INDONESIA: Scoping Baseline Information for Forest Law Enforcement, Governance and Trade

Baseline Study 7

By
Agung Prasetyo, James Hewitt and Chen Hin Keong

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Kuala Lumpur
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Regional Support Programme for the EU FLEGT Action Plan in Asia

Background
The European Commission (EC) published a Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan in 2003. FLEGT aims not simply to reduce illegal deforestation, but in promoting good forest governance, aims to contribute to poverty eradication and sustainable management of natural resources.

The European Forest Institute (EFI), an international research organisation with its headquarters in Finland, conducts, advocates and facilitates forest research networking at the pan-European level. Under its Policy & Governance programme, the EFI assists in the EU’s implementation of the FLEGT Action Plan. In 2007, the EU FLEGT Facility was established, hosted and managed by the EFI. The Facility (i) supports the bilateral process between the EU and tropical timber-producing countries towards signing and implementing “Voluntary Partnership Agreements” (VPAs) under the FLEGT Action Plan, and (ii) executes the regional support programme for the EU FLEGT Action Plan in Asia.

The FLEGT Asia Regional Office (FLEGT Asia) of the EFI’s EU FLEGT Facility was formally established in October 2009. FLEGT Asia seeks to collaborate and build synergies with existing regional initiatives and partners in Asia.

The EU FLEGT Facility is managed and implemented by the EFI in close collaboration with the EU.

Goal of FLEGT Asia
The goal of the FLEGT Asia Regional Programme is the promotion of good forest governance, contributing to poverty eradication and sustainable management of natural resources in Asia, through direct support of the implementation of the EU’s FLEGT Action Plan.

Strategy
The strategy to achieve this goal focuses on promoting and facilitating international trade in verified legal timber—both within Asia and exported from Asia to other consumer markets. In particular, it aims to enhance understanding of emerging demands in key timber-consuming markets and promote use of systems that assist buyers and sellers of Asian timber and timber products to meet these demands.

Work Programme
The work programme to achieve the Programme’s goal has three phases:

1. Information Collection
   Baseline information (trade statistics, product flows, future scenarios, stakeholder identification and engagement strategies), applied to countries in the region. Information on producers, processors, exports and major consumers of exports from this region will be collected and collated. It will then be used to develop training and communication materials; to further define the nature of the capacity-building to be undertaken (who the target beneficiaries and what the training needs are) and form the baseline for monitoring the progress over the three-year duration of the programme.

2. Capacity-building
   The second phase is the strengthening of key institutions (companies, trade associations, NGOs, government agencies, Customs organisations, etc.) for improved forest governance in each country and across the region to meet the identified market needs. This will consist of training (at individual level, training of trainers, workshops, pilot studies e.g. on individual
supply chains and for Timber Legality Assurance); information dissemination and communications (roadshows, seminars, communication materials, website, etc).

3. Customs & Regional Collaboration

The work to support trade regionally and to invest in Customs capacity in accordance with market requirements will be undertaken in collaboration with other programmes in the region.

The FLEGT Asia financed this report because it is part of phase 1 and 2 activities.

Address
European Forest Institute—FLEGT Asia Regional Office
c/o Embassy of Finland
5th Floor, Wisma Chinese Chamber
258 Jalan Ampang
50450 Kuala Lumpur
Tel: +60 3-42511886
Fax: +60 3-42511245
Website: [www.efi.int/portal/projects/flegt](http://www.efi.int/portal/projects/flegt), [www.euflegt.efi.int](http://www.euflegt.efi.int)
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<th>Description</th>
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<td>Annual Allowable Cut</td>
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<td>APFSOS</td>
<td>FAO’s Asia Pacific Forest Sector Outlook Study</td>
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<td>APHI</td>
<td>Asosiasi Pengusaha Hutan Indonesia—Indonesian Association for Forest Concessionaires</td>
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<td>APKI</td>
<td>Asosiasi Pulp dan Kertas Indonesia—Indonesian Association of Pulp and Paper Industry</td>
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<tr>
<td>APKINDO</td>
<td>Asosiasi Panel Kayu Indonesia—Indonesian Association of Wood Panel Industry</td>
</tr>
<tr>
<td>APP</td>
<td>Asia Pulp and Paper company</td>
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<td>ASEAN</td>
<td>Association of Southeast Asia Nations</td>
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<td>ASOF</td>
<td>ASEAN Senior Officers on Forestry meeting</td>
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<tr>
<td>ASMINDO</td>
<td>Asosiasi Industri Permebelan dan Kerajinan Indonesia—Indonesian Association of Furniture Producers</td>
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<tr>
<td>BATS</td>
<td>Tawau Barter Trade Association</td>
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<td>BPS</td>
<td>Badan Pusat Statistik—Indonesian Central Bureau of Statistics</td>
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<tr>
<td>BRIK</td>
<td>Badan Revitalisasi Industri Kehutanan—Indonesian Forest Industry Revitalisation Body</td>
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<tr>
<td>CBFM</td>
<td>Community-based forestry management</td>
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<td>CITES</td>
<td>Convention on International Trade in Endangered Species of Wild Fauna and Flora</td>
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<td>COMTRADE</td>
<td>UN’s Commodity Trade Statistics Database</td>
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<td>CO₂</td>
<td>Carbon dioxide</td>
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<td>CSR</td>
<td>Corporate Social Responsibility</td>
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<td>Dinas Kehutanan</td>
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<td>EC</td>
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<td>EFI</td>
<td>European Forest Institute</td>
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<td>EIA</td>
<td>Environmental Investigation Agency</td>
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<td>EU</td>
<td>European Union</td>
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<td>EU TR</td>
<td>EU’s Timber Regulation</td>
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<td>Eurostat</td>
<td>Directorate-General of the European Commission to provide statistical information of the EU</td>
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<td>FAO</td>
<td>Food and Agriculture Organisation</td>
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<td>FAO FRA</td>
<td>FAO Forest Resources Assessment report</td>
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<tr>
<td>FAOSTAT</td>
<td>FAO Statistical Database on agriculture, nutrition, fisheries, forestry, food aid, land use and population</td>
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<tr>
<td>FLEG</td>
<td>Forest Law Enforcement and Governance</td>
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<tr>
<td>FLEGT</td>
<td>Forest Law Enforcement, Governance and Trade</td>
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<tr>
<td>FMU</td>
<td>Forest management unit</td>
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<td>FSC</td>
<td>Forest Stewardship Council</td>
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<td>FTZ</td>
<td>Free Trade Zone</td>
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<td>GOI</td>
<td>Government of Indonesia</td>
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<td>HoB</td>
<td>Heart of Borneo Initiative</td>
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<td>HPH</td>
<td>Hak Pengusahaan Hutan—Indonesian Forest Concessionaire</td>
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<td>HS</td>
<td>WCO’s Harmonized Commodity Description and Coding System</td>
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<td>HTI</td>
<td>Hutan Tanaman Industri—Indonesian industrial plantation forest</td>
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<tr>
<td>HTR</td>
<td>Hutan Tanaman Rakyat—Indonesian community plantation forest</td>
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<tr>
<td>IDR</td>
<td>Indonesia currency, Rupiah</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<td>IPHH</td>
<td>Industri Primer Hasil Hutan—Indonesian primary forestry industry</td>
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<td>IPHHK</td>
<td>Industri Primer Hasil Hutan Kayu—Indonesian primary processing of timber licence</td>
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<tr>
<td>IPK</td>
<td>Izin Pemanfaatan Kayu—Indonesian permit to utilise timber</td>
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spp.  species
SVLK  Sistem Verifikasi Legalitas Kayu—Indonesian Timber Legality Verification System
TGHK  Tata Guna Hutan Kesepakatan—Indonesian Forest-Boundary Setting by Consensus
TLAS  EU Timber Legality Assurance Scheme
VPA  EC’s Voluntary Partnership Agreement
UN  United Nations
UNECE  United Nations Economic Commission for Europe
UNFCCC  United Nations Framework Convention on Climate Change
USA  United States of America
WCO  World Customs Organisation
WWF  World Wide Fund for Nature
WWF GFTN  WWF Global Forest and Trade Network
EXECUTIVE SUMMARY

A report by Chatham House explained that the illegal logging rate has been significantly reduced in Indonesia (75%) during the last decade. However, Indonesia has already lost around 33.4 million hectares of forest areas due to high forest conversion rate to other land uses and the estimation has not included the loss from conversion of forests. To combat this, the Government of Indonesia, through the Ministry of Forestry (MoF) has established eight policy priorities for the forestry sector in order to achieve sustainable forest management (SFM).

Unfortunately, the global economic crisis in 1997-1998, and the crisis of 2007-2009 which also affected Indonesia, the changes in national politics, and the initial implementation of regional autonomy through the decentralization process have increased uncertainty in doing business and more destruction of natural forests. Illegal logging has emerged as a serious threat to the quest of Indonesia to manage its forests sustainably. Indonesia has signed MOUs with UK, China, etc. to collaborate on combating illegal logging and associated timber trade. In 2011, Indonesia has entered into a Voluntary Partnership Agreement (VPA) with the EU to ensure only legal timber is exported to the EU.

To help improve the credibility of legality of Indonesian timber products in the global market the government developed and implemented a Timber Legality Verification System (SVLK). The Sistem Verifikasi Legalitas Kayu (SVLK) has various components, such as definition of timber legality, control of supply chain, verification system and independent monitoring systems.

In addition to the resource base policies, the government also adopted several trade policies relating to forestry industry, e.g. a log export ban policy since 8 October 2001 and a sawn timber export ban and tax policy since 2004.

The trade data analysis shows that the log production in Indonesia has decreased over the years. As forests are depleted, production will come from sustainably managed permanent forest and from plantations, as more such areas come on-line.

Therefore the source of logs for downstream industry in Indonesia has to be from a combination of sources: natural permanent forests, private forest, community forests, and plantations. The last-mentioned is controversial, partly due to potential for forest land conversion to plantations, but plantations also provide the best hope for sustaining the local timber industry. Indonesia has aimed for a significant increase in plantation forests, but this will require enabling policies, investment and strong monitoring and enforcement actions by the authorities to mitigate the issues related to the establishment of plantation forests. However, as the policies have only been recently formulated, and implementation of plantation strategies is still in an early stage, the production from local sources has yet to catch up with the installed capacity of the industry. The installed capacity of IPHH in 2008 was estimated around 23.4 million m³ of which the installed capacity for pulp production was approximately 6.4 million tonnes or about 28.8 million m³ RWE (1 tonne equals to 4.5 m³ RWE) in 2007. Java has a very extensive area of long established plantations (primarily of teak but also of mahogany and pine). Acacia species (primarily Acacia mangium) account for the bulk of the plantation-grown pulpwod.

Timber supply from sustainable and legal sources still cannot meet the demand for raw materials for forestry industry. Due to constraints in supply of raw material, the pulp industry had to import about 800,000 m³/year from various sources and there was still about 200,000 m³ unfulfilled capacity (idle capacity) per year. Several studies showed that there was still 25 to 30 million m³ of timber demand that could not be fulfilled from sustainable and legal sources in the last decade. This gap is expected to be gradually reduced by increasing yield from timber plantations.
Forest land and forest cover classification in Indonesia has been continuously changing due to the changing land use policy. In 2009 total forest size, based on synchronized Indonesian Forest-Boundary Setting by Consensus (TGHK) and Provincial Spatial Plan was 137.09 million hectares.

The data used are from government sources as there are very little other national data from other sources and there are shortcomings in the quality of the data.

The total area of Production Forests (Limited and Permanent Production Forests) was about 59 million hectares, which consisted of primary forests (14.98 million ha), secondary forests (23.11 million ha), plantations (2.82 million ha), non-forested land (18.59 million ha), and unclassified areas (989,000 ha) in 2009. However, degraded Production Forest was estimated at about 19.5 million hectares in 2006.

In 2009, about 32 million m$^3$ log had been produced from production natural forests (annual working plan) and 2.76 million m$^3$ from cleared natural forest land which had been allocated for other uses (agricultural, mining, infrastructure). These amounts should be reconciled with the actual harvest as there were differences found between the plans and actual logging. Industrial plantation forest plantation (HTI) has contributed about 22.4 million m$^3$ log production. There were also 2.2 million m$^3$ of logs sourced from other legal sources.

Timber production from natural forests has been decreasing and in 2009 was about 4.6 million m$^3$. In contrast, timber production from plantation forests increased significantly from 7 million m$^3$ to 22 million m$^3$ from 2004 to 2008. Timber production from the clear cutting of natural forests ranged from 1.6 million m$^3$ in year 2004 to 2.7 million m$^3$ in year 2008.

The total area that has been certified by voluntary certification systems (Forest Stewardship Council (FSC) and Lembaga EkoLabel Indonesia (LEI)) is less than 5% of total Production Forest. The Forest Management Unit (FMU) certification is issued on a voluntary basis; or by the Indonesian Independent Verification Body or Lembaga Penilai Independen (LPI) under the MoF on a mandatory basis. By June 2010, twenty FMUs covering 1,547,551 had been certified under LEI and FSC schemes, a small percentage of the 26.16 million hectares of natural forest concession areas.

Sawn timber production was at its peak of 10.4 million m$^3$ in 1989, then declined sharply to 4.3 million m$^3$ in 2005. Plywood and veneer production also increased sharply from 1 million m$^3$ in 1980 to its peak of 9.7 million m$^3$ in 1997, and then declined to 4.7 million m$^3$ in 2005. Pulp production increased rapidly from 0.5 million tonnes in 1989 and reached 5.4 million tonnes in 2005. Pulp production has increased to 5.97 million tonnes in 2009. In addition, the production of other forest products such as woodworking, block-board, particleboard and chips was estimated to have reached between 0.1 million m$^3$ to 2.3 million m$^3$ during the period 1983-2005.

There was little change last decade in the quantity of wood-based raw material which was imported annually into Indonesia.

The total value of timber sector export from Indonesia in 2009 was USD3.27 billion and for pulp and paper it was USD4.26 billion. The main destination countries for Indonesia’s timber export are mainland China, Japan, Korea, EU and USA. Plywood comprised 50% of the total export value, followed by pulp (47%), sawn timber (2%) and veneer (1%). In 2009, the main destination country/territory for pulp export from Indonesia was mainland China, with total export value of USD472 million of the total USD740 million of pulp export value. Total export value of the timber sector in 2009 to the EU countries and the USA was USD849 million and
USD557 million (26% and 17% respectively, of the total Indonesian timber export value in 2009).

Indonesia has dominated exports in the mouldings and joinery, furniture, pulp and paper sectors. It would appear, looking at the production trends, that Indonesia has been successful in promoting further downstream development.

Wooden furniture, and mouldings and joinery accounted for more than half of the export value of timber sector products exported from Indonesia during 2009. Plywood accounted for a further third. The log export ban has greatly facilitated the expansion of Indonesia’s plywood industry, which accounts for most of the RWE volume consumed by the timber sector—and roughly 60% of the RWE volume exported during recent years.

The recent financial crisis that hit the EU Member States and the USA has had an impact on the trade from Indonesia leading to a decline of export volumes of sawn timber and veneer from Indonesia to the EU countries and the USA. Export volume and value have significantly declined for sawn timber and veneer.

Indonesia has prohibited the export of rough sawn timber products which accounts for much of the HS4407 sawn timber product category since 2004. However, importing countries’ trade statistics indicate that sawn timber continues to be exported in substantial volumes, although these have been declining since 2002. This contrasts with export statistics declared by Indonesia—which slumped to near zero during 2004. The difference is unlikely to be attributable to sawn timber being misclassified as mouldings—exports of which have declined gradually since 2003. Although mismatches between Indonesia’s exports and importing countries’ imports have repeatedly been shown to be large, effective action to resolve those differences has yet to take place.

Overall and by both RWE volume and export value, the EU was the destination for an increasing share of the timber sector products which were exported from Indonesia during the last decade, even as Indonesia’s timber sector exports was declining. The cost per cubic metre of the timber sector to the EU has been increasing yearly even as the decline in exports has continued.

Furniture exports from Indonesia have been a major foreign exchange earner for the country. The main exports has been to the EU countries and the USA amounting to USD330 million and USD360 million respectively in 2009. These values were greater than values of exports to the Asian countries (mainland China, Japan and Korea) which only came up to USD208 million in 2009. Since furniture is included in the VPA, this could have significant impacts on Indonesia’s furniture exports. A temporary shock would be expected at the initial stage of the implementation (adjustment phase) due to the high volume and price of the exports to the EU in relation to other markets. The implementation of the legality verification system for raw materials would be expected to help recover from the shock in a relatively short period of time.

The first potential major impact of the VPA once implementation begins will be the significant decline in demand of wood products from Indonesia with only the legal ‘portion’ targeted at EU market. This will mean that any alleged mix of illegally sourced wood products that were exported to the EU countries prior to the VPA implementation will shift to other less stringent markets. However, this also depends on how quickly and efficiently the EU member states can begin monitoring and enforcement efforts to signal their resolve to the market place. SVLK as an instrument to determine the legality of VPA could potentially increase production cost that in turn could undermine community forest development, which is currently growing very rapidly, especially on Java Island. Therefore, SVLK needs to be adjusted for community forests.
The paper sector has increased steadily in exports from 17.82 million m³ RWE in 2000 to around 26 million m³ RWE in 2006, since when it has remained relatively constant to 2009.

The RWE volume of wood-based products imported into Indonesia is small relative to that which is exported. Pulp and paper account for the bulk of those imports. Timber products imports amounted to 1.2 million m³ RWE in 2009, whereas paper sector imports was 6.9 million m³ RWE, mostly dominated by wood-based pulp at 4.8 million m³ RWE and paper at 2.1 million m³ RWE. In 2009, most of the pulp was supplied from Brazil, Canada, Chile, New Zealand, South Africa, and Sweden; and East Asia (mainland China, Japan, and Taiwan) supplies most of the rapidly increasing quantity of paper. Indonesia’s imports of VPA core products (logs, sawn timber, plywood and veneer) were mostly from China, Malaysia, EU, New Zealand and USA.

Although the total RWE volume of wood-based products exported from Indonesia declined slightly over the last decade, the share accounted for by the timber sector declined rapidly from a high of 23.38 million m³ RWE in 2001 to 8.24 million m³ RWE in 2009 and this decline has not been compensated for by the paper sector. Plywood and, to a lesser extent, mouldings and joinery accounted for most of the decline.

The main countries of export of VPA core products by Indonesia was mainly Japan in the last decade, although Japan’s imports have been decreasing dramatically. The total exports of VPA core products have been reducing steadily to 4.7 million m³ RWE in 2009. The export volume for all other timber sector products (minus VPA core products) has dropped to 3.52 million m³ RWE in 2009. The main countries of exports have been EU, Australia, China, Japan, South Korea, Taiwan and USA.

The exports of the paper sector has been increasing steadily from 17.82 million m³ RWE in 2000 to around 26 million m³ RWE in the latter half of the last decade. The main countries of exports have been China, Japan, South Korea, EU, and Malaysia.

The Middle East is an important and growing market for timber from the insular SEA sub-region. There are no restrictions or barriers to imports of timber, and Indonesia and Malaysia have been developing trade networks and relations to increase trade flows of timber to the region. In 2009, Indonesia’s export to the Middle East amounted to just over 1 million m³ RWE.

The decline of forest product exports was mainly caused by the closure of many Industri Primer Hasil Hutan (IPHH) or Indonesian primary forestry industry (capacity <6000 m³/year) due to an insufficient supply of raw materials after enforcement of illegal logging, and decreasing demand for plywood products from Japan.

A very useful tool to help in the monitoring of cross-border trade and to address any potential impact of changing buyer demands and regulations, such as the EU Timber Regulation and Lacey Act, is to have real-time comparative analysis of Customs statistics. The more recent the data, the finer the scale of monitoring. The EC has been stressing that the Timber Regulation is not a border measure and hence there is no defined role specifically identified for Customs—at least not when it comes to controlling the external border of the EU.

There is an important role for Customs in supporting the implementation of the Timber Regulation by contributing important information. Under the VPA, Customs will also have to control imports of VPA-licensed timbers. Directly cross-checking Customs export declaration and Customs import declaration forms can provide very accurate controls and enforcement and monitoring, on volumes, species (where appropriate and required), values, shipper and exporter and importer. Comparative analysis of Customs data by HS categories can provide a
simple tool and method to look at the impacts of external factors such as regulatory changes, procurement policies, and control mechanisms.

A wood balance model (differences between all production, including imports against domestic consumption and exports) has been tried before with limited success, as data capture at the national and provincial levels varies by country and within country. The use of both the comparative statistical analysis and wood balance model together may provide some idea of the extent of illegal logging and illegal timber trade within a country and possible gaps and weaknesses of the governance system. Large discrepancies should be investigated immediately.

The EU should consider the following recommendations to assist Indonesia to meet the VPA and EU Timber Regulation requirements:

- Enhance the awareness and knowledge of the VPA and the EU Timber Regulation, and their implications, among all the stakeholders in the country. This is particularly important for those industries in the chain supplying EU markets, directly or in-direct via a third country which will need to ensure they have clear evidence of the origin of their raw material and verification of its legality. It is recommended that more awareness, training and capacity-building among the industry, civil society and government agencies be conducted. A particular challenge with the Timber Regulation is that the legal requirements for forestry and timber trade preclude the need to have a full traceability system. Since there is legal requirement for the government to have a traceability system in place, it will be difficult for operators in the EU to obtain legal documents that are fully traceable back to the stump. Hence, the evidence that might be needed for operators and monitoring organisations under the Timber Regulation has to be from a combination of legal documentation and company systems, records and procedures.

