"International Tropical Timber Organisation/European Commission"

FLEGT VPA Partners in EU Timber Trade 2014 to 2016[1]

Main Report

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Important Notice

This draft has been issued for public review and is not for citation

All comments on this review draft should be sent before 30 September 2017 to Rupert Oliver, IMM Technical Consultant, technical@flegtimm.eu

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The views expressed herein are those of the consultant and do not necessarily reflect the official opinion of the European Commission

[1] Versions 1.1 to 1.3 of this report were issued for internal review with the title IMM Annual Report 2015-2016. The amended title is proposed in this version to better reflect content.

Contents

List of Acronyms

$	United States Dollar
€	Euro
CN	Combined Nomenclature of the EU (relates to trade product codes)
CIF	Cost, Insurance and Freight (relates to shipping)
COMEXT	Eurostat External Trade database
CPD	Construction Products Directive
CPI	Construction Production Index
CPR	Construction Products Regulation
DRC	Democratic Republic of Congo
EDB	Ease of Doing Business Index of the World Bank
EU	European Union
EUTR	European Union Timber Regulation
FAO	UN Food and Agriculture Organisation
FEP	European Parquet Flooring Federation
FII	Forest Industries Intelligence Ltd
FLEGT	Forest Law Enforcement, Governance and Trade
FOB	Free On Board (relates to shipping)
FRA	Forest Resource Assessment of the UN FAO
FSC	Forest Stewardship Council
FTA	Free Trade Agreement
GATS	USDA Global Agricultural Trade System database
GCI	Global Competitiveness Index of the World Economic Forum
GFC	Global Financial Crises
GFW	Global Forest Watch
GTA	Global Trade Atlas
has.	Hectares
HDF	High Density Fibreboard
HS	Harmonised System (relates to trade product codes)
IMM	FLEGT Independent Market Monitoring project of the ITTO
ITTO	International Tropical Timber Organisation
JFSQ	Joint Forest Sector Questionnaire (regularly issued by UN)
LAS	Legality Assurance System
LVL	Laminated Veneer Lumber
m2	Square meters
m^3	Cubic metres
MDF	Medium Density Fibreboard
MLH	Mixed Light Hardwood (applied to plywood)
NTFP	Non-Timber Forest Product
OSB	Oriented Strand Board
PEFC	Programme for Endorsement of Forest Certification
PFE	Permanent Forest Estate (defined by ITTO)
PVC	Polyvinyl chloride
RWE	Roundwood Equivalent (relates to wood product volumes)
SFM	Sustainable Forest Management
spp.	Several species within a genus
TRAFFIC	Trade Records Analysis of Flora and Fauna in Commerce
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
USA	United States of America
USDA	US Department for Agriculture
VPA	Voluntary Partnership Agreement
WEF	World Economic Forum

1. Introduction

1.1 Background

The Independent Market Monitoring (IMM) mechanism was established under a 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 report updates the key data contained in the IMM Baseline Report which considered VPA Partner trade flow trends in the decade 2004 to 2013[2]. As far as possible, this report does not duplicate analysis in the Baseline Report, but rather updates trade data and includes a commentary on market trends in the 2014 to 2016 period.

This report also updates forest resource data, which in the Baseline Report was largely based on the FAO 2010 Forest Resource Assessment (FRA), using data from the newly published FAO 2015 FRA and including additional information from the World Resources Institute (WRI) which now monitors forest trends more regularly using remote sensing.

Only at the very end of the period reviewed in this report, in November 2016, were the first ever FLEGT licenses issued by Indonesia. Therefore, the report is limited in the extent to which it can assess actual market impact and acceptance. However, to better establish the baseline conditions for entry of FLEGT licenses into the EU market, Annex 1 of the report includes a more detailed appraisal of the prospects for FLEGT licensed timber from Indonesia.

The report also provides information on the status of EU Timber Regulation (EUTR) implementation and the market position of FLEGT licensing in relation to private sector legality verification and certification initiatives. Drawing on scoping studies in Germany, Spain and the UK carried out in 2015, Annex 3 of the report provides insights into the readiness for acceptance of FLEGT licensed timber in three countries which together account for over one-third of all timber imported into the EU from VPA partner countries.

Drawing on experience gained in the IMM scoping studies and review of market trends, the report concludes with recommendations for future monitoring by IMM and FLEGT-related communication activities.

1.2 Scope and definitions

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.

[2] Europe's changing tropical timber trade: Baseline report of the Independent Market Monitoring initiative, ITTO Technical Series #45, http://www.itto.int/files/user/imm/TS%2045%20(web).pdf

The report focuses on the trade between the 28 EU member countries[3] and the following 17 tropical timber-supplying countries at various stages of the VPA process in March 2017:

- FLEGT licensing: Indonesia.
- VPA-implementing countries: Cameroon, the Central African Republic, the Congo, Ghana, 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. Aggregate forest area and timber production and trade data is provided in this report for VPA Partner countries dependent on their stage of the VPA process in March 2017. Country-specific trade data with a brief overview of key trade trends for each if the 17 VPA partner countries is contained in the Statistical Annexes.

[3] The 28 EU member countries in March 2017 are Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

2. Forest sector trends in VPA partner countries 2010-2015

This section draws on the latest statistical data to summarise the share of VPA Partners in global forest and plantation area, growing stock, tree cover loss and gain, and log production. It also reviews various indices which provide insights into the broader competitiveness of VPA Partner countries in international forest products trade.

2.1 Global forestry data sources

Two key sources of data are available to monitor trends in forest area at national and international level both of which have been updated since preparation of the IMM Baseline Report:

- UN Food and Agriculture Organisation (FAO) which has been monitoring the world's forests since 1946 and which now produces the Global Forest Resources Assessment (FRA) every five years. The FRA is based on reports by National Correspondents drawing on national forest inventories with supplementary information now derived from remote sensing conducted by FAO together with national focal points and regional partners. The IMM Baseline Report included data from the FAO 2010 FRA which is now updated to the FAO 2015 FRA.

- Global Forest Watch (GFW) which since 2014 has been providing annual updates of changes in tree cover derived from analysis of satellite imagery. GFW builds on an analysis by Hansen et al.[4] of 650,000 Landsat images to identify gains and losses in tree cover at 30 X 30 metre resolution during the period 2001 to 2012.

Each data set uses different definitions and has strengths and weaknesses which should be considered when analysing trends in forest cover and condition. In practice, the clearest insights may be derived by reviewing both sources of information.

A key strength of the FAO FRA forest area and deforestation data is that it differentiates between "natural forest", "planted forest" and "other wooded land" and specifically excludes trees established for agricultural production (e.g. fruits, saps or for other non-forest land uses) from the definition of forest. The forest change data differentiates between forest conversion operations and harvesting as part of a sustainable forestry rotation. FAO FRA also monitors key forest policy and production criteria such as growing stock volume, area according to conservation status, management planning and certification.

On the other hand, FAO FRA suffers from data inconsistencies and quality issues as individual countries undertake forest inventories at different times and frequencies, vary widely in the level of funding and technical capacity devoted to forest inventory, and have different national definitions for forest and other land uses that may be difficult to reconcile with the FAO definitions.

The GFW tree cover loss and gain data is of considerable value as it adds transparency, consistency and regularity in assessing changes in tree cover on a global scale. However, GFW defines tree cover as all vegetation taller than five meters in height making no distinction between natural forests, plantations or commercial cash crops such as palm oil, cocoa and rubber.

[4] Hansen, M. C., et al. 2013. "High-Resolution Global Maps of 21st-Century Forest Cover Change." Science 342 (15 November): 850–53. Data available on-line from: http://earthenginepartners.appspot.com/science-2013-global-forest.

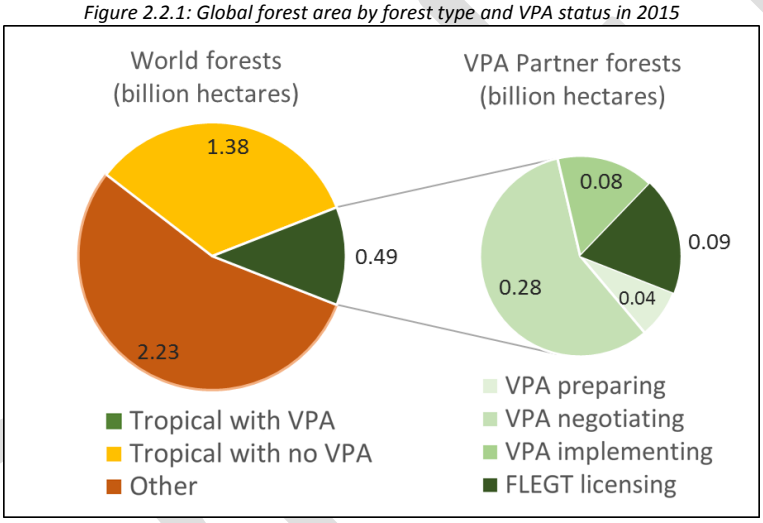
"Tree cover loss" monitored by GFW is not equivalent to "deforestation" as defined by FAO since it measures the total loss of all trees within a specific area regardless of the cause. It includes human-driven deforestation, forest fires both natural and manmade, clearing trees for agriculture, logging, plantation harvesting, and tree mortality due to disease and other natural causes. Much of the "tree cover loss" is only temporary, as forests are re-established after harvesting or regenerate naturally after disturbances such as fire. However, in practice it is a lot easier to identify losses – which tend to be sudden – than it is to identify gains which involve slow greening over time.

The GFW tree cover loss and gain data therefore does not effectively distinguish between forests which are permanently converted and those which are temporarily cleared as part of managed forestry operations. Although Hansen et al estimated both tree cover loss and gain during the 2001 to 2012 period, GFW does not include gains in their regular annual reports due to the problems of monitoring.

2.2 FAO forest area data

The FAO 2015 FRA indicates that the 17 VPA partner countries had a total forest area of 486 million hectares in 2015, which was 12% of world forest area and 27% of the total forest area in the tropics (Figure 2.2.1).

Figure 2.2.1: Global forest area by forest type and VPA status in 2015



Source: FAO Forest Resource Assessment 2015

Between 2010 and 2015, forest area in the 17 VPA partner countries declined by 7 million hectares and share of total world forest area fell from 12.3% to 12.1%. Loss of share was mainly due to a continuing rise in temperate forest area during the five-year period. The rate of forest area loss in VPA partner countries between 2010 and 2015 (-1.51%) was marginally less than in other tropical countries (-1.54%) (Table 2.2.1).

