbody>
</table>

Source: Delux, 2015

SLC is a concession granted to people who are landless or do not have enough land. This type of concession can be used to grant residential or agriculture land to the poor. Examples of SLCs granted include plantations of corn, cassava, cashew, sugar, rice, rubber, palm oil and castor oil. SLCs were also granted for pig breeding and tree plantations.

Outside SLCs, local communities face an uphill battle to get formal recognition of their tenure rights. Land titling is increasingly being promoted (by FAO, World Bank and others) as a way to encourage responsible agriculture investments by enhancing vulnerable communities’ land tenure. It has been suggested that a countrywide systematic land registration could help safeguard smallholders against land grabbing. However, the slow process in Cambodia has instead seen an avoidance of ‘potentially disputed’ areas by concentrating the land titling process in densely populated areas where people’s tenure was more less already secured. Land titling has not challenge the bigger economic interests for the benefit of communities (Dwyer, 2015).

There have been strong criticisms that ELCs and SLCs have been abused to enrich a selected few in Cambodia. The alleged severity of this abuse has evoked strong languages, for example “A kleptocratic elite is stripping Cambodia’s forests” (Global Witness, 2007). Global Witness went on to list powerful logging syndicates with suggestions that some “senior officials are directly responsible for corruption within the institutions that they head”.

Apart from stripping of the forests, there are also accusations of ‘land grabbing’ in Cambodia. Land grabbing has caused severe social unrests due to its strong impacts on livelihoods, especially of the poor in rural areas.

Local community

A report on land grabbing in Cambodia documents how affected communities have lost their livelihoods because of land grabbing by national and international corporations. Local communities have not been consulted and they have received little or no compensation for their loss. The
communities have been evicted from their land and have faced systematic human rights violations (Haakansson, 2011).

A well documented example of land grabbing is the case of Koh Kong Sugar Plantations (September 2006). At least 459 families and over 5,000 ha of community land in Sre Ambel and Botumsakor Districts in Koh Kong province (southwest Cambodia) have been affected by a sugar plantation producing sugar for the European Union. Villagers have tried to lodge complaints with various levels of RGC, and even up to the National Assembly, but to no avail. Armed guards are now keeping villagers out of the claimed land. Military police accompanying demolition crews were reported to firing shots. Several protestors were wounded (Haakansson, 2011).

APRODEV\(^{11}\) summarised that ELCs are a major cause of land disputes. By 2014, APRODEV has recorded 86 disputes caused by ELCs which affected 17,150 households or 78,890 people. There were 270 disputes with indigenous people and five forced displacements in 2014. In recent years, the RGC has introduced new policies and legal frameworks to address land and natural resources so as to improve implementation procedures to minimise land disputes.

Most, if not all, the disputes came about from the confusion caused by differing agencies granting concessions. ELCs are granted by MAFF, MoE, and the Ministry of Mine and Energy for various economic activities like agriculture, mining, tourism and conservation.

In May 2012, the Prime Minister issued Directive 01 on ‘Measures to strengthen and enhance the effectiveness of management of Economic Land Concessions’. The same directive announced a moratorium on the granting of new ELCs and a review of existing ELCs. This review aimed at granting land titles to 470,000 households on 1.8 million ha living in ELCs and forest concessions. Directive 01 calls for increased monitoring of ELCs and seeks to resolve and legalise unclear land occupation by granting of small scale ELCs or SLCs.

**Forest and timber industry**

Currently there are 3.3 million ha of land covered by valid forest concessions. The Forest Administration, under MAFF, allocates annual coupes which are open for bidding by the private sector to carry out logging. There was only one coupe permit in 2012 within the production forests which produced a insignificant supply of timber. It is unclear what the future will be for these valid forest concessions since the moratorium effectively stopped all official logging. However, timber is being produced in ELCs (see Table 9).

**Table 9.** Log production 2007 – 2011 (in m\(^{3}\))

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logs (domestic coupe)</td>
<td>1,408</td>
<td>7,188</td>
<td>10,070</td>
<td>5,443</td>
<td>6,542</td>
</tr>
<tr>
<td>Logs (ELCs)</td>
<td>13,491</td>
<td>31,049</td>
<td>37,113</td>
<td>48,644</td>
<td>135,728</td>
</tr>
<tr>
<td>Round logs, total</td>
<td>16,326</td>
<td>38,428</td>
<td>47,184</td>
<td>54,087</td>
<td>143,456</td>
</tr>
</tbody>
</table>


\(^{11}\) APRODEV, Association of World Council of Churches related Development Organisations in Europe, based in Brussels.
Illegal logging has been reported over the years in Cambodia. A report in June 2007 indicated that over the period 2003 to 2006 Cambodia official records showed no exports of sawntimber to China. But import records in China showed 154,000 m$^3$ of sawntimber was imported from Cambodia. Similarly, for plywood Cambodia showed no exports while China records showed 28,1000 m$^3$ of plywood were imported from Cambodia. The estimated tax revenue loss for this batch of smuggling was USD 4.5 million (Global Witness, 2007).

More recently a long article in the Cambodia Daily (14 Jul 2014) detailed illegal activities in the timber trade. Seized illegally sourced timber was supposed to be auctioned publicly but there was no evidence such auctions took place. The newspaper reported that the government officials charged with running the auctions refused to provide a full explanation of the process, while tens of millions of dollars worth of timber were allegedly sold to a businessman at bargain prices.\textsuperscript{12}

\textbf{Legality and certification}

The Royal Government of Cambodia has decided to tackle the issues and problems related to land concession first before it tackles those of logging. There is an ongoing process in Cambodia to address the legality of ELCs granted in part to address the grievances of the villagers. In September 2013, Cambodia elected a new Minister of Environment who discovered that there were many problems with ELCs. At that time, the Ministry of Environment controlled 113 ELCs that were issued previously. These ELCs cover projects mostly in the agro-industry like rubber, cassava, cashew nuts, etc. but there were a few for special economic zone, some for tourism and three for conservation projects to be run by private companies.

The Ministry of Environment admitted that there were problems caused by impacts of the ELCs on the local community. It was discovered that some ELCs were granted over land which had local communities and even entire villages when it was assumed to be inhabited by virtue of the fact that the areas were made into protected areas by Royal Decree in 1993. In many cases the Ministry did not demarcate the area properly on the ground too. So the granting of ELCs was assumed to be done at the ‘office level’ without ground survey. Some officials implied that the civil war prevented demarcation on the ground.

The Ministry of Environment initiated a process of review into the existing ELCs. In addition, MAFF and MoE signed an Inter-Ministerial Proclamation (‘prakas’) on strengthening ELC management on 09 May 2014 which was aimed at reducing land disputes. An Inter-Ministerial Committee was formed to monitor and assess the ELCs. Chaired by the Deputy Prime Minister, the committee comprises representatives from the following:

1. Ministry of Environment
2. Ministry of Agriculture, Forestry and Fisheries
3. Ministry of Land Management, Urban Planning and Construction
4. Ministry of Economy and Finance
5. Ministry of Water Resources and Meteorology
6. Ministry of Mining Industry and Energy

\textsuperscript{12}https://www.cambodiadaily.com/archives/how-cambodias-secretive-timber-auctions-are-fueling-the-illegal-logging-trade-63919/
The committee would review all the ELCs and assess their performances against what were proposed in the projects. It was assumed that such monitoring would - as a senior Ministry official said - “calm down the situation” over conflicts with local communities by solving some of the problems. The committee has been meeting once a week and given the workload involving so many agencies and ELCs, the committee is still optimistic that they can finish their work by the end of 2015.

Initial reports indicated that of the 113 ELCs under the Ministry of Environment, 23 were cancelled by the RGC for not following the approved procedures to develop or implement the projects. Four ELCs were voluntarily surrendered back to the government. A further 28 ELCs were given 6-12 months to prove their ability to carry on with the proposed projects.

**Myanmar**

Myanmar is the largest country in mainland Southeast Asia with a total land area of 676,577 km². The population in the 2014 census was 51,486,253. The nominal GDP is USD 65.291 billion (2014 estimate) and GDP per capita is USD 1,269. The poverty rate is 26% (UNDP).

The physical geography of the country is structurally complex and diverse with a topography of steep mountain ranges (highest is Mt Hkakaborazi, 5,881 m) to the north and northwest, running to upland plateaus and hill valleys in the eastern regions. The undulating central dry zone stretches to the lowland delta region and a narrow coastal strip further south adjoining Thailand.

Apart from the higher uplands in the northern region, the climate of Myanmar can be classified as tropical monsoonal although important regional variations occur within the country. The average annual rainfall is as high as 2,500 mm in some parts, especially the coastal areas, but as low as 500 mm in the central dry zone.

**Economy**

Myanmar is basically an agricultural country and accordingly the agriculture sector has been designated as the main pillar of the country’s economy. More than 70% of the population live in rural areas. The country is 47% covered with forests, all owned by the State. All teak trees are owned by the state no matter where they are growing.

In July and August 2015, there was severe flooding and landslides in Myanmar. These disasters displaced 1.6 million people, caused almost 120 deaths and damaged agriculture and infrastructure. But the country’s economy as a whole continues to expand at a robust pace on investment stimulated by structural reform and generally strong domestic demand.

**Figure 3. Map of Myanmar. Landuse and forest cover**
Since a new era of civilian rule in 2011, there were claims of widespread land grabbing. By 2013, 2.15 million ha of land had been leased out to investors for commercial agriculture, the majority without the consent of its owners. Rubber plantations alone cover more than a quarter of this leased area. This rush for land is decimating the livelihoods of Myanmar’s people, 70% of whom rely on farmlands (Global Witness, 2015).