- Continued support to Indonesia to help resolve land tenure disputes in a timely manner; with conflict-resolution mechanisms in place. Also, government administrative efficiency and effectiveness of policy implementation needs to be enhanced; sufficient investment must be made available; and greater engagement by civil society groups in development activities is needed.

- Assistance to Indonesia to harmonize the various visions, missions, and priorities among provinces and districts which are reflected in the wide variety of institutions and forest management regulations.

- Continued support to Indonesia in good public and corporate governance, to create conducive environments for integration and collaborative empowerment of sustainable forestry development and good governance and transparency in the forestry sector. This includes awareness and capacity-building aimed at the general public, non-governmental organisations (NGOs) and the private sector on ethical consumerism, sustainable development, climate change, Reducing Emissions from Deforestation and Forest Degradation (REDD), conservation, certification, and other issues that have an impact on the forestry sector and also in encouraging responsible purchasing domestically.

- Development of communication on full chain of custody regulation of timber products with other major timber importers (mainland China, Japan Korea and the USA), where part of Indonesia’s timber products is processed in a third country/territory before entering the EU.

- Support for more analysis of the re-export of Indonesian timber from mainland China to Western markets. For market demand to influence the implementation of best practice and legality of forest management in Indonesia there must be a critical mass. For this
reason there is a need to continue focusing on the major Asian markets for Indonesian timber products, including mainland China, Malaysia and Japan.

- Continued support to Indonesia in the development of social safeguard policies for community forest and small/medium forestry enterprises prior to implementation of international agreements such as the VPA.

- Assistance in developing ways of capturing national data on domestic trade. Governments should develop a system for data collection, compilation and analysis to determine the scale and scope of domestic consumption. This information, coupled with production data, imports and exports, can give a good basis for evaluating and revising national policies, legislation and systems.

- Engagement with other countries and territories that import timber from Indonesia but which may not have comparatively stringent import requirements, including the East Asia markets, India and the Middle East. For countries such as China and Japan, which are already in dialogue with the EU, the EU should identify specific areas for collaboration, such as Customs co-operation.

- The study recommends the use of national export and import statistics as the most cost effective methodology for periodic monitoring of baseline trade data. A comparative analysis approach should be carried out for each shipment where possible, or on a monthly basis, using specific and corresponding HS codes.

- Encourage Indonesia government to request importing country’s Customs verify the timber shipment against the Customs export declaration form of Indonesia. In many countries, no amendment of regulations is needed for this, only the political will to institute the additional request for documentation.

- Support further training of Customs agents should be carried out to ensure they are up to date with national legislation on timber trade and forestry, including that in trading countries, as well up to date with international conventions and measures of trading partners that affect trade, such as the Lacey Act, EU Timber Regulation, etc. Such training should be embedded in the national Customs training academy to ensure it is institutionalised, as officers are transferred on a regular basis and new officials have to be re-trained regularly.
1. **INTRODUCTION**

This study provides an overview and baseline of information relating to timber trade, industry and forest governance within Indonesia. It draws on existing national and international data and recommends steps for further analysis and monitoring, and proposes an engagement strategy for moving the Asia Regional Programme of the European Union (EU)’s Forest Law Enforcement, Governance and Trade (EU FLEGT) forward in its implementation with key stakeholders in Indonesia.

The country is divided into 33 provinces and special areas (urban agglomerations), 10 in Sumatra, 6 in Java, 4 in Kalimantan, 3 in Nusa Tenggara including Bali, 6 in Sulawesi, and 2 each in Maluku and Irian Jaya. Indonesia has the third largest area of tropical forests and the fourth largest population in the world with very diverse ethnicity and cultures.

The three largest islands of Sumatra, Kalimantan and Irian Jaya are characterized by extensive coastal plain and inland hilly areas of up to about 1,000 m. This amounts to 74% of land area in central and southern Sumatra, 40% in northern Sumatra, 84% in western and central Kalimantan, 50% in eastern Kalimantan and 60% in Irian Jaya. These are where the majority of the timber is harvested. The remaining areas are mountainous, formed by the Barisan range in western Sumatra, the interior ranges of eastern Kalimantan and the Bird’s Head, and northern and central ranges in Irian Jaya. Sulawesi is largely mountainous, with only 40% below 1,000 m, mainly in the south and south-east. Java is characterized by a series of 15 volcanoes and other mountains well spaced with, between them, fertile plains and a broad northern coastal plain to the Java Sea, with 63% of the area below 1,000 m. The Maluku and Nusa Tenggara are of similar size, containing volcanoes and mountains while the plains and lower hills of below 1,000 m are limited to 44%.

Additional information on Indonesia is found in Annex 1.

2. **METHODOLOGY**

The study uses official Customs statistics of countries and territories for the period 2000–2009 for analysis—this period is frequently referred to as the “last decade” in this report. The reason for using the Customs data is elaborated upon in the section on Customs. In terms of the data sets that are the most readily available and accessible, custom statistics are one of the few data sets that are comparable across countries. The official Customs statistics of the study countries and territories are classified according to the Harmonized Commodity Description and Coding System (HS) of the World Customs Organization (WCO), an internationally standardized system of names and numbers for categorizing traded products. The HS codes used by all Customs agencies which are members of the WCO are similar, to the 6 digit level. However, not all the categories of the HS codes are used by each country/territory as it depends on the products in trade by that country/territory. The statistics considered were solely those under HS codes for wood products under HS44. Official export statistics in these categories for each country or territory in this study were compiled and analysed where available.

The study did not use data from FAO Statistical Database on agriculture, nutrition, fisheries, forestry, food aid, land use and population data (FAOSTAT) as the data are usually two years out of date and are incomplete. The FAOSTAT data also do not include wood products such as furniture, flooring, and moulding. The UN Commodity Trade Statistics Database (UN Comtrade) was used where appropriate but some of its data are based on a constant factor of value and so the various anomalies would need to be revised.

For several products, Eurostat no longer requires that weight is declared for intra-EU trade. This makes it difficult to identify the not infrequent anomalies in Eurostat's volume data. Al-
though the statistics published by Eurostat should be identical to those published by each EU Member State, they are not, and judging by the UK’s data, Eurostat data are the less reliable of the two.

The USA does not declare more than value for several high unit value products (which account for a significant proportion of trade).

The statistics data that have been abstracted and processed for Indonesia were from the Badan Pusat Statistik (Department of Statistics) (nine digit HS codes, monthly data), the sum of importing country/territory statistics (for volume or weight), and for the European Union (EU), Eurostat (http://epp.eurostat.ec.europa.eu/newxtweb/) (eight digit HS codes, monthly data).

Roundwood equivalent (RWE) volume is a measure of the volume of logs used in making a given volume or weight of a wood-based product. For each type of product, the volume of logs used might vary, perhaps substantially, depending on such factors as the type of mill and the diameter and quality of those logs. In this assessment, RWE has been estimated by multiplying source data (revised where anomalous or estimated from trade value) by the following: in cubic metres per cubic metre—1.4 (particleboard), 1.8 (sawn timber and fibre board), 1.9 (veneer and mouldings), 2.3 (plywood); and, in cubic metres per tonne: 1.6 (wood chips), 2.8 (wooden furniture), 3.5 (paper), 4.5 (wood-based pulp), zero (pulp based on waste paper). In order to avoid double counting, it might be appropriate to modify such factors if a substantial proportion of the wood raw material actually used in making a given type of product was already accounted for in the RWE volume of the products from which that raw material was derived.

It is important to note that the statistics compiled contain some anomalies and inconsistencies and should therefore be taken as indicative of the extent of the trade only. This study will recommend some protocol changes for Customs that could help to narrow and reduce such anomalies and inconsistencies in Customs statistics.

“Paper sector products” in this study equate to wood chips and mill residues, wood-based pulp and paper; timber sector products are all wood-based products other than fuel wood and paper sector products. The EU’s Voluntary Partnership Agreement (VPA) “core products” comprises of logs, sawn timber, veneer and plywood; which is the minimum to be covered under the VPA.

3. **POLICY AND LEGISLATION**

Tropical forests in Indonesia have served as the major source of timber and raw materials for forest industries which supply domestic consumption as well as export to places such as Japan, Europe and USA. Indonesia’s forestry sector is facing a challenge of high deforestation rate, particularly between 2003 and 2006 when the rate was reported to have reached 1.09 million hectares annually (Ministry of Forestry, 2009b). Deforestation problems have seriously deteriorated the timber supply for industries.

A report by Chatham House (Lawson, S. and MacFaul, L., 2009) explained that the illegal logging rate has been significantly reduced in several countries, such as Cameroon (50%), Brazil (50%-75%), and Indonesia (75%) during the last decade. However, Indonesia has already lost around 33.4 million hectares of forest areas due to high forest conversion rate to other land uses (FAO-MoF, 2009) and the estimation has not included the loss from conversion of forests.
The Government of Indonesia, through the Ministry of Forestry (MoF) has established eight policy priorities for the forestry sector in order to achieve sustainable forest management (SFM), i.e. (1) Consolidation of Forest Areas, (2) Forest Rehabilitation and Watershed (DAS) Support Improvement, (3) Forest Security and Forest Fire Control, (4) Biodiversity Conservation, (5) Revitalization of Forest Utilization and Forest Industry, (6) Empowerment of Forest-dependent Community, (7) Mitigation and Adaptation to Climate Change in Forestry Sector, (8) Strengthening Forestry Institutions (Ministry of Forestry, 2009d). To implement the fifth and sixth priorities (Revitalization of Forest Utilization and Forest Industry; and Empowerment of Forest-dependent Community) the government has set a target for the development of 5 million hectares of industrial forest plantations by 2009, and an additional 5.4 million hectares of community forest plantations between 2007 and 2016.

The main legal references for forest management in Indonesia are Act no. 41/1999 on Forestry and Act no. 5/1990 on Biodiversity Conservation. Through forest concessions, the management of Production Forests is granted to private companies, individuals, co-operatives, communities, or State enterprises. Forest concessions in natural forests are granted for 20 to 55 years and for up to 60 years in Hutan Tanaman Industri (plantation forests)(HTI). Another basic forestry law for managing forest resources in Indonesia is the Indonesian Constitution Article 33 that establishes the basis of State authority over land and natural resources, including forestlands. Forestry Act No. 41 was issued in 1999 to replace the Basic Forestry Law or Law No. 5 of 1967, which mainly focused on timber management. In principle, the Forestry Act No. 41 stipulates that extraction of forest products must not exceed the forest’s carrying capacity. Furthermore, Act No. 22 of 1999 has also emphasized the decentralization of forest administration to, among others, local governments. This has enabled forest management, including forest harvesting, to take into account local conditions and hence be more appropriate in practice.

As a response to the Earth Summit and the Bali ITTO meeting in 1992, the Government of Indonesia has implemented regulations (Ministerial Decree no. 252/Kpts-II/1993 and no. 576/Kpts-II/1993) on sustainable forest management (SFM). However, the Decrees have not incorporated social measures as one of the SFM criteria.

Unfortunately, the global economic crisis in 1997-1998, and the crisis of 2007-2009 which also affected Indonesia, the changes in national politics, and the initial implementation of regional autonomy through the decentralization process have increased uncertainty in doing business and more destruction of natural forests. Illegal logging has emerged as a serious threat to the quest of Indonesia to manage its forests sustainably. In addition, illegal logging activities undermine respect for the rule of law and of government, reduce profitability of forest products obtained by more sustainable practices and undervalue Indonesia’s forest resources.

Based on a review on forest concessions’ performance in 1998, the Minister of Forestry suspended over 200 poor-performing forest concessionaires. In the outer islands, particularly in Sumatra and Kalimantan, the Government often re-grants the open forest land for plantations in a format of community concession, including community plantation forest Hutan Tanaman Rakyat or (HTR). Collaborative plantation management involves local community, co-operatives or collective groups and government at various levels, e.g. provincial or district. This management model has been rapidly expanding since the implementation of decentralization policy in 1998. Since 2007, the government has given priority to plantation development by rural smallholders on 5.4 million hectares of degraded Production Forest areas through its Community-Based Plantations programme (Ministry of Forestry, 2009c) which will be carried on through 2016, especially where there are tenure disputes (Ministry of Forestry, 2009b).

As part of the forest concession policy (Hak Pengusahaan Hutan (HPH) Bina Desa) through a Forestry Ministerial Decree (SK Menhut) no. 61/Kpts-II/1991, the government issued a policy
on Community-based Forestry Management (CBFM) known as the Village Development Programme. This HPH Bina Desa programme was later replaced by the Pembangunan Masyarakat Desa Hutan (PMDH) or the Indonesia Rural Forest-based Community Development programme through Forestry Ministerial Decree (SK Menhut) no. 65/Kpts-II/1995. The government has also launched two regulations regarding CBFM, viz. (i) SK Menhut No. 318/Kpts-II/1999 regarding community participation in forest management, and (ii) SK Menhut No. 31/Kpts-II/1999 for granting the ‘less than 50,000 ha’ forest concessions to the community. Neither regulation can be implemented because they were originally developed as an official response to public reform without attention to requirements for its implementation in the field.

Currently, many CBFM programmes are implemented using slightly different terms such as forest management by the community or Pengelolaan Hutan oleh Masyarakat (POHM), community-based forest management or Pengelolaan Hutan Berbasis Masyarakat (PHBM), and participative forest management with the community or Pengelolaan Hutan Partisipasi Bersama Masyarakat (PHPBM). Implementation is in accordance with the government regulation (PP) No. 34/2002.

To halt further deforestation and forest degradation and support efforts towards SFM, the MoF, Indonesia has formulated five priority policies which will be gradually and selectively implemented. They are as follows:

(i) elimination of illegal logging;
(ii) overcoming forest fires through preventive measures;
(iii) restructuring of the forestry sector by increasing the efficiency and effectiveness of forest resource management;
(iv) conservation of forest resources through rehabilitation of degraded forests and land; and
(v) decentralization of the forestry sector.

To further combat illegal logging and enhance control of the supply chain, after a long consultation with stakeholders since 2003, the Government of Indonesia has also enacted legislation and rules to verify legality of the supply chain. The Sistem Verifikasi Legalitas Kayu (SVLK) or Timber Legality Verification System has various components, such as definition of timber legality, control of supply chain, verification system and independent monitoring systems. The SVLK is authorized under the following regulations:

- Minister of Forestry Decree Permenhut No. P38/Menhut-II/2009 dated 12 June 2009;

Other legislation and regulations that have also had some influence and impact on forest resource management, protection and conservation in Indonesia are:

(i) Indonesia’s highest legislative body Majelis Permusyawaratan Rakyat or Indonesia’s People’s Consultation Assembly (MPR) Decree No. IX of 2001 on Agrarian Reform and Natural Resources Management which contains principles and approaches that have some potential to reduce conflict both among the laws and the users of natural resources;
(ii) Law No. 22 of 1999 (amended by Law No. 32 of 2004 on Regional Administration) and Law No. 25 of 1999 (amended by Law No. 33 of 2004 on Fiscal Balance Between the Central Government and Regional Governments) that address decentralization through reallocating the roles and responsibilities for forestland management and revenue sharing between the central, provincial, and district governments;

(iii) the Basic Agrarian Law No. 5 of 1960 which has some influence on the management of land and the process of designating land rights;

(iv) the National Land Policy Framework (NLPF) that was formulated by the government in 2004 and 2005 to review and renew land policy, to improve existing land laws and regulations, including the Basic Agrarian Law, to resolve increasing land problems, and to implement MPR Decree No. IX of 2001;

(v) The Environmental Law of 2009 that requires companies whose operations have an impact on the environment to obtain an environmental licence and undergo an environmental assessment before starting operations; but regulations are pending and implementation will take up to 5 years;

(vi) Law No. 7 of 2004 on Water Resources which integrates responsibilities across ministries, with primary responsibility under the Ministry of Public Works, to improve water resource management and allocation at the national level;

(vii) Presidential Instruction No. 4 of 2005 that directs the leaders of 18 government bodies to co-operate and co-ordinate to eradicate illegal logging;

(viii) Law No. 25 on Anti-Money Laundering which includes forestry and environment crimes as predicate offences for prosecution for money laundering; and

(ix) bi-lateral agreements with Norway, mainland China, the UK, USA, S. Korea and Japan, to assist in combating forest crimes and trade of illegal timber products, arising from the call made in the Bali Ministerial Declaration on Forest Law Enforcement and Governance (FLEG) in 2001.

Indonesia’s New Order government had given privileges of logging concessions to the private sector, for which the Government had created many policies about exploitation of forest products as outlined above. When the Government implemented the ‘Basic Forestry Law’ Act in 1967, this introduced a new foreign investment law to attract foreign investors and to promote timber exports. The strategy was implemented to boost the growth of the country’s devastated economy at that time. This law was heavily criticised as it no longer recognized customary ownership in the State forests and had even granted the management right to large-scale concessionaires or Hak Pengusahaan Hutan (HPH). The new policy strictly limited local communities’ right to access and to use the forests the way they used to. Before 1967, customary right to access the State forests was still acknowledged.

Unfortunately, the new policy triggered conflicts between local communities living adjacent to the concession HPH due to unclear boundaries, inadequate compensation payments, or restrictions to communities’ access to harvest forest products or to build settlements in forest areas which remain until the present although new policies and legislations were enacted to attempt to right this injustice.

In addition to the resource base policies, the government also adopted several trade policies relating to forestry industry, e.g.:
- a log export ban policy: firstly issued in May 1980 and fully enacted in 1985 and re-enacted on 8 October 2001 and still current;
- Sawn timber export tax policy: enacted in November 1989, superseded by the undried rough sawn timber export ban in 2004;

The re-enactment of the log export ban policy has improved the development of the plywood and sawn timber industries in Indonesia, but the revenue from plywood and sawn timber export was much lower than the total revenue loss of US$ 6 billion from the banned log export, 1985–1997 (Manurung, 2002).

The policy on forestry industry revitalization was aimed at supporting the national policy on "economic triple track strategy". The triple track strategy was designed to meet the demand for pro-growth, pro-job, and pro-poor development. The growth in the forestry industry sector was projected to be 2% per year in order to support national growth plans (Ministry of Forestry, 2009e).

Through the ministerial regulation no P.59/Menhut-II/2009, MoF proposed a 5 year-strategic plan for the revitalization of the forestry industry sector. The strategic plan aimed at optimizing the use of forest resources, and included the following activities:

- Management of Production Forests to ensure that they do not overlap with other land rights/concessions
- Management of natural forest resources use
- Development of plantation forests and Community Plantation Forest (HTR)
- Restructuring of primary forestry industries

Timber supply from sustainable and legal sources still cannot meet the demand for raw materials for forestry industry. Securing timber supply is crucial for strengthening the forestry sector. Several studies showed that there was still 25 to 30 million m³ of timber demand that could not be fulfilled from sustainable and legal sources in the last decade. This gap is expected to be gradually reduced by increasing yield from timber plantations (Brown et al., 2005).

The MoF has issued the ministerial regulations P.20/Menhut-II/2007 jo. and P.60/Menhut-II/2007 as guidelines for granting licences for timber production in Natural Production Forest. These regulations are intended to attract more investment for timber production in areas that do not overlap with other rights/concessions and in secondary forest with relatively good vegetation, as well as to accelerate ecosystem restoration in Production Forests.

In order to boost timber production from plantation forests, MoF has introduced guidelines and procedures for granting licences for timber plantation expansion in Production Forests (P.19/Menhut-II/2007). This expansion is expected to attract more investments for the development of plantation forests (HTI) on the heavily degraded or unproductive forests. The regulations have not yet been implemented yet.

The Government Regulation (PP) No 6/2007 on forest planning, which was further elaborated in the Ministerial Regulation no. P.23/Menhut-II/2007 jo and Ministerial Regulation no. P.5/Menhut-II/2008, has contributed to increasing timber supply from community forests to approximately 1.5 million m³ in 2008.

The regulations have encouraged industry to use small-diameter wood from community forests and industrial plantation forests (HTI), and to reduce using wood from natural forests. They also encouraged the re-engineering/retooling of Industri Primer Hasil Hutan Kayu or Indonesian primary processing of timber licence (IPHHK) in order to improve efficiency and productivity.
In July 2007, the Indonesian parliament passed Law 40/2007 on Limited Liability Companies, introducing mandatory legal requirements for corporate social responsibility. In the forestry sector, Indonesian corporations introduced out-grower schemes in 1999/2000 to resolve long-term land conflicts inside their concessions. Although there are no official statistics on total out-grower areas, there have been a growing number of companies that have been working with out-growers as part of their corporate social responsibility (CSR) program. Forestry companies consider this to be an effective approach to ensuring sustainable supply of timber while sharing the benefits (and risks) with local communities, as well as providing smallholder out-growers to manage and create economic option from the idle lands (Nawir, A.A. et al., 2003).

In 2002, the Government of Indonesia issued a soft landing policy which was aimed at setting a standard for sustainable log production from natural forests. The policy gradually reduces national Annual Allowable Cut (AAC) volume, which applies to all provinces and concessionaires. Using the policy, the AAC has been gradually reduced from 21 million cubic metres in 2001 to 12 million cubic metres in 2002, to 6.89 million cubic metres in 2003, and to 5.74 million cubic metres in 2004. Lembaga Ekolabel Indonesia or Indonesian Eco-labelling Institute (LEI) certification-holder companies are exempted from the AAC reduction (Decree of Director General Forest Production no. 02/KPTS/VI-PHA/2003).