Table 2.2.1: Global forest area by forest region and VPA status, 1990 to 2015

Region	Area (million ha)					Area change per annum (million ha)			% world, 2015
	1990	2000	2005	2010	2015	1990–2000	2000-2010	2010–2015	
World	**4128**	**4056**	**4033**	**4016**	**3999**	**-7**	**-4**	**-3**	**100%**
Boreal	1219.3	1219.8	1218.9	1224.9	1224.5	0.1	0.5	-0.1	31%
Temperate	618.0	640.9	659.2	673.4	684.5	2.3	3.3	2.2	17%
Subtropical	325.4	324.8	323.9	319.6	320.1	-0.1	-0.5	0.1	8%
Tropical	1965.5	1870.1	1830.8	1797.8	1770.2	-9.5	-7.2	-5.5	44%
o/w VPA	534.6	505.9	498.7	493.0	485.6	-2.9	-1.3	-1.5	12%

Source: FAO Forest Resource Assessment 2015

VPA Partner countries lost 1.49 million hectares of forest per year between 2010 and 2015, an increased rate of loss compared to the 2000 to 2010 period (1.29 million hectares per annum). However, trends varied widely between countries with the rate of deforestation increasing in Indonesia, Guyana, Thailand, and Myanmar; continuing at the same level in Cameroon, CAR, Congo, DRC, Honduras, and Liberia; and slowing (but still high) in Cambodia. Between 2010 and 2015 forest area increased in Ghana, Gabon, Lao PDR, Malaysia, Thailand and Vietnam. (Table 2.2.2).

Table 2.2.2: Forest area in VPA partner countries, 1990 to 2015

Region	Area (1000 ha)					Area change per annum (1000 ha)			% VPA, 2015
	1990	2000	2005	2010	2015	1990–2000	2000-2010	2010–2015	
All VPA Partners	**534635**	**505883**	**498682**	**493021**	**485569**	**-2875**	**-1286**	**-1490**	**100%**
Indonesia (FLEGT licensing)	**118545**	**99409**	**97857**	**94432**	**91010**	**-1914**	**-498**	**-684**	**19%**
VPA-implementing	**83158**	**80614**	**79345**	**78099**	**76836**	**-254**	**-252**	**-253**	**16%**
Cameroon	24316	22116	21016	19916	18816	-220	-220	-220	4%
Central African Republic	22560	22404	22326	22248	22170	-16	-16	-16	5%
Congo	22726	22556	22471	22411	22334	-17	-15	-15	5%
Ghana	8627	8909	9053	9195	9337	28	29	28	2%
Liberia	4929	4629	4479	4329	4179	-30	-30	-30	1%
VPA-negotiating	**280770**	**279446**	**277428**	**278623**	**279225**	**-132**	**-82**	**120**	**58%**
Côte d'Ivoire	10222	10328	10405	10403	10401	11	8	0	2%
Democratic Republic of the Congo	160363	157249	155692	154135	152578	-311	-311	-311	31%
Gabon	22000	22000	22000	22000	23000	0	0	200	5%
Guyana	16660	16622	16602	16576	16526	-4	-5	-10	3%
Honduras	8136	6392	5792	5192	4592	-174	-120	-120	1%
Lao PDR	17645	16526	16870	17816	18761	-112	129	189	4%
Malaysia	22376	21591	20890	22124	22195	-79	53	14	5%
Thailand	14005	17011	16100	16249	16399	301	-76	30	3%
Viet Nam	9363	11727	13077	14128	14773	236	240	129	3%
VPA-preparing	**52162**	**46414**	**44052**	**41867**	**38498**	**-575**	**-455**	**-674**	**8%**
Cambodia	12944	11546	10731	10094	9457	-140	-145	-127	2%
Myanmar	39218	34868	33321	31773	29041	-435	-310	-546	6%

Source: FAO Forest Resource Assessment 2015

2.3 FAO planted forest area data

The FAO 2015 FRA indicates that rate of plantation establishment in the 17 VPA partner countries was not only very low compared to other regions between 2010 and 2015, but also declined sharply compared to the previous two decades. Between 2010 and 2015, only 85 000 hectares of new plantations were established per year in the 17 VPA partner countries compared to 480 000 hectares per year between 2000 and 2010 and 300 000 hectares per year between 1990 and 2000. In 2015, VPA partner countries accounted for 6.0% of global plantation area compared to 6.1% in 2010 (Table 2.3.1).

Table 2.3.1: Global planted forest area by forest region and VPA status, 1990 to 2015

Region	Area (million ha)					Area change per annum (million ha)			% world, 2015
	1990	2000	2005	2010	2015	1990–2000	2000-2010	2010–2015	
World	**166**	**209**	**239**	**266**	**278**	**4**	**6**	**2**	**100.0%**
Boreal	25.0	31.0	35.2	40.2	41.9	0.6	0.9	0.3	15.1%
Temperate	93.6	119.1	136.9	149.6	154.5	2.5	3.0	1.0	55.6%
Subtropical	17.9	20.7	22.1	23.8	24.7	0.3	0.3	0.2	8.9%
Tropical	30.0	38.3	44.8	52.4	56.8	0.8	1.4	0.9	20.4%
o/w VPA	8.4	11.4	14.0	16.2	16.6	0.3	0.5	0.1	6.0%
Non-VPA	21.6	26.9	30.8	36.2	40.2	0.5	0.9	0.8	14.4%

Source: FAO Forest Resource Assessment 2015

The decline in rate of plantation establishment in VPA partner countries was primarily due to the slowing pace in Indonesia where only 28 000 hectares were established per year between 2010 and 2015 compared to 148 000 hectares per year in the previous 10-year period. This change is likely

attributable to the Indonesia government's moratorium on new concessions to convert primary natural forests and peat lands to oil palm and timber plantations introduced in May 2011.

Of VPA-implementing countries, only Ghana significantly extended planted forest area between 2010 and 2015 at a rate of 13 000 hectares per year. Of VPA-negotiating countries, the area of planted forest in Malaysia increased at a rate of 69 000 hectares per year between 2010 and 2015 after declining by 4 000 hectares per year in the 2000 to 2010 period. However, Thailand and Viet Nam experienced the opposite trend, respectively recording flat and declining planted forest area between 2010 and 2015 after a period of growth in the previous decade (Table 2.3.2).

Table 2.3.2: Planted forest area in VPA partner countries, 1990 to 2015

Region	Area (1000 ha)					Area change per annum (1000 ha)			% VPA, 2015
	1990	2000	2005	2010	2015	1990–2000	2000-2010	2010–2015	
All VPA Partners	**8419**	**11421**	**13994**	**16221**	**16646**	**300**	**480**	**85**	**100%**
Indonesia (FLEGT licensing)	**2000**	**3322**	**4659**	**4803**	**4946**	**132**	**148**	**29**	**30%**
VPA-implementing	**125**	**135**	**235**	**365**	**442**	**1**	**23**	**15**	**3%**
Cameroon	14	14	14	20	36	0	1	3	0%
Central African Republic	2	2	2	2	2	0	0	0	0%
Congo	51	51	51	75	71	0	2	-1	0%
Ghana	50	60	160	260	325	1	20	13	2%
Liberia	8	8	8	8	8	0	0	0	0%
VPA-negotiating	**5834**	**7189**	**8177**	**9996**	**10245**	**136**	**281**	**50**	**62%**
Côte d'Ivoire	154	261	337	405	427	11	14	4	3%
Democratic Republic of the Congo	56	57	57	59	60	0	0	0	0%
Gabon	30	30	30	30	30	0	0	0	0%
Guyana	0	0	0	0	0	0	0	0	0%
Honduras	0	0	0	0	0	0	0	0	0%
Lao PDR	3	19	27	70	113	2	5	9	1%
Malaysia	1956	1659	1573	1623	1966	-30	-4	69	12%
Thailand	2668	3111	3444	3986	3986	44	88	0	24%
Viet Nam	967	2052	2709	3823	3663	109	177	-32	22%
VPA-preparing	**460**	**775**	**923**	**1057**	**1013**	**32**	**28**	**-9**	**6%**
Cambodia	67	79	74	69	69	1	-1	0	0%
Myanmar	393	696	849	988	944	30	29	-9	6%

Source: FAO Forest Resource Assessment 2015

2.4 FAO growing stock volume data

The FAO 2015 FRA indicates that the 17 VPA partner countries had a total forest growing stock of 82.6 billion m^3 in 2015, down from 84.1 billion m^3 in 2010. The share of global growing stock volume in VPA partner countries declined from 17.5% in 2010 to 17.3% in 2015. The share of tropical growing stock volume in VPA partner countries declined from 35.0% in 2010 to 34.7% in 2015 (Table 2.4.1).

Table 2.4.1: Global growing stock volume by forest region and VPA status, 1990 to 2015

Region	Volume (billion m^3)					Vol. change per annum (billion m^3)			% world, 2015
	1990	2000	2005	2010	2015	1990–2000	2000-2010	2010–2015	
World	**477**	**476**	**476**	**479**	**478**	**0**	**0**	**0**	**100.0%**
Boreal	132.5	133.3	133.9	135.2	135.3	0.1	0.2	0.0	28.3%
Temperate	69.4	76.8	80.4	85.4	90.8	0.7	0.9	1.1	19.0%
Subtropical	16.4	17.4	17.9	18.5	13.8	0.1	0.1	-0.9	2.9%
Tropical	258.2	248.7	243.7	240.0	238.0	-1.0	-0.9	-0.4	49.8%
o/w VPA	91.2	87.9	85.8	84.1	82.6	-0.3	-0.4	-0.3	17.3%
Non-VPA	167.1	160.8	157.9	156.0	155.4	-0.6	-0.5	-0.1	32.5%

Source: FAO Forest Resource Assessment 2015

Growing stock volume in Indonesia fell nearly 10% between 2010 and 2015, from 11.3 billion m^3 to 10.2 billion m^3, a significantly higher rate of decline than during the previous decade. The main change in growing stock volume in VPA implementing countries between 2010 and 2015 was a

continuing decline in Cameroon at a consistent rate of around 68 million m^3 per year. The main changes in growing stock in VPA Negotiating countries between 2010 and 2015 were a continuing decline in the Democratic Republic of Congo and Honduras and a significant rise in Gabon and Malaysia, the latter reversing a long-term decline in the previous two decades (Table 2.4.2).