There is expectation that a long awaited new Land Law might solve many of the problems caused by overlapping land use. There is an ongoing process of national consultation with all stakeholders on a land use policy. In July 2015, the Sixth Draft\textsuperscript{13} of the National Land Use Policy was discussed with stakeholders in Nay Pyi Taw.

The policy document is thorough. The following is a list of the chapter headings:

\textsuperscript{13} The Sixth draft is available at http://www.fdmoecaf.gov.mm/documents
Objectives and Basic Principles
Land Use Administration
Planning and Changing Land Use
Grants and Leases of Land at the disposal of the Government
Procedures Related to Land Acquisition, Relocation, Vompensation, Rehabilitation and Restitution
Land Dispute Resolution and Appeal
Assessment and Collection of Land Tax, Land Transfer Fee and Stamp Duties
Land Use Rights of Ethnic Nationalities
Equal Rights of Man and Woman
Harmonisation of Laws and Enacting New Law
Monitoring and Evaluation
Research and Development

It is commendable that the Government of Myanmar has allowed and encouraged open discussions on this important Land Use Policy, when many thought just a few years ago the military government would have cracked down on such a move.

In Nay Pyi Taw, the civil society and activists were concerned over ‘market-based solutions’ and ‘contract farming’ in the documents, though both sides seemingly adopted the free prior informed consent approach in land use. Civil societies are highlighting the need to ensure benefits go to the landless, remedy historical injustices, promote rights to women to own land, promote rights of ethnic minority groups, and public support to build diverse and sustainable livelihoods (TNI, 2015).

Forest resources

In 1990, Myanmar had 39.22 million hectares of forests, and in 2000 the forest cover dropped to 34.55 million ha. By 2005, the cover was down to 32.22 million ha and in 2010 it reached 31.77 million ha (FRA, 2010) (Table 10). The country has the highest rate of forest loss in Southeast Asia.

WWF has claimed that the principal driver of forest loss in Myanmar is large-scale conversion for agriculture or aquaculture. The forests that are converted have often been degraded by fuel wood collection or logging. Other drivers of forest loss include shifting cultivation, conversion to commercial rubber or oil palm plantations, and mining. Oil palm is reportedly driving rapid deforestation in some areas (WWF, 2014)14.

Table 10. Myanmar’s forest types and area

<table>
<thead>
<tr>
<th>Forest type</th>
<th>Area ('000 ha)</th>
<th>% total forests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mangrove forests</td>
<td>467.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Tropical evergreen forests</td>
<td>5,470.6</td>
<td>17.2</td>
</tr>
<tr>
<td>Mixed deciduous forests</td>
<td>12,157.3</td>
<td>38.3</td>
</tr>
<tr>
<td>Dry forests</td>
<td>3,114.7</td>
<td>9.8</td>
</tr>
<tr>
<td>Dipterocarp forests</td>
<td>1,321.9</td>
<td>4.2</td>
</tr>
<tr>
<td>Hill and temperate evergreen</td>
<td>8,541.2</td>
<td>26.9</td>
</tr>
</tbody>
</table>

14 https://shar.es/17vZDn
### Table 11. Status of permanent forest estate in Myanmar

<table>
<thead>
<tr>
<th>Category</th>
<th>Area (km$^2$)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFE</td>
<td>197,899.4</td>
<td>30.7</td>
</tr>
<tr>
<td>Reserved Forests</td>
<td>121,842.9</td>
<td>18.0</td>
</tr>
<tr>
<td>Protected Public Forests</td>
<td>40,949.6</td>
<td>6.1</td>
</tr>
<tr>
<td>Protected Area System</td>
<td>35,106.9</td>
<td>6.7</td>
</tr>
</tbody>
</table>


### Forest concessions

Land conversions, particularly with large industrial estates and plantations, are significant sources of ‘conversion timber’. About 2.10 million ha of agricultural concessions throughout the country have been awarded to predominantly Myanmar companies by July 2013 (Woods, 2013).

Most of the agricultural concessions are located in two of the most forested regions in the country (Tanintharyi region and Kachin State). These concessions are mainly for production of biofuel and rubber, so it can be assumed that forest clear cutting is taking place. Data published quoting sources from the Department of Agriculture showed that by July 2013, agricultural concessions totalled 484,351 ha. Of that total area, only 23% was actually planted (Woods, 2013).

### Local community

In the 1990s, the authorities recognised that local communities in the villages could be mobilised to protect and regenerate adjacent forests while ensuring their supply of non-timber forest products are sustained. Community Forestry was encouraged when the 1992 Forest Law and the 1995 Forest Policy enabled the 1995 Community Forestry Instruction (CFI).

Implementation of the CFI began immediately, and was promoted by international donor projects (e.g. UNDP, JICA, DFID) as well as through the Myanmar Forest Dept, and in some cases by the community organizations. Implementation received a major boost through the Forestry Master Plan (2001) which mandated that 5.51 mil. ha (1.36% of the country) be handed over to local communities or Forest User Groups (FUG) by 2030-31.

The annual progress of community forestry establishment since 1995 had averaged 2,810 ha, and there are now 572 Forest Users Groups with certificates, managing 42,146 ha of forest. However, the rate of Community Forestry handover has been far lower than that needed to meet the Master Plan’s 30-year target (which is 918,636 ha by 2030).

The Forest Dept also aims to obtain 4.13 million m$^3$ of wood fuel from community forests, amounting to 25% of the country’s total wood fuel requirement of 16.53 million m$^3$ by 2030, another target unlikely to be achieved at the current rate (Tint, 2011).
Forest and timber industry

Scientific forest management in the tropics began in Myanmar around 1856 when the “Exploitation cum Cultural System” was established by Dr Dietrich Brandis, and subsequently called the Brandis Selection System. The Brandis system was later modified into the Myanmar Selective System (MSS) which laid the foundation for other selective systems in Southeast Asia in later years. The main objectives of the MSS are to harvest annual yield on a sustainable basis and to work out estimated future yield.

The MSS is still used in Myanmar natural forests and is based on an identified Annual Allowable Cut (AAC), girth limit and a 30-year felling cycle. The fundamentals of the MSS are:

- Fixing AAC.
- Forecasting future AAC obtaining composition and densities of tree species in the forests.
- Improving forests by climber cutting, improvement felling, thinning and broadcasting of teak seeds.
- Improving natural regeneration by selection of sound trees as seed bearers.
- Improving natural regeneration of forest by coppicing of desirable species and cutting undesirable species.

For many years, Myanmar has been known as a producer of tropical timber, especially its famous teak; however, for the past two decades the country has been the centre of the world’s attention for deforestation.

The Ministry of Environmental Conservation and Forestry (MOECAF) placed a ban on log exports in April 2014, and also lowered the ACC for teak from the previous 540,600 to 108,120 m³ (Myanmar measures logs in hoppus tons)\(^\text{15}\); and for other hardwood species, from 3,604,000 to 1,081,200 m³. This significant reduction in production will contribute to Myanmar’s progress towards sustainable forest management but there are other challenges which are outside the realms of commercial forestry.

The most common accusation is that Myanmar has extracted logs much more than its sustainable yield. There was consistent over-harvesting for a number of years during the Military Rule. Even though the official forest management system was based on a pre-defined AAC, in reality the actual production of logs was based on revenue targets set by the then Ministry of Forestry, and placed upon the Myanmar Timber Enterprise (MTE) to carry out. (In September 2011, the Ministry of Forests was combined with the Ministry of Environment to form the current MOECAF).

Hardwood log exports have been growing by volume, and even more by value since the new government took office in 2011. Between 2011 and 2013, the volume of timber product exports jumped from about 2.7 to over 3.3 million m³, with values increasing from just over USD 1 billion to about USD 1.6 billion. Much of Myanmar’s timber is no longer sourced from historical harvesting areas as domestic private companies are clear-cutting forests for agribusiness, mining, and hydropower sites, and special economic zones (Woods, 2015).

\(^{15}\) 1 hoppus ton = 1.802 cubic metre.
Legality and certification

There are currently five recognised ways of sourcing logs, each with varying degrees of legality, land rights regimes, ethnic sourcing and sustainability (Woods, 2013):

- State-managed (MTE) forests, largely consisting of teak;
- Logging concessions in natural forests, mostly in ethnic conflict areas;
- Land conversion in natural forests predominately driven by agribusiness concessions, mostly (but not exclusively) in ethnic areas, and also known as ‘conversion timber’;
- Tree plantations, which is very limited in extent so far due to a host of political and economic factors; and
- Community forests, which so far are not allowed to conduct commercial harvesting.

The structure of MOECAF is divided into four departments: Forest Dept, Dry Zone Greening Dept, Environmental Conservation Dept, and Survey Dept. The Myanmar Timber Enterprise (MTE) is the fifth arm of MOECAF which is solely responsible for harvesting, processing and marketing of timber. MTE manages 39 extracting agencies, sawmills (nine for exports and 58 for domestic markets), and wood based industries (four plywood mills, three veneer mills, nine furniture factories and three moulding factories). MTE adopts RIL principles in its harvesting, which includes using elephants for stumping and dragging. However, there is no independent third party monitoring and there is no assurance of compliance.