4. FOREST RESOURCES

Forest land and forest cover classification in Indonesia has been continuously changing due to the changing land use policy. Total forestland area according to Forest Boundary Setting by Consensus (Tata Guna Hutan Kesepakatan-TGHK) by 1991 was about 143.97 million hectares. The original TGHK was based only on MoF’s land use jurisdiction and was aimed at providing a basis for land use map and planning in order to solve inter-agency conflicts over land use. Since the implementation of decentralization in 1999, local governments have proposed provincial and district spatial planning to also be considered in the classification process. Current total forest size, based on synchronized TGHK and Provincial Spatial Plan is 137.09 million hectares (Ministry of Forestry, 2009b).

The data used are from government sources as there are very little other national data from other sources and there are shortcomings in the quality of the data (Brown, D.W. and Stolle, F., 2009). A proposal has been made to help overcome shortcomings in the quality of Indonesia’s national statistics concerning forest management, industrial roundwood production and trade in wood-based products (Brown, D.W. and Stolle, F., 2009). If implemented, this should help efforts to combat illegal timber, manage forest land sustainably, and improve the quality and quantity of funds made available to Indonesia for climate change mitigation.

According to Forestry Act no. 41/1999, forest areas can be categorized as: Conservation Forest, Protection Forest and Production Forest. Conservation Forest is forest area which is designated for the conservation of animal and plant species and their ecosystem. Protection Forest is forest area which is designated for sustaining forest ecological services, such as hydrological systems, flood prevention, erosion control, sea water intrusion prevention, and maintaining soil fertility. Production Forest is forest area which is designated mainly for promoting sustainable forest production. Production Forest can be further classified into Permanent Production Forest, Limited Production Forest, and Convertible Production Forest. Table 1 describes the area of each forest category.
Table 1: Allocation of forest lands in Indonesia

<table>
<thead>
<tr>
<th>Classification</th>
<th>Area (ha)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Protected Forest</td>
<td>31,604.032.02</td>
<td></td>
</tr>
<tr>
<td>2. Production Forest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Limited Production Forest *)</td>
<td>22,502,724.26</td>
<td>*) Forest could still be harvested under strict regulation and careful considerations of forest land characteristics, such as slope and vegetation type.</td>
</tr>
<tr>
<td>b) Permanent Production Forest</td>
<td>36,649,918.43</td>
<td></td>
</tr>
<tr>
<td>c) Convertible Production Forest *)</td>
<td>22,795,961.00</td>
<td>*) Could still be allocated for other land uses, such as agriculture, infrastructure development, mining, etc</td>
</tr>
<tr>
<td>3. Conservation Forest*)</td>
<td>23,537,832.47</td>
<td>Includes area for hunting</td>
</tr>
<tr>
<td>Total</td>
<td>137,090,468.18</td>
<td></td>
</tr>
</tbody>
</table>

Source: Forestry Statistic, MoF (2008)

Forest industry in Indonesia has been growing very rapidly and has played a vital role in the country’s economic development and creating job opportunities. Decreasing capacity of natural forests to supply raw materials, low pulpwood production, slow growth of industrial plantation forest (HTI), and production inefficiencies have caused severe decline in forest production, leaving many wood processing companies with financial losses and debts as well as increasing unemployment rate. Some forestry companies are suspected to have been engaged in illegal timber extraction from natural forests to sustain their production.

The total area of Production Forests (Limited and Permanent Production Forests) was about 59 million hectares, which consisted of primary forests (14.98 million ha), secondary forests (23.11 million ha), plantations (2.82 million ha), non-forested land (18.59 million ha), and unclassified areas (989,000 ha) in 2009 (Ministry of Forestry, 2009). However, degraded Production Forest was estimated at about 19.5 million hectares in 2006 (FAO, 2006). In order to improve production from natural Production Forests, MoF has implemented intensive silviculture system (Silin) at 25 forest concessions Izin Usaha Penegeolaaan Hasil Hutan Kayu — Indonesian logging licence (IUPHHK) covering a total area of 52 301 hectares. Enrichment planting has also been implemented in 16 792 hectare of logged-over natural Production Forests. Both programmes are expected to contribute to increasing timber supply for the forest industry.

By December 2008, about 26.16 million hectares of natural forest had been allocated to 308 forest concession holders throughout 5 major islands in Indonesia (Table 2). In addition to that, Production Forest has been reforested using a system of forest plantation licences (HTI). The licences are available to individuals, co-operatives, private companies, and state/local government-owned enterprises. In 2008, according to the MoF, 277 HTI concessionaires had planted 4.31 million hectares, out of a total 10.04 million hectares area under their concessions (Ministry of Forestry, 2008)(Table 3).
Table 2: Progress of Natural Forest Concessions issued in Indonesia (IUPHHK/HPH)(1991/1992–2009)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Area (Million hectare)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991/1992</td>
<td>567</td>
<td>60.48</td>
</tr>
<tr>
<td>1992/1993</td>
<td>580</td>
<td>61.38</td>
</tr>
<tr>
<td>1993/1994</td>
<td>575</td>
<td>61.70</td>
</tr>
<tr>
<td>1994/1995</td>
<td>540</td>
<td>61.03</td>
</tr>
<tr>
<td>1995/1996</td>
<td>487</td>
<td>56.17</td>
</tr>
<tr>
<td>1996/1997</td>
<td>447</td>
<td>54.09</td>
</tr>
<tr>
<td>1997/1998</td>
<td>427</td>
<td>52.28</td>
</tr>
<tr>
<td>1998/1999</td>
<td>420</td>
<td>51.58</td>
</tr>
<tr>
<td>1999/2000</td>
<td>387</td>
<td>41.84</td>
</tr>
<tr>
<td>2000</td>
<td>362</td>
<td>39.16</td>
</tr>
<tr>
<td>2001</td>
<td>351</td>
<td>36.42</td>
</tr>
<tr>
<td>2002</td>
<td>270</td>
<td>28.08</td>
</tr>
<tr>
<td>2003</td>
<td>267</td>
<td>27.80</td>
</tr>
<tr>
<td>2004</td>
<td>287</td>
<td>27.82</td>
</tr>
<tr>
<td>2005</td>
<td>285</td>
<td>27.72</td>
</tr>
<tr>
<td>2006</td>
<td>322</td>
<td>28.78</td>
</tr>
<tr>
<td>2007</td>
<td>324</td>
<td>28.27</td>
</tr>
<tr>
<td>2008</td>
<td>308</td>
<td>26.16</td>
</tr>
<tr>
<td>2009*)</td>
<td>308</td>
<td>26.16</td>
</tr>
</tbody>
</table>

Source: Forestry Statistic, MoF, 2009a
*) - Data as of February 28, 2009

Table 3: Progress of plantation in forest concessions issued in Indonesia (1995/1996-2009)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Area (Million hectare)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995/1990</td>
<td>9</td>
<td>1.13</td>
</tr>
<tr>
<td>1996/1997</td>
<td>45</td>
<td>2.83</td>
</tr>
<tr>
<td>1997/1998</td>
<td>90</td>
<td>3.93</td>
</tr>
<tr>
<td>1998/1999</td>
<td>90</td>
<td>3.93</td>
</tr>
<tr>
<td>1999/2000</td>
<td>96</td>
<td>4.34</td>
</tr>
<tr>
<td>2000</td>
<td>98</td>
<td>4.44</td>
</tr>
<tr>
<td>2001</td>
<td>100</td>
<td>4.52</td>
</tr>
<tr>
<td>2002</td>
<td>103</td>
<td>4.55</td>
</tr>
<tr>
<td>2003</td>
<td>105</td>
<td>4.63</td>
</tr>
<tr>
<td>2004</td>
<td>114</td>
<td>5.80</td>
</tr>
<tr>
<td>2005</td>
<td>113</td>
<td>5.73</td>
</tr>
<tr>
<td>2006</td>
<td>130</td>
<td>6.19</td>
</tr>
<tr>
<td>2007</td>
<td>247</td>
<td>9.88</td>
</tr>
<tr>
<td>2008</td>
<td>227</td>
<td>10.03</td>
</tr>
<tr>
<td>2009</td>
<td>229</td>
<td>9.97</td>
</tr>
</tbody>
</table>

Source: Forestry Statistic, MoF, 2009a

In 2008, about 32 million m³ log had been produced from production natural forests (annual working plan) and 2.76 million m³ from cleared natural forest land which had been allocated for other uses (agricultural, mining, infrastructure)(Table 4). These amounts should be reconciled with the actual harvest as there were differences found between the plans and logging as shown later. Industrial plantation forest plantation (HTI) has contributed about 22.4 million m³ log production. There were also 2.2 million m³ of logs sourced from other legal sources.
According to Table 4, timber production from natural forests increased significantly from 3.5 million m$^3$ in 2004 to 6.4 million m$^3$ in 2007, but then decreased sharply to about 4.6 million m$^3$ in 2008. In contrast, timber production from plantation forests increased significantly from 7 million m$^3$ to 22 million m$^3$ from 2004 to 2008. Timber production from the clear cutting of natural forests ranged from 1.6 million m$^3$ in year 2004 to 2.7 million m$^3$ in year 2008.

As the left hand chart in Figure 1 indicates, Kalimantan and Papua accounted for the great majority of concessions in Production Forest which the Ministry of Forests considered valid during 2008 (Ministry of Forestry, 2009b). The right hand chart above shows that Kalimantan and, to a lesser extent, Papua also accounted for the great majority of the annual permitted cut in 2009 (Ministry of Forestry, 2009b). The mix of species actually logged might differ from what is anticipated in the annual permitted cut. The volume actually logged was considerably less than anticipated during 2006 and 2007 (Ministry of Forestry, 2009b). For example in 2007, for West Nusa Tenggara, the target for teak was 17,312 m$^3$ but the actual logging was only 1343 m$^3$. Such vast discrepancies occurred for many of the provinces.
Figure 2 describes significant fluctuation of timber supply for forestry industry during the four years from 2004 to 2008. Timber production from industrial plantation forests or Hutan Tanaman Industri (HTI) increased sharply from 7 million m³ in 2004 to 22 million m³ in 2008 (two companies appear to have reported producing 17 million m³ from plantations in their annual report (Cossalter, C., 2006)), while timber production from natural forests was relatively stagnant until 2007 before declining to 4.4 million m³ in 2008. Total timber production had increased from 13.5 million m³ in 2004 to 31.9 million m³ in 2008.

Figure 2: Log production (m³) from 2004-2008 from various sources in Indonesia

Statistics for annual permitted cut presumably relate solely to Production Forest. The annual permitted cut decreased steeply during the first half of last decade, but has doubled since then (ITTO, 2007). The area of concessions in Production Forest has declined by more than half since the mid-1990s.

Production forest accounted for less than 10% of the total volume logged in Indonesia during 2006 (Obidzinski, K., et al., 2007). By volume during 2008, Sumatera seems to have been the source of most of Indonesia’s log production through clearance of natural forests for plantations (Ministry of Forestry, 2009b). Annual statistics for the volume of logs obtained during other years from plantations and conversion forest do not seem to be readily available—except informally for 2004 (Banjar, Y.L., 2004). Java has a very extensive area of long-established plantations (primarily of teak but also of mahogany and pine)(Anon., 2010). However, the legality and sustainability of their output is unclear.

HTI is usually established to replace a natural forest. HTI has been projected to be the major source of timber supply for forestry industries in Indonesia. Field observation in several Izin Usaha Pengelolaan Hasil Hutan Kayu—Hutan tanaman—Indonesian logging licence for plantation forest (IUPHHK-HT) plantation forests showed that pulpwood production (Acacia spp., Eucalyptus spp.) with a 6 to 8 year-rotation period is sufficiently high, ranging from 125 to 200 m³ per hectare or about 16–33 m³/ha/year, but this is by no means the same across all plantations. However, current wood supply is still insufficient to provide a pulpwood volume up to 35 to 60 m³ per hectare annually (possible, depending on the species and clone seedlings used)(Kustiawan, D., 2006), which has been one of the major reasons for HTI expansions.
Indonesia could also potentially get significant benefit from Reducing Emissions from Deforestation and Forest Degradation (REDD). Indonesia is one of the few countries in Asia which is working with the UN-REDD national programme that is supported by UNDP, FAO and other agencies to develop a national strategy on REDD. Estimates vary widely due to uncertainty on how much reduced deforestation can actually be achieved and how much credit can be obtained from the reduced carbon emissions. By reducing the deforestation rate, Indonesia could potentially gain between USD2.5 and USD4.5 billion per year (Ministry of Forestry-IFCA, 2008). Regulation no. 30/Menhut-II/2009 provides guidance on REDD, i.e. prerequisites for locations and participations, rules and procedures for approval, establishment of reference emission level (REL), monitoring, reporting and verification, time frame, rights and obligations, incentive distribution and liability, as well as the roles of government at all levels. One challenge which the UN-REDD programme is attempting to address is the quality of the datasets, through inventory and measurement activities to get a higher degree of confidence in the figures to be used for baselines on carbon emissions and sequestration.

Table 5: Deforestation rate in 7 major islands in Indonesia between 2000 and 2005

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sumatra</td>
<td>259,500</td>
<td>202,600</td>
<td>339,000</td>
<td>208,700</td>
<td>335,700</td>
<td>1,345,500</td>
<td>269,100</td>
</tr>
<tr>
<td>Kalimantan</td>
<td>212,000</td>
<td>129,700</td>
<td>480,400</td>
<td>173,300</td>
<td>234,700</td>
<td>1,230,100</td>
<td>246,020</td>
</tr>
<tr>
<td>Sulawesi</td>
<td>154,000</td>
<td>150,400</td>
<td>385,800</td>
<td>41,500</td>
<td>134,600</td>
<td>1,146,300</td>
<td>173,250</td>
</tr>
<tr>
<td>Maluku</td>
<td>20,000</td>
<td>41,400</td>
<td>132,400</td>
<td>10,600</td>
<td>10,500</td>
<td>214,900</td>
<td>42,980</td>
</tr>
<tr>
<td>Papua</td>
<td>147,200</td>
<td>160,500</td>
<td>140,800</td>
<td>100,800</td>
<td>169,100</td>
<td>1,037,800</td>
<td>143,680</td>
</tr>
<tr>
<td>Jawa</td>
<td>118,300</td>
<td>142,100</td>
<td>343,400</td>
<td>71,700</td>
<td>37,300</td>
<td>872,500</td>
<td>142,560</td>
</tr>
<tr>
<td>Bali &amp; NTT</td>
<td>107,200</td>
<td>99,600</td>
<td>84,300</td>
<td>28,100</td>
<td>40,600</td>
<td>359,800</td>
<td>71,960</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1,018,200</td>
<td>926,300</td>
<td>1,906,100</td>
<td>634,700</td>
<td>962,500</td>
<td>5,447,800</td>
<td>1,089,560</td>
</tr>
</tbody>
</table>

Source: Executive Data Strategic, MoF, 2009.
* Nusa Tenggara Timur

But the reality is that huge deforested areas (Table 5) have not been replanted with economically beneficial plantation, such as estate crops, plantation forests, or annual crops. Such areas are currently covered by sparse vegetation, shrub, grass, and many even be experiencing recurring fires.

In May 2010, Norway and Indonesia signed a partnership agreement to support Indonesia’s efforts to reduce greenhouse gas emissions from deforestation and degradation of forests and peat lands. Norway will support Indonesia's efforts with up to USD1 billion based on Indonesia's performance over the next 7-8 years. The agreement does not impact on existing forestry contracts and will be implemented in phases. One of the objectives of the programme is to secure a more sustainable management of forest in Indonesia (Anon., 2011).

Indonesia recognizes the importance of transboundary collaboration in the protection and conservation of biological diversity. Indonesia has been actively involved in the development of the Heart of Borneo Initiative (HoB) together with Brunei Darussalam and Malaysia since the signing of the HoB Declaration on 12 February, 2007 in Bali, Indonesia. As part of this initiative, an area totalling up to 24 million hectares would be designated as protected areas, Production Forests and sustainable land-use areas. The designated forest area will contain a core of totally protected areas within a buffer zone comprising a largely forested landscape that will be managed for sustainable human use, for example, sustainable production of timber and other forest products, ecotourism and water catchment management.
4.1 Certification

In June 2009, the MoF issued a mandatory certification scheme which was based on the Ministerial Regulation no. P.38/Menhut-II/2009 about Standard and Guidelines for Performance Assessment of Sustainable Production Forest Management and SVLK.

In Indonesia, SFM progress is measured by the number of forest management units (FMUs) that have been certified. The FMU certification is issued by LEI or by Forest Stewardship Council (FSC) on a voluntary basis; or by the Indonesian Independent Verification Body or Lembaga Penilai Independen (LPI) under the MoF on a mandatory basis. By June 2010, twenty FMUs covering 1,547,551 had been certified under LEI and FSC schemes, a small percentage of the 26.16 million hectares of natural forest concession areas. Tables 6 and 7 show the distribution of the certified FMUs.

Table 6: Certified FMUs LEI-FSC system scheme in Indonesia as of June 2010

<table>
<thead>
<tr>
<th>FMU</th>
<th>Area (Ha)</th>
<th>Join Certification Program (JCP)/Non-JCP</th>
<th>Certificate Issuance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Forest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT. Diamond Raya Timber</td>
<td>90 956</td>
<td>LEI-FSC</td>
<td>2001</td>
</tr>
<tr>
<td>PT. Intracawood Mfg.</td>
<td>195 110</td>
<td>LEI-FSC</td>
<td>2001</td>
</tr>
<tr>
<td>PT. Sari Bumi Kusuma</td>
<td>147 600</td>
<td>LEI-FSC</td>
<td>2002</td>
</tr>
<tr>
<td>PT. Erna Ojilawati</td>
<td>184 205</td>
<td>LEI-FSC</td>
<td>2003</td>
</tr>
<tr>
<td>PT. Sumalindo Lestari Jaya Unit II</td>
<td>267 600</td>
<td>LEI-FSC</td>
<td>2003</td>
</tr>
<tr>
<td>PT. Sarmiento Paraktantja Timber</td>
<td>216 580</td>
<td>LEI (Non-JCP)</td>
<td>2008</td>
</tr>
<tr>
<td>Total Natural Forest</td>
<td>1 102 052</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total JCP</td>
<td>885 472</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plantation Forest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PT. Riau Andalan Pulp and Paper</td>
<td>159 500</td>
<td>LEI (Non-JCP)</td>
<td>2006</td>
</tr>
<tr>
<td>PT. Wira Karya Sakti</td>
<td>260 829</td>
<td>LEI (Non-JCP)</td>
<td>2008</td>
</tr>
<tr>
<td>Total Plantation</td>
<td>420 329</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Forest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FKPS Desa Selopuro</td>
<td>262</td>
<td>LEI (Non-JCP)</td>
<td>2006</td>
</tr>
<tr>
<td>FKPS Desa Sumberejo</td>
<td>547</td>
<td>LEI (Non-JCP)</td>
<td>2006</td>
</tr>
<tr>
<td>Koperasi Wana Manunggal Lestari</td>
<td>815</td>
<td>LEI (Non-JCP)</td>
<td>2006</td>
</tr>
<tr>
<td>GOPHR Wono Lestari Makmur</td>
<td>1 179</td>
<td>LEI (Non-JCP)</td>
<td>2008</td>
</tr>
<tr>
<td>PPHR Catur Giri Manunggal</td>
<td>2 434</td>
<td>LEI (Non-JCP)</td>
<td>2008</td>
</tr>
<tr>
<td>UM Hutan Ddat Rumah Panjae Menua Sungai Utik</td>
<td>9 545</td>
<td>LEI (Non-JCP)</td>
<td>2008</td>
</tr>
<tr>
<td>UMR Argo Bancak</td>
<td>600</td>
<td>LEI (Non-JCP)</td>
<td>2009</td>
</tr>
<tr>
<td>UMR WARAS</td>
<td>1 404</td>
<td>LEI (Non-JCP)</td>
<td>2009</td>
</tr>
<tr>
<td>UMR Rimbasari</td>
<td>1 073</td>
<td>LEI (Non-JCP)</td>
<td>2010</td>
</tr>
<tr>
<td>UMR Wana Lestari</td>
<td>3 427</td>
<td>LEI (Non-JCP)</td>
<td>2010</td>
</tr>
<tr>
<td>UMR Gerbang Lestari</td>
<td>2 889</td>
<td>LEI (Non-JCP)</td>
<td>2010</td>
</tr>
<tr>
<td>UMHRT Alas Makmur</td>
<td>965</td>
<td>LEI (Non-JCP)</td>
<td>2010</td>
</tr>
<tr>
<td>Total CBFM</td>
<td>25 170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1 547 551</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: The Indonesian Ecolabeling Institute (LEI), 2010
Very little wood production out of the 26 million hectares of production natural forest in Indonesia is credibly certified. The competitive advantage which illegalities confer (particularly in relation to price) has contributed to the difficulty which the FSC-certified plywood made in Indonesia has faced in securing export orders (Oliver, R., 2007).