Table 2.4.2: Growing stock volume in VPA partner countries, 1990 to 2015

Region	Volume (million m^3)					Vol. change per annum (million m^3)			% VPA, 2015
	1990	2000	2005	2010	2015	1990–2000	2000-2010	2010–2015	
All VPA Partners	**91151**	**87860**	**85837**	**84068**	**82607**	**-329**	**-379**	**-292**	**100%**
Indonesia (FLEGT licensing)	**14233**	**13229**	**12459**	**11343**	**10227**	**-100**	**-189**	**-223**	**12%**
VPA-implementing	**17188**	**16349**	**15937**	**15529**	**15114**	**-84**	**-82**	**-83**	**18%**
Cameroon	7497	6819	6480	6141	5802	-68	-68	-68	7%
Central African Republic	3875	3825	3801	3776	3751	-5	-5	-5	5%
Congo	4603	4568	4551	4539	4523	-4	-3	-3	5%
Ghana	434	406	397	389	378	-3	-2	-2	0%
Liberia	779	731	708	684	660	-5	-5	-5	1%
VPA-negotiating	**56708**	**55604**	**54917**	**54807**	**55031**	**-110**	**-80**	**45**	**67%**
Côte d'Ivoire	2588	2618	2638	2632	2626	3	1	-1	3%
Democratic Republic of the Congo	36906	36189	35831	35473	35115	-72	-72	-72	43%
Gabon	5170	5170	5170	5170	5405	0	0	47	7%
Guyana	3015	3009	3005	3000	2991	-1	-1	-2	4%
Honduras	986	775	702	629	556	-21	-15	-15	1%
Lao PDR	997	977	958	939	920	-2	-4	-4	1%
Malaysia	5097	4696	4436	4585	5034	-40	-11	90	6%
Thailand	1291	1376	1352	1535	1506	9	16	-6	2%
Viet Nam	658	794	825	844	878	14	5	7	1%
VPA-preparing	**3022**	**2678**	**2524**	**2389**	**2235**	**-34**	**-29**	**-31**	**3%**
Cambodia	1257	1109	1025	959	893	-15	-15	-13	1%
Myanmar	1765	1569	1499	1430	1342	-20	-14	-18	2%

Source: FAO Forest Resource Assessment 2015

2.5 GTF tree cover loss and gain

Global Forest Watch (GFW) data indicates that worldwide annual tree cover loss was 15.1 million hectares between 2001 and 2010 rising to 17.1 million hectares between 2011 and 2014. Annual tree cover loss was higher than tree cover gain in all forest regions, although the discrepancy was particularly great in the tropics. Annual tree cover loss in tropical countries increased from 7.4 million hectares between 2001 and 2010 to 8.4 million hectares between 2011 and 2014. Annual tree cover gain in tropical countries was 2.2 million hectares between 2001 and 2012 (Table 2.5.1).

Table 2.5.1: Tree cover loss and gain with > 50% canopy density by forest region and VPA status, 2001 to 2014

Region	Area in 2000		Gain in area 2001-2012		Annual average loss in area				Annual loss in area			
					2001-2010		2011-2014		2011	2012	2013	2014
	1m has.	% world	1m has/yr	% world	1m has/yr	% world	1m has/yr	% world	1m has.	1m has.	1m has.	1m has.
World	**3276.5**	**100.0%**	**7.3**	**100.0%**	**15.1**	**100.0%**	**17.1**	**100.0%**	**15.4**	**20.5**	**17.1**	**15.5**
Boreal	806.5	24.6%	1.9	25.7%	3.6	23.6%	4.8	28.1%	3.6	6.0	6.0	3.6
Temperate	527.6	16.1%	1.4	19.4%	2.1	14.0%	2.0	11.5%	2.2	2.4	1.7	1.6
Subtropical	265.9	8.1%	1.8	24.1%	2.0	13.3%	2.0	11.4%	2.1	2.3	1.8	1.7
Tropical	1676.5	51.2%	2.2	30.7%	7.4	49.2%	8.4	49.0%	7.5	9.8	7.7	8.6
o/w VPA	596.2	18.2%	1.2	16.8%	2.7	18.1%	4.0	23.3%	3.4	4.6	3.6	4.4
Non-VPA	1080.3	33.0%	1.0	14.0%	4.7	31.0%	4.4	25.7%	4.2	5.2	4.1	4.2

Source: Global Forest Watch, Hansen et al

Annual tree cover loss in VPA partner countries accelerated from 2.7 million hectares between 2001 and 2010 to 4.3 million hectares between 2011 and 2015. Annual tree cover gain in VPA partner countries was 1.2 million hectares between 2001 and 2012. Annual tree cover loss was higher in all VPA partner countries between 2011 and 2015 than in the previous decade, in some cases significantly higher. The data provides no insight into the causes of increased tree cover loss, or the extent to which it is being offset by tree cover gains, but it does suggest a generally higher intensity of land use and management in all VPA partner countries in recent years (Table 2.5.2).

Table 2.5.2: Tree cover loss and gain with > 50% canopy density by VPA partner countries, 2001 to 2015

Region	Area in 2000		Gain in area 2001-2012		Annual average loss in area				Annual loss in area				
					2001-2010		2011-2015		2011	2012	2013	2014	2015
	1000 has.	% VPA	1000 has/yr	% VPA	1000 has/yr	% VPA	1000 has/yr	% VPA	1000 has.	1000 has.	1000 has.	1000 has.	1000 has.
All VPA Partners	**596250**	**100.0%**	**1227**	**100.0%**	**2743**	**100.0%**	**4323**	**100.0%**	**3368**	**4589**	**3643**	**5519**	**4497**
Indonesia (FLEGT licensing)	**155386**	**26.1%**	**634**	**51.6%**	**1195**	**43.6%**	**1685**	**39.0%**	**1531**	**2237**	**1115**	**1843**	**1699**
VPA-implementing	**93280**	**15.6%**	**36**	**2.9%**	**143**	**5.2%**	**315**	**7.3%**	**154**	**220**	**354**	**501**	**347**
Cameroon	25259	4.2%	6	0.5%	31	1.1%	75	1.7%	25	45	74	162	72
Central African Republic	30770	5.2%	4	0.3%	28	1.0%	35	0.8%	42	47	29	40	18
Congo	23943	4.0%	4	0.3%	22	0.8%	42	1.0%	26	29	49	65	42
Ghana	4254	0.7%	12	1.0%	30	1.1%	45	1.0%	28	28	54	79	37
Liberia	9055	1.5%	10	0.8%	33	1.2%	117	2.7%	34	70	148	155	179
VPA-negotiating	**300311**	**50.4%**	**519**	**42.3%**	**1213**	**44.2%**	**1938**	**44.8%**	**1370**	**1744**	**1775**	**2734**	**2067**
Côte d'Ivoire	6358	1.1%	21	1.7%	72	2.6%	110	2.5%	96	74	106	188	87
Democratic Republic of the Congo	164362	27.6%	127	10.3%	455	16.6%	794	18.4%	400	573	864	1256	879
Gabon	24166	4.1%	4	0.3%	15	0.5%	30	0.7%	17	16	42	47	25
Guyana	18900	3.2%	1	0.1%	7	0.3%	11	0.2%	8	13	7	12	13
Honduras	6697	1.1%	5	0.4%	38	1.4%	45	1.0%	51	31	42	55	47
Lao PDR	18115	3.0%	31	2.5%	93	3.4%	191	4.4%	126	140	193	227	268
Malaysia	28964	4.9%	235	19.1%	369	13.5%	500	11.6%	462	625	330	637	448
Thailand	17967	3.0%	45	3.7%	80	2.9%	99	2.3%	86	100	76	124	110
Viet Nam	14783	2.5%	51	4.2%	85	3.1%	158	3.7%	125	170	116	189	190
VPA-preparing	**47273**	**7.9%**	**39**	**3.1%**	**192**	**7.0%**	**385**	**8.9%**	**312**	**389**	**399**	**441**	**383**
Cambodia	7483	1.3%	10	0.8%	83	3.0%	159	3.7%	184	181	173	141	116
Myanmar	39790	6.7%	29	2.3%	109	4.0%	226	5.2%	128	208	226	300	268

Source: Global Forest Watch, Hansen et al

In Indonesia the annual average rate of tree cover loss increased from 1.20 million hectares between 2001 and 2010 to 1.69 million hectares between 2011 and 2015. Tree cover loss in Indonesia varied widely in each of the years 2011 to 2015 and showed no consistent trend. Recent research by GFW in partnership with Transparent World, involving mapping of the tree cover loss data over plantation area data in seven tropical countries, showed that in 2013 to 2014, 44% of tree cover loss in Indonesia was in plantations (including agricultural crops such as palm oil) and 56% in natural forest[5]. GFW monitoring in future years should indicate whether there is any significant shift in the proportion of tree cover loss between natural forests and plantations and the extent to which losses are offset by tree cover gains.

The annual average rate of tree cover loss in VPA implementing countries increased from 143 000 hectares between 2001 and 2010 to 315 000 hectares per year between 2011 and 2015. Liberia recorded a particularly rapid excelaration in tree cover loss, to a high of 179 000 hectares in 2015, all the more significant in a country with a total forest area of only 9 milion hectares in 2000.

Amongst VPA negotiating countries, the data for Malaysia, Lao PDR, Viet Nam and Democratic Republic of Congo is particularly notable. Malaysia, like Indonesia, records relatively high and rising level of tree cover loss only partly offset by tree cover gain. This seems indicative of high intensity forest and plantation management in the country. More detailed analysis by GFW and Transparent World indicates that 66% of tree cover loss in Malaysia in 2013 to 2014 was in plantations.

Lao PDR and Viet Nam are both notable for the particularly sharp increase in annual average tree cover loss during the 2011-2015 period compared to the 2001-2010 period. The Democratic Republic of Congo is notable for the rapid year-on-year escalation in tree cover loss from 400 000 hectares in 2011 to over 1 million hectares in 2014, slowing only slightly to 879 000 hectares in 2015. Given the limited size of plantatations in the country, this is likely to be almost all at the expense of natural forest.