While it was observed that forest management on the ground was not implemented strictly according to the MSS, forest degradation and deforestation were due not only to logging activities but to other factors:

- illegal logging (inside and around border area);
- conflict in land use due to dam construction, mining, and plantation (rubber and palm oil plantation); and
- production of fuel wood. Some think this can be as much as 20 million m³ a year, considering the size of the rural population.

The process of timber certification started in Myanmar with a government decree in 1998 made by MOECAF, and the Timber Certification Committee of Myanmar (TCCM) was established. TCCM later changed to Myanmar Forest Certification Committee (MFCC) to cover all aspects of the forest certification process. The Myanmar criteria and indicators (C&I) for natural forest certification was developed based on ITTO C&I 2007, and it is currently being revised. The chain-of-custody was developed based on ASEAN guidelines. Presently, Myanmar is developing its C&I for forest plantation.

Though MFCC develops and operates an independent Myanmar Forest Certification Scheme (MFCS), MFCC still needs the Myanmar Dept of Standards as the National Accreditation body to accredit Certification Bodies. So far, the Dept of Standards is still re-organising itself for this new role.

There is an urgent need for a chain-of-custody to be set up and operating in order to control the mixing of timber from various sources. Since the government does not differentiate the sources of timber set aside for exports, any intention of exporting to Europe and America will have big issues
with proof of legality. As it is, all timber is considered legal if it has the stamp of MTE and exported through the ports of Yangon, and any timber exported through the land border with China and Thailand is considered questionable. Such an arrangement will need to improve considerably in order to meet the stringent conditions of EU TR or the Lacey Act.

Local experts working on timber certification say the major challenges to forestry are demographic pressure, expansion of agriculture into forest area, shifting cultivation, excessive use of fuel wood, over exploitation of timber and illegal logging.

In July 2015, a court in Myanmar’s northern Kachin State, bordering China, handed down severe penalties, of up to 20 years in prison, to 155 Chinese nationals for illegal logging. Many were surprised at the severity of punishment though eventually the Chinese government formally intervened for a pardon.

Claims of widespread land grabbing came with the start of civilian rule in 2011. By 2013, 2.15 million ha of land was leased out with a quarter of that alone for rubber planting. However, a National Land Use Policy is close to acceptance and will be converted into a new land law. Much will depend on the national general elections in Nov 2015.

**Indonesia**

The Republic of Indonesia has a total land area of 1,904,569 km² and a population of 237,424,363 (2011 Census). The nominal GDP is USD 895.677 billion (2015 estimate) and GDP per capita is USD 3,511. The Gini coefficient is medium at 35.6 and the poverty rate is 11.4% (UNDP).

Indonesia is characterised by its large number of islands: 17,508 in total, of which around 6,000 are inhabited. The country is divided into 34 provinces, each with its own laws and Governor. The provinces are further divided into districts for administration purposes.

**Economy and livelihoods**

Commodities form one of the mainstays in Indonesia’s economy as a major contributor of foreign exchange and national income as well as job creation for the world’s fourth most populous country. The total contribution of commodities to the nation reached USD 45.54 billion in 2013. This was made up of plantation commodity (USD 36.64 billion) - of which palm oil contributed USD 19.0 billion -, tobacco excise tax USD (8.63 billion), and the balance of USD 1.26 billion came from duties on Crude Palm Oil and Cocoa beans. The 2013 contribution was 27.8% higher than 2012 (Directorate of Plantations Report, 13 Jan 2015)\(^{16}\).

The drive towards production of commodities is partly due to the ‘Master Plan for the Acceleration and Expansion of Indonesia’s Economic Development’ (referred to as MP3EI) launched by the Ministry for Economic Affairs in 2011. MP3EI sets out the roadmap towards achieving an annual GDP growth of 12.7% to raise the national GDP up to USD 4.5 trillion by year 2025, with accompanying per capita income of USD 15,500. This ambitious plan would bring Indonesia into the world’s top ten largest economies. The plan encourages investments in the expansion of plantations for timber, oil palm and food crops, and in natural resource extractions, particularly logging and mining.

Policies

During the 1997 Asian Financial Crisis, the World Bank and IMF imposed strict conditions on Indonesia for a financial support package of USD 40 billion. Indonesia’s economic instability at that time was reinforced by its political instability. By May 1998 the President resigned and was succeeded by his deputy.

Decentralisation

One of the conditions imposed on Indonesia for the financial support was to decentralise its government machinery. Another condition was to remove the then existing ban on log exports. It was a far reaching process which devolved much of the authority over land-use to the provincial levels, including the semi-autonomous district and municipal governments. This led to a series of issues related to environment management, conflicts of authority and a shortage of appropriate capacity, resources and funding and a lack of political accountability of local officials. These abuses eventually created a network of rent seekers (Anderson, 2015).

Figure 4. Map of Indonesia. Forest Areas.

Source: DG Forest Planning, Department of Forestry 2014

Moratorium on new concessions

In May 2012, Indonesia decreed a two-year moratorium on the issuance of new forest concessions for logging, oil palm plantations, and wood-fibre plantations as part of a USD 1 billion Indonesia – Norway REDD+ deal. The USD 1 billion was Norway’s contribution to the development and implementation of a REDD+ programme in Indonesia. The moratorium covered an area of 65 million ha though most of that was already protected. The moratorium was extended for another two years to allow the government time to improve land use planning and perform data collection and information systems, and work towards Indonesia’s low emissions development goals. Essentially, it gave the government time to harmonise maps from differing agencies with differing data sets.
In September 2013, a Presidential decree established the ‘Managing Agency for the Reduction of Emissions from Deforestation and Degradation of Forest and Peatlands’, and since then a number of provinces have developed strategies and action plans for implementing REDD+. However, in January 2015 another Presidential Decree (No 16,2015) closed down the Agency. The National Council on Climate Change was also closed down and together with the former REDD+ Agency has been absorbed into the new Ministry of Environment and Forestry (MOEF), under the new Directorate General of Climate Change. While the work is essentially carried out by the same officials in a new office, it remains to be seen whether this move will improve their performance or the perceived lowering of priority will be a hindrance.

One Map

Indonesia officially implemented the ‘One Map policy’ in December 2014 to help resolve disagreements resulting from the use of different data and maps that had often caused land disputes and overlapping permits for plantation and mining operations. The Geospatial Information Agency (Indonesian acronym, BIG) was tasked with the standardization of the existing maps. This is expected to clarify concession boundaries and to help make companies accountable for their actions within their boundaries. However, progress is reportedly slow. It took three years before the government was able to fulfill its mandate for implementing the one-map policy, as stipulated in Law No. 4/2011 on geospatial information. Work is in progress as other sectors are feeding in the thematic maps.

Forest resources

Out of the 190.5 million ha of land in Indonesia, 126 million ha (66% of total area) are managed by the MoEF and local governments. Production forests cover 69.0 million ha, conservation forests 27.4 million ha and protected forests 29.6 million ha. MoEF has direct control over 49.8 million ha which are licensed (see Table 12). Another 10.2 million ha of land are licensed for oil palm cultivation. Forestry and oil palm concessions together make up 31.4% of the entire country.

Table 12. Indonesia's forest area and forest classification

<table>
<thead>
<tr>
<th>Category</th>
<th>ha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation Forests</td>
<td>27,429,535</td>
</tr>
<tr>
<td>Protected Forests</td>
<td>29,629,349</td>
</tr>
<tr>
<td>Production Forests</td>
<td>69,035,456</td>
</tr>
<tr>
<td>Limited production Forests</td>
<td>26,798,373</td>
</tr>
<tr>
<td>Permanent production. Forests</td>
<td>29,294,799</td>
</tr>
<tr>
<td>Forests for Conversion</td>
<td>12,942,284</td>
</tr>
<tr>
<td>Total</td>
<td>126,094,341</td>
</tr>
<tr>
<td>Natural Forests</td>
<td>20,218,418</td>
</tr>
<tr>
<td>Industrial Plantations</td>
<td>10,647,017</td>
</tr>
<tr>
<td>Ecosystem Restoration</td>
<td>515,270</td>
</tr>
<tr>
<td>NTFP</td>
<td>304,936</td>
</tr>
</tbody>
</table>

Source: DepHut, 2015.

The challenge is forest loss due to a variety of reasons, from agriculture conversion to forest fires (which is very significant). According to official Ministry of Forestry maps, Indonesia lost at least
1,240,000 ha of forest over the period 2009 to 2011. Half of this took place in just three provinces: Central Kalimantan (296,000 ha), Riau (230,000 ha) and West Kalimantan (95,000 ha) (Greenpeace, 2013).

**Forest concessions**

The total area of industrial concessions occupies over 56 million ha, including logging, oil palm, fibre, mining and mixed (Table 13).