Unsustainable management, illegality and social conflict prompted the withdrawal of all FSC-certificates from Perum (now PT) Perhutani, a State-controlled enterprise which manages a large area of long established plantations (mainly of teak)(Anon., 2010a). A very small area of those plantations is now FSC-certified and, for several years, six rather larger areas have received technical assistance from The Forest Trust (Anon., 2010b). The Tropical Forest Foundation has supported a number of concessionaires and timber enterprises nationwide—three of these have FSC certificates (Anon., 2010c) and the output of some others has been verified for legality (Anon., 2010d). WWF’s Global Forest and Trade Network (GFTN) in Indonesia has also supported a number of concessionaires and timber enterprises to move towards certification and also to gain chain-of-custody certificates for its supply chain (Anon., 2010e).

Known weaknesses in local and international certification schemes have been exploited by a few in Indonesia. While one concession held by a major group might be certified, that group as a whole might have a poor record for illegality and/or unsustainability. Unlike its competitors, the FSC prohibits the use of its trademark by any affiliate of the multi-national Asia Pulp and Paper group (Anon., 2010f). Affiliates of that group account for roughly one third of the enterprises which form the Business Chapter of Lembaga Ekolabel Indonesia (Anon., 2010g).

General lessons learned about the nature of demand for, and supply of, sustainable and legal verified timber from Indonesia is that market demand for certified and legal forest products is driven by multiple factors including purchasing policies by corporations and regulatory and public purchasing policies by importing governments. For forest certification implementation in Indonesia to have a major impact on natural forest management companies there needs to be a stepwise approach towards certification.

Up to now, the total area that has been certified by voluntary systems (FSC and LEI) is less than 5% of total Production Forest. Although progress has been slow and challenges remain, market-based efforts to improve forest management are beginning to pay dividends in Indonesia. Keeping environmentally sensitive buyers engaged with Indonesian timber producers needs to be prioritized. This may entail identifying more existing buyers of Indonesian timber

Table 7: Certified FMUs with FSC scheme in Indonesia as of October 2010

<table>
<thead>
<tr>
<th>Certificate Code</th>
<th>License No.</th>
<th>Organization Name</th>
<th>Issue Date</th>
<th>Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW-FM/COC-004117</td>
<td>FSC-C013892</td>
<td>Koperasi Taman Wijaya Rasa (KOSTAJASA)</td>
<td>2 Jun 2009</td>
<td>1 Jun 2014</td>
</tr>
<tr>
<td>SA-FM/COC-002083</td>
<td>FSC-C023796</td>
<td>KSU ALAS MANDIRI KTI (KAM KTI)</td>
<td>22 Dec 2008</td>
<td>21 Dec 2013</td>
</tr>
<tr>
<td>SGS-FM/COC-000659</td>
<td>FSC-C008121</td>
<td>PT Diamond Raya Timber</td>
<td>7 Jul 2006</td>
<td>4 Jul 2011</td>
</tr>
<tr>
<td>SW-FM/COC-001623</td>
<td>FSC-C018226</td>
<td>PT Erna Djilawati</td>
<td>6 Sep 2010</td>
<td>5 Sep 2015</td>
</tr>
<tr>
<td>SW-FM/COC-001849</td>
<td>FSC-C010789</td>
<td>PT Intracwood Manufacturing</td>
<td>6 Apr 2006</td>
<td>5 Apr 2011</td>
</tr>
<tr>
<td>SW-FM/COC-002645</td>
<td>FSC-C021870</td>
<td>PT Sari Bumi Kusuma</td>
<td>26 Sep 2007</td>
<td>25 Sep 2012</td>
</tr>
<tr>
<td>SW-FM/COC-001735</td>
<td>FSC-C013237</td>
<td>PT Sumalindo Lestari Jaya Tbk</td>
<td>4 Jan 2006</td>
<td>3 Jan 2011</td>
</tr>
<tr>
<td>SW-FM/COC-000104</td>
<td>FSC-C003700</td>
<td>PT Xylo Indah Pratama</td>
<td>20 Apr 2007</td>
<td>19 Apr 2012</td>
</tr>
</tbody>
</table>

Source: FSC (2010)
products and working closely with them to put pressure on their suppliers to invest in SFM, or to pursue forest certification.

In relation to slow progress with certification for forestry in Indonesia, buyers have an important role and it is recommended that they create new market links that promote investments in SFM and help to meet guaranteed prices and quantities that are high enough to compensate for the investment costs; strike purchasing agreements that are long term; agreements that are backed up by personal relationships or other guarantees acceptable to Indonesian producers; and agreements that provide an outlet for the whole product line and type.

For market demand to influence the implementation of best practice forest management in Indonesia there must be a critical mass. For this reason there is a need to continue focusing on the major Asian markets for Indonesian timber products including mainland China, Malaysia, and Japan. As part of this, more analysis of the re-export of Indonesian timber from mainland China to western markets is needed. At the moment, using trade statistics, it is difficult to know which of the products exported to mainland China are then processed and re-exported to the EU and other western markets.

A key barrier to the adoption of certification is Indonesia’s uncertain business climate which discourages long term investment and the uneven playing field which raises the potential opportunity cost for concessionaires’ certification to be discouraging. The MoF has made clear commitments to reduce illegal logging and improve policy frameworks for SFM. These governance measures are in large part being driven by market pressures and are likely to reduce the amount of “cut and run” timber on the market.

5. LOGGING, TRADE AND ILLEGALITY

To ensure responsible sourcing of timber, Government of Indonesia (GOI) has issued Presidential Instruction no. 4/2005 that gives instruction to 18 government bodies to co-operate and co-ordinate in eradicating illegal logging. Better co-operation and co-ordination among government bodies has helped to decrease illegal sourcing of raw materials for the forestry industry. Wood-balance analysis indicates that supply of illegal logs from Indonesia has declined by 75% after its peak in 2000, but it still comprises about 40% of the total national timber production (Lawson, S. and MacFaul, L., 2010).

Perhaps the most often quoted percentage of Illegal timber production in Indonesia (73%) seems to relate to a single year (1998) and was simply the unexplained difference between estimates of industrial roundwood production, imports, exports and local end-use (Yuichi, S., 2002). The errors implicit in the assumptions used in making each of those estimates are likely to have been sufficiently large to influence the result.

The wood balance model approach has been used by various reports, the most recent by Chatham House (Lawson, S., and MacFaul, L., 2010). The estimate for illegal logging in Indonesia in 2006 has reduced to about 40%. In its simplest form, the method compares the local supply of timber from both officially permitted logging and legal imports, with the actual consumption of domestic and exports. The extent to which real consumption outstrips legal supply can be used as a measure of the volume of illegal timber being cut and of the percentage of logging which is considered illegal. The estimate in 1998 was of the rate of illegal logging of 73% (Scotland, N. et al., 1999).

As the World Bank (2006) implies, the ways in which the State manages forest in Indonesia have tended to be unconstitutional and illegal.
Whereas the constitution requires that the “Land and water and the natural riches therein shall be controlled by the State and made use of for the greatest welfare of the people” not only have forest peoples tended to be deprived of their livelihoods but, particularly during the Suharto era, forest (and land which used to be forest) has tended to be managed primarily for the benefit of well-connected elites. Forest was allocated on generous terms to business associates of the then President. A ban on the export of logs served to maximise the profit of well-connected elites who owned wood processing mills (Barr, C. et al., 2006)—it maximised the rate at which the wealth embodied in the forest was realised, as the livelihoods of forest-dependent peoples diminished. This has increased social tension (Colchester, M., 2004).

Decentralisation (and related legal ambiguity) subsequent to the collapse of the Suharto regime increased the prevalence and diversity of illegality (Barr, C. et al., 2006).

According to MoF, illegal logging cases have decreased significantly from 1,714 cases in 2006 to 107 cases in 2009. The Government of Indonesia has completed verdicts for 304 cases in 2006, 152 cases in 2007, 31 cases in 2008, and 13 cases in 2009 (Anon., 2010h). Act no. 41/1999 on Forestry defines illegal logging as unlawful forestry-related acts done by an individual/group of people or legal entities in the form of cutting down or picking up timber from forest areas without permit; and/or receiving or buying illegally collected timber, and/or collecting illegal forest products without complete letter of valid legal document of timber or Surat Keterangan Sahnya Hasil Hutan—Indonesian legal forest products permit (SKSHH). Improvement in forest governance and awareness-raising by non-governmental organizations (NGOs) have been the important factors to reducing illegal logging, as well as an increasing supply of legal timber from plantation forests (Lawson, S. and MacFaul, L., 2010).

During 2005, the President issued an instruction requiring greater efforts to implement the law (Anon., 2005)—partly in response to earlier law enforcement operations which tended not to reduce the frequency of exposés. This seems to have had most impact in the timber sector, particularly helping to reduce the smuggling of logs, particularly from Papua (EIA, 2007), and via neighbouring Malaysia (Obidzinski, K. et al., 2007). Malaysia had, a few years earlier, imposed bans on log imports from Indonesia, reciprocal to the ban on exports of logs from Indonesia itself—which remains current (Tacconi, L. et al., 2004). However, Malaysia continues to be vigilant in monitoring smuggling (including through free trade zones in Malaysia) and falsifying Customs documentation which remains of concern (Hashim, N., 2004). In addition to under-declaration, some sawn timber might be mis-declared as mouldings, in order to bypass the ban on sawn timber exports. Mainland China continues to declare as imports from Indonesia a much larger combined quantity of sawn timber and mouldings than Indonesia declares as exports.

The Forestry Law, as revised during 1999, requires, amongst other things, that forests be managed equitably and sustainably—accommodating community aspirations (World Bank, 2006). These conditions seem rarely to pertain except for those concessionaires who are moving towards certification or are certified.

The great majority of past and current logging concessions were not or have not been gazetted—the process by which forest areas are classified, their boundaries surveyed and agreed by interdepartmental teams and then officially registered as State Forests—and, even if gazetted, the legal status may be disputed if any of the procedures for setting boundaries such as consultation with local village leaders were rushed and inadequate. Consequently, the great majority of logging in what is left of Indonesia’s “production” forest is likely to be illegal on this basis alone (Colchester, 2004).

The Government of Indonesia, through the Secretary General of the MoF Decree no. 99/I-KUM/2008, has formed a Working Group in order to accelerate the finalization of the timber
legality standard and capacity-building, to improve forest governance, and to facilitate implementation of the FLEGT-VPA.

To help improve the credibility of legality of Indonesian timber products in the global market the government enacted several pieces of legislation that enabled the development and implementation of a Timber Legality Verification System (SVLK). The MoF plans to implement an integrated information system to support a single-window national timber legality mechanism. The SVLK is not specifically intended only to support of the FLEGT VPA, but also to verify legality of timber for all other markets as required, including the US Lacey Amendment, future Australia timber regulation, etc.

The SVLK differs by type of woodland (Anon., 2010i). It currently focuses on state-owned resources, and the scope of legality for private forests and community forests is narrow and only covers the criteria for the demonstration of land ownership.

Such research as has been carried out into the legality of forest conversion indicates that most wood-based products which derive from “conversion” forest are likely to be illegal (ITTO, 2001). Indeed, given both the extent to which “permanent” forest in Indonesia is exhausted of commercial value, forest conversion rather than logging in “permanent” forest should now probably be the primary focus of illegality in the supply of wood raw material for industry in Indonesia (Global Forest Watch, 2002).

It is unclear whether and how poor performance against criteria and indicators of sustainable management in State-owned Production Forest is deemed illegal. The laundering of wood through concessions which have inappropriate (but officially approved) management plans is widespread (Setiano, B., 2007; Setiono, B., 2008). It seems that concessions are frequently allocated to enterprises which are not appropriately qualified (Anon., 2008). It is expected that new procedures to be developed to implement the SVLK in the near future will clarify many of these issues.

The use of fire in clearing forest remains commonplace and the clearance of forest on deep peat soil continues, despite both being illegal (Greenpeace, 2009).

The paper sector suffers challenges in respect of its production of pulp and paper made from wood grown in Indonesia. The mills of most of the major pulp producing groups appear to have been financed from various sources (Barr, C., 2001) and the refinancing of the largest (after it defaulted on selected debt repayments) has not been without controversy (Pirard, R. and Rokhim, R., 2006). Further, fire has been widely used to clear land for pulpwood plantations and pulpwood plantations are being cultivated on deep peat (Barr, C., 2004). During 2007, three of these groups used timber from natural forest in their pulpwood despite commitments otherwise. Two of these have made commitments that their supplies would (by 2005 and 2009) derive only from plantations (Cossalter, 2006). Annual reports published by the leading two pulp producing groups indicate that natural forests account for a declining proportion of their pulpwood supplies, and that, during 2007, the volume of logs in their pulpwood was approximately four million m³ from natural forest and 17 million m³ from plantations. At least one of them has been reported to have resorted to violence in order to secure its interests against local communities (Barr, C. et al., 2010).

The output of most large plywood mills would likewise probably warrant classification as illegal given that some should have been closed for indebtedness after an audit from the Department of Forestry’s Industrial Working Group which ordered the closure through due process of the law (Brown, 2005). But powerful political support and judicial resistance kept the mills open and continuing to purchase illegal timber.
6. THE INDUSTRY

Forestry industry policies, especially the log export ban and log export tax, had promoted rapid growth in the timber industry sector and major structural changes during 1980-2005 and currently, as Indonesia works towards implementing the VPA.

Sawn timber production increased sharply from 4.8 million m$^3$ in 1980 to 7.1 million m$^3$ in 1985, reaching its peak of 10.4 million m$^3$ in 1989, then declined sharply to 4.3 million m$^3$ in 2005 (FAO, 2006). Plywood and veneer production also increased sharply from 1 million m$^3$ in 1980 to 8.3 million m$^3$ in 1990, reached its peak of 9.7 million m$^3$ in 1997, and then declined to 4.7 million m$^3$ in 2005. Pulp production increased rapidly from 0.5 million tonnes in 1989 to 3.1 million tonnes in 1997, and reached 5.4 million tonnes in 2005 (APKI, 2007). Pulp production has increased to 5.97 million tonnes in 2009 (Barr, C., 2010). In addition, the production of other forest products such as woodworking, block-board, particleboard and chips was estimated to have reached between 0.1 million m$^3$ to 2.3 million m$^3$ during the period 1983-2005 (FAO, 2006; Ministry of Forestry, 2006) (Table 8).

Tables 8 and 9 explain that the installed capacity of IPHH in 2008 was estimated around 23.4 million m$^3$ of which the installed capacity for pulp production was approximately 6.4 million tonnes or about 28.8 million m$^3$ RWE (1 tonne equals to 4.5 m$^3$ RWE) in 2007. With an assumption of similar installed capacity in 2007 and 2008, total installed capacity of IPHH including for pulp industry was around 52.2 million m$^3$ (RWE).

Due to constraints in supply of raw material, the pulp industry had to import about 800,000 m$^3$/year from various sources and therefore, there was still about 200,000 m$^3$ unfulfilled capacity (idle capacity) per year. Table 8 shows that in 2008, total IPHH idle capacity including for pulp was about 15.8 million m$^3$, and total investment was about IDR 16,558,301,781,454, or equivalent to USD 707,479/m$^3$. With 15.8 million of IPHH idle capacity, total investment loss was approximately IDR 11,178,174,318,880 (USD 1.2 billion).

### Table 8: Indonesia’s log and wood processes and wood production during 1997-2008 (m$^3$)

<table>
<thead>
<tr>
<th>Year</th>
<th>Log (m$^3$)</th>
<th>Sawn- Wood (m$^3$)</th>
<th>Plywood (m$^3$)</th>
<th>Wood Working (m$^3$)</th>
<th>Block Board</th>
<th>Veneer (m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997/1998</td>
<td>29,520,322</td>
<td>2,613,452</td>
<td>6,709,836</td>
<td>141,589</td>
<td>600,734</td>
<td>1,128,693</td>
</tr>
<tr>
<td>1998/1999</td>
<td>19,026,944</td>
<td>2,707,221</td>
<td>7,154,729</td>
<td>5,610</td>
<td>661,954</td>
<td>1,314,063</td>
</tr>
<tr>
<td>1999/2000</td>
<td>20,619,942</td>
<td>2,060,163</td>
<td>4,611,878</td>
<td>10,472</td>
<td>427,096</td>
<td>1,034,999</td>
</tr>
<tr>
<td>2000</td>
<td>13,798,240</td>
<td>2,789,543</td>
<td>4,442,735</td>
<td>299,412</td>
<td>321,125</td>
<td>668,842</td>
</tr>
<tr>
<td>2001</td>
<td>11,155,400</td>
<td>674,868</td>
<td>2,101,485</td>
<td>278,088</td>
<td>388,004</td>
<td>94,228</td>
</tr>
<tr>
<td>2002</td>
<td>9,004,105</td>
<td>623,495</td>
<td>1,694,405</td>
<td>71,681</td>
<td>121,560</td>
<td>4,361,044</td>
</tr>
<tr>
<td>2003</td>
<td>11,423,501</td>
<td>762,604</td>
<td>6,110,556</td>
<td>161,814</td>
<td>436,418</td>
<td>289,191</td>
</tr>
<tr>
<td>2004</td>
<td>13,548,938</td>
<td>432,967</td>
<td>4,514,392</td>
<td>387,503</td>
<td>277,396</td>
<td>155,374</td>
</tr>
<tr>
<td>2005</td>
<td>24,222,638</td>
<td>1,471,614</td>
<td>4,533,749</td>
<td>131,297</td>
<td>403,160</td>
<td>1,012,205</td>
</tr>
<tr>
<td>2006</td>
<td>21,762,144</td>
<td>679,247</td>
<td>3,811,794</td>
<td>39,100</td>
<td>189,007</td>
<td>255,759</td>
</tr>
<tr>
<td>2007</td>
<td>31,491,585</td>
<td>525,209</td>
<td>3,454,350</td>
<td>-</td>
<td>204,066</td>
<td>299,202</td>
</tr>
<tr>
<td>2008</td>
<td>31,984,442</td>
<td>530,688</td>
<td>3,353,479</td>
<td>-</td>
<td>-</td>
<td>427,257</td>
</tr>
</tbody>
</table>

Source: Forestry Statistic, MoF, 2008
There were 227 units of forestry industry in 2008 (for > 6000 m³/year capacity category) with a total of 23,404,642 m³/year installed capacity. This equals a total investment value of about IDR16.56 trillion (USD1.7 billion). The type of forestry primary industry (IPHH) and integrated wood processing and its installing capacity is described in Table 9.

Table 9: Indonesia’s installed production capacity of the primary forestry industry (IPHH) in 2008

<table>
<thead>
<tr>
<th>Type of Industry</th>
<th>Number</th>
<th>Production Capacity (m³/year)</th>
<th>Employment (Person)</th>
<th>Investment (IDR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Un-affiliate Industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plywood</td>
<td>30</td>
<td>2,588,948</td>
<td>41,882</td>
<td>2,756,512,345,955</td>
</tr>
<tr>
<td>Sawmill</td>
<td>91</td>
<td>1,877,910</td>
<td>29,421</td>
<td>1,056,927,441,911</td>
</tr>
<tr>
<td>Veneer</td>
<td>28</td>
<td>1,001,000</td>
<td>12,561</td>
<td>469,266,041,872</td>
</tr>
<tr>
<td>Wood Chips</td>
<td>11</td>
<td>6,303,096</td>
<td>1,693</td>
<td>1,646,483,388,947</td>
</tr>
<tr>
<td>Total A</td>
<td>160</td>
<td>11,770,954</td>
<td>85,557</td>
<td>5,929,189,218,685</td>
</tr>
<tr>
<td>Integrated Industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plywood + Sawmill</td>
<td>44</td>
<td>7,749,627</td>
<td>90,335</td>
<td>7,551,382,780,947</td>
</tr>
<tr>
<td>Plywood + Veneer</td>
<td>3</td>
<td>332,500</td>
<td>2,082</td>
<td>392,047,946,120</td>
</tr>
<tr>
<td>Plywood + LVL (laminated veneer lumber)</td>
<td>2</td>
<td>614,000</td>
<td>3,434</td>
<td>399,667,341,000</td>
</tr>
<tr>
<td>Plywood + Sawmill+ Veneer</td>
<td>7</td>
<td>1,083,761</td>
<td>11,883</td>
<td>371,076,498,456</td>
</tr>
<tr>
<td>Plywood + Veneer + LVL</td>
<td>2</td>
<td>278,000</td>
<td>2,130</td>
<td>166,000,000,000</td>
</tr>
<tr>
<td>Plywood + Sawmill+ Veneer + LVL</td>
<td>1</td>
<td>281,400</td>
<td>497</td>
<td>670,889,566,516</td>
</tr>
<tr>
<td>Plywood + Sawmill+ Chips</td>
<td>2</td>
<td>903,500</td>
<td>7,143</td>
<td>844,592,173,826</td>
</tr>
<tr>
<td>Sawmill+ Veneer</td>
<td>5</td>
<td>277,000</td>
<td>2,193</td>
<td>79,966,255,904</td>
</tr>
<tr>
<td>Sawmill + Wood chips</td>
<td>1</td>
<td>163,900</td>
<td>52</td>
<td>153,120,000,000</td>
</tr>
<tr>
<td>Total B</td>
<td>67</td>
<td>11,639,688</td>
<td>119,748</td>
<td>11,629,112,562,769</td>
</tr>
<tr>
<td>Total A + B</td>
<td>227</td>
<td>23,404,642</td>
<td>205,305</td>
<td>16,558,301,781,454</td>
</tr>
</tbody>
</table>

Source: MoF 5 year Action Plan 2010-2014 (MoF, 2009)

Note: Demand for timber supply for furniture and handicraft industries is approximately 7 to 7.5 million m³ annually; Recently, Indonesia has begun importing wood from overseas, and the trend is rising. AS-MINDO reported a total value of approximately US$ 1.79 billion in furniture exports in 2005 (AS-MINDO, 2007).