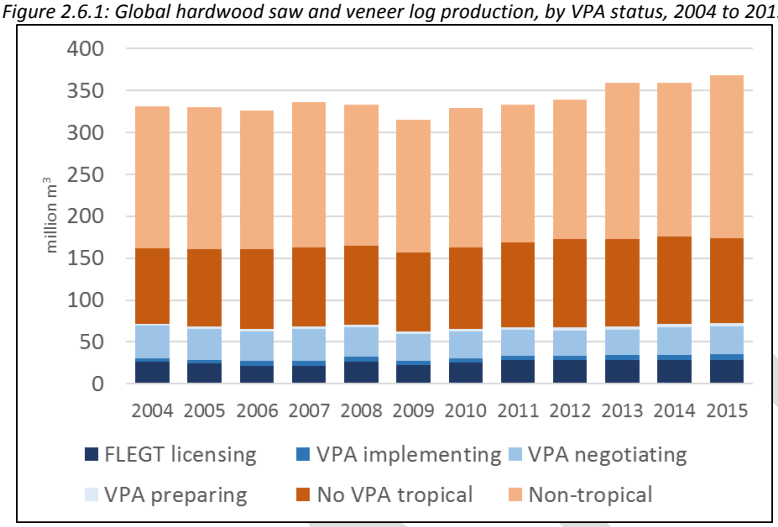
[5] http://blog.globalforestwatch.org/2016/01/forest-loss-pushes-far-beyond-plantation-boundaries-in-south-america-africa/

2.6 VPA partner country log production

Sawlogs and veneer logs

According to the FAOSTAT database (collected through the Joint Forest Sector Questionnaire - JFSQ), hardwood sawlog and veneer log production in the 17 VPA partner countries increased by 5.7% from 68.1 million m^3 in 2013 to 72.0 million m^3 in 2014 and then by an additional 1.1% to 72.7 million m^3 in 2015. (Figure 2.6.1)

Figure 2.6.1: Global hardwood saw and veneer log production, by VPA status, 2004 to 2015



Source: ITTO IMM analysis of FAOSTAT

FAOSTAT data indicates that annual sawlog and veneer log production in Indonesia was static at 28 million m^3 between 2011 and 2015. Production in the five VPA implementing countries in Africa increased by 3.0% to 6.3 million m^3 in 2014 and by a further 13.4% to 7.1 million m^3 in 2015. Production in VPA negotiating countries increased 7.9% to 33.2 million m^3 in 2014 before falling slightly, by 0.2%, to 33.1 million m^3 in 2015. Production in VPA-preparing countries increased by 40.7% to 4.5 million m^3 in 2014 and remained stable at this higher level in 2015.

The sharp rise in sawlog and veneer log production in VPA Partner countries in 2014 coincides with a rapid increase in Chinese imports of tropical logs during the year. China's imports of tropical logs increased from 9.3 million m^3 in 2013 to 13.0 million m^3 in 2014. Much of the increase comprised rosewood, including Dalbergia spp. from Cambodia, Lao PDR, Myanmar, and Vietnam, and Pterocarpus erinaceus from Ghana, Côte d'Ivoire, Nigeria and other Africa countries. China's imports of tropical logs declined to 10.0 million m^3 in 2015 and were stable at that level in 2016.

The share of VPA partner countries in global hardwood sawlog and veneer log production increased from 11.1% in 2013 to 12.2% in 2014 and then fell back slightly to 12.1% in 2015. During the period, VPA partner countries were gaining share in global hardwood saw and veneer log production in relation to China where harvesting of natural forests is becoming more restricted. However, VPA partner countries were losing share to the United States where hardwood harvest levels were rising rapidly in response to improved domestic and export demand.

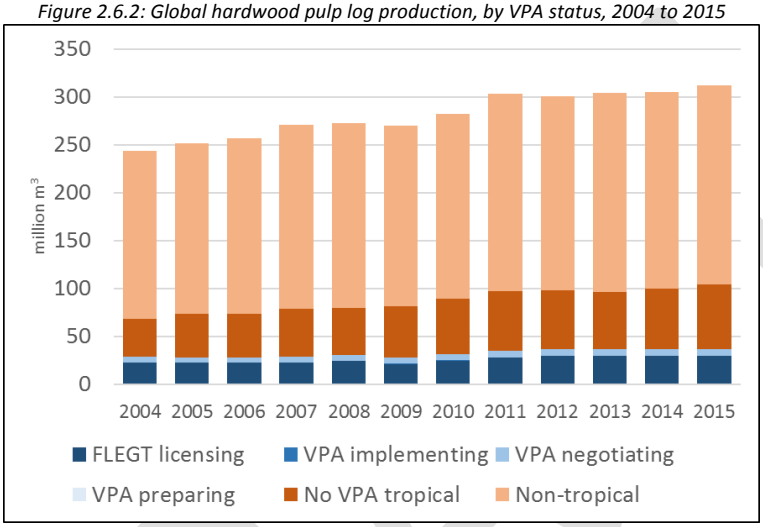
Pulp logs

FAOSTAT data shows no change in production of hardwood pulp logs in any VPA Partner country between 2013 and 2015. Of VPA Partner countries reporting on hardwood pulp logs, annual harvesting remained level at 29.7 million m^3 in Indonesia, 3.25 million m^3 in Vietnam, 2.90 million m^3 in Thailand, 0.70 million m^3 in Malaysia, 0.24 million m^3 in Congo and 0.10 million m^3 in Guyana. This

stasis across VPA countries is more indicative of lack of data and the failure of many tropical countries to provide new information in the JFSQ than it is of actual production trends.

Nevertheless, the FAOSTAT data from other countries provides insights into the changing share of VPA Partner countries in global hardwood pulp log production (Figure 2.6.2). Brazil is now the world's largest producer of hardwood pulp logs which are sourced almost exclusively from extensive eucalyptus plantations, mainly in the sub-tropical zone in southern Brazil[6]. Brazilian harvests of hardwood pulp logs increased 13.6% from 56.4 million m^3 in 2013 to 64.0 million m^3 in 2015. While production of hardwood pulp logs increased in Brazil, it declined in the United States and China. Between 2013 and 2015, production fell 7.1% to 48.4 million m^3 in the United States and by 13.1% to 24.7 million m^3 in China.

Figure 2.6.2: Global hardwood pulp log production, by VPA status, 2004 to 2015



Source: ITTO IMM analysis of FAOSTAT

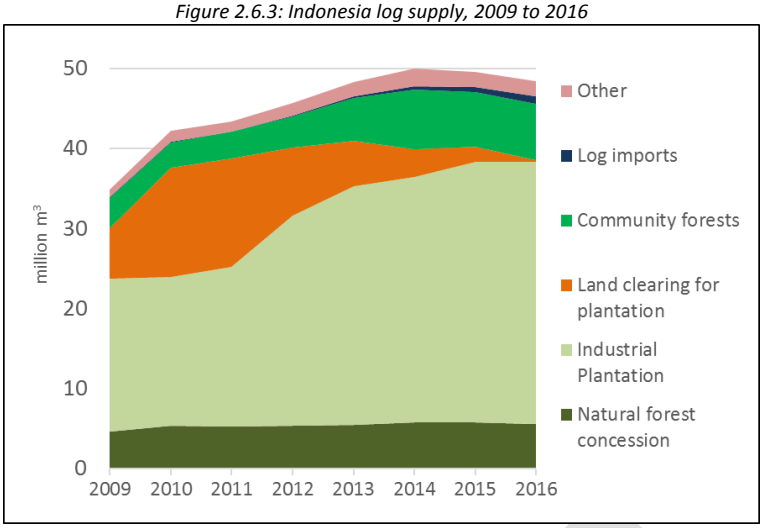
For VPA partner countries, these trends are particularly relevant to Indonesia which, like Brazil, has been expanding production and exports of chemical pulp derived from hardwood pulp logs. Brazil is now the leading global exporter of this commodity with growing volumes destined mainly for China, the United States and the EU. At present Indonesia exports of chemical pulp are mainly destined for China, with smaller volumes destined for South Korea, Bangladesh and India.

Indonesian log production

While FAOSTAT data shows no change in Indonesian log production in recent years, more detailed data published by the Indonesian Ministry of Environment and Forestry indicates significant changes in both the volume and source of logs harvested in the country (Figure 2.6.3).

[6] Note that Figure 2.6.2 draws on COMTRADE definitions and identifies all production in Brazil as "tropical"

Figure 2.6.3: Indonesia log supply, 2009 to 2016



Source: ITTO IMM analysis of Indonesian Ministry of Environment and Forestry data

Total log production in Indonesia increased 9.6% from 45.6 million m^3 in 2012 to a peak of 50.0 million m^3 in 2014 before declining 3.1% to 48.4 million m^3 in 2016. In the years prior to 2015, rising production from industrial plantations and community forests was sufficient to offset a sharp fall in production from land clearing. However, in 2015 and 2016 production from industrial plantations and community forests stabilised at the higher level while production from land clearance operations fell to negligible levels. In 2016, plantations accounted for 68% of all log supply in Indonesia compared to 15% from community forests, 11% from natural forest concessions, 2% from imports and less than 1% from land clearance operations.

2.7 Relative international competitiveness of VPA countries

Some VPA partner countries are exploiting competitive advantages to develop markets for further-processed wood products in Europe. The IMM Baseline report observed that VPA partner countries ranked highly in international competitiveness indices—Indonesia, Malaysia, Thailand and Viet Nam— tend 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.

The following trends in VPA partner country competitiveness between 2013 and 2016 are identified from a review of three indices, namely the World Bank's "Ease of Doing Business" (EDB), the World Economic Forum Global Competitiveness (GC) Index, and the UNCTAD Line Shipping Connectivity Index:

- Indonesia's position on the GC Index declined slightly from 38th in 2013 to 41st in 2016, but ranking on the EDB index increased from 120th to 91st during the same period. Indonesia's connectivity remains a problem being considerably lower than key competitors including China, Malaysia, Viet Nam and Thailand.
- Malaysia remained by far the top performer amongst VPA Partner countries across the indices. Malaysia is one of the world's most connected countries and Malaysia's Connectivity Index continued to improve between 2013 and 2016. However, during the same period, Malaysia fell from 6th to 23rd on the EDB index due to a fall in ranking on "starting a business", "trading across borders" and "paying taxes".
- Between 2013 and 2016, Thailand fell from 18th to 46th on the EDB index, losing ground on a range of issues including "construction permits", "registering property", "paying taxes",

"trading across borders" and "enforcing contracts". However, Thailand's Connectivity Index improved slightly during this period.

