Baseline report of the Independent Market Monitoring initiative
The Independent Market Monitoring (IMM) mechanism was established under an EU-funded project of the International Tropical Timber Organization (ITTO) to support the implementation of bilateral voluntary partnership agreements (VPAs) between the European Union (EU) and timber-supplying countries. VPAs are a key element of the EU’s Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan, which defines the EU’s policy for promoting legal logging and the trade of legally licensed timber. A VPA specifies commitments and actions by both signatory parties with the aim of developing a legality assurance system to license timber and timber products for export to the EU.

This baseline report was prepared during the IMM inception phase to determine the position in the EU market of wood products exported by VPA partner countries prior to the issuance of FLEGT licences. Recognizing that market trends in the EU and VPA partner countries are highly dependent on trade with other regions of the world, the report also puts trade flows between the EU and VPA partner countries in their global context.

The report covers all products within the scope of existing or potential future VPAs and includes the following chapters (and parts thereof) of the international Harmonized Commodity Description and Coding System: all products in Chapter 44 (Wood); products identified as containing wood in Chapter 94 (Furniture); virgin wood-based pulp products in Chapter 47 (Pulp); and all products in Chapter 48 (Paper). Collectively, wood and wood furniture are referred to here as wood products and dealt with separately from pulp and paper.

The report focuses on the trade between the 28 EU member states and the following 17 tropical timber-supplying countries at various stages of the VPA process:

- VPA-implementing countries: Cameroon, the Central African Republic, the Congo, Ghana, Indonesia and Liberia.
- VPA-negotiating countries: Côte d’Ivoire, the Democratic Republic of the Congo (DRC), Gabon, Guyana, Honduras, the Lao People’s Democratic Republic (Lao PDR), Malaysia, Thailand and Viet Nam.
- VPA-preparing countries: Cambodia and Myanmar.

Collectively, these countries are referred to here as VPA partner countries. The report contains country-specific production and trade data for the six VPA-implementing countries, but this summary presents mainly aggregated data. Data are analyzed at decadal timescales so that potentially significant long-term trends affecting the trade in wood products from VPA partner countries can be identified. The main report describes the data sources used.

**VPA partner countries’ share of global wood-product supply**

VPA partner countries had a total forest area of 486 million hectares in 2010, comprising 169 million hectares in VPA-implementing countries, 276 million hectares in VPA-negotiating countries, and 42 million hectares in VPA-preparing countries. The forest area in VPA partner countries was about 26% of the total forest area in the tropics and 12% of the global forest area (Figure S1).

VPA partner countries had a total growing stock of 82 billion m³ in 2010, nearly all of which was hardwood. VPA partner countries accounted for 17% of the total global growing stock and 24% of global hardwood growing stock in 2010. Growing stock was 27 billion m³ in VPA-implementing countries, 53 billion m³ in VPA-negotiating countries, and 2 billion m³ in VPA-preparing countries.
In VPA partner countries, industrial hardwood log production increased from 102 million m³ in 2004 to 131 million m³ in 2013, when it accounted for 18% of global production and 42% of tropical production (Figure S2). In 2013, industrial hardwood log production was 71 million m³ in VPA-implementing countries, 55 million m³ in VPA-negotiating countries, and 6 million m³ in VPA-preparing countries.

In the 17 VPA partner countries:

- Hardwood sawnwood production increased from 18.6 million m³ in 2004 to 21.9 million m³ in 2013, which was 18% of global production and 42% of tropical production. VPA-implementing countries accounted for 6.1 million m³ of production in 2013, VPA-negotiating countries for 14.2 million m³ and VPA-preparing countries for 1.6 million m³.
• Hardwood veneer production increased from 1.8 million m³ in 2004 to 3.0 million m³ in 2013, which was 24% of global production and 60% of tropical production. VPA-implementing countries accounted for 1.2 million m³ of production in 2013, VPA-negotiating countries for 1.7 million m³ and VPA-preparing countries for 0.1 million m³.

• Hardwood plywood production decreased from 10.8 million m³ in 2004 to 9.6 million m³ in 2013, which was 11% of global production and 59% of tropical production. VPA-implementing countries accounted for 5.5 million m³ of production in 2013, VPA-negotiating countries for 4.0 million m³ and VPA preparing countries for 0.1 million m³.

Relative international competitiveness of VPA countries

Some VPA partner countries are exploiting competitive advantages to develop markets for further-processed wood products in Europe. A review of various international competitiveness indices for VPA partner countries found the following:

• Malaysia is one of the world’s most competitive countries and also one of the most “connected” countries to international trade networks.

• Thailand scores highly for the ease of doing business and global competitiveness but is relatively less connected than Malaysia to international trade networks.