**Table 13.** Area under industrial concessions in Indonesia

<table>
<thead>
<tr>
<th>Regions</th>
<th>Land area (ha)</th>
<th>Oil Palm</th>
<th>Logging</th>
<th>Fibre</th>
<th>Mining</th>
<th>Mixed</th>
<th>All Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kalimantan</td>
<td>53,602,272</td>
<td>8,367,206</td>
<td>9,129,299</td>
<td>4,242,584</td>
<td>2,538,180</td>
<td>4,737,105</td>
<td>29,077,375</td>
</tr>
<tr>
<td>Sumatra</td>
<td>47,639,870</td>
<td>3,099,060</td>
<td>1,368,171</td>
<td>4,467,859</td>
<td>1,583,892</td>
<td>767,572</td>
<td>11,286,553</td>
</tr>
<tr>
<td>Papua</td>
<td>41,505,929</td>
<td>416,636</td>
<td>10,442,780</td>
<td>1,412,020</td>
<td>N/A</td>
<td>275,783</td>
<td>12,547,219</td>
</tr>
<tr>
<td>Sulawesi</td>
<td>18,738,282</td>
<td>249,154</td>
<td>1,663,584</td>
<td>441,988</td>
<td>N/A</td>
<td>24,141</td>
<td>2,378,868</td>
</tr>
<tr>
<td>Moluccus</td>
<td>7,884,757</td>
<td>0</td>
<td>1,325,608</td>
<td>44,330</td>
<td>N/A</td>
<td>0</td>
<td>1,369,939</td>
</tr>
<tr>
<td>Total</td>
<td>169,371,110</td>
<td>12,132,057</td>
<td>23,992,442</td>
<td>10,608,782</td>
<td>4,122,072</td>
<td>5,804,600</td>
<td>56,659,954</td>
</tr>
</tbody>
</table>


Table 13 does not include some agricultural crops like coffee. Indonesia is the fourth largest coffee producer after Brazil, Vietnam and Colombia. The country currently has around 1.1 million ha of coffee plantations, with production volume rising from around 400,000 tons a year in the 1990s to level out at around 650,000 tons since 2002, according to data from GAEKI (Indonesian Coffee Exporters’ Associations) and the Agriculture Ministry. Of the total coffee plantation area, 96% is cultivated by small farmers and the remainder is run by private and state-owned companies, with only around 77% of the land deemed productive. GAEKI said recently that the government needed to provide more land to grow coffee and intensify production if it wanted to overtake Brazil (Jakarta Post. 29 Sep 2015)17.

**Oil palm concessions**

The area under oil palm in 1990 was about one million ha. This doubled by 1995 with records showing 658,000 ha owned by smallholders, 962,000 ha by private estates and 405,000 ha by the government. Between 1995 and 2000, the area under oil palm doubled to 4,158,077 ha and by 2010 it had doubled again to 8,385,394 ha. Indonesia overtook Malaysia in 2006 as the world’s largest palm oil producer.

In 2013, most of the oil palm was grown on Sumatra (64.1%) and Kalimantan (32.0%) with a smaller portion on Sulawesi (2.9%) and the rest in Papua and elsewhere. The palm oil industry in Indonesia is dominated by very big groups of companies with the government owned estates forming only 6.9% of the areas under oil palm. Smallholders account for a significant 44.1% of the area but with lower

yields, they account for only 34% of the production. The Directorate of Plantations estimated a total area of 10.2 million ha under oil palm in 2014.

**Local community**

There are many reports and publications detailing illegal logging, deforestation, land disputes, social injustices, etc., all seemingly caused by or at least related to concessions of forests and oil palm. Since 1900 the country has lost half of its forests. Almost all the lost forests are traditional land of the local communities. In recent times, transmigration, logging, tree and oil palm plantations, and other agriculture are the main drivers of the forest losses. Consequently there is a proliferation of land conflicts between companies and local communities (Colchester, 2014).

The constitutional court decision No. 35/PUU-X/2012 is considered a major victory for the indigenous people of Indonesia. *Aliansi Maeyarakat Adat Nusantara* or AMAN, a local social movement of indigenous peoples in Indonesia, said that there are two significant conclusions from this landmark decision: (1) the first relates to indigenous peoples’ rights over indigenous territories, or in this case, customary forest. And (2) it reaffirms the provisions for determining the existence of indigenous peoples in an area as provided in the 1945 Constitution of the Republic of Indonesia (which has five provisions for determining the existence of indigenous peoples).

AMAN and other civil society bodies working with local communities understood that the decision No. 35/PUU-X/2012 means a concession cannot be given over forests which are claimed by indigenous peoples, especially by making sweeping statements that there are no indigenous peoples living in the area. However, there are claims that the MoEF and other ministries are slow to incorporate this decision into their work scope and some land disputes continue on the ground.

**Forest and timber industry**

The objectives of SFM are stated in the Forestry Law Mo 41/1999, whose Article 2 spells out that implementation is based on benefits and sustainable forestry, democracy, justice, solidarity, openness and integrity.

However, there are challenges for executing this law. SFM has been under discussion since the mid-1980s. Policy discussions to promote SFM in Indonesia have focused almost exclusively on reforming the *Hak Pengusahaan Hutan* (HPH) or Forest Concessions and Forest Exploitation Rights. Policy analysts advocating the reform of the HPH system have prioritised three objectives (Personal communication, Johan Kieft. 15 Sep 2015):

- Increase the government’s capacity to enforce the technical aspects of SFM.
- Significant increase in timber royalties and fees to halt flow of resource rents.
- Lifting the prohibitive restrictions on log exports (in place since 8 Oct 2001).

Currently, under the license scheme, timber can be used commercially from natural forests (IUPHHK-HA) and plantation forests (IUPHHK-HT). The types of licenses are listed (see Table 14).
Table 16. Types of forest licenses

<table>
<thead>
<tr>
<th>No.</th>
<th>Type of license</th>
<th>Acronym</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>License for Utilisation of Natural Forest Timber Products</td>
<td>IUPHHK-HA</td>
</tr>
<tr>
<td>2</td>
<td>License for Utilisation of Plantation Timber Products</td>
<td>IUPHHK-HT</td>
</tr>
<tr>
<td>3</td>
<td>License for Utilisation of Ecosystem Restoration Timber Forest products</td>
<td>IUPHHK-RE</td>
</tr>
<tr>
<td>4</td>
<td>License for Conversion to Production Forests</td>
<td>HPK</td>
</tr>
<tr>
<td>5</td>
<td>License for Production Forest Land Use/non-mining</td>
<td>IPPKH Production/non-mining</td>
</tr>
<tr>
<td>6</td>
<td>License for forest Land Use for Surveys/exploration (including mining)</td>
<td>IPPKH Survey/Exploration</td>
</tr>
</tbody>
</table>

Table 15. Selected forestry sector exports (in USD)

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel</td>
<td>2,357,294,770</td>
<td>2,640,258,603</td>
<td>2,793,483,865</td>
</tr>
<tr>
<td>Woodworking</td>
<td>650,023,620</td>
<td>649,673,733</td>
<td>807,251,309</td>
</tr>
<tr>
<td>Pulp</td>
<td>1,545,403,689</td>
<td>1,848,770,872</td>
<td>1,721,891,823</td>
</tr>
<tr>
<td>Paper</td>
<td>611,546,324</td>
<td>602,415,810</td>
<td>633,620,761</td>
</tr>
</tbody>
</table>

Source: Dept of Forestry, SVLK Workshop. 25 Aug 2015

Legality and certification

Experts have said that third party monitoring like timber certification is critical to the performance of concessionaires in carrying out SFM. Many private companies admit to the lack of technical competency to do certification.

Legality is an important first step towards timber certification. The Indonesian Timber Legality Assurance System (Indonesian acronym, SVLK) aims to ensure that timber products and raw materials are obtained or derived from sources whose origins and management meet the legal standards. In June 2009, the Indonesian government made SVLK mandatory and all private and state-owned forests (IUPPHK, HKm, HTR) must adopt this verification of legality. At the same time, a chain-of-custody must be in place to show the timber raw material for finished products has also been verified under SVLK.

SVLK includes tracking the validity of the timber origin right from the very beginning to end products. It starts from the utilization license, markings of identity documents accompanying the timber from the logging, transportation from the forest to timber production, and the packing and shipping process. SVLK effectively applies in all types of forest management in Indonesia.

In a move to bring transparency to the process, the government implemented Sistem Informasi Legalitas Kayu (SILK) which is a website to share information on the process as well as certificate holders (https://silk.dephut.go.id/index.php).

Indonesia started negotiating a VPA with EU in March 2007. The VPA was agreed and signed on 30 Sep 2013. It was ratified in April 2014 and came into force on 1 May 2014. In September and October
2014, Indonesia and the EU held the first Joint Implementation Committee (JIC) meeting and technical working sessions on the VPA annex review, VPA monitoring mechanisms and the joint Timber Legality Assurance System (TLAS) assessment.

As it stands, the SVLK certified timber is not recognised as FLEGT licensed timber for an automatic green lane proof of legality. Indonesia is working with EU to get this recognition.

4. DISCUSSION

Forest concessions can be a useful tool for the utilisation of forest resources in a legal manner but the devil is in the details. The problems of forest concessions are mainly due to the very fact that the forests themselves are very complex ecosystems. This is further compounded by another issue, especially in Southeast Asia, that there are many communities who live and exist inside the forests. And often the interactions of these local communities and the forest concessionaires give rise to problems.

Moreover, the environmental health of the forests is generally treated as ‘public goods’ by all stakeholders: government, forest concessionaires and in many cases, even by the local communities. This gives rise to the free-rider problem when everyone wants to enjoy the benefit without personally contributing to the better management of that benefit. Such public goods are usually not internalised into a forest concession thus not considered an asset which warrants proper care and use.

The World Bank has listed eight issues facing forest concessions: (1) Public or private forest ownership and management, (2) Public benefits of natural forests, (3) Local community forest use and benefits, (4) Length of concession agreement, (5) Concession size and forest fees, (6) Bidding on concessions and transparency in concession allocation, (7) Concession management incentives and performance incentives, and (8) Inspecting, monitoring, and auditing forest management (Gray, 2000). A questionnaire to experts (chapter 3) in the region has added issues from recent developments. Taken as a whole, the more pressing issues are grouped under five headings.