- Viet Nam's ranking on the GC index increased from 70th in 2013 to 60th in 2016. Viet Nam's EDB index ranking increased from 99th in 2013 to 82nd in 2016 as the country made ground on several issues including "access to electricity", "access to credit", and "protecting minority investors". However, these gains were partly offset by a decline in Vietnam's ranking for "trading across borders" and "enforcing contracts". Viet Nam's Connectivity Index improved sharply in 2016, overtaking Thailand but still well below Malaysia.
- Lao PDR's ranking on the GC index fell from 81st in 2013 to 93rd in 2016. However, ranking on the EDB increased from 159th in 2013 to 139th in 2016. The country made significant ground on "access to credit" and "trading across borders" but lost ground on "starting a business" and "paying taxes".
- Cambodia's competitiveness ranking increased slightly between 2013 and 2016, from 95th to 89th on the GC index and from 137th to 131st on the EDB index. The country's Connectivity Index remains extremely low by international standards.
- Ghana slipped sharply down the EDB index from 67th in 2013 to 108th in 2016. Ranking was down significantly on several issues including "dealing with construction permits", "access to electricity", "registering property", "access to credit", "protecting minority investors", "paying taxes", "trading across borders", "enforcing contracts" and "resolving insolvency". However, ranking on the GC index was stable at a low level (114th) in both 2013 and 2016. Ranking on the Connectivity Index was also static at a level higher than most countries of the Congo region but lower than Asian countries.
- Côte d'Ivoire's competitiveness is still low but showing signs of improvement. The country's ranking on the GC index increased from 126th in 2013 to 99th in 2016. During the same period, ranking on the EDB index increased from 167th to 142nd. Côte d'Ivoire's Connectivity Index is very similar to that of Ghana.
- Congo's Connectivity Index increased between 2013 and 2016 to a level higher than that of Ghana and Côte d'Ivoire. There was also a slight improvement in Congo's ranking on the EDB index from 185th in 2013 to 177th in 2016.
- Liberia's ranking on the EDB fell from 144th in 2013 to 174th in 2016 with a significant decline across a wide range of issues including "Dealing with construction permits", "Access to electricity", "Access to credit", "Paying Taxes", "Protecting minority Investors", and "Trading across borders".
- There was no change in the very low level of competitiveness and connectivity exhibited by other VPA partner countries in Africa including Cameroon, Central African Republic, DRC and Gabon.
- Between 2013 and 2016 Honduras ranking on the GC index increased from 111th to 88th. Honduras ranking on the EDB increased from 127th to 105th in the same period. However Honduras' Connectivity Index remains unchanged at a very low level.
- In contrast, Guyana is slipping down the competitiveness rankings. The country's ranking on the GC index fell from 117th in 2014 to 121st in 2015 and ranking on the EDB fell from 115th in 2013 to 124th in 2016. Guyana's Connectivity Index remains unchanged at a very low level.

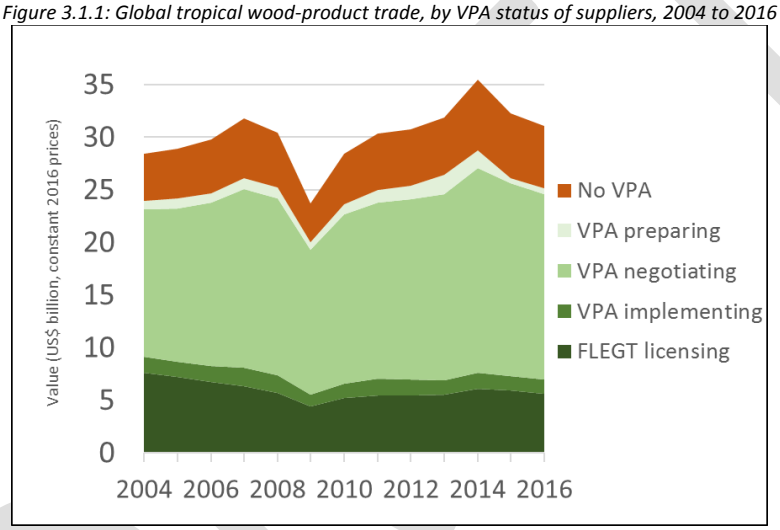
3. VPA partner share of global tropical timber product trade 2014-2016

This section analyses the share of VPA partner countries in global tropical timber trade. This is to ensure that trade flows between VPA Partner countries and the EU are considered in their appropriate global context. The section considers the relative contribution of VPA Partners in total global trade in tropical timber. It considers the changing composition of products in the tropical timber trade and changing regional supply and demand. It also considers the emerging role of VPA Partner countries in the global pulp and paper sector.

3.1 Overview

The value of global trade in tropical wood products increased 13% to peak at US$35.0 billion in 2014 before sliding 9% to US$31.9 billion in 2015 and a further 3% to US$31.1 billion in 2016 (Figure 3.1.1). The combined share of the 17 VPA partner countries in global tropical wood products trade remained stable at 81% in the three years between 2014 and 2016.

Figure 3.1.1: Global tropical wood-product trade, by VPA status of suppliers, 2004 to 2016



Source: ITTO IMM analysis of Global Trade Atlas

Longer-term, the share of VPA partner countries in global tropical wood timber trade has declined from 84% in 2009. This was not due to any downturn in export value by those countries, but rather due increased exports from a variety of non-VPA countries such as Papua New Guinea (PNG), Solomon Islands, and Mozambique, particularly to supply logs to the Chinese market. India's exports of a variety of higher value wood products such as furniture have also been rising, particularly to the United States. In addition, Mexico is exporting more processed wood products – a large proportion likely to consist of U.S. temperate hardwoods (that cannot be separated from tropical in the statistics for further processed products).

The export value of Indonesian wood products increased from US$5.5 billion in 2013 to US$6.1 billion in 2014, but then declined to US$5.9 billion in 2015 and US$5.7 billion in 2016. While Indonesia's export value declined, Indonesia's share of global trade in tropical wood increased between 2014 and 2016. Indonesia accounted for 18.2% of global trade in tropical wood in 2016, a rise from a low of 17.2% in 2014. The recent increase in Indonesia's share of global trade in tropical wood is a reversal of a long-term trend of declining share in relation to countries of the Mekong region, particularly Thailand and Vietnam.

Total export value by the five African VPA-implementing countries was volatile in the three years to 2016, rising from US$1.4 billion in 2013 to US$1.5 billion in 2014 before declining to US$1.4 billion in 2015 and US$1.3 billion in 2016. The spike in export value in 2014 was mainly due to the sharp and short-lived increase in demand for rosewood logs in China. The five VPA-implementing countries in Africa accounted for 4.2% of global trade in tropical wood in 2016, continuing a long-term slide from 5.1% in 2011. The declining share is largely due to VPA-implementing countries in Africa falling a long way behind Asian countries in efforts to develop internationally competitive export markets for high value products such as furniture.

Total export value of tropical wood products by the nine VPA-negotiating countries increased from US$17.7 billion in 2013 to US$19.5 billion in 2014 before falling to US$18.3 billion in 2015 and US$17.6 billion in 2016. The share of VPA-negotiating countries in global tropical wood trade declined from 55.4% in 2013 to 54.9% in 2014 but then increased to 56.7% in 2016.

The rosewood boom in China was the major factor behind the spike in exports by VPA-negotiating countries in 2014 and was particularly pronounced for Lao PDR, Thailand, and Viet Nam. There have also been significant long-term rising trends in the export of furniture from Viet Nam and of rubberwood and other plantation species from Thailand. Exports of wood furniture by Malaysia and Thailand have been high and consistent in recent years and are a major component of exports by VPA negotiating countries.

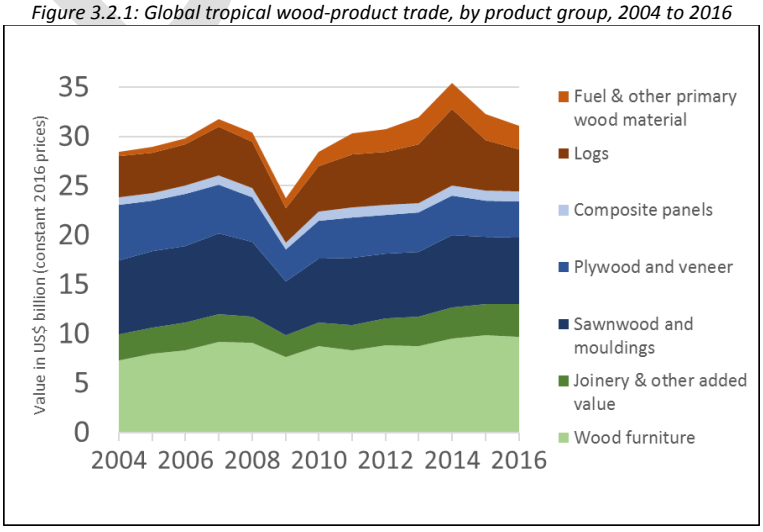
Amongst VPA-negotiating countries in Africa, a significant long-term trend is an increase in exports of more processed products (including sawn wood, veneer and plywood) from Gabon following the country's log export ban implemented in May 2010.

The share of the two VPA-preparing countries – Myanmar and Cambodia - in global tropical wood trade declined from 5.6% in 2013 to a low of 1.6% in 2015 before recovering slightly to 1.8% in 2016. The total value of exports by the two countries fell from US$1.8 billion in 2013 to US$570 million in 2016. The decline follows implementation of the log export ban by Myanmar in April 2014.

3.2 Product mix of tropical wood trade

The short-lived surge in the global value of tropical wood trade that occurred in 2014 was heavily concentrated in logs primarily destined for China. The value of global trade in tropical logs increased 29% from $6.0 billion in 2013 to $7.8 billion in 2014 but then fell nearly 50% during the next 2 years to $4.2 billion in 2016. The share of logs in the global tropical wood trade increased from 19% in 2013 to 22% in 2014 but had fallen to 14% by 2016. (Figure 3.2.1).

Figure 3.2.1: Global tropical wood-product trade, by product group, 2004 to 2016



Source: ITTO IMM analysis of Global Trade Atlas

The value of wood furniture and joinery products exports by tropical countries dipped in 2009 during the global financial crises but have been rising consistently ever since. The share of wood furniture in total tropical wood trade increased from 27.4% in 2013 to 31.2% in 2016, while the share of joinery products increased from 9.3% to 10.6% during the same period. The large majority of exports of these higher-value products are from tropical countries in South East Asia, notably Indonesia, Vietnam, Malaysia, and Thailand.

Wood furniture and joinery exports from tropical countries particularly benefitted from strengthening demand in the U.S. between 2013 and 2016. A growing proportion of product exported to the U.S., while derived from tropical countries, is now likely manufactured from imported temperate hardwoods rather than tropical species.