• Indonesia scores highly for global competitiveness but is less connected than Malaysia and is not rated highly for the ease of doing business.

• Viet Nam is generally middle-ranked for international competitiveness.

• VPA partner countries in Africa are all low in competitiveness indices, although Ghana is relatively more connected and competitive than other African countries.

• Some African VPA partner countries, especially Cameroon and DRC, are very poorly connected to international trade routes.

• Honduras and Guyana are both higher-ranked than the Congo Basin countries (but are ranked well below Ghana) for the ease of doing business and global competitiveness. Their connectivity is extremely low.

Those VPA partner countries ranked highly in international competitiveness indices—Indonesia, Malaysia, Thailand and Viet Nam—also have the most developed wood-processing sectors and are significant exporters of value-added wood products to the EU. VPA partner countries that are poorly connected to international trade routes and are rated as challenging places in which to do business are more focused on the export of primary wood products.
**Forest certification share**

The total area of forest certified worldwide by the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC) was 440.45 million hectares in November 2014, which was 11.1% of the global forest estate. About 24.75 million hectares (5.6% of the world’s certified forest) was in tropical countries, and VPA partner countries had a combined area of 11.22 million hectares of certified forests. Of the VPA-implementing countries, only Cameroon, the Congo and Indonesia had more than negligible areas of forest certified under either the FSC or the PEFC.

**VPA partner share of global tropical wood-product trade**

The value of global trade in tropical wood products increased by 15% in the decade to 2013, to US$31 billion (Figure S3). Combined, the 17 VPA partner countries accounted for 81% of the value of global trade in tropical wood products in 2013, down from 84% in 2004. The six VPA-implementing countries accounted for 22% of that trade in 2013, down from 32% in 2004, while the nine VPA-negotiating countries accounted for 53%, up from 49% in 2004. These changes in relative share were due primarily to increased exports from Thailand and Viet Nam (both VPA-negotiating countries).

**Product mix of tropical wood-product trade**

Much of the decline in the value of global trade in tropical wood products due to the global financial crisis (GFC) was concentrated in logs, sawnwood, plywood and veneer, while the value of the global trade of wood furniture and other value-added wood products (such as flooring, doors, windows and laminated veneer lumber—LVL) was more stable (Figure S4).

There was a significant shift in the relative proportion of trade in primary and secondary processed products in the decade to 2013. Demand in China and India, which grew strongly from 2009, focused on sawlogs and veneer logs, and the share of logs in the global trade of tropical wood products increased from 14% in 2004 to 19% to 2013. There was also strong growth in demand in China and Japan for biomass for energy production, particularly from Thailand and Viet Nam.

The share of sawnwood in the global trade of tropical wood products fell from 18% in 2004 to 15% in 2013 as China and India became more important relative to western markets, which traditionally prefer sawnwood. The share of plywood in the global trade of tropical wood products also fell during the period, from 20% to 12%.

**Figure S3: Global tropical wood products trade, by VPA status of suppliers, 2004–2013**

**Figure S4: Global tropical wood products trade, by product group, 2004–2013**
Regional supply of tropical wood products

The main trend in the regional supply of tropical wood products in the decade to 2013 was the rapid rise in exports from countries in the Mekong subregion—Cambodia, the Lao PDR, Myanmar, Thailand and Vietnam (Figure S5). Although the relative share of Indonesia and Malaysia in the global trade in tropical wood products declined over the period, those two countries still accounted for 17% and 21% of the global trade, respectively, in 2013. The share of Congo Basin countries fell from 8% in 2004 to 6% in 2013, with particularly large falls in 2008 and 2009.

Changes in regional demand for tropical wood products

The GFC precipitated a dramatic fall in tropical wood-product imports by the EU, Japan, North America and the Republic of Korea. There was also a dip in tropical wood-product exports to China in response to declining demand among Chinese manufacturers engaged in re-exports to western markets (Figure S6).

The main consumer markets for tropical wood products followed different trajectories in the aftermath of the GFC. The value of EU tropical wood-product imports fell from a peak of US$7.37 billion in 2007 to US$3.66 billion in 2013. The EU's share of global imports of tropical wood products halved between 2004 and 2013, to 12%, but there was a robust rebound in North American and northeast Asian imports. Nevertheless, emerging markets are taking a rapidly increasing share of tropical wood products in international trade. There has been massive growth in tropical wood-product exports to China, with the value more than doubling from less than US$4 billion in 2009 to close to US$9 billion in 2013. India’s imports of tropical wood products, almost exclusively logs, have also risen rapidly since 2006.

VPA share of total EU import value

Note: CIS = Commonwealth of Independent States; Taiwan POC = Taiwan Province of China.