According to Table 10, total pulp production grew rapidly from 0.5 million tonnes in 1989 to 3.1 million tonnes in 1997, and reached 5.7 million tonnes in 2006 (APKI, 2007). Due to shortage of raw materials, production dropped to 5.2 million in 2007, or equivalent to 80% of the installed capacity.
Table 10: Indonesia’s installed capacity of pulp industry from 1997-2007 (tonnes)

<table>
<thead>
<tr>
<th>Year</th>
<th>Capacity</th>
<th>Production</th>
<th>Import</th>
<th>Export</th>
<th>Consumption</th>
<th>Idle capacity*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>4,266,600</td>
<td>3,058,450</td>
<td>943,970</td>
<td>1,186,020</td>
<td>2,816,400</td>
<td>1,208,150</td>
</tr>
<tr>
<td>1998</td>
<td>4,323,600</td>
<td>3,490,000</td>
<td>839,510</td>
<td>1,556,740</td>
<td>2,612,770</td>
<td>893,600</td>
</tr>
<tr>
<td>1999</td>
<td>4,543,600</td>
<td>3,694,630</td>
<td>956,960</td>
<td>1,179,400</td>
<td>3,472,190</td>
<td>846,970</td>
</tr>
<tr>
<td>2000</td>
<td>5,228,100</td>
<td>4,089,550</td>
<td>768,590</td>
<td>1,329,460</td>
<td>3,528,680</td>
<td>1,138,550</td>
</tr>
<tr>
<td>2001</td>
<td>5,587,100</td>
<td>4,665,920</td>
<td>839,510</td>
<td>1,698,580</td>
<td>3,531,470</td>
<td>921,180</td>
</tr>
<tr>
<td>2002</td>
<td>6,087,100</td>
<td>4,969,000</td>
<td>768,590</td>
<td>2,245,200</td>
<td>3,549,500</td>
<td>1,138,550</td>
</tr>
<tr>
<td>2003</td>
<td>6,287,100</td>
<td>5,194,310</td>
<td>735,560</td>
<td>2,375,250</td>
<td>3,554,620</td>
<td>1,092,790</td>
</tr>
<tr>
<td>2004</td>
<td>6,287,100</td>
<td>5,208,680</td>
<td>899,050</td>
<td>2,476,960</td>
<td>3,630,770</td>
<td>1,078,420</td>
</tr>
<tr>
<td>2005</td>
<td>6,447,100</td>
<td>5,467,540</td>
<td>885,580</td>
<td>2,562,970</td>
<td>3,790,150</td>
<td>979,560</td>
</tr>
<tr>
<td>2006</td>
<td>6,447,100</td>
<td>6,072,210</td>
<td>922,520</td>
<td>2,800,680</td>
<td>3,794,050</td>
<td>774,890</td>
</tr>
<tr>
<td>2007</td>
<td>6,483,100</td>
<td>5,200,000**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*) calculated based on gap between installed capacity and actual production;
**) data taken from APKI – Business Indonesia, 2008.

The capacity of both the timber and paper sector, particularly the former, tends greatly to exceed the quantity of wood raw material that is available from legal and sustainable sources in Indonesia. For example, during 2009, the Barito Pacific group produced less than 60,000 cubic metres of plywood despite its mills having an output capacity of 1.1 million cubic metres (Anon., 2010).

Table 11: Realization of industrial raw materials fulfilment plan, Indonesia (Capacity > 6,000 m³/year, during 2006–2008)

<table>
<thead>
<tr>
<th>Source of Raw material</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M³</td>
<td>%</td>
<td>M³</td>
</tr>
<tr>
<td>Initial Stock</td>
<td>3,747,873.10</td>
<td>10.31%</td>
<td>2,382,279.97</td>
</tr>
<tr>
<td>HPH/Natural Forest</td>
<td>4,356,492.25</td>
<td>11.98%</td>
<td>6,445,263.40</td>
</tr>
<tr>
<td>HTI/Plantation</td>
<td>9,897,079.25</td>
<td>27.21%</td>
<td>21,981,821.99</td>
</tr>
<tr>
<td>ILS (other legal source)</td>
<td>16,139,549.45</td>
<td>44.38%</td>
<td>4,456,952.46</td>
</tr>
<tr>
<td>Other IPHHK</td>
<td>405,118.97</td>
<td>1.11%</td>
<td>174,873.15</td>
</tr>
<tr>
<td>Community Forest</td>
<td>1,324,898.29</td>
<td>3.64%</td>
<td>1,113,490.22</td>
</tr>
<tr>
<td>Plantation (stated own)</td>
<td>21,539.73</td>
<td>0.06%</td>
<td>28,565.65</td>
</tr>
<tr>
<td>Agriculture plantation</td>
<td>226,166.19</td>
<td>0.62%</td>
<td>66,390.72</td>
</tr>
<tr>
<td>Auction</td>
<td>49,584.78</td>
<td>0.14%</td>
<td>69,360.77</td>
</tr>
<tr>
<td>Import</td>
<td>198,977.58</td>
<td>0.55%</td>
<td>51,407.67</td>
</tr>
<tr>
<td>Total</td>
<td>36,367,279.59</td>
<td>100.00%</td>
<td>36,770,411.00</td>
</tr>
</tbody>
</table>

*) carried over from previous year.

Table 11 also describes that in 2006, total imported raw materials was 198,977 m³ or comprised 0.55% of the total raw materials fulfilment. The amount decreased to 51,407 m³ (0.14% of total fulfilment) in 2007 and increased again to 104,431 m³ (0.29% of total fulfilment) in
2008. The data suggest that imported raw materials did not comprise a significant proportion of the industrial raw materials fulfilment in Indonesia.

7. WOOD-BASED PRODUCTS INDUSTRY STAKEHOLDERS

Entities relevant to production and governance in the wood-based products industry include:

- Kementerian Kehutanan or the MoF;
- Pusat Pelaporan dan Analisis Transaksi Keuangan (PPATK) or the Indonesian Centre for reporting and analysis of monetary transactions, uses financial analysis to identify those who facilitate forest-related crime;
- Multi-stakeholder Forestry Programme—supports forest governance reform particularly in connection with the EU’s FLEGT Action Plan
- Konsortium Anti Illegal Logging - Indonesian Consortium against illegal logging (KAIL)—monitors illegal logging in West Kalimantan;
- Asosiasi Pengusaha Hutan Indonesia (APHI)—a trade association for forest concessionaires;
- Asosiasi Panel Kayu Indonesia (APKINDO)—the leading association in the timber sector. Managing the plywood sector for the benefit of its members has been its primary focus;
- Asosiasi Pulp dan Kertas Indonesia (APKI)—a trade association for pulp and paper producers;
- Indonesian Saw Millers and Wood Product Manufacturers Association (ISWA)—an association mainly comprising small- and medium-sized enterprises having no logging concessions;
- Asosiasi Industri Permebelan dan Kerajinan (ASMINDO)—an association for furniture producers in a number of regions.

In addition, the NGO community, with numerous organisations from grass-roots level, to national level in Indonesia are vibrant, active and very engaged in the VPA process.

8. TRADE IN TIMBER-BASED PRODUCTS

8.1 Timber Sector

The industry has had very great influence over policy in the timber and paper sectors. Several long established timber groups remain active in the sector. Some of these have diversified, particularly into palm oil, but also into banking and unrelated sectors. A number have links to Fujian (mainland China), and/or are at least partly foreign-owned, particularly by Chinese,\(^1\) Japanese\(^2\), Korean\(^3\), Malaysian\(^4\) and Singaporean\(^5\) interests. A few are listed on the Jakarta Stock Exchange\(^6\). The police, military and Suharto family still have extensive interests in the industry.\(^7\) Their ownership is not always transparent.

---

\(^1\) For example CCT Telecom (including Merdeka)—enterprises listed on the Hong Kong Stock exchange are understood to be subject to Chinese government guidelines concerning logging overseas.

\(^2\) For example Marubeni (Tanjung Enim Lestari / Musi Hutan Persada), Sumitomo Forestry (including Kutai Timber and Rimba Partikel—a joint venture with Kayu Lapis, one of the largest timber groups in Papua)

\(^3\) For example Dongwha (as Korindo, its logging affiliates and Aspex Paper, a newsprint producer), Kodeco

\(^4\) For example Wapoga Mutiara

\(^5\) For example Samko (including Sumalindo Lestari Jaya and Essam Timber) and Royal Golden Eagle “RGE” (formerly Raja Garuda Mas (including APRIL, IndoRayon, Pacific Fiber and ITCI Manunggal)

\(^6\) Barito Pacific (including Tunggal Agathis Indah and Mongole Timber)

\(^7\) For example Kertas Nusantara, Hanurata, Alias Kusuma and Prabu Alaska

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www.euflegt.efi.int
There was little change last decade in the quantity of wood-based raw material which was imported annually into Indonesia.\(^8\)

The total value of timber sector export from Indonesia in 2009 was USD3.27 billion and for pulp and paper it was USD4.26 billion. The main destination countries for Indonesia’s timber export are mainland China, Japan, Korea, EU and USA (Figure 3). Plywood comprised 50% of the total export value, followed by pulp (47%), sawn timber (2%) and veneer (1%). In 2009, the main destination country or territory for pulp export from Indonesia was mainland China, with total export value of USD472 million of the total USD740 million of pulp export value. Total export value of the timber sector in 2009 to the EU countries and the USA was USD849 million (26%) and USD557 million (17%) respectively, of the total Indonesian timber export value in 2009.

Figure 3: Export value (USD) and destinations of forest products from Indonesia in 2009

<table>
<thead>
<tr>
<th></th>
<th>Million USD FOB</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>150</td>
</tr>
<tr>
<td>USA</td>
<td>100</td>
</tr>
<tr>
<td>China</td>
<td>500</td>
</tr>
<tr>
<td>Japan</td>
<td>200</td>
</tr>
<tr>
<td>Korea</td>
<td>150</td>
</tr>
<tr>
<td>Others</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Badan Pusat Statistik Indonesia

The timber sector has been dominated by plywood manufacturers whose business was heavily dependent on Japan’s willingness to take advantage of, and implicitly shaped, norms of legality and sustainability prevalent in Indonesia (Dauvergne, P., 1997).

By-products of plywood mills tended to account for a larger proportion of the wood raw material used by fibre board and particleboard mills than now, due to the decline in plywood production. Plantation-grown wood, particularly rubberwood, is now used as a substitute.

Wooden furniture, and mouldings and joinery accounted for more than half of the export value of timber sector products exported from Indonesia during 2009. Plywood accounted for a further third.

Concerning Indonesia’s exports of timber sector products to the EU during 2009, wooden furniture accounted for 40% of the total, mouldings and joinery 30% and VPA core products (predominantly plywood) only 15%.

The recent financial crisis that hit the EU Member States and the USA has had an impact on the trade from Indonesia leading to a decline of export volumes of sawn timber industry and veneer from Indonesia to the EU countries and the USA. Export volume and value have significantly declined for sawn timber and veneer. Export volume and value have significantly de-

\(^8\) Although imports of sawn timber tended to increase, most of this was supplied from Germany and the USA, probably exported subsequently as furniture. There was a surge in imports of pulp at the end of the last decade.
clined for sawn timber and veneer. The export volume of sawn timber has decreased by 15% from 20,112 to 17,006 cubic metres, while the export value has decreased by 17% from USD11.65 million to USD9.65 million. The export volume of veneer has decreased by 12% from USD8.711 million to USD7.64 million (Tambunan, E., and Agus, R., 2010). Indonesia has since 2001 prohibited the export of logs. This greatly facilitated the expansion of Indonesia’s plywood industry, which accounts for most of the RWE volume consumed by the timber sector—and roughly 60% of the RWE volume exported during recent years.

Indonesia has prohibited the export of rough sawn timber products which accounts for much of the HS4407 sawn timber product category since 2004. However, importing countries’ trade statistics indicate that sawn timber continues to be exported in substantial volumes, although these have been declining since 2002. This contrasts with export statistics declared by Indonesia—which slumped to near zero during 2004. The difference is unlikely to be attributable to sawn timber being misclassified as mouldings—exports of which have declined gradually since 2003. Although mismatches between Indonesia’s exports and importing countries’ imports have repeatedly been shown to be large, effective action to resolve those differences has yet to take place. There are two possible reasons—undried rough sawn timber is smuggled out of Indonesia and is imported by trading partners due to lack of appropriate Customs legislation and poor enforcement (see Customs section 9), or Indonesia has managed to increase the processing of kilned and planed sawn timber significantly since 2004. This may not have been feasible in such a short period of time due to the investment in equipment and capital that would have been needed.

Nevertheless, by July 2010, both the overall volume and value of forestry product exports had increased significantly. The overall export volume had reached 1.5 million m$^3$ or had increased by 26% compared to the amount for the same period in 2009, which was only 1.1 million m$^3$. The overall export value had reached USD805.9 million or had increased by 31% compared to the amount for the same period in 2009, which was only USD556.2 million (Tambunan, E., and Agus, R., 2010).

Overall and by both RWE volume and export value, the EU was the destination for an increasing share of the timber sector products which were exported from Indonesia during the last decade, even as Indonesia’s timber sector exports was declining. The cost per cubic metre of the timber sector to the EU has been increasing yearly even as the decline in exports has continued (Table 12).

| Table 12: EU share of export of Indonesia’s timber sector between 2000 and 2009 in million m$^3$ RWE |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Year            | 2000            | 2001            | 2002            | 2003            | 2004            | 2005            | 2006            | 2007            | 2008            | 2009            |
| World           | 22.62           | 23.48           | 22.68           | 21.20           | 18.29           | 17.35           | 15.36           | 12.35           | 11.26           | 8.26            |
| EU              | 2.96            | 3.22            | 2.82            | 2.61            | 2.55            | 2.66            | 2.34            | 2.13            | 1.90            | 1.35            |
| Value USD FOB   | 839             | 767             | 763             | 791             | 891             | 1,050           | 1,087           | 1,110           | 1,092           | 849             |
| Unit cost USD/m$^3$ | 283.6           | 238.3           | 270.7           | 302.6           | 349.9           | 394.4           | 464.9           | 522.1           | 575.5           | 629.1           |

Source: Badan Pusat Statistik Indonesia

Furniture exports from Indonesia have been a major foreign exchange earner for the country (Figure 4). The main exports has been to the EU countries and the USA which values were USD420 million and USD400 million respectively in 2008, but dropping to USD330 million and USD360 million respectively in 2009. These values were greater than values of exports to the
Asian countries (mainland China, Japan and Korea) which only came up to USD208 million in 2009.

Figure 4: Indonesia’s exports of furniture (weight in million kg and % of total national furniture exports) to selected destination countries in 2009

![Diagram showing Indonesia's exports of furniture to selected countries in 2009](image)

<table>
<thead>
<tr>
<th>Country</th>
<th>Weight (Million kg)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>0.13</td>
<td>30%</td>
</tr>
<tr>
<td>Others</td>
<td>0.08</td>
<td>18%</td>
</tr>
<tr>
<td>USA</td>
<td>0.12</td>
<td>27%</td>
</tr>
<tr>
<td>European Union</td>
<td>0.09</td>
<td>20%</td>
</tr>
</tbody>
</table>

Source: Badan Pusat Statistik Indonesia

The impact of the mainland China—ASEAN free trade agreement on production in Indonesia, especially of (indoor) wooden furniture, and on priorities assigned to minimising trade in illegal timber is as yet uncertain. Much of the wooden furniture which is exported from Indonesia is made of plantation-grown teak, particularly for outdoor use. The share of such furniture in the RWE volume (and particularly the value) of wooden furniture made in Indonesia might be substantial (Roda, J-M. et al., 2007). Greater understanding of the source of the timber used to manufacture furniture would help to determine the impact.

A furniture industry dominated by small and medium-sized enterprises (SMEs) plays an important role in creating employment opportunities for people in Indonesia. The furniture industry creates a huge multiplier effect for players such as craftsmen, who supply intermediate goods, and timber merchants who supply raw material. A study in 2005 reported that the total employment by a furniture industry centre in Central Java, Indonesia was around one million workers (Effendi, R., and Hariyatno, I, B., 2005).

Since furniture is included in the VPA, this could have significant impacts on Indonesia’s furniture exports. A temporary shock would be expected at the initial stage of the implementation (adjustment phase) due to the high volume and price of the exports to the EU in relation to other markets. The implementation of the legality verification system for raw materials would be expected to help recover from the shock in a relatively short period of time.

The first potential major impact of the VPA once implementation begins will be the significant decline in demand of wood products from Indonesia with only the legal ‘portion’ targeted at EU market. This will mean that any alleged mix of illegally sourced wood products that were exported to the EU countries prior to the VPA implementation will shift to other less stringent markets (Lawson, S., and MacFaul, L., 2010).

The decline in employment levels can be predicted due to the closure of many timber indus-
tries in relation to implementation of VPA. According to the data, every 113 m³ installed capacity absorbs 1 worker although in reality, as the full installed capacity is not used, this means a lower productivity per actual worker in the industry. Total wood exports from Indonesia to EU countries were about 319 million kg or equivalent to 425,957 m³ (1 m³ equals to 750 kg)\(^5\), which suggest employment of about 3,770 engaged directly in the timber product export sector (excluding furniture).

If we assume that 40% of timber industries are still using illegal raw materials (according to Lawson, S., and MacFaul, L., 2010), the country’s wood exports could decline to 255,000 m³ and about 1,500 IPHH employees could potentially lose their jobs but this is a very rough estimate as not all products are exported to the EU. The number does not include workers from furniture industries, which are assumed to have a larger number of employees than IPHH. Some companies may undertake short-term solutions to alleviate the impact of legality verification on the employment problem, by shifting the export destination to non eco-sensitive and non VPA countries although this is expected to change over time as companies work to increase the legally verified timber in their supply chain as the EU market pays a higher price for timber products in comparison to many other markets.

When the VPA comes into effect, community forest plantations will be in a better position since such forest type is considered as a legal source of timber under the legislation of Indonesia, although there are limited verification systems for these plantations such as by LEI. However Timber Legality Verification System (SVLK) as an instrument to determine the legality of VPA could potentially increase production cost that in turn could undermine community forest development, which is currently growing very rapidly, especially on Java Island.

Therefore, SVLK needs to be adjusted for community forests, especially the ones on private lands. In 2007, MoF issued the Ministerial Regulation no. P.33/Menhut-II/2007 about the second amendment to the previous Ministerial Regulation no. P.51/Menhut-II/2006 about the need for attaching a Reference Letter on the Source of Origin or Surat Keterangan Asal Usul Bulat (SKSAU) for forest product transportation from community forest.

Community forestry operates on a much simpler system compared to large scale concessions. Therefore, it is suggested that the regulation could be further improved through SVLK adjustment, such as by the simplification of SKAU and the Legal Letter of Log or Indonesian licence to transport logs - Surat Keterangan Asal Usul Kayu Bulat (SKSKB) to transaction documents, i.e. receipts or other commonly recognized purchasing documents.

If the EU can effectively control and prevent illegal timber products from non-VPA countries through the EU Timber Regulation, a gradual increase of Indonesia’s export value from IPHH products (plywood, veneer, sawn timber, and pulp) and furniture could be expected. Legality verification would increase timber production cost, but it is presumed this will not significantly impact on the long-term exports, once the industry finds ways of reducing costs to compensate for higher production costs. However, Indonesia’s forest industry players are still concerned about a potential "evasion" from other non-VPA countries that will significantly affect the "level playing field" and competitiveness of Indonesia’s wood exports to EU countries, although this should disappear once the EU Timber Regulation is enforced in 2013.

\(^{5}\) Conversion factor of timber from (kg to m³) according to FAO. The weight of timber varies according to the species of tree. Examples: Opepe weighs about 750 kg/m³; Teak weighs about 640 kg/m³; Ironbark weighs about 1,200 kg/m³; Greenheart weighs about 1,040 kg/m³; Red lauro weighs about 640 kg/m³; Blue gum weighs about 830 kg/m³. Conversion from m³ product to RWE is about Non-conifer (rough-green) m³rw/m³p 1.53 (sawn timber), Non-conifer for veneer=1.8; for Plywood=2. For this study use 1.8 RWE for IPHH products and conversion rate from Kg to m³ (use average of those =876 kg/m³) and from m³ to RWE use (1.8) conversion factor.
The EU could also support through dialogues with other major importer countries (mainland China, Japan and the USA) in order to promote co-operation in combating illegal logging and its associated trade.

Reduced illegal logging is expected to have a long-term positive impact on the environment and biodiversity by discouraging illegally sourced timber industries. In the long run, VPA could have positive impacts on legal certainty in the business, encouraging fair play and good incentives for industries that use legal raw materials.

Additional details for the timber sector are in the following sections.

8.2 Paper Sector

That part of Indonesia’s paper sector which is based primarily on virgin wood fibre is dominated by two large groups, Asia Pulp and Paper, part of the Sinar Mas Group and APRIL, part of the RGE (formerly RGM) Group. Although both are controversial mainly because of large scale clearance of natural forest for plantation and land tenure conflicts with indigenous communities, APP has had the most attention (Lang, C., 2007; Greenpeace, 2010). Both companies have extensive interests in mainland China and also have a number of businesses in North America. Their exports to the EU include copier paper marketed under their own brands.