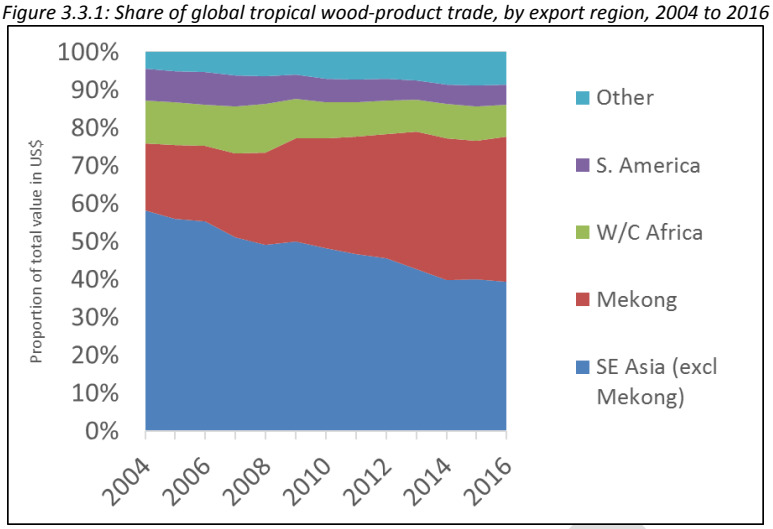
Global trade in tropical sawn wood (including decking and mouldings) increased 11% from $6.56 billion in 2013 to $7.30 billion in 2014, before falling 8% to $6.73 billion in 2016. The surge in 2014 was mainly due to rising imports of sawn wood into China, notably from Thailand, Lao PDR, Indonesia, Malaysia, Viet Nam, Gabon, and Mozambique. Although China's imports continued to rise from several of these countries in 2015 and 2016, notably Thailand and Viet Nam, there was a significant decline in imports from Lao PDR, Malaysia, and Mozambique. Throughout the period 2013 to 2016 there was a moderate and more consistent upturn in tropical sawn wood imports by the EU and United States.

The global value of tropical plywood and veneer trade remained remarkably stable at around $4 billion per annum throughout the period 2010 to 2014 but then declined to $3.7 in both 2015 and 2016. The downturn was mainly due to slowing imports of tropical plywood into Japan from the dominant suppliers, Malaysia and Indonesia, in 2015 and 2016. Imports of tropical plywood into the U.S. increased in 2015 but were more mixed in 2016, declining from Indonesia, the largest supplier, while continuing to strengthen from a range of smaller tropical suppliers including Ecuador, Viet Nam, Cambodia and Guatemala. Imports of tropical plywood into the EU were rising slowly, but consistently, between 2013 and 2016.

3.3 Regional supply of tropical wood products

The most obvious trend in the regional supply of tropical wood products is the rapid rise in exports from countries in the Mekong region—Cambodia, Lao PDR, Myanmar, Thailand and Viet Nam – in the ten years to 2014. However, after peaking at US$13.29 billion in 2014, exports from the region declined to $11.8 billion in 2015 and recovered only a little ground to $11.9 billion in 2016. A major contributing factor was the surge in China's imports of logs – including rosewood, rubberwood and possibly acacia - from the Mekong region in 2014, a trend which eased in 2015 and 2016. However, the long-term rise in furniture exports by Vietnam continued throughout the period to 2016. (Figure 3.3.1).

Figure 3.3.1: Share of global tropical wood-product trade, by export region, 2004 to 2016



Source: ITTO IMM analysis of Global Trade Atlas

The value of exports from South East Asia, mainly from Indonesia and Malaysia, increased in 2014, by 3% to $14.1 billion, but then declined 13% over the next two years to $12.3 billion. This was mainly driven by exports to Japan and China which increased in 2014 and then fell in 2015 and 2016. The relative share of South East Asia in global tropical wood-product trade stabilised at 40% in the period 2014 to 2016, having fallen from nearly 60% in the previous decade.

The value of tropical wood product exports from West and Central Africa increased 20% from $2.7 billion in 2013 to $3.2 billion in 2014, a rise driven mainly by the rosewood boom in China, before declining 9% in 2015 and a further 11% in 2016 to $2.6 billion. Exports from the region in 2016 were the second lowest in the last decade and only marginally greater than exports of $2.4 billion in 2009 in the immediate aftermath of the global financial crises.

The share of West and Central Africa in global tropical wood products exports was 8.4% in 2016, down from 9.1% in both 2014 and 2015 and over 12% a decade ago. The declining value of wood products exports from West and Central Africa is a sign of reduced access to good quality timber resources, rising domestic consumption, and low competitiveness in markets for higher value products such as furniture.

The value of tropical wood product exports from Latin America increased 10% from $1.6 billion to $1.8 billion in 2014, before falling 1% in 2015 and a further 6% in 2016 to $1.7 billion. The surge in Latin American exports in 2014 was driven by the combined effects of rising demand in India, China and the U.S. Exports to China and the U.S. eased in 2015 and 2016, but continued to rise to India.

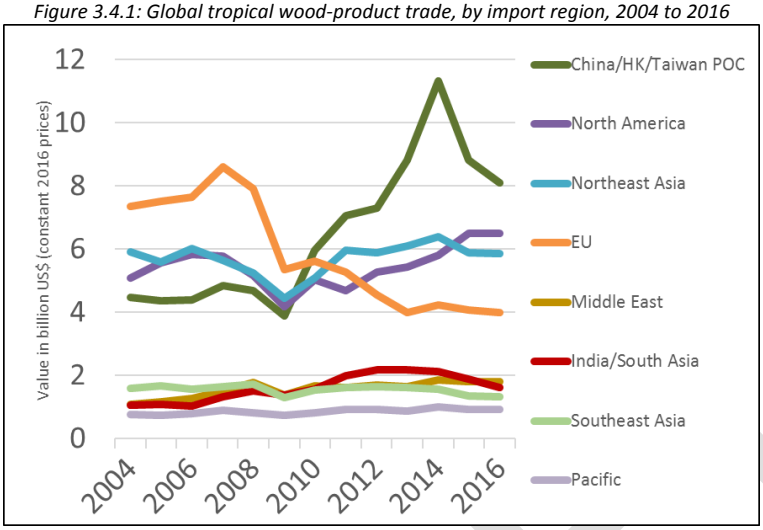
Several countries outside these production regions increased share in global tropical wood products trade in the decade to 2014, and maintained high levels of trade in 2015 and 2016, notably Mozambique in East Africa, and Papua New Guinea and the Solomon Islands in the Pacific region. Most exports from these countries comprise logs destined for China and India.

3.4 Changes in regional demand for tropical wood products

While EU imports of tropical wood products remained flat at a historically low level of around $4 billion per year in the period 2013 to 2016, imports into other regions were much more volatile. EU share of global tropical wood product imports fell from 12.5% in 2013 to 11.9% in 2014 before rising to 12.6% in 2015 and 12.8% in 2016. These figures compare to share of over 25% prior to the global financial crises. (Figure 3.4.1).

Much of the volatility in global trade during the period 2013 to 2016 was due to fluctuating demand in China. China's imports of tropical wood products increased by nearly 50% in the two years between 2012 and 2014 to peak at $11.3 billion and then declined 30% in the next two years to $8.1 billion in 2016. China's share of global tropical wood trade increased from 27.7% in 2013 to 31.9% in 2014 but fell back to 26.1% in 2016.

Figure 3.4.1: Global tropical wood-product trade, by import region, 2004 to 2016



Note: Taiwan POC = Taiwan Province of China.

Source: ITTO IMM analysis of Global Trade Atlas

China's imports of wood products from the tropics consist primarily of logs, fuelwood, and sawn wood. In volume terms, China's tropical log imports surged from 9.3 million m^3 in 2013 to 13.0 million m^3 in 2014 before falling back to 10.0 million m^3 in 2015, a level which was maintained in 2016. Tightening restrictions on log exports in recent years have led to a dramatic decline in China's imports of logs from Malaysia, Myanmar, and Gabon, however other countries have filled the gap notably Papua New Guinea, Solomon Islands, Mozambique, and Equatorial Guinea. In 2016, China imported 4.9 million m^3 of tropical logs from the Pacific region, 4.4 million m^3 from African countries, 450,000 m^3 from the Mekong region, 260,000 m^3 from South America, and 125,000 m^3 from South East Asia.

China's sawn hardwood imports have been rising, including of higher grades as processing costs have been rising in China and importers are becoming more concerned about wood quality and yield. China's imports of sawn tropical hardwood increased from 4.1 million m^3 in 2013 to 6.4 million m^3 in 2016. There was a particularly sharp increase in imports from Thailand, from 1.9 million m^3 to 4.1 million m^3 in the three-year period. Imports also increased from Malaysia, Gabon, and Vietnam during the period. However, China's sawn hardwood imports from the Philippines fell from 700,000 m^3 in 2013 to 225,000 m^3 in 2016.

During the period 2013 to 2016, China imported annually between 6 to 7 million tonnes of fuel wood with a value of around $1 billion from tropical countries, mainly from Viet Nam and Thailand and almost all in the form of chips.

North American tropical wood imports continued to recover from the lows of the financial crises in 2014 and 2015 and stabilised at $6.5 billion in 2016. During the period there was a rise in imports into the United States of tropical plywood (notably from Indonesia and Ecuador), furniture (mainly from Vietnam, Mexico, Malaysia and Indonesia) and other processed products (mainly from Mexico and Indonesia).

Japan's imports of tropical wood products increased from $5.15 billion in 2013 to $5.25 in 2014 before falling to $4.75 billion in 2015 and remaining at the lower level in 2016. Japan's imports a wide range of mainly higher-value tropical wood products, comprising (by value) around 35% furniture (mainly from Vietnam, Malaysia and Indonesia), 20% plywood (mainly from Indonesia and Malaysia), 16% joinery products (mainly from the Philippines), 14% fuel wood, and 35% a mix of decking, sawn wood, charcoal, composite panels, kitchenware and other manufactured products.

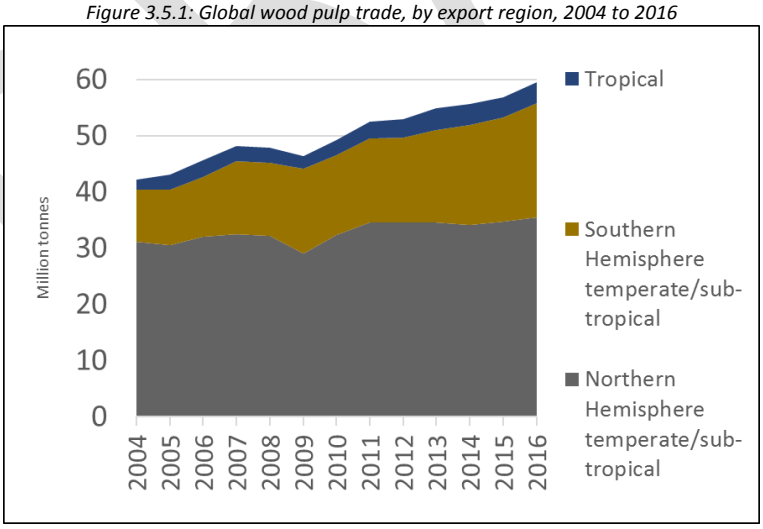
South Korea's imports of tropical wood products increased from $1.10 billion in 2013 to $1.55 billion in 2016, the largest gains being in imports of furniture, fuel wood (both pellets and chips) and plywood from Vietnam, plywood and decking from Indonesia, and particle board from Thailand.