Transparency

All four countries have little transparency in the allocation and management of concessions though there are some promising moves in Indonesia. In countries where international civil societies and activists are active, there are attempts to collect and share data through a website which is accessible to all. This is a major step to foster transparency, for example in Lao PDR: <www.opendevelopmentcambodia.net> in Cambodia and <www.decide.la>.

In all four countries, the application and approval process of obtaining a concession is not publicly known, the structure of the concession is not readily available and the execution and monitoring of the concession operations are not made public.

Experts have concerns about the lack of information on the process leading up to the award. Due diligence should be conducted before awarding the concession to any particular person or company. There are questions of past performance, outstanding issues of conflicts with local communities or laws, care of environment and conservation. After the award, there is also very little information
during the exploitation stage. Conflicts arise when concession boundaries are not publicised. No maps are shown in public. In many cases, even the names of the concessionaires are not known, making it very difficult to seek clarifications over use rights, demarcations, public right of way, collections of NTFP, etc.

In September 2013, the then Indonesian Ministry of Forestry (now MoEF) launched an online portal that provides information on how to obtain permits for activities related to forestry. Prior to this, applicants had to process different requirements at different offices in the ministry, shuttling between directorates, with no certainty of processing time and cost. The website also offers daily updates on the number of permits being processed (Jakarta Post, 12 Sep 2013)\textsuperscript{18}.

This initiative is part of a bureaucratic reform as stipulated in the Presidential Regulation No.81/2010 and can be seen as Indonesia’s move towards more transparency. The online licensing system was the first stage of a one-stop, integrated and multi-roof forestry licensing system reform. However, a recent evaluation (Kartdodihardjo, 2014) concluded: \textit{the expectations of service users have not all been met. Timeliness of the service provider needs continuous improvement and the unofficial fees that service users have to pay are the issues of most concern.}

Local activists have claimed that the plan to speed up the licensing system might work against the environment of the country and promote faster deforestation instead. The Indonesian Forum for the Environment (WALHI) said this initiative posed a huge risk to the country’s ‘struggling natural environment’. WALHI also noted that abuse of forest permits has been blamed as one of the leading causes of annual forest fires in the country, and the government is currently trying to revoke concession permits for land or forest cleared by fire (Jakarta Post. 6 Oct 2015)\textsuperscript{19}.

Nevertheless, this is the best attempt to introduce transparency in the four countries studied. Indonesia deserves recognition for this.

\section*{Local communities and rights}

Local communities in all four countries are under threat with numerous conflicts involving local communities. Almost all of them can be traced down to a lack of formal laws protecting the local communities and hence they are open to abuses of land grabs, displacements and even evictions. However, civil societies are active in this area and have helped many local communities fight for their rights.

\section*{Abuses}

In Southeast Asia, inevitably there are local inhabitants in concession areas, some of them having settled in the same area for generations. Some have been there even before law of the land existed and all claim traditional or customary rights. Such traditional or customary rights are usually not recognised under codified laws of the country and have been, and are still the subject of heated protests in countries especially where ‘land grabbing’ is taking place.

\textsuperscript{18} http://www.thejakartapost.com/news/2013/09/12/ministry-ease-permit-application-procedure.html
\textsuperscript{19} http://www.thejakartapost.com/news/2015/10/06/new-permit-policy-could-increase-deforestation.html
Local communities have little recourse when a concession is given over their land because of the lack of recognised rights. These overlapping claims have lead to displacements and even evictions which created tremendous hardship over livelihoods. In some cases, there are no alternative livelihoods when the local communities lost control over the land on which they practise subsistence farming.

Legal challenges

An example is shown in the Indonesian court decision No. 35/PUU-X/2012 in which the Constitutional Court decided that customary forests claimed by indigenous peoples have precedence over forests claimed by the State. This was a hallmark decision in Indonesia. But there are accusations by civil societies that this decision has yet to be implemented universally throughout the nation in a timely fashion.

In Malaysia, the Federal Court heard the Sarawak State government’s appeals on the extent of native customary rights over land. In essence, the Federal Court heard arguments on whether these customs are legally enforceable, notwithstanding the fact that they are not contained in codified laws. The appeal is still pending.

The rights under contention in the Sarawak case are very similar to rights claimed by other communities in Southeast Asia: felled and cultivated lands by natives, and include or extend to rights to land in and over trees, fruit trees, hunting grounds, fishing grounds, grazing grounds and areas for the gathering of food and forest produce in uncultivated areas within their broader territorial domain or communal areas.

From 2007, the apex court of Malaysia has recognised the pre-existing laws and customs of indigenous inhabitants (including natives of Sarawak, natives of Sabah and Peninsular Malaysia Orang Asli) relating to their customary lands without the need for formal recognition of such laws and customs by the relevant legislatures and executives (unless such rights are validly extinguished by the government). These rights are determined in accordance with the customs, practices and usages of the particular indigenous community and established as a matter of fact through the continuous occupation and/or the maintenance of a traditional connection with the land claimed (Borneo Post, 7 Sep 2015).²⁰

Apart from recognising traditional and customary rights, there is a need to involve local communities actively in decision making and work actively with concessionaires. Since the local communities are usually under educated there is an urgent need for support in capacity building to facilitate participatory management in the concessions. True participation of forest dependent communities will allow them to benefit from concessions. Participation in concession management also empowers forest communities and allows them to make decision on forests they claim to be theirs. Such democratic management regime can sustain long term economic, social and environmental objectives.

As a partial solution to the lack of official recognition by the laws of the country, a clear land use policy (accompanied by a detailed land use map) could alleviate some of the issues over conflicting land claims. It is noted that some conflicts do not concern local communities as some business entities might be in conflict with each other and not necessarily with the local communities.

Cambodia’s National Forest Programme (2010) recognised the importance of sectoral land use planning. Indonesia and Myanmar are working towards a national land use policy and a One Map approach.

**Forest management**

It seems there is little SFM in Southeast Asia judging by the lack of forest certification and volumes of publications pointing out environment degradation, illegal logging and social conflicts. SFM is contentious in all four countries.

The lack of forest management certification does not mean SFM is not taking place in the region but it does indicate the low level of achievement by the loggers. All the Southeast Asian forests certified by the world’s two leading schemes, FSC and PEFC, do not make up 2% of the world’s certified forests.

Countries in the region tend to follow guidelines produced by ITTO and FAO, for example: the *ITTO guidelines for Sustainable Management of Natural Tropical Forests Management* (1992) and the *FAO Code of practice for forest harvesting in Asia-Pacific* (1999). However, it is debatable whether these are actually carried out on the ground by loggers as there was hardly any third party checking.

The methods of logging can hinder SFM. In Southeast Asia a logging concession is selectively logged. A forest management plan divides a concession into annual coupes which are the areas permitted by authorities to work in during a specified year. For operational planning, each coupe is divided into blocks and logging roads are planned to connect the blocks into main trucking roads. The concession owner will arrange for a main contractor to log the concession, if the owner is not a logging contractor or lacks the necessary resources. The main contractor might work some blocks but it is not uncommon to employ sub-contractors to work the blocks. This is where in most cases the chain of command breaks down. The concession owner and the main contractor might be fully aware of SFM and its requirements but the smaller sub-contractors are usually focussed on volume production for profitability (sub-contracting rate of payment is usually based on volume produced). Road construction and maintenance are also often contracted out. The small sub-contractor does not have the capacity or resources to carry out SFM.

Since this business arrangement is common in the region, there seems to be a need to relook at the responsibilities and accountabilities of each actor in the logging operation. In some logging concession agreements there is an appendix on forest engineering plans (e.g. such plans are mandatory in Sarawak) in which skid trials and road building standards, buffer zones for waterways, bridge construction, skidding slopes, etc are clearly spelled out. The sub-contractor must be legally held responsible to abide by this engineering plan as well as other general guidelines.

**Governance**

**Masterplan of land use**

Experts say this is the root of many evils. The lack of a Masterplan or a National Land Use Policy does not portend well for climate change in years to come especially in tackling Land Use, Land-Use Change and Forestry (LULUCF). The immediate effects of this critical lack show up in the number and frequency of disputes over concessions, conflicts with local communities, confusions in governments.
Forest concessions are given over land which is claimed by local communities; land for agriculture is given over farmland worked upon by generations of local communities; hydro dams are flooding local communities out of their land.

Government officials have admitted that concession have been given out based on ‘office maps’ without knowledge of what was actually on the ground. In some countries, there is a lack of data available for such policy decisions. Concessions have also been awarded without proper demarcation of boundaries which, not surprisingly, begs conflicts on the ground. Logging concessions were known to be allocated over land with hardly any trees.

On an operational level, a few experts from the private sector pointed out that overlapping jurisdictions by different departments sometimes lead to conflicting instructions and guidelines which add unnecessarily to operating costs, if not confusion. In such a situation, concessionaires can break some rules unknowingly. Such additional layers of reporting are not conducive to efficient running of a commercial operation and there are pleas for harmonisation of department rules and procedures.

One promising solution to these problems is the One Map approach. The aim is for only one agency to produce a map on which different government departments will overlay their interests so as to prevent any overlaps (and hence confusion over whose jurisdiction or laws to follow). The One Map can then progress to collecting data and build up different thematic layers so that all the government departments are quite literally on the same page.