The paper sector has increased steadily in exports from 17.82 million m³ RWE in 2000 to around 26 million m³ RWE in 2006, since when it has remained relatively constant to 2009.

Two other enterprises, the Japanese group Marubeni with Musi Hutan Persada (MHP) and Tanjung Enim Lestari (TEL), and Kiani Kertas (owned by Prabowo Subianto’s group) account for the country’s remaining production of wood-based pulp.

Acacia species (primarily Acacia mangium) account for the bulk of the plantation-grown pulpwood consumed by these four groups. In so far as (i) Indonesia accounts for most of the world’s acacia-based pulp and (ii) it is feasible to identify products made at least partially from such pulp, it would be possible to assess the likelihood that the origin of paper products (printed or plain) which are suspected of being linked to illegality and/or unsustainability and possible source countries of the pulp. A recent report of fibre analysis showed it is feasible to identify species used in paper products. Gonystylus spp. Ramin was found in the paper used to print a children’s book (Nogueron, R., and Hanson, C., 2010).

Further plans to expand this part of Indonesia’s paper sector are controversial because of biodiversity loss, carbon emissions and tenure conflict and displacement of forest communities (Lang, C. 2007). A number of schemes have failed to come to fruition (Minar, T. B., 2006). One challenge has been the increase of social conflict and uncertain land tenure as the Indonesian regional autonomy has led to sharp increase in land claims and illegal logging (Barr, C., 2008). In Jambi in 2001, APP lost 70 000 hectares to local claims, and in Riau, APP had 57 000 ha subjected to claims in 2002.

Indonesia’s paper sector also includes a number of enterprises which produce paper based primarily on waste-paper. A substantial quantity of this segment’s output is exported—particularly as newsprint.
8.3 Trade in wood-based products—Imports

The RWE volume of wood-based products imported into Indonesia is small relative to that which is exported. Pulp and paper account for the bulk of those imports (Figure 5).

Figure 5: Indonesia’s imports of wood based products from 2000-2009 in million m³ RWE

![Figure 5](image)

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008

Timber products imports amounted to 1.2 million m³ RWE in 2009, whereas paper sector imports was 6.9 million m³ RWE, mostly dominated by wood-based pulp at 4.8 million m³ RWE and paper at 2.1 million m³ RWE.

In 2009, most of the pulp was supplied from Brazil (250 000 m³ RWE), Canada (1.17 million m³ RWE), Chile (858 000 m³ RWE), New Zealand (539 000 m³ RWE), South Africa (489 000 m³ RWE); and East Asia (mainland China, 240 00 m³ RWE, Japan 170 000 m³ RWE, Taiwan 170 000 m³ RWE) supplies most of the rapidly increasing quantity of paper (Annex 2: Figure 1).

The RWE volume imported for the timber sector increased strongly during the second half of last decade to around 1.6 million m³ RWE in 2008, but fell during 2009 (Annex 2: Figure 2). Indonesia’s imports of VPA core products (logs, sawn timber, plywood and veneer) were mostly from China, Malaysia, EU, New Zealand and USA (Annex 2 Figure 3).

Panels (other than plywood) supplied from Malaysia and Thailand accounted for most of that growth, amounting to 590 000 m³ RWE in 2009 (Annex 2 Figure 5). Sawn timber (330 000 m³ RWE in 2009) and, to a lesser extent, plywood (120 000 m³ RWE mainly from mainland China) comprised most of the remainder (Annex 2 Figure 6, and Annex 2 Figure 4). Most sawn timber was supplied from the EU, New Zealand, and the USA.

From 2000-2005, Indonesia imported between 88 000 m³ (2004) and a high of 210 000 m³ (2002) of logs. Of these between 70 000 – 90 000 m³ of logs was imported into Indonesia from Liberia—Indonesia’s Djajanti group, the concessionaire faced substantial challenges and accusations of alleged complicity in that country’s civil war (Annex 2 Figure 7)(Global Witness, 2004).
Mainland China supplied most of the small volume of veneer which was imported into Indonesia.

8.4 Trade in wood-based products—Exports

Although the total RWE volume of wood-based products exported from Indonesia declined slightly over the last decade, the share accounted for by the timber sector declined rapidly from a high of 23.38 million m³ RWE in 2001 to 8.24 million m³ RWE in 2009 and this decline has not been compensated for by the paper sector (Figure 6). Plywood and, to a lesser extent, mouldings and joinery accounted for most of the decline.

Figure 6: Indonesia’s exports of wood-based products (by products) from 2000-2009 in million m³ RWE

The main country of export of VPA core products by Indonesia in the last decade is Japan, although Japan’s imports has been decreasing dramatically from a high of 6.26 million m³ RWE in 2001 down to 1.73 million m³ RWE in 2009 (Annex 3 Figure 8). The total exports of VPA core products has been steadily reducing from 15 million m³ RWE in 2000 down to 4.7 million m³ RWE in 2009. The export volumes for all other timber sector products (minus VPA core products) has risen steadily from 7.28 million m³ RWE in 2000, to a high of 8.72 million m³ RWE in 2005, and since then has been dropping steadily to 3.52 million m³ RWE in 2009. The main countries of exports have been EU, Australia, China, Japan, South Korea, Taiwan and USA (Annex 3 Figure 9).

The exports of the paper sector has been increasing steadily from 17.82 million m³ RWE in 2000 to around 26 million m³ RWE in the latter half of the last decade (Annex 3 Figure 10). The main countries of exports have been China, Japan, South Korea, EU, and Malaysia among others.

The Middle East is an important and growing market for timber from the insular SEA sub-region. There are no restrictions or barriers to imports of timber, and Indonesia and Malaysia have been developing trade networks and relations to increase trade flows of timber to the region (Malessa, U. and Chen, H.K., 2010). In 2009, Indonesia’s export to the Middle East amounted to just over 1 million m³ RWE.
The decline of forest product exports was mainly caused by the closure of many *Industri Primer Hasil Hutan* (IPHH) or Indonesian primary forestry industry (capacity <6000 m³/year) due to an insufficient supply of raw materials after enforcement of illegal logging, and decreasing demand for plywood products from Japan. Japan conducted re-engineering of its plywood industry which enabled the industry in Japan to process small-diameter logs imported from Siberia (Ministry of Forestry, 2009b). The main decline in exports has also been due to the log export ban instituted in October 2001 (ITTO, 2003) which was made permanent in 2002, and the rough sawn timber export ban which excludes some categories of planed sawn timber from September 2004. There has been a negligible export of logs from Indonesia from 2002 onwards.

8.4.1 Sawn timber

In the insular SEA sub-region, there are four exporters of sawn timber: Indonesia, Malaysia, the Philippines, and Singapore. Intra-regionally in the last decade, following the rough sawn timber export ban, Indonesia declared a small volume (less than 10 000 m³ RWE) of sawn timber exported to Malaysia and Singapore and a negligible amount to Singapore in the years from 2004 to 2009.

Indonesia has seen a steep decline in exports of sawn timber, in particular after 2004 when the government banned the export of rough sawn timber (Figure 7). The exports of sawn timber have thus shifted to value added products like kiln dry and planed sawn timber. In particular, the exports to the EU and Japan have shown a significant increase in value even though the volumes are low at less than 50 000 m³ in 2008 and 2009 (Figure 7).

Figure 7: Indonesia's exports of sawn timber by destination country from 2000-2009 in million m³ RWE

Indonesia accounted for less than 5% of the tropical sawn timber which was imported into the EU during the last decade (i.e. 2000–2009) but this has decreased significantly to only 5 200 m³ RWE in 2009 although the EU has declared a total import of 42 000 m³ in 2009 (Figure 8).
8.4.2 Veneer

In insular SEA, only four countries, Indonesia, Malaysia, the Philippines and Singapore, exported veneer between 2000 and 2009 (Figure 9). By far, the dominant exporter was Malaysia, with volumes varying between 0.89 million m³ RWE in 2000, and 0.28 million m³ RWE in 2009, with the total export over the period of 4.82 million m³ RWE. Over the same period, Indonesia only exported a total of 170 000 m³ RWE and in 2009, it was only 11 000 m³ RWE.

Source: Eurostat

Figure 9: Veneer exports from Indonesia, Malaysia, the Philippines and Singapore from 2000-2009 in million m³ RWE
The main countries of export for veneer from Indonesia has been EU, China and USA, although the volume is small at less than 3 000 m³ RWE each (Annex 3 Figure 11).

8.4.3 Plywood

In the insular SEA sub-region, the dominant plywood exporters have been Indonesia and Malaysia (Figure 10). The total volumes exported by each of the two countries between 2000 and 2009 have been quite close, with Indonesia’s total being 44.51 million m³ RWE, and for Malaysia it is slightly less at 41.79 million m³ RWE. However, while Indonesia’s exports have been decreasing over the period, Malaysia’s has been increasing and from 2005 to 2009 has exceeded Indonesia’s exports significantly, on average by over 1.4 million m³ RWE annually.

Figure 10: Export of plywood from Indonesia, Malaysia, the Philippines and Singapore from 2000-2009 in million m³ RWE

There is some intra-regional plywood trade. Indonesia exported around 130 000 m³ RWE of plywood to Singapore annually during the first half of the last decade and roughly two thirds less to around 30–50 000 m³ RWE yearly during the second half. Indonesia exported a small volume (between 10–50 000 m³ RWE) to Malaysia yearly during most of the last decade.

Malaysia imported less than 20 000 m³ RWE a year of plywood from Indonesia during the first half of the last decade and half of that again during the second half with only 10 000 m³ RWE in 2009.

Japan dominates the market for Indonesian plywood (Annex 3 Figure 12) with exports ranging from the highest volume in 2000 of 2.63 million m³ RWE, to a low of 0.74 million m³ RWE in 2009. The share of Japan and other substantial export destinations changed remarkably little during the last decade. The three-fold decline in the total volume exported since 2001 might reflect exhaustion of Indonesia’s forests as much as law enforcement efforts in Indonesia or importers’ concerns about legality and sustainability.

The next highest export market is mainland China with between 670 000 m³ RWE achieved in 2000, to a low of 120 000 m³ RWE in 2009. Other large markets are Taiwan with the highest volume exported of just over 400 000 m³ RWE in 2000, decreasing to 190 000 m³ RWE in...
2009, and South Korea, decreasing to only 130 000 m³ RWE in 2009, from a high of 510 000 m³ RWE in 2003.

The other significant market for Indonesia’s plywood has been the Middle East region, with the lowest exports of 470 000 m³ RWE in 2007 and the highest of 0.86 million m³ RWE in 2003, but this decreased substantially in 2009 to 340 000 m³ RWE probably due to the recent economic crisis which hit that region hard.

During 2000, Indonesia supplied more than half the EU’s imports of tropical plywood with the rest from other tropical countries (See Figure 11). By 2009, Indonesia accounted for less than 10% of the total. Imports from Malaysia increased to about 15% of the total, partly offsetting that decline. The EU’s imports of hardwood plywood from Brazil declined steeply towards the end of the last decade. Those from tropical Africa changed little. Between 2001 and 2009, the EU’s imports of hardwood plywood from tropical countries declined by two thirds. This decline was more than offset by a very large increase in imports of plywood from mainland China between 2002 and 2007. The total declined by about 40% between 2007 and 2009. By 2009, Malaysia and mainland China respectively accounted for roughly 20% and 60% of the total. The total export of plywood from Indonesia to the EU amounted to 140 000 m³ RWE in 2009, declining from over 600 000 m³ RWE per year in 2000 to 2003. The most important export destination in the EU were Belgium and UK in the early years of the last decade but those countries have been receiving less in the latter part of the decade. The USA has been a significant destination for Indonesian plywood but has been decreasing in importance throughout the last decade and Indonesia only exported 120 000 m³ RWE in 2009, down from a high of 620 000 m³ RWE in 2001. Malaysia’s share of the EU market was similarly reduced, to around 180 000 m³ RWE in 2009, following an increasing trend in volumes from 170 000 m³ RWE in 2005 to 320 000 m³ RWE in 2008.

Figure 11: The EU’s imports of plywood from mainland China, tropical Africa, tropical South America and tropical countries elsewhere from 2000-2009 in million m³ RWE

Malaysia (primarily Sarawak) is the world’s second largest exporter of plywood after mainland China. Indonesia used to be the leading producer but has dropped to third place since the middle of last decade.
The decline in volume exported to certain EU member states, particularly the UK, was driven by concerns of illegality and deforestation (Timber Trade Federation, 2004). Despite the amended Lacey Act, the volume exported to the USA remains substantial. The USA declared imports of 160,000 m³ RWE of plywood from Indonesia during 2009 while Indonesia declared exports of 120,000 m³ RWE to the USA. There could be many reasons for this discrepancy as illustrated in the section on Customs but further study to find out the reasons should be carried out.

8.4.4 Mouldings and Joinery

The insular SEA sub-region is a large exporter of mouldings and joinery totalling over 49 million m³ RWE between 2000 and 2009. The largest exporter has been Indonesia, followed by Malaysia, the Philippines, and the smallest exporter, Singapore (See Figure 12).

Figure 12: Exports of moulding and joinery from Indonesia, Malaysia, the Philippines and Singapore from 2000-2009 in million m³ RWE

Indonesia has been a major exporter, with a steady increase during the years 2000 to 2005, from 3.53 million m³ RWE to around 4.12 million m³ RWE, before a gradual decrease after 2006 to a low of 1.37 million m³ RWE in 2009, a decline of over 60% (Annex 3 Figure 13).

Intra-region trade within the insular SEA sub-region is variable. Between 2000 and 2009 Indonesia exported a small volume of mouldings and joinery to Malaysia, ranging from 20 000 to 120 000 m³ RWE yearly, and between 40 000 to 150 000 m³ RWE yearly to Singapore in the same period. Indonesia imports a negligible quantity of mouldings and joinery. Malaysia exported a small volume (primarily joinery) to Indonesia (10–20 000 m³ RWE yearly from 2005 to 2009).

In terms of trade to the rest of Asia, the most important market for Indonesia has been mainland China but at a decreasing volume over the last decade (from a high of 1.65 million m³ RWE in 2003 down to 190 000 m³ RWE in 2009. A similar decrease in exports has been seen in mouldings and joinery exports to Japan and South Korea, with Taiwan showing the most significant decrease from 240 000 m³ RWE in 2000 down to 20 000 m³ RWE in 2009. The volumes exported to Japan have decreased drastically too, from a high of over 400 000...
m³ RWE yearly from 2000 to 2005 to 90 000 m³ RWE in 2009. South Korea showed similar reductions from a high of 360 000 m³ RWE in 2002 down to 100 000 m³ RWE in 2009.

Most of the decline was attributable to a decline in exports to mainland China, Japan and Taiwan, possibly due to a rise in the number of moulding and joinery plants, coupled with decreased demand during the economic crisis. Judging by mismatches in partner statistics, it seems that mainland China has been recorded as the destination for most of the mouldings which are exported from Indonesia to Taiwan.

Indonesia’s exports of mouldings and joinery to Australia have been increasing since 2000 and have been consistent at around 230 000 m³ RWE yearly in the latter half of the last decade, and a smaller variable export to USA between 180 000 to 60 000 m³ RWE yearly from 2007 and 2009. The most important market for mouldings and joinery for Indonesia is the EU with around 490 000 m³ RWE in 2009 or around 30% of the mouldings and joinery exports of Indonesia, and even higher in the preceding years of the last decade. The key markets in the EU for Indonesia were Netherlands (over 200 000 m³ RWE per year at least or about a third of the total imports), followed by Germany and UK (well over 100 000 m³ RWE each except during 2008 and 2009), and the smaller markets of Belgium, France and Italy.

Although the RWE volume of mouldings and joinery imported into the EU from tropical countries and mainland China rose almost threefold between 2002 and 2007 to nearly four million m³ RWE, supplies from Indonesia increased only by a little and those from Malaysia scarcely changed. Imports from mainland China and, to a rather lesser extent, Brazil accounted for most of the change (Figure 13). The total has declined steeply since 2007. Having supplied 50% of the total during the first years of the last decade, the proportion supplied from Indonesia declined to about 15% by 2009. Malaysia, Brazil and mainland China accounted for approximately 10%, 20% and 40% respectively. The EU imports only a small quantity of mouldings and joinery (predominantly mouldings) from tropical Africa.

Figure 13: The EU’s imports of mouldings and joinery from East Asia, tropical Africa and tropical South America from 2000-2009 in million m³ RWE
Mainland China exports a greater RWE volume of mouldings and joinery than either Indonesia or Malaysia. Other countries in Asia export much smaller quantities.

8.4.5 Wooden Furniture

The major exporter of furniture from the insular SEA sub-region is Indonesia, followed far behind by Malaysia, and even further behind by the Philippines and Singapore (See Figure 14). Indonesia consistently exported over 1.2–1.3 million m³ RWE of furniture yearly from 2000 to 2009, with an increase to over 1.6 million m³ RWE per year in the years 2005 to 2007 before dropping back to the norm, probably due to the global economic crisis of 2008 and 2009.

Figure 14: Furniture export from Indonesia, Malaysia, the Philippines and Singapore from 2000-2009 in million m³ RWE

Intra-regional furniture trade is small, with exports from Indonesia to Malaysia of between 18 000 to 34 000 m³ RWE annually and to Singapore of up to 40 000 m³ RWE yearly in the last decade. There is only a little export of furniture from Singapore to Indonesia and Malaysia. Malaysia had some exports to Indonesia of less than 10 000 m³ RWE in some of the years in the last decade.

The quantity of wooden furniture exported from Indonesia changed little overall in the last decade, but increased temporarily between 2004 and 2007 (Annex 3 Figure 14). The share exported to particular countries likewise changed little.

For Indonesia, the main furniture export markets have been USA, Japan and the EU. Approximately 30% of the total was supplied to each of the EU and the USA. Japan accounted for roughly half as much. The USA has received between 310 000 to 430 000 m³ RWE yearly in the last decade, followed by the EU whose imports have ranged from 350 000 to 570 000 m³ RWE yearly, and then Australia with around 50 000 to 80 000 m³ RWE yearly. The main EU country markets for Indonesian furniture have been UK, France, and the Netherlands, followed by Belgium, Germany and Italy with Denmark the smallest market. Within Asia, Indonesia has exported to Japan, South Korea, mainland China and Taiwan in that decreasing order of importance for the last decade, with about 200 000 m³ RWE to Japan yearly, about 100 000 m³ RWE to South Korea, and lower volumes to mainland China and Taiwan. The Middle East market has slowly been increasing its imports from a low volume of 60 000 m³ RWE in 2002 to about 190 000 m³ RWE in 2008, but drastically dropping to 100 000 m³ RWE in 2009.
The volume of wooden furniture imported into the EU from tropical countries (including Brazil) and mainland China increased threefold between 2002 and 2007, due predominantly to supplies from mainland China. The volume supplied by Indonesia changed little during the last decade and was similar to that imported from Malaysia with around half a million m³ RWE, though that declined to 350 000 in 2008 for Indonesia. There was a smaller decline for Malaysia to 470 000 m³ RWE a year after a steady increase from the year 2000 when Malaysia only exported 240 000 m³ RWE. The share in the total attributable to Indonesia and Malaysia each fell from 15% to 5% between 2000 and 2009. Vietnam and, to a rather lesser extent, Thailand accounted for most of the volume supplied from “other tropical” countries. Mainland China supplied almost two thirds of the total during 2009. The EU imports a negligible quantity of wooden furniture from tropical Africa. See Figure 15 for details.

Figure 15: The EU’s imports of wooden furniture from East Asia, South America and tropical Africa from 2000-2009 in million tonnes

Mainland China dominates the exports of wooden furniture from Asia with 14.8 million m³ RWE per annum, while Vietnam’s exports are now similar to Malaysia’s—about 880 000 m³ RWE in 2009.

Much of the wooden furniture exported from Indonesia and Malaysia is made primarily from particleboard or fibre board. The wood residues of mills supplies a lot of the raw materials used.

Revenue from the sale of such wood residues to panel manufacturers (a number of whom have links to the owners of the mills which supply the wood residues) tends to make the milling of the original logs more profitable than if the wood residues were abandoned, thereby making the logging more commercially attractive. If the logs (or the mill) are associated with illegality, then resulting wood residues would warrant being described as illegal timber.

It is likely that a small proportion of the wooden furniture which is exported to the EU from Indonesia and Malaysia comprises indoor furniture made from natural forest-grown wood.
8.4.6 Wood Chips

A substantial quantity of wood chips is exported from Indonesia and in 2009, it was over 500,000 tonnes (Annex 3 Figure 15). During most of last decade, Japan and Taiwan were the destinations for well over half of the total. Exports to mainland China during the second half of the decade rose steeply. By 2009, mainland China accounted for two thirds of the total and exports to Japan were negligible. There is a continued dependence for most of Indonesia’s pulp mills on pulpwod from natural forest and/or plantations established on peat land. Indonesia exported chipwood especially to affiliates of the two major paper groups which have mills in both mainland China and Indonesia (Pirard, R., and Cossalter, C., 2006).

8.4.7 Wood-based Pulp and paper

The only country in insular SEA sub-region that exports pulp is Indonesia, which is also the only Asian country/territory which exports a large quantity of pulp.