The value of India's imports of tropical wood products declined from $2.01 billion in 2013 to $1.51 billion in 2016. Most tropical wood is supplied to India in the form of logs, imports of which declined from 4.22 million m^3 in 2013 to 2.85 million m^3 in 2016. This was almost entirely due to a significant decline in log imports from Myanmar, which fell from 1.32 million m^3 in 2013 to 855,000 m^3 in 2014 and to negligible levels in both 2015 and 2016. Myanmar banned exports of raw logs from 1 April 2014. The fall in India's log imports from Myanmar was partly offset by a rise in log imports from a variety of sources between 2013 and 2016, including Solomon Islands, Ecuador, Ghana, Papua New Guinea, and Suriname. During the same period. India also increased imports of sawn wood from Malaysia, Indonesia, and Myanmar, and of veneer from Myanmar.

3.5 VPA partner share of global pulp trade

Global trade of wood pulp was 59.5 million tonnes in 2016, an increase from 56.9 million tonnes the previous year. Global trade in wood pulp increased in almost every year between 2004 and 2016, dipping only slightly in 2008 and 2009 during the global financial crises (Figure 3.5.1). Much of the increase in trade is due to increasing dependence of the large paper manufacturing sectors in Europe, North America and China on hardwood chemical pulp produced from expanding eucalyptus plantations in the southern hemisphere.

Figure 3.5.1: Global wood pulp trade, by export region, 2004 to 2016



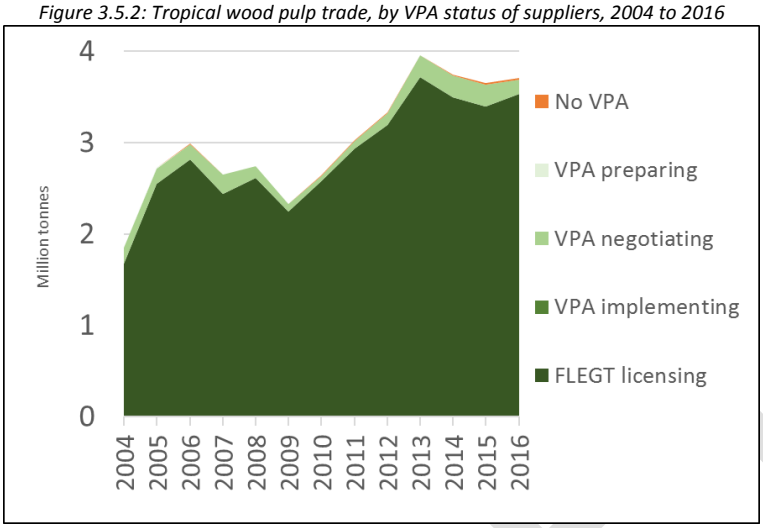
Source: ITTO IMM analysis of Global Trade Atlas

The tropical zone plays only a small role in total global pulp trade. Pulp exports from tropical countries increased from 1.85 million tonnes in 2004 to 3.96 million tonnes in 2013 before falling back to 3.71 million tonnes (Figure 3.5.2). Almost all tropical pulp exports derive from Indonesia. Indonesia's exports increased from 1.68 million tonnes in 2004 to 3.72 million tonnes in 2013 and

then declined to 3.53 million tonnes in 2016. Around two thirds of Indonesia's pulp exports are destined for China, with most of the rest destined for South Korea, India and Bangladesh.

Thailand and Malaysia are the only other tropical countries exporting anything other than negligible quantities of pulp, together accounting for around 0.16 million tonnes in 2016, a decline from 0.24 million tonnes in 2013.

Figure 3.5.2: Tropical wood pulp trade, by VPA status of suppliers, 2004 to 2016



Source: ITTO IMM analysis of Global Trade Atlas

In practice, Indonesia's main competition in export markets for pulp comes not from other tropical countries but from suppliers in the sub-tropical region, notably Brazil and Chile. Brazil's exports of pulp were 13.52 million tonnes in 2016, rising from 9.84 million tonnes in 2013 and 4.99 million tonnes in 2004. Brazil's exports consist almost exclusively of hardwood chemical pulp mostly destined for the EU, China and the U.S. Chile's exports of pulp were 4.65 million tonnes in 2016, a rise from 4.55 million tonnes in 2013 and 2.54 million tonnes in 2004. Chile's exports are mix of hardwood and softwood chemical pulp with most destined for China, and smaller volumes for South Korea and the EU.

Brazil, and to a lesser extent Chile, are proving highly competitive in the global markets for paper-grade chemical wood pulp offering a good combination of good growing conditions and relatively low-cost land and fibre resources, energy and water supplies. The plantation and pulping sectors in these countries have also benefited from considerable inward investment by European and other large international paper corporations.

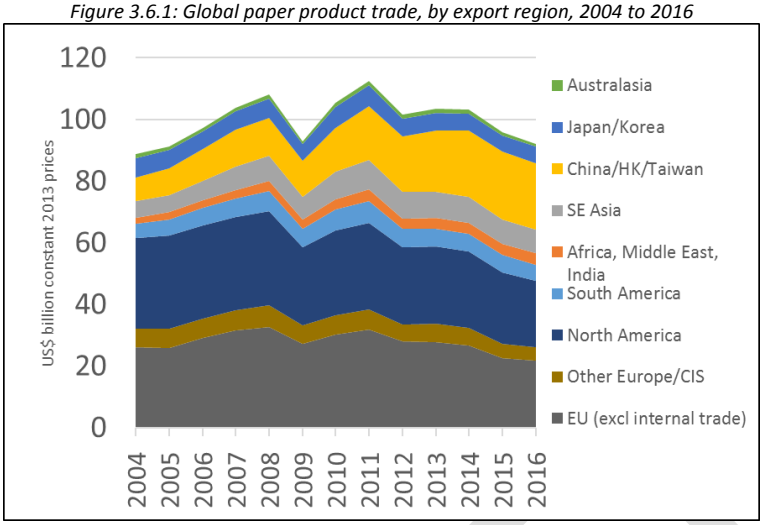
3.6 VPA partner share of global paper trade

The paper sector is highly capital intensive. It is less attracted to locations with low labour costs and more to countries where there is low commercial risk and ready access to a large and relatively stable electricity supply and other essential infra-structure. It also benefits from the presence of relatively undifferentiated forest resources, best supplied by fast-growing plantations or northern boreal forests. In many parts of the world it is becoming increasingly dependent on recycled fibre and an efficient supply chain for this material. Finished products are bulky and prone to damage during transport, while customers are unwilling to carry stock and require quick turnaround times, generally favouring location close to consumers.

Total value of global trade in paper products decreased from a peak of $112.5 billion in 2011 (constant 2016 prices) to $92.2 billion in 2016 (excluding internal EU trade) (Figure 3.6.1). The value of paper exports in nearly all global regions declined during this period. The exception was China

where growth continued until 2015 when exports peaked at $21.8 billion before falling 3% to $21.5 billion in 2016.

Figure 3.6.1: Global paper product trade, by export region, 2004 to 2016

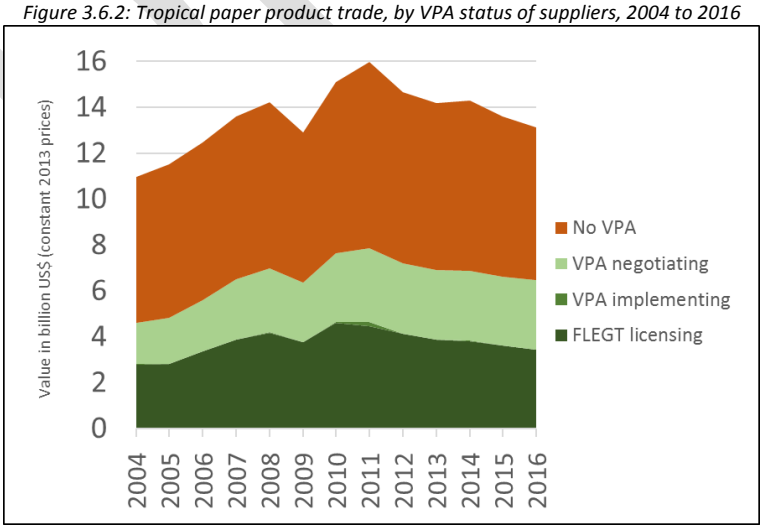


Source: ITTO IMM analysis of Global Trade Atlas

The data for total paper trade hides significant shifts in the composition of products. Increased digitization has led to a decline in global demand for printing and writing papers and newsprint. However, demand for tissue and wrapping papers, both of which are dependent on household consumption, has been more resilient. Packaging is also benefitting from the rise in e-commerce. Regionally, demand in Asia, which now accounts for 45% of total paper and board demand worldwide, has continued to rise alongside improving household consumption. This has compensated for sluggish demand in Western Europe and Latin America.

Paper product exports from tropical countries fell from a high of $16.0 billion in 2011 to $13.1 billion in 2016 (Figure 3.6.2). Indonesia remains the world's largest tropical exporter of paper products despite a fall in trade in recent years. Indonesian paper exports peaked at $4.61 billion in 2010, but fell over the next 6 years to $3.41 billion in 2016. In tonnage terms, Indonesia paper exports fell from 4.5 million tonnes to 4.1 million tonnes during the same period.

Figure 3.6.2: Tropical paper product trade, by VPA status of suppliers, 2004 to 2016



Source: ITTO IMM analysis of Global Trade Atlas

Export markets for Indonesian paper products are very diverse with sales to over 170 countries in 2016, led by Japan (382 000 tonnes), Malaysia (314 000 tonnes), Viet Nam (270 000 tonnes), China

(240 000 tonnes) India (228 000 tonnes) and the U.S. (214 000 tonnes). Indonesia exported 254 000 tonnes of paper products to EU countries in 2016, a rise from 185 000 tonnes in 2013, with most gains in the U.K., Croatia and Romania.

Paper product exports from countries implementing VPAs – all in Africa – are negligible, totalling no more than around $9 million in 2016, most from Ghana. Countries negotiating VPAs exported paper products with total value of $3 billion consistently each year between 2013 and 2016. These exports derive mainly from VPA-negotiating countries in South East Asia including, in 2016, $1.4 billion from Thailand, $0.9 billion from Malaysia and $0.5 billion from Vietnam. The only VPA-negotiating country outside South Asia exporting a significant amount of paper is Honduras with exports of $206 million in 2016.