Inconsistent government policy is a bugbear to the private sector. Changing the policy mid-stream can also be harmful for large scale concessions. The Indonesian Ministry of Environment and Forestry has set a target of redistributing 12.7 million ha of social forests (2015-2019) to address rampant land disputes involving indigenous communities. Most of the land (6.8 million ha) would be taken from concession forests. Forestry companies have raised concerns over a new ministerial regulation that requires them to allocate at least 20% of their existing concession areas to local communities, saying the ruling would severely hurt their plantation operations (Jakarta Post, 08 July 2015)\(^21\). Concessionaires have looked at this move as additional and unexpected burden (and they would need to recalculate their productions costs) on legal concessionaires when the Ministry should be taking serious actions against illegal occupation of unmanaged production forests (Jakarta Post, 27 Jul 2015)\(^22\).

**Technology and governing**

Recent advances in satellite imageries, LIDAR\(^23\), GPS, drones, and even smart telephones have given government (and others like civil societies) new and better ways of monitoring which are not only fast but very accurate. In Lao PDR, for example, there are trials to use drones and smart phone apps to monitor concessions. Elsewhere, villagers are empowered and trained to watch over forests and wildlife.

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\(^23\) LIDAR (Light Detection and Ranging) is a remote sensing method that uses pulsed laser to measure variable distances to the Earth. It generates precise, three-dimensional information about the shape of the Earth and its surface characteristics.
Timber certification and market failure

While many experts said third party forest certification will contribute towards SFM and ensure a steady stream of revenue flow to the government treasuries, the logging and plantation companies are less than enthusiastic. Timber companies do not see any premium prices paid for certified legal timber products let alone certified SFM timber products.

In a similar vein the palm oil companies also said the premium paid for RSPO certified oil, if any, does not cover their additional costs. In fact, the production of RSPO certified oil, known as Certified Sustainable Palm Oil (CSPO), far surpasses its uptake which in itself is already a disincentive for the palm oil producers (see Table 16).

Table 16. Certified area, CSPO Supply and CSPO sales

<table>
<thead>
<tr>
<th>Year</th>
<th>Area (ha)</th>
<th>Supply (mt)</th>
<th>Sales (mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>125,288</td>
<td>619,012</td>
<td>n.a.</td>
</tr>
<tr>
<td>2009</td>
<td>304,421</td>
<td>1,473,912</td>
<td>343,857</td>
</tr>
<tr>
<td>2010</td>
<td>716,080</td>
<td>3,522,207</td>
<td>1,281,134</td>
</tr>
<tr>
<td>2011</td>
<td>1,299,891</td>
<td>5,573,202</td>
<td>2,490,526</td>
</tr>
<tr>
<td>2012</td>
<td>2,105,433</td>
<td>8,184,200</td>
<td>3,479,415</td>
</tr>
<tr>
<td>2013</td>
<td>2,653,058</td>
<td>9,792,185</td>
<td>4,513,273</td>
</tr>
<tr>
<td>2014</td>
<td>3,071,321</td>
<td>11,909,121</td>
<td>5,349,666</td>
</tr>
</tbody>
</table>

Source: RSPO.

While most experts can see the benefits of getting a logging or oil palm operations certified by relevant third party organisations albeit the increase production costs, the market is simply not responding. The market has failed to pay a premium price for certified timber products thus sending a negative signal for producers to skip certification and go about business as usual. Palm oil producers have responded to the call for certification as demonstrated by the annual increases in certified areas and CSPO. Again the market has failed not only for not paying a fair premium price but also for not buying up the CSPO produced. The market has failed to recognise the producers’ efforts towards sustainability.

5. RECOMMENDATIONS

This chapter is a synthesis of the key successes and failures as well as the achievements observed in Lao PDR, Cambodia, Myanmar and Indonesia. These recommendations were shaped by the opinions of the experts surveyed while taking on board some incisive comments recorded during visits to the four countries.

Some issues with forest concessions need complex solutions which will take a long time to achieve. The consultant concurred with experts in the region that it would not be realistic to address all the issues related to forest concessions. This study does not set out to identify and fix all the issues in the region’s forest concessions but it prioritised issues which are deemed fixable. The short listed recommendations below could be readily adopted by countries in the region as they are based on existing examples.
Restoration and rehabilitation

Huge expenses of forests were badly degraded, and still being degraded, by extensive bad logging techniques, agricultural conversion, mining and other economic activities. These damaged forests are results of poor implementation of the concession systems. While it is too late to correct the implementation, it is not too late to restore the degraded forests back into a functional forest. Ecosystem restoration licenses are a strategic way to reverse the deforestation and degradation of production forests.

Indonesia has devised an approach towards ecosystem restoration. The MoEF issues Licenses for Timber Utilization and Ecosystem Restoration (Izin Usaha Pemanfaatan Hasil Hutan Kayu Restorasi Ekosistem, or IUPHHK-RE). As at June 2015, Indonesia has issued 13 IUPHHK-RE licenses covering 515,270 ha and directly employing 2,227 workers. The license is for 60 years and can be extended by another 35 years.

By a Proclamation (PP. No. 6 Tahun 2007 jo. PP. No. 3 Tahun 2008), Indonesia recognises restoration of ecosystem in production forests as an effort to conserve the area of production forest which has important ecosystem values. The Ecosystem Restoration Concession aims to achieve its objectives through maintenance, protection and restoration of forest ecosystems, and this may include planting, enrichment, thinning, and animal breeding. In order to restore biodiversity and ecosystem balance in the concession, the license allows reintroduction of appropriate flora and fauna.

Areas for IUPHHK-RE are identified by MoEF from ex-production forests. One criterion used in the identification process is the availability of NTFP like rattan, sago, sap, bark, fruits, seeds, eaglewood and bamboo. MoEF also considers the environmental services of the forests: water resources, biodiversity protection, absorption and storage of carbon. The IUPHHK-RE allows a restricted use of the forest area: cultivation of medicinal and ornamental plants, mushroom farming, bee keeping, animal breeding and cultivation of swift nests.

These 13 license holders are possibly the first examples of ecosystem restoration in Southeast Asia. Sarawak, Malaysia has started with an experimental restoration license in October 2015. The challenge is how to generate a steady stream of income to keep going when there is no clarity in where the funds might come from.

Certification

Third party certification seems to be the de facto avenue in view of failures by governments to ensure forest management is sustainable in their forests. Consumers, who are too far removed from forestry operations to make a judgement, rely on third party certification to be assured of the legality and sustainability of the products they are buying.

Technical obstacles

In the case of timber, there is very little volume of certified tropical timber products available in the Western markets. The main reason for this lack lies in the complexity of the certification process. It is

24 Eaglewood, an Indonesian name for agarwood or gaharu (Aquilaria).
25 Birds’ nests are a big business in Asia. Eg. In 2013, it was estimated Malaysia produced 375 tons of edible nests, worth RM 1.5 billion (approx US$ 450 million then).
a complex process which is long, tedious and expensive, and it needs a lot of technical inputs. Logging companies do not have the technical competency to carry out the work stipulated in the certification process. The answer is not simply to employ such experts to fill their gaps in knowledge; they need hand-holding which the certification organisations presently do not provide.

In Indonesia, a very pragmatic approach to solve this is run by a foundation, the Borneo Initiative (TBI). TBI recognises certification is of vital importance in spite of the obstacles. TBI works to overcome the obstacles with financial assistance and, more importantly, linkage to a professional network of experts who can assist with the process of certification.

The approach and work of TBI address most of the problems faced by loggers who are trying to get their operations certified. TBI forges links between the logging companies and consultants who provide mentorship all along the process of certification, with certifying bodies as independent auditors.

By 2014, TBI has supported 40 forest concessions with 4.2 million ha: 12 of them have been awarded full FSC certificates, two Controlled Wood certificates (the 14 concessions cover 1.4 million ha). Of the 40 concessions supported by TBI, 39 are actively logging with a total output of 1.8 million m³ roundwood, harvested from a total production area of 2.6 million ha.

**Market failure**

The technical difficulties in getting certification are exacerbated by wrong signals from the markets. There is no premium paid by timber buyers for certified timber (whether by FSC or PEFC) and there is no premium paid for timber that is certified as being produced legally

In the case of palm oil, the premium paid for RSPO certified oil is small, if at all there is premium. A Malaysian palm oil producer said he saw a premium of USD 0.40 per metric ton being paid for RSPO certified oil in August 2015 (Personal communication, K S Ho. 5 Oct 2015) when the average CPO price was USD 489.

To make matters worse, the actual sales of RSPO certified oil are not matching the production of certified oil. In 2014, only 44.9% of certified oil was sold. In 2013, 46.1%. In 2012, 42.5%. This low uptake of certified oil is proving to be a disincentive for oil palm plantations to be certified.

The disincentive signals sent by the markets expose a more critical problem: *market failure*. Activists and ‘Green civil societies’ have long pressured the producer of timber and palm oil to demonstrate their adherence to acceptable environment and social care by getting their operations certified. However, markets in the environmentally sensitive countries (especially in Europe) are not responding to this sentiment. Consumers seem to be voting by their wallets and buying products for their prices rather than for their ‘greenness’.

The failures in the markets need to be fixed. If the prices for certified products are attractive enough, the producers will respond accordingly without any outside pressures needed.
Land use policy

Conflicts in the region are often, if not always, sparked by the government, central or provisional, granting access or permission for companies to use land without Free, Prior and Informed Consent (FPIC) of local communities. This might be due to the fact that local communities are rarely granted clear rights to their land and thus tend to be sidelined by the authorities especially when strong economic pressures are put to bear.