Tropical - China/Hong Kong/Taiwan POC - Russian Federation/CIS - Non-EU Europe - North America - Other

0 5000 10000 15000 20000 25000
0 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013
Value (# million in constant 2013 prices)

Summary – Europe’s changing tropical timber trade
The total value of EU imports of wood products was €13.98 billion in 2013, down from a peak of €21.7 billion in 2007 (Figure S7). Imports generally lost market share to domestic wood products and a range of non-wood materials, and imports of tropical wood products also lost share relative to wood-product imports from other regions, notably China (Figure S8).

EU imports from the six VPA-implementing countries fell from €2.26 billion in 2004 to €0.99 billion in 2013, when they accounted for 32% of the total value of tropical wood-product imports. Imports from VPA-negotiating countries fell from €2.28 billion in 2004 to €1.46 billion in 2013 (Figure S9).

The decline in EU imports of tropical wood products was particularly pronounced for logs, sawnwood and plywood, while the value of imports of wood furniture and other tertiary processed products was relatively stable (Figure S10). As a result, the value of tertiary processed tropical wood products imported by the EU increased from 47% of total import value in 2004 to nearly 60% in 2013.
VPA partners in EU veneer supply

The supply of veneer to the EU fell by 33% from 2007 to 2013, to 1.57 million m³, due to the combined effects of the GFC, declining domestic plywood manufacturing capacity, and competition from substitute wood and non-wood materials. EU veneer imports fell more steeply than production, causing a sharp loss of market share. Tropical hardwood veneer import volume in 2013 was 266 000 m³, of which 21% was derived from VPA-implementing countries and 72% from VPA-negotiating countries.

VPA partners in EU plywood supply

The supply of plywood in the EU declined from 7.8 million m³ in 2004 to 7.2 million m³ in 2013; imports contributed 45-50% of the EU’s annual plywood supply in the decade to 2013. EU imports of tropical hardwood plywood declined from 1.3 million m³ in 2004 to 411 000 m³ in 2013.

The overall share of tropical hardwoods in EU plywood imports fell from 37% in 2004 to 12% in 2013, due mainly to a sharp increase in imports of Chinese “mixed light hardwoods” (Figure S11) and competition from Russian birch plywood and alternative panel products such as oriented strandboard (OSB). VPA-implementing countries supplied 98 000 m³ of plywood to the EU in 2013, down from 482 000 m³ in 2004, and VPA-negotiating countries supplied 191 000 m³, down from 264 000 m³.

VPA partners in EU log supply

The supply of sawlogs and veneer logs in the EU averaged 185 million m³ per year in the wake of the GFC (i.e. from 2008), down from around 220 million m³ per year before the GFC, with the share of imports constituting less than 2% of supply in 2013. VPA-implementing countries supplied 105 000 m³ of sawlogs and veneer logs to the EU in 2013, down from 482 000 m³ in 2004, and VPA-negotiating countries supplied 60 000 m³, down from 664 000 m³.

VPA partners in EU sawnwood supply

The supply of sawnwood in the EU peaked at 129 million m³ in 2007 and was 110 million m³ in 2013, when about 85% of sawnwood supply was domestic softwood, 9% was domestic hardwood, and imports made up 6% (down from 11% in 2004). The share of tropical hardwoods in EU sawnwood import volume declined from 19% in 2004 to 14% in 2013. VPA-implementing countries supplied 415 000 m³ of sawnwood to the EU in 2013, down from 901 000 m³ in 2004, and VPA-negotiating countries supplied 370 000 m³, down from 891 000 m³.

VPA partners in EU mouldings and decking supply

EU imports of moulding and decking increased in the construction boom in the mid-2000s, from 519 000 m³ in 2004 to 747 000 m³ in 2007, but fell to a low of 300 000 m³ in 2013. Tropical hardwoods dominate EU imports of this commodity group; VPA-implementing countries accounted for 36% of imports in 2013 and VPA-negotiating countries for a further 11%.

Summary – Europe’s changing tropical timber trade
VPA partners in EU composite-panel supply

The EU’s composite-panel market is significant in VPA countries mainly for the role it plays in the supply of competing products. Total European manufacturing capacity of particleboard, OSB and fibreboard exceeds 50 million m³ per year, while imports are only around 1 million m³ per year and include negligible volumes from VPA countries.

VPA partners in EU wood-window supply

The supply of wood windows in the EU was valued at €5.96 billion in 2013, down from €8.77 billion in 2007. Imports of wood windows from VPA-implementing and VPA-negotiating countries were worth €530 000 in 2013, down from €5.45 million in 2006. The EU wood-window market is more important to VPA partner countries for its role as an end-user of imported sawnwood and LVL. Some Indonesian and Malaysian manufacturers are supplying LVL products to exploit the trend towards engineered wood in this sector.