In the last decade Indonesia generally exported less than 10,000 tonnes per annum each to Malaysia, the Philippines and Singapore, this accounting for only a small proportion of those countries’ imports of pulp with only one year, 2007, where Malaysia did not have any imports.

Indonesia supplied the most pulp to mainland China of all its trading partners: mainland China has consistently imported over 1 million tonnes from Indonesia annually in the last decade. The other significant importer from Indonesia is South Korea at around 500,000 tonnes yearly in the last decade dipping to 370,000 tonnes in 2009. Japan imported around an average of 150,000 tonnes per year in the last decade, which dipped to 120,000 tonnes in 2009. The other importers in the last decade were Taiwan with an average of 100,000 tonnes per year, and Vietnam with 33,000 tonnes per year. The Middle East is a very small importer from Indonesia ranging between 10,000 and 40,000 tonnes per year, and the EU imported on average 300,000 tonnes per year from 2000 to 2007 but this dropped to 160,000 tonnes in 2008 and dropped further to 70,000 tonnes in 2009 (Annex 3 Figure 16).

Indonesia’s supply of pulp to the EU is one of the most controversial of its timber product exports. Nevertheless, Indonesia supplied a large quantity of pulp to the EU yearly during most of the last decade (prior to 2009). This was similar to the quantity imported to the EU from Russia (much of which was FSC-certified) but several times smaller than that imported from Brazil. The EU imports negligible quantities of pulp from tropical Africa or other parts of Asia. See Figure 16.

Figure 16: The EU’s imports of pulp from Asia, Brazil and Russia from 2000-2009 in million tonnes and USD

Source: Eurostat
The EU's share of Indonesia's exports of paper sector products fell by almost half in tonnage terms. However, the decline was due entirely to pulp implying that the customer base for paper was less sensitive than that for pulp to media coverage of reports questioning the legality and sustainability of aspects of the supply of pulp from Indonesia.

The quantity of paper exported from Indonesia to the global market increased during the last decade—particularly after increases in the capacity of mills in Indonesia. Much of the expansion of pulp and paper mills in Indonesia has been facilitated by the supply of plant from EU-based businesses which won the contract to supply the plants and equipment. During 2006, exports of paper increased in a single step—by 30% (Annex 3 Figure 17).

9. CROSS BORDER TRADE AND CUSTOMS

All international trade of countries that are members of the WCO has to go through Customs. All shipments through Customs have to submit information in the official Customs declaration forms, for export and import, according to the requirements of Customs. The goods have to be classified according to the HS (Harmonized System—the internationally standardized system of names and numbers for categorizing traded products) of the WCO. HS codes comprise a series of six-digit numerical codes. The first two digits represent the chapter of the commodity: Chapter 44, for example, is for "wood and articles of wood; wood charcoal". Official statistics are then compiled from the Customs declaration forms. These trade statistics, coupled with resource statistics and other information, can inform and provide data and information on the implementation of government policies and regulations.

There is a key role to play for Customs in monitoring and controlling international timber trade. Customs agents have the ability to monitor and control the trade through provisions in Customs legislation, and also the extensive enforcement capabilities to enforce Customs regulations and to support provisions in other legislation, as appropriate, when it comes to illegality in trade. This section will summarise the Customs protocols, documentation, and other relevant information on how Customs can help in combating illegal timber trade, and ultimately to help stop illegal logging. This will be illustrated using the Indonesia and Malaysia cross-border timber trade.

9.1 Customs and trade statistics

Large discrepancies between the statistics of what Indonesia declares as exports and what partner countries declare as imports have been both known about for several years and assessed in numerous studies (Eastin, I., and Perez-Garcia, J., 2004; Goetzl, A., 2005; and Chen, H.K., 2008). The previous sections highlighted some of the discrepancies found for various products in trade. Tables 13 and 14 selectively illustrated the discrepancy in Customs statistics compiled by the statistics departments of the country/territory of export and import and are not meant to single out any particular country/territory. The discrepancies can be found for any two trading partner countries for most any year of trade. It should be noted that, in Table 13, the discrepancies become smaller and smaller over the years, in particular after Indonesia instituted a log export ban in the middle of 2001. The large volume in 2001 was the result of traders shipping to beat the dateline for the policy implementation, and for a little while after, the confusion in implementation by Customs of Indonesia. This table shows that it is possible for importing countries to receive, more or less, a similar volume to that of timber exported. Table 14 shows how large the discrepancies can be, in this case for sawn timber exports from Indonesia. This case illustrates that, even though Indonesia has an export ban on rough sawn timber, as indicated by the small amount of sawn timber recorded as exported by Indonesian Customs, many countries continued to receive substantial volumes of sawn timber from Indonesia. Since Indonesia has an export ban, this effectively means that importing countries are laundering illegal sawn timber from Indonesia. However, such known dis-
crepancy is not limited to Indonesia and its timber trade partners, but is widespread among nearly all trading countries.

The case studies that follow will illustrate how and with what documents Customs verify a shipment and then generate the data and hence the statistics nationally.

Table 13: A comparison of the export volumes (m$^3$) for HS4403 logs as reported by Indonesia and its importing partner Japan

<table>
<thead>
<tr>
<th>Year</th>
<th>Indonesia</th>
<th>Japan</th>
<th>Difference</th>
<th>% Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>30,774</td>
<td>46,330</td>
<td>-15,556</td>
<td>-51</td>
</tr>
<tr>
<td>2001</td>
<td>219,252</td>
<td>167,615</td>
<td>51,637</td>
<td>24</td>
</tr>
<tr>
<td>2002</td>
<td>1,506</td>
<td>8,067</td>
<td>-6,561</td>
<td>-436</td>
</tr>
<tr>
<td>2003</td>
<td>440</td>
<td>110</td>
<td>330</td>
<td>75</td>
</tr>
<tr>
<td>2004</td>
<td>67</td>
<td>27</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>2005</td>
<td>17</td>
<td>57</td>
<td>-40</td>
<td>-237</td>
</tr>
<tr>
<td>2006</td>
<td>25</td>
<td>82</td>
<td>-57</td>
<td>-229</td>
</tr>
</tbody>
</table>

Source: Central Bureau of Statistics (BPS), Indonesia, and Statistics Department, Japan

Table 14: A comparison of the export volumes for HS4403 lumber between Indonesia and trading partners with huge discrepancies (m$^3$)

<table>
<thead>
<tr>
<th>Year</th>
<th>Indonesia</th>
<th>Japan</th>
<th>Difference</th>
<th>% Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>534</td>
<td>116087 (CN)</td>
<td>-115553</td>
<td>-21639</td>
</tr>
<tr>
<td>2004</td>
<td>99</td>
<td>92518 (CN)</td>
<td>-92419</td>
<td>-93353</td>
</tr>
<tr>
<td>2005</td>
<td>0</td>
<td>49897 (CN)</td>
<td>-49897</td>
<td>#DIV/0!</td>
</tr>
<tr>
<td>2006</td>
<td>25</td>
<td>35806 (CN)</td>
<td>-35781</td>
<td>-143124</td>
</tr>
<tr>
<td>2003</td>
<td>53</td>
<td>1849 (KR)</td>
<td>-1796</td>
<td>-3389</td>
</tr>
<tr>
<td>2005</td>
<td>207</td>
<td>4369 (MY)</td>
<td>-4162</td>
<td>-2011</td>
</tr>
<tr>
<td>2004</td>
<td>1</td>
<td>28571 (SG)</td>
<td>-28570</td>
<td>-2857000</td>
</tr>
<tr>
<td>2005</td>
<td>25</td>
<td>35836 (SG)</td>
<td>-35811</td>
<td>-143244</td>
</tr>
<tr>
<td>2006</td>
<td>42</td>
<td>13647 (SG)</td>
<td>-13605</td>
<td>-32393</td>
</tr>
<tr>
<td>2003</td>
<td>13</td>
<td>51960 (USA)</td>
<td>-51947</td>
<td>-399592</td>
</tr>
</tbody>
</table>

Source: Statistics Department of Indonesia, USA, mainland China, Malaysia, Korea and Singapore

Factors involved in generating discrepancies in timber trade statistics between trading partners include, but are not limited to, differences in data reporting systems; units of measurement; conversion factors; codification; and scaling methods. Time lapsed between export and import from one fiscal year into the next; combined shipment of mixed timber products; tranzhipments; and indirect trade routes can also cause discrepancies. These factors are not lim-
Illegal logging and illegal timber trade can be further controlled by Customs through changes in information requirements and document verification, control which should then be reflected in the narrowing of bilateral timber trade statistics discrepancies. Customs authorities have the required legislation to impose additional requirements for legality and controls, such as the requirement for forestry departments to verify and certify the legality of a shipment. However, this has to be activated through requests from other government agencies that would like to use Customs controls for additional verification, monitoring and control.

The Indonesian Directorate General of Customs and Excise (http://www.beacukai.go.id/) will presumably be obliged to accept as legal all products which are being exported provided that these are accompanied by a valid document asserting compliance with the SVLK. However, checking procedures will need to differ markedly from those which were adopted for the sort of documentation which was presented under the former Badan Revitalisasi Industri Kehutanan (BRIK) (Indonesian Forest Industry Revitalisation Body) system.

Indonesia’s trade statistics for a number of timber commodities (primarily logs, sawn timber, veneer and plywood) are published in units of weight whereas their trading partners’ statistics may be published only in units of volume. Unless and until the WCO requires that member countries publish both weight and volume for such products, comparisons between the records of Indonesia and its partner traders are unlikely to be robust. Estimating volume from weight is fraught with potential error, and is dependent on species, water content, the age and growing conditions of the tree, etc. However, if it is just a comparison of weight and volume between the trading partners, the discrepancies would not be as wide as they are, with other factors in play.

The current systems in use for handling international timber trade and the basis for trade statistics compilation in each country or territory are similar, in that completion of Customs declaration forms (for both exports and imports) is mandatory. In many countries, access to the forms is mainly online and submission to Customs authorities principally electronic. In general, various documents endorsed by relevant government agencies, together with shipping and business documents, are obliged to be submitted to Customs together with the declaration form. Much of this documentation accompanies an exported shipment to its destination, but the official Customs export declaration form does not, yet it is the key official document recording export details with actionable information for enforcement authorities and, as such, should be the basis for comparison by importing countries.

In addition, remedial measures, for example facilitating real-time information exchange between relevant Customs authorities, do not seem to take place for all commodities, as far as can be ascertained from talking to Customs officials.

There appears to be very little cross-referencing between countries and limited exchange, if any, between agencies in-country/territory regarding statistics declared on export and corresponding import forms. Cross-referencing of export information for a shipment with that supplied on import is sometimes possible if specific concerns arise, but such verification does not
happen routinely. In other words, according to the status quo, Customs export information is not verified on import, except in so far as certain accompanying documentation allows. There is no standard designated documentation to use to double-check information in the Customs declaration forms in either exporting or importing countries.

Customs export declarations could contain fraudulent, inaccurate or misleading information which, if not detected at export, are by no means guaranteed to be picked up on import, unless protocols for cross-referencing exist. Customs are not expected to question official clearance from exporting countries but only use this as the basis for checking and to provide feedback to the Customs of exporting countries if the shipment differs from what was imported. Shipping protocols and documents thus provide an avenue for falsification of characteristics of an export, likewise business documents, although business importers are likely to go to some lengths to check the accuracy of shipment details. However, such checks during imports may show that the products may not be the same as what was officially approved for shipment during export.

Customs regulations in Malaysia, Singapore and Indonesia have specific clauses that give authority to demand all invoices, bill of lading, certificates of origin or analysis and any other document which Customs may need to test the accuracy of any declaration made by the importer or exporter. This presumably is similar for other Customs authorities in other countries/territories although the EU customs regulation does not have such clause. Then it is the decision of Customs whether they will request the Customs export declaration form, to verify the details of the shipment. There is no requirement for any amendment to legislation for this to take place, at least not in the case of those countries whose trade situation has so far been analysed by TRAFFIC.

The FLEGT VPA and the EU Timber Regulation (EU TR), which require timber trade to the EU to be transparent and legal, can be further strengthened if Customs declaration forms are also monitored in conjunction with the timber legality licensing system of the VPA and the licensed Timber Regulation’s monitoring organisations. According to the Timber Regulation articles, the operators which first place the timber products in the EU market, have to capture the following information: description, including trade name and types of product and, where applicable, its full scientific name, country/territory of harvest, quantity, name and address of supplier, name and address of trader, documents and other information indicating compliance with applicable legislation. All this information resides with the operators and also independent monitoring organisations. It is not clear in the EU TR if Customs will be one of the competent authorities to assist in monitoring the trade in timber. But much of the information required under the Timber Regulation can be checked by the Customs authorities through their Customs import declaration form. The EC has been stressing that the Timber Regulation is not a border measure and hence there is no defined role for Customs, at least not when it comes to controlling the external border of the EU—however the designation of “competent authorities” is up to individual member States and some Member States might designate Customs, whereas others might designate administrative authorities under the Ministry of Agriculture, etc. There is an important role for Customs in supporting the implementation of the Timber Regulation by contributing important information and, also, under the VPA Customs will have to control imports of VPA-licensed timbers.

The VPA and monitoring organisations for the Timber Regulation would generate a lot of data captured from all shipments. The systems that govern and monitor the VPA and Timber Regulation implementation should be regularly monitored and evaluated. Experience with other paper-based permit systems, like Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), suggest that it is possible to monitor the trade through comparative analysis of the data captured during export and import, if there are similar datasets (Chen, H.K., 2006). However, this can be most effective if the analysis is carried out
using near real-time data as far as possible. The Customs export declaration form, has the potential to mirror the relevant data in the VPA, and possibly to be used to verify data from the operators under the Timber Regulation. The statistics could be analysed quickly, as the data would be captured by Customs as a matter of course and in real time as well. If the Customs data were to differ from the VPA and Timber Regulation data of the operator, then it would be a cause for further inspection and investigation.

9.2 Indonesian supply chain and export procedure

West Kalimantan in Brief

Administratively, West Kalimantan province is divided into eight districts and two cities, these are: Kapuas Hulu, Sintang, Sanggau, Sambas, Landak, Bengkayang, Ketapang and Pontianak and the cities of Singkawang and Pontianak. West Kalimantan borders with East Malaysia (Sarawak) on the north, East Kalimantan on the east, Central Kalimantan Province and the Java Sea on the south; and Natuna Sea and Karimata Sea on the west. It covers 146,807 km$^2$ of land, equal to 1.13 times the size of Java. According to 2000 statistical data, the total population of West Kalimantan was 3,954,300 inhabitants (indigenous and new settlers) with an overall population density of 27 people/square km, most of the population inhabiting the main cities such as Pontianak, Sanggau and Sintang. The border area with Sarawak, Malaysia, covers 2,035,164 hectares and passes through 5 districts or kabupaten. This vast area has always been very sparsely populated. In 2005, the total population of Kalimantan's border zone was estimated at about 260,000 people (Obidzinski, K., et al., 2007). Since most of the population lives in villages and small towns near the main communication arteries (rivers), a large portion of the border lands in Kalimantan is effectively uninhabited. The indigenous communities in the area (Dayak, Melayu) have until fairly recently ignored the border altogether, moving freely along hundreds of footpaths and waterways connecting the villages on both sides, mainly for trade purposes (Obidzinski, K., et al., 2007).

Kapuas River dissects West Kalimantan and stretches from Hulu Kapuas, passing Sintang and Sanggau, and ends in Pontianak district, with a length of 1.086 km. It is the longest river in Indonesia.

There is a main government-owned asphalt road to Sarawak via Entikong Post towards Tebedu (15 km from the border). There are also many small roads strategic for log transportation, i.e. from Badau Post (Kapuas Hulu district) towards Lubuk Antu (Sarawak, 9 km from the border). Beside these roads, other roads with potential for illegal forest product transportation are those found in Sambas (Aruk/Sajingan to Biawak), Sintang (Senaning), and Bengkayang (Jagoi Babang to Serikin) districts. In total, there are approximately 50 small roads that connect 55 villages in Indonesia and 32 villages in Sarawak, (Malaysia)(Obidzinski, K., et al., 2007). Other prominent characteristics of West Kalimantan in the context of forestry products include the proximity of sea and the main log landing Sarawak port, Sematan, a point of pooling and distribution of wood products from Indonesia. Additionally, Pontianak is also at an accessible distance from other cities in both Sumatra (Riau) and Java (Semarang, Cirebon, and Tegal), and also Singapore.

Until 1993, the cross-border trade in Borneo was officially classified as barter trade, whereby traders crossed the border back and forth bringing Indonesian raw materials to Malaysia and “smuggling manufactured articles back home” (Lee 1976:5 in Obdizinski, K. et al. 2007)). In 1993, the cross-border trade between the Indonesian province of East Kalimantan and the Malaysian State of Sabah was placed under the regulatory framework of Tawau Barter Trade Association (BATS). Similarly, in the late 1990s, the cross-border trade between West Kalimantan and Sarawak was subsumed by the Free Trade Zone (FTZ) chapter in Sarawak (Anon., 2004).
Altogether, there are five legal crossings for timber into Sarawak from Kalimantan through Customs check points on the Malaysian border: Semantan a sea port, Biawak, Serikin, Tebedu and Lubuk Antu. Two of the main timber crossing points between Kalimantan and Sarawak are:

a. Entikong Legal Border Post (Indonesia–Malaysia)

This post is situated in Sanggau district and directly borders Tebedu, Malaysia, with good asphalt road on both sides of the border. Truck numbers and capacity in transporting square or sawn timbers are high due to the good road condition, compared to other posts along the border. The average load per truck is 10.5 m$^3$ RWE (or around 10.5 tonnes). In one year in early 2000s, it was recorded that 64 trucks used this road for 22 days/month and had transported approximately 177 408 m$^3$ of processed wood per year, or the equivalent of 354 816 m$^3$ of logs per year (Setyarso, A., 2003). It should be noted that these figures give a historical perspective and, from observations, volumes are nowhere near what they were in the early part of the last decade—see the trade figures in section 5.

b. Border Post of Badau (Indonesia–Malaysia)

Badau post is a point at the border, on land route that connects the Kapuas Hulu district (Indonesia) with Lubuk Antu (Malaysia). The road is a dirt road, and hence the number of trucks passing this point is much smaller than the number using the Entikong route. The trucks also use palm oil estate roads around this area to cross the border. Saw mills are found on both sides of the border, as Sarawak has a log import ban from Indonesia.

All wood products passing through are carried by the Northern Trans Route (JLU or Jalur Lintas Utara) and the area surrounding the Kapuas Hulu district. These products were formerly processed at the saw mills owned by Malaysian citizens, constructed in 1998/1999 in the vicinity of the border. It is estimated that illegal timber trade between West Kalimantan and Sarawak through all the crossings, by land and sea, reached approximately 1.2 million m$^3$ RWE in 2005 (Obdizinski, K. et al. 2007).

Timber administration procedures:

One of the most serious challenges for forest governance in Indonesia’s Kalimantan region is the illegal logging by licensed forestry operations that engage in gross over-harvesting and violation of shipping regulations (Obdizinski, K., et al. 2007). Indonesia has well defined laws, regulations and procedures to manage its forest sector. Timber administration procedures are instruments to record and report production plans, felling, measuring, collection, transport, processing and distribution of forest products. The aim is to regulate sustainable forestry and earn adequate revenue collection. The Indonesian procedures are also part of the SVLK and have the following components:

1. Production planning
   a. Forest inventory, cruising reports
   b. Annual cutting plan, which has to be in line with the government AAC for that area.
2. Harvesting. Documented in Laporan Hasil Cruising—Indonesia cruising result report (LHC) and Laporan Hasil Penebangan (LHP) or the Indonesia timber felling report
4. Loading and transporting
5. Processing
6. Reporting

Process from forest to export:

1. Concession Permits awarded by the national government

IUPHHK = Production permit (Izin Usaha Pengelolaan Hasil Hutan Kayu—Indonesian logging licence)

IPHHK = Collection permit, Industri Primer Hasil Hutan Kayu—Indonesian primary processing of timber licence

IPK = Use permit (Izin Pemanfaatan Kayu—Indonesian permit to utilise timber)

The Concession Permit can be issued by a governor or bupati (based on Peraturan pemerintah (PP) or government regulation 6/1999 and SK 538/1998), and should be declared void after UU 41/1999, but this is often not the case.

IPK-KBNK = Timber use in non-forest area (Izin Pemanfaatan Kayu—Kawasan Budidaya Non Kehutanan—Indonesian permit to use timber in areas designated for non-forestry use)

IPK-KBK = Timber use in forest land (Kawasan Budidaya Kehutanan—Indonesian permit to use timber in areas designated for forestry use)

Personal use permits (< 20m³/yr)

2. Forest Inventory, LHC

A 100% survey by the concessionaire and a 10% field check by Dinas Kehutanan or District Forest Department. There can be a three-year time lag between forest inventory and approval. It is also impractical for the concessionaire to carry out 100% inventory of their concessionaire. There is a high probability that the inventory figures may not reflect the actual volumes available for harvesting. This can therefore lead to a large difference between LHC-reported volume and LHP, the actual log production report. The changes are mainly because of illegal logging in the concessionaire area and thus leave a lower standing stock.