In part this problem might be due to a lack of clear policy on land use. Detractors postulate that in some cases the lack of a national land use policy might be a deliberate ploy to allow arbitrary granting of land and rights as political patronage. There is also no mechanism to redress grievances or resolve ongoing conflicts over land use.

The issues and confusion of who owns what and where are due to the lack of a detailed and comprehensive map. The concept of One Map as a solution is being tested, in various degree of development, in three of the four countries studied. The concept calls for the production of One Map with up-to-date data which will be referenced and used by every government agencies.

In Indonesia, the lack of coordination between the central government and district governments is even more pronounced. The heads of district governments have enjoyed autonomy in natural-resource management since decentralisation started in the late 1990s. The ambiguity creates an excuse for companies to blame one another or the local communities for any environmental violations like forest fires.

The Indonesian government is implementing its One Map initiative to tackle the land tenure chaos. In late 2014, Indonesia's Geospatial Information Agency rolled out a standard land cover map after consolidating spatial data from 13 government agencies.

In Myanmar, there are high hopes that a new Land Law will be put in place by the new government after their General Elections on 08 November 2015. It is expected the new Land Law will reflect the National Land Use policy which has been under intense discussions over a number of years. The government has taken a reasonably open approach with multi-stakeholders meetings so when the Policy is finally adopted, it could start the production of One Map to be used by all government agencies to avoid further conflicts over land use.

One Map cannot be produced without a robust national policy on land use. And a land use policy cannot be robust without an inclusive multi-stakeholders approach. If Myanmar, which was ruled by a military junta from 1962 to 2011, can and is taking a seemingly democratic multi-stakeholders approach to formulate its national land use policy, Myanmar should serve as an inspiration for other countries to follow.

Capacity building and training

The issue of capacity is critical and the scale of need is enormous, but appreciation of the problem is low. Managing tropical forests is difficult due to their complex ecosystems which involves both botany and zoology, and with the local communities living in the forests, sociology and anthropology are added to further complicate management. On top of all these difficulties, there is often an overriding need to consider the economics too.
Government agencies managing forests are challenged when it comes to technical competency over so many disciplines. One head of department has admitted he has very few graduates in his department, let alone properly qualified foresters.

In the private sector, companies are driven by profits and have demonstrated very little care of environment and social issues until recent call for timber certification and proof of legality. Technical competency to address the gamut of skills required in managing tropical forests is limited in the companies.

But capacity building is not only about training. Apart from human resources development for the individuals, there is an aspect of organisational development on processes and procedures which might cover both public and private sector. Also there are institutional and legal backgrounds to consider. For all these aspects to come together for successful capacity building, the government must first recognise the need and then put in place enabling conditions.

While there seems to be no shortages of ‘capacity building’ or ‘training’ in the region, an outstanding example of very focussed capacity building is ongoing in Sarawak, Malaysia. The State authorities realised that logging companies lack relevant trained executives to lead the companies into better practices and eventually to certification (Sarawak authorities have publicly asked the major logging companies to be certified by 2017). The State’s Forest Ordinance was amended to recognise appropriate training. This move enabled the private sector, in the form of the Sarawak Timber Association (STA), to initiate training, firstly on chainsaw operators and moving on to Log Loading, Clear-fell Site Preparation, and Mechanical Site Preparation. And finally training the managers in forest operations.

In an innovative move STA partnered with Lincoln University of New Zealand to deliver a post graduate diploma programme aimed at managing tropical forestry. This training programme started in 2006 and in three cohorts of students, 50 graduated. Currently there are 20 students enrolled in the fourth cohort.

The rationale of this partnership was that STA recognised the challenges in training and looked at Lincoln University as an institution with teaching expertise. In short, Lincoln was roped in to maintain a high standard in training Sarawak’s forest managers with methodologies familiar to all graduates: lectures, tutorials, projects, field training, and examinations. Lecturers with the required expertise are sourced from within and outside STA and Lincoln University.

The 12 subjects that make up the Postgraduate Diploma in Applied Science (Sustainable Tropical Forest Management) cover a wide range of topics, examples: Planning and Implementing Forest Certification; Communities and Forests; Natural Forest Silviculture; RIL; Harvesting and Roading; etc. The teaching format is designed around the needs of working managers. All subjects are taught in Sarawak and offered as intensive block courses. Students who successfully complete all subjects are awarded a Lincoln University Postgraduate Diploma26. Such an intensive and focussed training can fill some of the skill gaps in the region.

Governance

Governments must govern forest concessions. Failure of governing can produce catastrophic results. No failure is so obviously demonstrated for tens of millions to see (and experience) as the failure in managing the Indonesia forest fires and the smoke from the fires (euphemistically called 'haze' in Southeast Asia).

There are many reasons why the forests in Indonesia burn during the dry season: plantation small holders, local farmers, shifting cultivators, etc. Traditionally, forests in Indonesia and other countries where shifting cultivation takes place, setting the forests on fire is an annual event during the dry season but by far the biggest fires are found in concessions.

Observations by Global Forest Watch between 5 and 12 September were published in Jakarta Post on 14 Sep 2015. The results show that 41% of the fires alerts occurred in pulpwood plantations, 4% in palm oil concessions, 1% in logging concessions and 54% outside concessions. There were 528 hot spots in nine pulpwood concessions, 44 in oil palm concessions, and 11 in logging concessions. By October, Indonesian authorities said 1.7 million ha of land has been razed so far in the country (Jakarta Post, 23 Oct 2015).

Indonesian laws are clear: plantations cannot use fires to clear their land. And if fires are found in their concessions, regardless of who lit the fires, the plantation owners are deemed legally responsible.

Smoke haze had affected Southeast Asian countries during the dry seasons in 1991, 1994 and 1997. From July to October 1997, ASEAN countries in particular Brunei Darussalam, Indonesia, Malaysia, and Singapore, were badly affected by smoke haze caused by land and forest fires. The severity and extent of the smoke haze pollution were unprecedented, affecting millions of people across the region. This lead to the formulation of the Regional Haze Action Plan (RHAP), which sets out co-operative measures needed amongst ASEAN member countries to address the problem of smoke. Despite this, the Indonesian forests burn every year.

Haze

A standard way of measuring haze in Southeast Asia is by using the Air Pollutant Index (API). It provides comprehensible information about the air pollution level. The API system includes five major air pollutants which could cause potential harm to human health should they reach unhealthy levels.

During the haze episodes it is common for the API readings in Malaysia and Singapore to go into the Unhealthy or Very Unhealthy level for weeks on end. The highest recorded API in Malaysia was a reading of 839 on 19 Sep 1997 in Kuching, well beyond Hazardous. The haze in Indonesia where the fires are burning is extremely thick. In the West Kalimantan city of Pontianak, the API peaked at 706

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29 API under 50 means healthy air, 51-100 Moderate, 101-200 Unhealthy, 201-300 Very Unhealthy, over 300 Hazardous.
30 Ozone (O3), carbon monoxide (CO), nitrogen dioxide (NO2), sulphur dioxide (SO2) and particulate matter with a diameter of less than 10 micron (PM10).
on 22 Sep 2015. On the same day, at Palangkaraya, capital of Central Kalimantan, the day's high was 1,986 (AsiaOnline, 23 Sep 2015)\(^{31}\)

**Standard Operating Procedure**

The Indonesian Minister of Forestry, the Minister of Agriculture, the Minister of Environment, and the Head of the National Agency for Disaster Management (BNPB) agreed on the ‘National Standard Operating Procedure on Forest and Land Fire Prevention’, and a regulation was signed on 16 October 2014 in Jakarta. The Standard Operating Procedure (SOP), developed with support from UNORCID\(^{32}\), was a collaborative effort among the various ministries, agencies, and sub-national governments to prevent forest and land fires in an integrated, effective, and efficient manner. It contains a comprehensive series of frameworks and strategies aimed at early-warning, early-detection, and early fire-fighting, all of which would be implemented through a concerted effort and coordinated by the above actors (UNORCID, 2014).

In 2015, the haze has disrupted the FINA Swimming World Cup in Singapore and the Kuala Lumpur Marathon of 30,000 runners was cancelled. Sarawak saw a 30 % increase in acute respiratory infection cases due to trans-boundary haze. When the air quality became very unhealthy, on 05 October 2015, Malaysia closed down 6,798 schools with total enrolment of 3.7 million students and 300,000 teachers (The Star, 05 Oct 2015)\(^{33}\).

The negative effects of the haze go beyond humans. Vegetables production in several Malaysian states was down by a third, sending prices up by more than two-fold. Penang and Province Wellesley Farmers Association estimated that on average two to three million broiler chickens in the northern region of Penang, Kedah, Perlis and Perak die in a month because of the haze. In Sarawak, chicken egg production has dropped by about 2% while in Johor, laying declined by about 5% since the start of the haze season (The Star, 2 Oct 2015)\(^{34}\).

Indonesia was also badly affected by the haze. Local residents struggle with thick haze that puts their health at risk and the education and transportation sectors in jeopardy (Jakarta Post, 29 Sep 2015)\(^{35}\). In Sumatra four airports were closed and eight in Kalimantan due to poor visibility. In Jambi (central Sumatra) two young children died after experiencing acute respiratory problems (Jakarta post, 15 Sep 2015). Unfortunately, the third death due to haze was a 31 year old civil servant died in Riau from suspected respiratory failure (Jakarta Post, 8 Oct 2015)\(^{36}\).

The government should exert its jurisdictions over concessions and stop fires from starting. There is no smoke without fire.

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\(^{32}\) UNORCID, United Nations Office for REDD+ Coordination in Indonesia.