VPA partners in EU wood-door supply

The total supply of wood doors in the EU was worth €6.06 billion in 2013, down from €9.94 billion in 2007. Imports fell from a peak of €407 million in 2007 to €275 million in 2013, which was 4.5% of total supply.

The EU wood-door sector has been important for VPA partner countries mainly as a driver of imports of wood raw materials, but recent trends have been negative. Wood doors manufactured in Europe today are made mostly from veneered panels and finger-jointed timbers.

VPA partners in EU real-wood flooring supply

The production of real-wood flooring in the EU declined from 105 million m² in 2007 to 76 million m² in 2013, while imports fell from 53 million m² to 28 million m².

There is a trend in this sector away from tropical suppliers in favour of products from China and non-EU temperate countries (Figure S12). VPA partner countries were relatively minor suppliers of wood flooring to the EU in the decade to 2013 and lost share over the period.

Summary – Europe’s changing tropical timber trade
EU domestic paper production reached a high of 102 million tonnes in 2006 but had fallen to 92 million tonnes by 2013. EU paper-product imports peaked at 9.7 million tonnes in 2007 (8% of EU supply) before falling to 6.3 million tonnes in 2013 (6.4% of EU supply). Less than 5% of paper-product imports into the EU derive from tropical countries; Indonesia accounted for 167 000 tonnes of the 311 000 tonnes of paper imported from tropical countries by the EU in 2013. Of other VPA partner countries, only Thailand is a significant paper supplier to the EU, contributing 38 000 tonnes in 2013.

Review of EU market impact factors

The baseline report identifies and scores the relative significance of 30 factors affecting the EU market for timber from VPA-implementing and VPA-negotiating countries in the decade to 2013; it also indicates the projected impact of those factors from 2014 to 2023. The analysis shows that many factors outside the scope of the FLEGT VPA process have the potential to restrain the supply of, and demand for, timber from VPA partner countries in the next decade or more. Prominent among these factors are: the continuing weakness of the EU recovery from the GFC; the shift in global economic activity to emerging markets; continuous product innovation to extend applications for temperate woods and non-wood substitutes; the strong commitment of competitors to market development; the potential for the increased production of hardwoods in Europe and other temperate countries; and the relative lack of freight infrastructure in most VPA partner countries.

The implication of the baseline report is that FLEGT licensing, even when combined with the EU Timber Regulation, cannot be regarded as a “magic bullet” that, on its own, will transform the EU market for timber produced in VPA partner countries. On the other hand, the VPA process has strong potential as a means for overcoming some of the most significant obstacles to market development in the EU (and beyond) for timber products from VPA partner countries. It also has the potential to increase the long-term security of timber supply from VPA partner countries, a factor that is especially relevant given growing pressure on financial and physical resources.

VPA partners in pulp supply

Woodpulp supply in the EU averaged close to 50 million tonnes per year in the five years to 2008 before falling to about 45 million tonnes per year in 2009–2013. Imports—mainly from North and South America—contributed around 20% of total annual EU woodpulp supply in the period 2004–2013. Indonesia and Thailand were the only VPA partner countries that supplied non-negligible volumes of pulp to the EU in the decade to 2013: EU pulp imports from Indonesia fell from more than 300 000 tonnes in 2004 to only 19 000 tonnes in 2013, and imports from Thailand were negligible until 2013, when they increased sharply to 33 000 tonnes.

VPA partners in paper supply

The value of the global trade in paper products (excluding internal EU trade) grew from US$85.1 billion in 2004 to US$98.8 billion in 2013. Paper-product exports from tropical countries increased from US$10.5 billion in 2004 to a peak of $15.4 billion in 2011 before declining to US$13.7 billion in 2013. Exports from VPA-implementing countries—mainly Indonesia—increased from US$2.7 billion in 2004 to US$4.5 billion in 2011 and weakened to US$3.76 billion in 2013 (Figure S14). VPA-negotiating countries exported paper products worth US$2.8 billion in 2013.

**Figure S14:** Paper exports from tropical countries, by VPA status of suppliers, 2004–2013
By strongly emphasizing good governance—which aligns with lower commercial risk—the FLEGT VPA process can help remove barriers to inward investment in sustainable tropical timber industries. It can also help overcome market prejudice against tropical timber in the EU and to turn around environmental campaigns to the point where they support the industry as socially and environmentally sustainable.

Several factors could provide new opportunities for timber from VPA partner countries in the next decade, as long as the VPA process is combined with strong communication efforts and active market development programmes in the EU and other export markets.

These opportunities stem from emerging design trends; increased interest in hardwoods for structural applications; concern for climate change and carbon footprints; rising commitment to sustainability; and improving knowledge and expertise in marketing.

Copies of the full report can be downloaded at: www.itto.int/technical_report.