3. Annual cutting plan or Rencana Kerja Tahunan (RKT)

The logs will be checked by an official called Pejabat Pengesah Laporan Hasil Penebangan (P2LHP) or the Indonesia authorised official to validate log report, who signs the Laporan Hasil Penebangan (LHP)—Indonesia timber felling report. The Surat Keterangan Sahnya Hasil Hutan (SKSHH) or Indonesian legal forest products permit are based on this LHP, issued by the Pejabat Penerbit Surat Keterangan Sahnya Hasil Hutan (P2SKSHH)—Indonesia authorised official to issue transport permit.

4. Transport licence, SKSHH

This permit is needed from forest to log pond, from log pond to mill, from mill to export harbour. SKSHHs are issued by an official at the level of P2SKSHH. This person can be Dinas Kehutanan (Provincial forest service) staff or other similar level staff. There are millions of SKSHHs issued each year (Surabaya alone issues 120,000 per year).
Timber traffic across the border is usually the result of collusion of both the Malaysian buyers and people of West Kalimantan, from villagers, to loggers, to district/provincial officials and security officers (Obdizinski, K., et al. 2007). Timber is processed like any other good coming into Malaysia, as outlined in the section previously. Since the round log import ban from Indonesia imposed by Malaysia, the movement of round logs across the border has dried up. However, rough sawn timber is still moving across the border although in much smaller quantities. This is possible due to the systemic failure of Indonesia’s forestry supervisory organisations and subversion of the system of controls put in place as outlined above for the timber supply chain (Obdizinski, K., et al. 2007).

10. FUTURE OUTLOOK

The three main objectives identified for managing the forest resources in Indonesia are first, to support economic development; second, to improve rural livelihoods and reduce poverty; and third, to produce environmental services and benefits. These objectives will be achieved through, among other things, forest rehabilitation and forest plantation establishment and development; improved forest governance; strengthened law enforcement; enhanced capacity-building and institutional strengthening; and community-oriented and participative approaches in managing and developing the forest resources at the local level.

Based on the assumptions of effective policy implementation and faster economic growth, which imply greater forest rehabilitation efforts, and that sufficient investment is available, the Indonesia Forestry Outlook Study, 2009 (FAO-MoF, 2009) has projected that under SFM, which is the most likely situation facing Indonesia in 2020, the state of the forest resources in Indonesia will be as follows:

(i) for Production Forest, the areas of primary forest will range from 8.5–8.6 million hectares, areas of secondary forest from 31.0–31.2 million hectares, areas under intensive silvicultural management from 0.3–0.6 million hectares, pulpwood plantations from 2.6–3.3 million hectares, community timber plantations from 1.6–3.2 million hectares, timber plantations from 1.5–1.7 million hectares, and non-forested areas from 10.7–13.2 million ha;

(ii) for Protection Forest, the areas for primary forest, secondary forest, and non-forested areas are 13.3 million hectares, 10.5 million hectares, and 5.6 million hectares respectively;

(iii) for Conservation Forest, the areas for primary forest, secondary forest, and non-forested areas are 10.1 million hectares, 5.5 million hectares, and 3.9 million hectares respectively; and

(iv) for Conversion Production Forest, the areas for primary forest, secondary forest, and non-forested areas are 5.3 million hectares, 5.3 million hectares, and 12.2 million hectares respectively.

It was further projected that in 2020 legal timber production would drastically increase to between 63 million m³ RWE and 117 million m³ RWE mainly from timber being produced from the Industrial Community Forest Plantation. To achieve this, it is pertinent that land tenure disputes be resolved in a timely manner; conflict resolution mechanisms be in place; that there be: improved government administrative efficiency and enhanced effectiveness of policy implementation; availability of sufficient investment; more consultative and transparent policy-making processes; and greater engagement by civil society groups in development activities. However, as timber supplies in Sumatra and Kalimantan are depleted, timber harvesting pres-
Demand for sustainable forest products does not necessarily translate to a willingness to pay for the additional costs of sustainable production. Companies and forest concessions in Indonesia are less likely to respond to demand from companies that they are not trading with since there are significant costs and risks related to switching markets and the benefits are not always clear. Since the VPA in essence only affects those Indonesian companies which have a commercial link to EU companies, companies may shift to less restrictive markets.

The EU is an important player, but not dominant, in the global timber market. Therefore it has to develop communication and dialogue with other major timber importers (Japan, Korea and the USA) to promote the EU Timber Regulation widely. The EU already has an MOU with mainland China to combat illegal logging and trade. There is timber products trade between the EU and East Asian countries. It will be important to identify and understand those trades of products whose raw materials originate from Indonesia. This will help the verification of legality of Indonesia’s timber along the entire trade chain.

However, the EU is an important market for Indonesian furniture. And this will be a powerful sector to support the push for verified legal products, especially to the EU.

Social safeguard policy for community forest and small to medium-sized forestry enterprises need to be developed for the implementation of international agreements such as the VPA.
11. CONCLUSION AND RECOMMENDATIONS

The trade data analysis shows that the log production in Indonesia has decreased over the years. As forests are depleted, production will come from sustainably managed permanent forest and from plantations, as more such areas come on-line.

Therefore the source of logs for downstream industry in Indonesia has to be from a combination of sources: natural permanent forests, private forest, community forests, and plantations. The last-mentioned is controversial, partly due to potential for forest land conversion to plantations, but plantations also provide the best hope for sustaining the local timber industry. Indonesia has aimed for a significant increase in plantation forests, but this will require enabling policies, investment and strong monitoring and enforcement actions by the authorities to mitigate the issues related to the establishment of plantation forests. However, as the policies have only been recently formulated, and implementation of plantation strategies is still in an early stage, the production from local sources has yet to catch up with the installed capacity of the industry.

Indonesia has dominated exports in the mouldings and joinery, furniture, pulp and paper sectors. It would appear, looking at the production trends, that Indonesia has been successful in promoting further downstream development.

Imports of timber products play a role in Indonesia, although this has been small in comparison to the export of timber products across all the timber categories. Even so, these imported timber products could be used in further-processed timber or directly re-exported to the EU, in which case the EU Timber Regulation would apply. For Indonesia, the VPA products with a mix of imported materials without verified supporting legal documents may face a challenge to enter the EU market.

The push for certified furniture in the EU market has meant that manufacturers in Indonesia have had to source for sustainably managed timber products. However, the competition for such certified timber products is stiff as there are limited certified forests in the region, and there are more chain-of-custody certificates than sources of the products. The majority of the forest products will not be from certified forests. Hence in the short-to-medium-term, the only option for securing market share is to aim for credible legality verification of the country’s forests and timber products, through effective, transparent and credible implementation of the regulatory framework. Ambiguous and conflicting regulations should be removed or revised accordingly.

A number of EU countries import from Indonesia including the UK, Germany, the Netherlands, France, Italy, Belgium, and Denmark. However, the dominant market for timber products from Indonesia is in particular mainland China. For some timber products, Australia and the Middle East featured highly. In Indonesia some of the imports are utilised locally with some portion further processed for re-export, to the EU and USA.

This has implications for the EU VPA negotiations and the EU Timber Regulation. The current negotiations for the VPA between EU are with Malaysia and Vietnam, both of which trade with Indonesia. All the countries in Asia, to a large or small extent, export timber products the EU either directly or indirectly via a processing or transit country. This means that once it comes into force in 2013, the EU Timber Regulation will have implications for the whole supply chain, from the country of origin to the processing or transit country and finally to the EU market.

In general, it would appear that good forestry governance in Indonesia is still a challenge. However, great strides have been made to improve the situation, with the Indonesian legality verification system (SVLK) building on certification principles and criteria. Transparency of the
management, monitoring and enforcement of the forestry sector could be further improved, as illegally harvested logs are still suspected of entering the supply chain. Further clarification of the legal ownership, access and use rights to forests, and reducing conflicts with indigenous peoples and local communities could help to resolve some of the issues.

The VPA with Indonesia is closely tied to its timber legality verification system (SVLK). The Indonesian Government has rolled out the SVLK strategy and implementation plan, including independent auditing, and is promoting the system extensively in the country while conducting discussions with the EU on the acceptance of the SVLK to meet the EU Timber Legality Assurance Scheme (TLAS) for the licensing permit. There are challenges to the implementation and design of the SVLK. Part of this is due to the many sources of logs that enter the supply chain: conversion forests, natural forests, plantation forests, community-based forests; and various permutations of these. Each will need to have clear legal ownership, management and harvesting according to the EU criteria for legality.

In addition, tertiary processed timber products such as furniture are dominated by small to medium-sized enterprises (SMEs) in Indonesia. Therefore, clarifying the legality chain from the various sources up the supply chain is very important for Indonesian companies that supply markets in the EU. Obviously, certification would help in this, but only 5% of the log production in Indonesia is from certified forest concessions. The bulk of the resource will need to depend on the SVLK to prove legality. It is envisaged by the Government of Indonesia that once teething problems with the implementation of the SVLK as an instrument of legality for the VPA are resolved, the demand from the market should increase supply. This would be especially true for the SMEs and community-based forest development, despite the likelihood that the SVLK would increase the production cost.

Cross border timber trade can freely take place without much difficulty as long as proper procedures and documentation are submitted to Customs authorities. There are variations of procedures and documentation depending on location and type of products and category of trade. In the SEA region, there is the informal trade called barter trade for many goods, especially true for the SMEs and community-based forest development, despite the likelihood that the SVLK would increase the production cost.

A very useful tool to help in the monitoring of cross-border trade and to address any potential impact of changing buyer demands and regulations, such as the EU Timber Regulation and Lacey Act, is to have real-time comparative analysis of Customs statistics. The more recent the data, the finer the scale of monitoring. The EC has been stressing that the Timber Regulation is not a border measure and hence there is no defined role specifically identified for Customs—at least not when it comes to controlling the external border of the EU. However, the designation of “competent authorities” is up to individual member States and some Member States might designate Customs, whereas others may designate more administrative authorities under the Ministry of Agriculture, etc. There is an important role for Customs in supporting
the implementation of the Timber Regulation by contributing important information. Under the VPA, Customs will also have to control imports of VPA-licensed timbers. Directly cross-checking Customs export declaration and Customs import declaration forms can provide very accurate monitoring and controls, on volumes, species (where appropriate and required), values, shipper and exporter and importer.

Comparative analysis of Customs data by HS categories can provide a simple tool and method to look at the impacts of external factors such as regulatory changes, procurement policies, and control mechanisms. This can only give an indication of trends. However, it can show changes in consumption, demand, and shifts in markets. A wood balance model (differences between all production, including imports against domestic consumption and exports) has been tried before with limited success, as data capture at the national and provincial levels varies by country and within country. The use of both the comparative statistical analysis and wood balance model together may provide some idea of the extent of illegal logging and illegal timber trade within a country and possible gaps and weaknesses of the governance system. Large discrepancies should be investigated immediately. Not all countries are able to provide monthly and recent statistics, so the comparative monitoring for those countries may need to be at six monthly, or even yearly intervals. The longer the time frame, the more difficult it will be to determine the anomalies to the individual shipment level for detailed investigations and control. However, the analysis could still provide information that could be of use, when coupled with other data sets and analysis for monitoring, controls and enforcement.

The EU should consider the following recommendations to assist Indonesia to meet the VPA and EU Timber Regulation requirements:

- Enhance the awareness and knowledge of the VPA and the EU Timber Regulation, and their implications, among all the stakeholders in the country. This is particularly important for those industries in the chain supplying EU markets, directly or in-direct via a third country which will need to ensure they have clear evidence of the origin of their raw material and verification of its legality. It is recommended that more awareness, training and capacity-building among the industry, civil society and government agencies be conducted. A particular challenge with the Timber Regulation is that the legal requirements for forestry and timber trade preclude the need to have a full traceability system. Since there is legal requirement for the government to have a traceability system in place, it will be difficult for operators in the EU to obtain legal documents that are fully traceable back to the stump. Hence, the evidence that might be needed for operators and monitoring organizations under the Timber Regulation has to be from a combination of legal documentation and company systems, records and procedures.

- Continued support to Indonesia to help resolve land tenure disputes in a timely manner; with conflict-resolution mechanisms in place. Also, government administrative efficiency and effectiveness of policy implementation needs to be enhanced; sufficient investment must be made available; and greater engagement by civil society groups in development activities is needed.

- Assistance to Indonesia to harmonize the various visions, missions, and priorities among provinces and districts which are reflected in the wide variety of institutions and forest management regulations.

- Continued support to Indonesia in good public and corporate governance, to create conducive environments for integration and collaborative empowerment of sustainable forestry development and good governance and transparency in the forestry sector. This includes awareness and capacity-building aimed at the general public, non-governmental organisations (NGOs) and the private sector on ethical consumerism, sustainable develop-
Development, climate change, Reducing Emissions from Deforestation and Forest Degradation (REDD), conservation, certification, and other issues that have an impact on the forestry sector and also in encouraging responsible purchasing domestically.

- Development of communication on full chain of custody regulation of timber products with other major timber importers (mainland China, Japan Korea and the USA), where part of Indonesia’s timber products is processed in a third country/territory before entering the EU.

- Support for more analysis of the re-export of Indonesian timber from mainland China to Western markets. For market demand to influence the implementation of best practice and legality of forest management in Indonesia there must be a critical mass. For this reason there is a need to continue focusing on the major Asian markets for Indonesian timber products, including mainland China, Malaysia and Japan.

- Continued support to Indonesia in the development of social safeguard policies for community forest and small/medium forestry enterprises prior to implementation of international agreements such as the VPA.

- Assistance in developing ways of capturing national data on domestic trade. Governments should develop a system for data collection, compilation and analysis to determine the scale and scope of domestic consumption. This information, coupled with production data, imports and exports, can give a good basis for evaluating and revising national policies, legislation and systems.

- Engagement with other countries and territories that import timber from Indonesia but which may not have comparatively stringent import requirements, including the East Asia markets, India and the Middle East. For countries such as China and Japan, which are already in dialogue with the EU, the EU should identify specific areas for collaboration, such as Customs co-operation.

- The study recommends the use of national export and import statistics as the most cost effective methodology for periodic monitoring of baseline trade data. A comparative analysis approach should be carried out for each shipment where possible, or on a monthly basis, using specific and corresponding HS codes.

- Encourage Indonesia government to request importing country’s Customs verify the timber shipment against the Customs export declaration form of Indonesia. In many countries, no amendment of regulations is needed for this, only the political will to institute the additional request for documentation.

- Support further training of Customs agents should be carried out to ensure they are up to date with national legislation on timber trade and forestry, including that in trading countries, as well up to date with international conventions and measures of trading partners that affect trade, such as the Lacey Act, EU Timber Regulation, etc. Such training should be embedded in the national Customs training academy to ensure it is institutionalised, as officers are transferred on a regular basis and new officials have to be re-trained regularly.
REFERENCES


© EU FLEGT Facility, Jakarta: Scoping baseline information for Forest Law Enforcement, Governance and Trade, January 2012.

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http://www.itto.int/direct/topics/topics_pdf_download/topics_id=32280000&no=11


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Annex 1: Indonesia—additional information of interest

Background

Indonesia is the world’s largest archipelago with some 13,677 islands covering approximately 181.16 million hectares of land and 9.30 million hectares of inland water bodies, totalling 190.46 million hectares. Common land boundaries are with Malaysia (with the states of Sabah and Sarawak on Borneo island) and with Papua New Guinea and Timor-Leste. Otherwise the archipelago lies between the Indian Ocean to the west and south and the Pacific Ocean to the north-east and is separated from Peninsular Malaysia and Singapore by the Straits of Malacca and the South China Sea, from the Philippines islands by the Sulawesi Sea and from Australia by the Arafura Sea and Timor Sea. The vast distances within the country are illustrated by the straight lengths from the north-western tip of Aceh province in Sumatra to the south-eastern corner of Irian Jaya, 5,300 km approximately, and from Talaud island, close to the Mindanao Island of the Philippines; to Roti island, southeast of Timor island; roughly north-south, covering a distance of approximately 1,775 km.

Indonesia is a recognized mega-biodiversity country. It has been reported that there are 515 species of mammals (12% of the world’s mammals); 511 species of reptiles (7.3% of the world’s reptiles); 1,531 species of birds (17% of the world’s birds); 270 species of amphibians, 2,827 species of invertebrates; and an estimated 38,000 species of plants of which about 1,260 species are medicinal plants. At the end of 2006, the MoF, Indonesia has managed to protect 127 species of mammals; 382 species of birds; 31 species of reptiles; 9 species of fish; 20 species of insects; 2 species of crustacean; 1 species of anthozoa and 12 species of bivalves. The Ministry has also listed 1,053 species of flora and 1,384 species of fauna in CITES Appendices I and II.

Policy and legislation

The basic principles and objectives contained in the Forestry Act No. 41, and 22 of the legal frameworks are:

(i) forest resources are controlled and managed to provide multiple uses;
(ii) forestry administration be based on sustainability, democracy, equity, togetherness, transparency and integration, as well as be oriented for people’s maximum welfare;
(iii) the government is obliged to encourage people’s participation through various effective and efficient forestry activities and to reflect this participation through assistance from a stakeholder forum, and to this end a National Forestry Council was formed;
(iv) as long as they exist and are recognized customary laws, communities have the rights to collect forest products for their daily needs, undertake forest management under customary laws that do not contradict national laws, and be empowered for improving their welfare;
(v) communities can use forest and forest products and be informed about plans for forest allocation, forest products use and forestry information;
(vi) communities have the right to compensation for losing access to their forests due to designation as forest areas, in accordance with prevailing laws and regulations; and
(vii) communities are obliged to participate in maintaining and preventing forest areas from disturbance and damage and can seek assistance and guidance in this task even from third parties.
Hence, it is clear that the Indonesian legal framework for forest management is based on the three broad goals of promoting economic growth, providing widespread and equitable benefits to society, and sustaining environmental services and benefits. In this regard, the basic principles of forestry administration in Indonesia are to:

(i) ensure that forests are sufficient in area and evenly distributed;

(ii) optimize the variety of forest functions which cover conservation, protection and production in order to achieve balanced and sustainable benefits from the forest resources for society, culture and the economy;

(iii) improve the carrying capacity of watersheds;

(iv) improve the capacity to develop community potentials and empowerment through participatory, equal and environmentally-friendly ways so as to strengthen endurance against external changes; and

(v) secure equal and sustainable distribution of benefits.

There has been several policy shifts by the government over the years. In early 1998, following the signing of a Letter of Intent (LoI) between the Government of Indonesia and the International Monetary Fund (IMF), the former log export ban policy was removed, and substituted with the new log export tax policy. Tax for log export was originally 40%, and further reduced to 10% before the end of December 2000, and became 0% in 2003. There was lack of clear reasoning for the re-enactment and the log export tax policy should have been based on an accurate calculation of supply and demand in order to create an optimal effect (Manurung, E.G., 2002). The government should conduct proper analysis before imposing new policies as such policies may result in severe market failures. All these are now superseded by the log and rough sawn wood export ban.
Annex 2: Indonesia’s imports of wood-based products from 2000-2009 in million m³ RWE

Figure 1: Indonesia’s imports of paper products by supplying countries from 2000-2009 in million m³ RWE

![Graph showing imports of paper products by supplying countries from 2000 to 2009.]

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008

Figure 2: Indonesia’s imports of other timber sector products by supplying countries from 2000-2009 in million m³ RWE

![Graph showing imports of other timber sector products by supplying countries from 2000 to 2009.]

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008
Figure 3: Indonesia's imports of VPA core products by supplying countries from 2000-2009 in million m$^3$ RWE

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008

Figure 4: Indonesia's imports of plywood by supplying countries from 2000-2009 in million m$^3$ RWE

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008
Figure 5: Indonesia’s imports of other panels by supplying countries from 2000-2009 in million m$^3$ RWE

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008

Figure 6: Indonesia’s imports of sawn timber by supplying countries from 2000-2009 in million m$^3$ RWE

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008
Figure 7: Indonesia’s imports of logs by supplying countries from 2000-2009 in million m³ RWE

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008
Annex 3: Indonesia’s exports of wood-based products from 2000-2009 in million m³ RWE

Figure 8: Indonesia’s exports of VPA core products by destination countries from 2000-2009 in million m³ RWE

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008

Figure 9: Indonesia’s exports of other Timber sector products by destination countries from 2000-2009 in million m³ RWE

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008
Figure 10: Indonesia’s exports of other paper sector products by destination countries from 2000-2009 in million m³ RWE

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008

Figure 11: Indonesia’s exports of veneer products by destination countries from 2000-2009 in million m³ RWE

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008
Figure 12: Indonesia’s exports of plywood products by destination countries from 2000-2009 in million m$^3$ RWE

![Diagram showing exports of plywood products by destination countries from 2000-2009.](image)

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008

Figure 13: Indonesia’s exports of mouldings and joinery by destination countries from 2000-2009 in million m$^3$ RWE

![Diagram showing exports of mouldings and joinery by destination countries from 2000-2009.](image)

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008

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Figure 14: Indonesia’s exports of wooden furniture by destination countries from 2000-2009 in million tonnes

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008

Figure 15: Indonesia’s exports of wood chips by destination countries from 2000-2009 in million tonnes

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008
Figure 16: Indonesia’s exports of pulp by destination countries from 2000-2009 in million tonnes

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008

Figure 17: Indonesia’s exports of paper by destination countries from 2000-2009 in million tonnes

Source: Badan Pusat Statistik, Indonesia, and UN COMTRADE for 2000 and 2008

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