References


FAO. (2014). *Caring for Family Farming in LAO PDR*. FAO.


Greenpeace. (2013). *Certifying destruction: why consumer companies need to go beyond the RSPO to stop forest destruction*. Amsterdam: Greenpeace International.


Appendix 1: Terms of Reference

TASKS AND OBJECTIVES

Under the general supervision of Director, FOM and the direct supervision of the Forest Management Officer, and in close collaboration with relevant FO professional staff in HQ and the Decentralised Offices, the consultant will prepare a report on the status of forest concessions (primarily for timber production but also for non-timber forest products - NTFPs, conservation, restoration, ecotourism and other forest-based uses as relevant) in selected countries of Southeast Asia (Indonesia, Lao PDR, Cambodia and Myanmar).

The report will:

a) Describe the overall forest land status and what can be considered as forest concession, distinguishing industrial concessions, community-based concessions and other status (private forests, etc.).

b) Provide an overview of the history of the experience with forest concessions in the region, considering other countries than those selected for this study (in particular Philippines, Thailand and to a lesser extent Vietnam).

c) Describe the legal, technical and administrative aspects of the forest concession regime in the selected countries, including allocation system; fiscal, legal and normative regimes; transparency (availability of public information on concessions), contract specifications (e.g. on duties of the concessionaire), forest management system and independent certification.

d) Describe linkages/influence of the existing concession regime on national forest policies and vice versa (e.g. on community forestry, on the approach of REDD+ and FLEGT, etc.) and on the broader policy (rural development, regional initiatives).

e) Identify the main failures/weaknesses and challenges of forest concessions from an institutional, economic, social, legal and environmental standpoint.

f) Present future perspectives on the forest concession regime in each country given changes in the social and land-use conditions (i.e. status of the informal sector, demography, changes in land tenure, competition with alternative land-use, climate change).

g) Identify and briefly describe experiences of forest concessions (at least five cases for the entire region) that show promising elements and drivers of success including social aspects related to working conditions (e.g. employment forms, payment methods, living quarters, sanitation, safety and health), and explicitly note the criteria considered for assessing the success.

h) Present available information on evidence of both positive and negative impacts (ecological, social and economic) of the existing concession regime.

For points (f), (g) and (h), a generic assessment framework shall be developed a priori.

i) Based on the assessment in (f), (g), and (h) identify good practices and promising initiatives found in forest concessions in the region.

j) Synthesize the main achievements, key success factors, lessons learned and recommendations for improving forest concession systems in the region.
Appendix 2: the Questionnaire

I am reaching out to you as an expert with expertise and working experience in Southeast Asian forestry. We seek your inputs into a FAO study on the status of forest concessions in Southeast Asia. This will take only a few minutes of your valuable time.

Background.

FAO, in partnership with ITTO, CIFOR and CIRAD, is leading an initiative to improve forest concession policies and practices, particularly for tropical natural production forests. This initiative, titled "Making forest concessions work to sustain forests, economies and livelihoods" aims to positively influence political dialogue at the international and regional levels on the role of forest concessions for different objectives, and to provide practical guidance to countries in the design, implementation and evaluation of forest concession systems that better respond to their economic, social, institutional and environmental goals.

Your Opinions

As part of the initiative, we are surveying opinions of stakeholders to shape the “lessons learned and recommendations for improving forest concession systems in the region”. Stakeholders like you are knowledgeable and have valuable on-the-ground experiences to share.

Have the forest concessions met their institutional, economic, social, and environmental goals?

(a) The Positives. What good aspects would you like to introduce into the current concession system? What are the positives which are currently lacking: legality, fiscal, social, environmental, transparency, economic, institutional, land use, tenure security, etc? What are the Three Positive Aspects which you like to introduce to improve the system?

(b) The Negatives. What are the bad aspects of the current concession system? What are the negatives: legality, fiscal, social, environmental, transparency, economic, institutional, land use, tenure security, etc? What are your Three Negative Aspects which you like to be addressed and corrected?

Publications and Documents.

You and/or your organisation might have produced some publications or documents related to forest concessions over the years. Can you please share these with us as inputs to make this study more complete?

This anonymous Survey of Opinions will be treated confidentially; neither your name nor your organization will be reported or linked to the opinions you share. However, publications and documents will be properly cited if used.

Finally, please feel free to share this Survey of Opinions with your colleagues.

Please reply by 23 August 2015

We THANK YOU for your contribution.
Appendix 3, Meeting with Experts

The following experts participated in meetings with the consultant, who acknowledge with gratitude the information, data, suggestion and guidance shared.

Vientiane, Lao PDR (31 Aug – 02 Sep 2015)

1. Ilari Sohlo Consultant
2. Akiko Inoguchi FAO Lao PDR Forestry officer REDD+
3. Stephen Rudgard FAO Lao PDR Representative
4. Palikone Thalongsengchanh Ministry Agriculture & Forestry Snr Researcher
5. Somchay Sanontry Ministry Agriculture & Forestry (For.) Deputy Director General
6. Thongphath Vongmany Ministry Agriculture & Forestry (For.) Director General
7. Phomma Pathoummavong Ministry Agriculture & Forestry (For.) Act Head, For. Technique Std.
8. Boupnone Sengthong Ministry Agriculture & Forestry (For.) Head Harvest Div. / SUFORD
9. Kinnalone Phommasak Ministry Agriculture & Forestry (For.) Dpty Directot REDD+ Office
10. Richard Laity PEFC international, Lao PDR Prjt and Development
11. Michael Epprecht University Bern Snr Research Scientist
12. Vong Nanthavong University Bern Research Fellow

Phnom Penh, Cambodia (03 – 04 Sep)

13. Etienne Careme FAO Cambodia Operations Coordinator
14. Srun Darith Ministry of Environment Advisor
15. Wayne Burton Grandis Timber Ltd CEO
16 Sung Bunra | Conservation International Cambodia | Country Director
17 Joel, Allan Jurgens | Winrock International | Deputy Chief of Party
18 Mathieu van Rijn | FAO Cambodia | Forestry officer REDD+
19 Chhith Sam Ath | WWF Cambodia | Country Director
20 Oum Sony | NTFP EP Cambodia | Country Coordinator
21 (HOU Kalyan) Staff | Centre for people and Forests | Country Prog Coordinator
22 Chheng Kimsun | Forest Administration | DG
23 Khorn Saret | Forest Administration | Deputy Director
24 Bun Vanna | Forest Administration | Dir. For. Industry
25 Samreth Vanna | Forest Administration | Dir. Community Forestry
26 Chheng Channy | RECOFTC Cambodia

Bangkok, Thailand (06 Sep 2015)

27 Thomas Enters | UNEP, Bangkok | UN REDD Programme
28 Celina Yong | UNDP REDD Programme, Bangkok | Stakeholder Engagement

Nay Pyi Taw & Yangon, Myanmar (08 – 10 Sep 2015)

29 U Shwe Kyaw | Myanmar Forest Certification Committee | Chairman
30 Barber Cho | MHCC Advisor / Private Sector | Trader
31 Mahn Win Tin | Myanmar Timber Enterprise | GM (Extraction)
32 U Nyunt Wai | Myanmar Timber Enterprise | Asst GM (Extraction)
33 Daw Tin Tin Myint | Myanmar Timber Enterprise | Manager (Extraction)
34 U Kyaw Myo Lin | Myanmar Timber Enterprise | Asst Manager (Extraction)
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<td>U Kyaw Ko Win</td>
<td>Myanmar Timber Enterprise</td>
<td>Asst Manager (Extraction)</td>
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<td>36</td>
<td>Khin Maung Oo</td>
<td>Forest Dept</td>
<td>Director</td>
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<td>37</td>
<td>Zaw Min</td>
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<td>38</td>
<td>Myo Min</td>
<td>Forest Dept</td>
<td>Dir. (Nat. For. &amp; Plantation)</td>
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**Jakarta, Indonesia (14 – 15 Sep 2015)**

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<td>Suwito</td>
<td>Kemitraan Partnership (Governance ID)</td>
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<td>Hasbi Berliani</td>
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<td>41</td>
<td>Asep Sugih Suntana</td>
<td>KEHATI</td>
<td>Prog Director</td>
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<td>42</td>
<td>Irwan Kurniwan Permadi</td>
<td>The Borneo Initiative</td>
<td>Prog Coordinator ID</td>
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<td>43</td>
<td>Wim Ellenbrock</td>
<td>The Borneo Initiative</td>
<td>Prog Director</td>
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<td>44</td>
<td>Johan Kieft</td>
<td>UN REDD Office</td>
<td>Head Green Economy</td>
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<td>Indra Sumarta</td>
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<td>Putera Parthama</td>
<td>Ministry Environment &amp; Forestry</td>
<td>Deputy Director (Sust. Man.)</td>
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<td>Nur Masripatini</td>
<td>Ministry Environment &amp; Forestry</td>
<td>DG Climate Change</td>
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<td>Yoga Prayoga</td>
<td>Ministry Environment &amp; Forestry</td>
<td>Head, Certification Section</td>
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<td>Dir. Int. Cooperation</td>
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<td>50</td>
<td>David Lee</td>
<td>PT Erna Djulawati / Lyman Timber</td>
<td>Snr Manager</td>
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<td>51</td>
<td>Ageng Herianto</td>
<td>FAO Indonesia</td>
<td>A – FAOR (Prog)</td>
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<td>52</td>
<td>Stepi Hakim</td>
<td>OPML Timber Legality</td>
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