Paper product exports from tropical countries not engaged in the VPA process declined from $7.3 billion in 2013 to $6.7 billion in 2016. The largest tropical exporters of paper with no VPA process, which together accounted for around $5.4 billion of exports in 2016, are Mexico, India, Singapore and Hong Kong. A large proportion of exports from the last two countries are re-exports (both have very limited paper manufacturing capacity and import a large quantity of paper, from Indonesia in the case of Singapore, and from China in the case of Hong Kong).

Brazil is not classified in this analysis as an exporter of tropical paper products because most paper manufacturing in Brazil is outside the tropical region. Brazil is a moderately large trader in paper products but, unlike for wood pulp, exports have declined in recent years, falling from $2.19 billion in 2011 to $1.87 billion in 2016.

4. VPA Partners in EU timber supply 2014-2016

This section summarises the role of VPA Partners in EU timber supply, focusing on trends between 2014 to 2016. An overview of EU timber market conditions during the period is followed by analysis of VPA Partner position in individual timber and timber product market segments.

4.1 EU market conditions

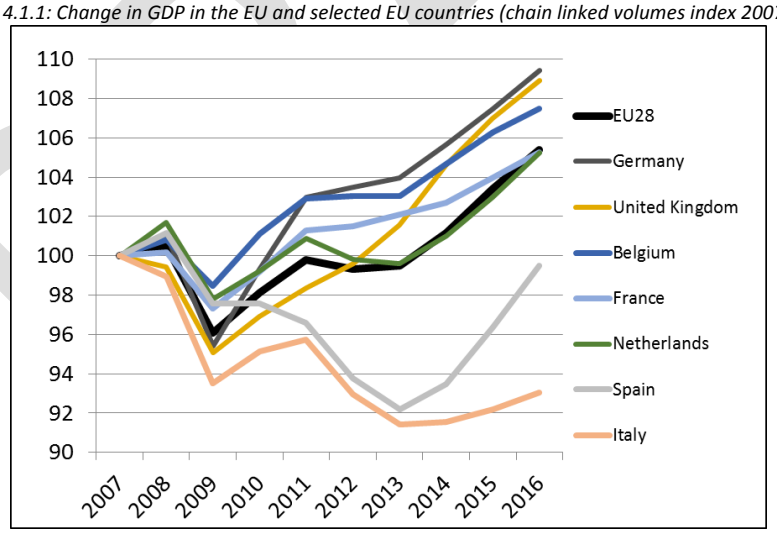
Economic growth

During the review period, the EU market for wood products was characterised by a slow but steady recovery in demand across key sectors including construction and furniture. After a period of stasis in 2012 and 2013, the EU economy grew consistently between 2014 and 2016. According to the European Commission, GDP in the EU increased 1.6% in 2014, 2.2% in 2015, 1.9% in 2016 and is forecast to increase 1.8% in 2017.

The economic recovery began early, and was relatively more rapid, in Germany, the U.K. and Belgium. In Spain, the economic recovery was delayed until 2013 but growth was rapid between 2014 and 2016. Italy only began to recover in 2015 and growth has remained very slow. (Figure 4.1.1).

With high levels of government debt continuing to limit public spending, private consumption is the main economic growth driver in the EU, supported by sustained improvements in employment and a rise in wage growth. However, with inflation rising and limiting the growth of household purchasing power in 2016 and 2017, private consumption growth is expected to slow. Investment is set to continue growing in the region in 2017 but only moderately, supported by several factors such as very low financing costs and strengthening global activity.

Figure 4.1.1: Change in GDP in the EU and selected EU countries (chain linked volumes index 2007=100)



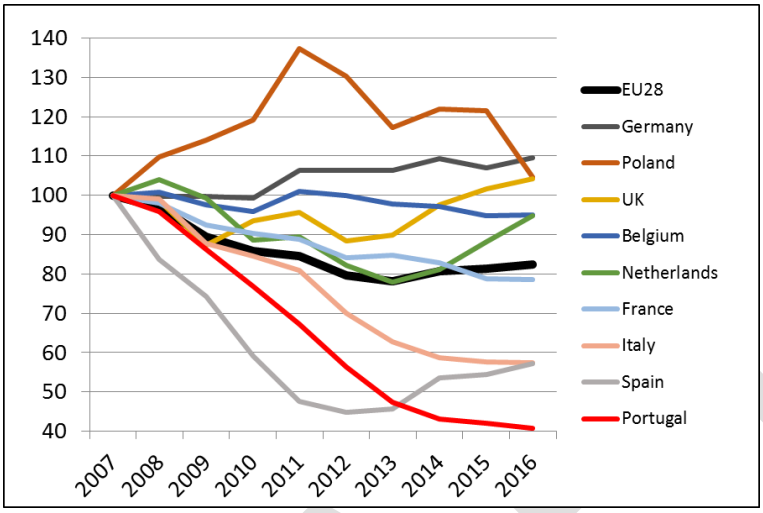
Source: ITTO IMM analysis of Eurostat

Construction activity

Europe's construction sector is currently under-performing compared to other industrial sectors. The Eurostat Construction Production Index (CPI) shows that construction activity across the EU has made only limited gains after hitting bottom in 2013. Construction activity across the EU was still 18% down on pre-crises levels during 2016. (Figure 4.1.2).

The CPI reveals how the timing and depth of construction recession and recovery has varied widely between European countries. Construction activity in Germany has been resilient, remaining stable both during and after the global financial crises. Construction activity in the UK and Netherlands recovered strongly in the period 2013 to 2016. Spanish construction activity also rebounded during this period, but from a low base. However, these gains were offset by continuing very weak activity in Italy and Portugal, and by slowing activity in France, Belgium and Poland.

Figure 4.1.2: Change in construction production value in the EU and selected EU countries 2007 to 2016 (2007 = 100)



Source: ITTO IMM analysis of Eurostat

Forecasts issued at the Euroconstruct conference in November 2016 suggest low expectations for longer term growth in EU construction activity. Euroconstruct forecast EU construction activity to increase by 2.1% in 2017 and 2.2% in 2018, and observe that this rate of growth is dependent on "a combination of cheap credit and a more favourable perception of building as an investment shelter", both factors which "may be ephemeral, and not a driver for the longer term".

Considering individual sectors, Euroconstruct forecast that growth in residential construction will fall from around 3.9% in 2016 to 2% in 2017 and 2018. Recent growth in this sector has been boosted by low interest rates but credit is now not expected to remain so favourable.

Much growth in European residential construction in recent years has been in repair, renovation and maintenance; these activities were responsible for roughly 60% of the total residential market in 2015 and 2016 and have been key drivers of demand for tropical hardwood. However, a larger share of growth in 2017-2018 is likely to be in the residential new-build sector, driven partly by the large influx of migrants to western Europe.

Euroconstruct observe that the recovery of non-residential construction is still at a very early stage in Europe and that there is unlikely to be any rapid change. Euroconstruct forecast growth in non-residential construction of only 1.5% for 2016-2017 and 1.8% for 2018-2019. Office construction is expected to perform somewhat above these averages, since it is rebounding from a period of significant contraction. However industrial and storage construction are expected to perform below the non-residential average. Activity in Europe's civil engineering sector is believed to have declined in 2016, by around 1%, a hangover from Europe's continuing high levels of public sector debt.

Joinery activity

The trend in European joinery activity parallels the trend in construction activity. The Eurostat index of wood manufacturing activity in Europe recorded an increase of around 5% between January 2015

and December 2016. This index covers all manufacturing of sawn wood, veneer and panels, and joinery products like floors, windows, doors and glulam but excludes wood furniture. Growth in wood manufacturing activity has been inconsistent across the continent, with relatively strong growth in Sweden, Poland, the UK and Spain, offset by slow recovery in Italy and France. In Germany, the largest single wood manufacturing location in Europe, activity has been resilient in recent years and was rising in 2015 but slowed a little in 2016.

The total value of wood windows manufactured in the EU remained static at around €6.2 billion per year between 2011 and 2015, down from a level of close to €8 billion before the onset of the financial crises. Only slight gains in European wood window production are likely to have occurred in 2016. Imports of finished wood windows from outside the EU have remained negligible.

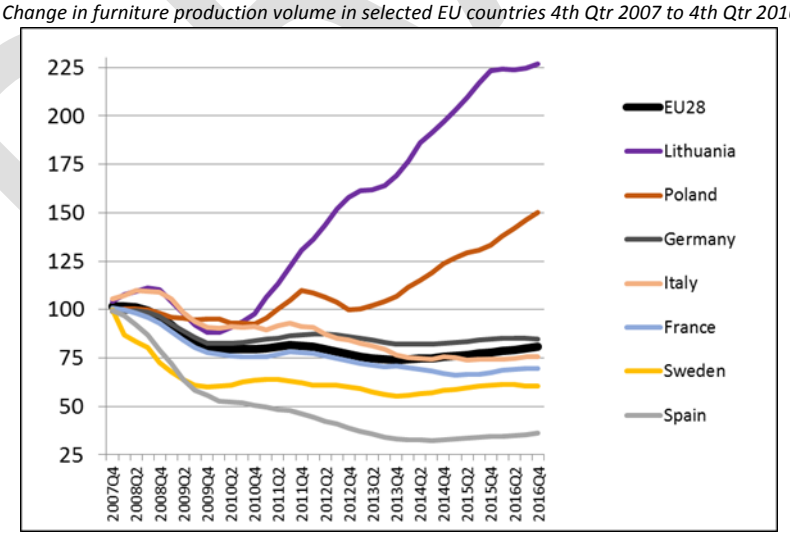
Growth in the EU wood door manufacturing sector has been more robust than in the window sector. The total value of wood doors supplied to the EU increased 7% to €6.62 billion in 2015, with good production growth in Germany, the UK, Poland, and Spain. Wood door production in Italy, the second largest European manufacturer after Germany, has been flat. Imports of wood doors from outside the EU have been increasing, mainly from China, Indonesia and Malaysia, although imports still account for less than 1% of total EU supply.

Furniture manufacturing

The Eurostat furniture production index indicates that manufacturing activity across the region was rising in the 2014 to 2016 period. However overall growth was very slow and the total volume of furniture manufacturing was still down around 15% compared to the period before the global financial crises. (Figure 4.1.3).

The index also highlights shifts in the overall location of European furniture manufacturing, with much of the recent growth in activity concentrated in Eastern Europe, notably in Poland and Lithuania. Activity in the two largest western European furniture manufacturing countries, Germany and Italy, remained flat in 2015 and 2016.

Figure 4.1.3: Change in furniture production volume in selected EU countries 4th Qtr 2007 to 4th Qtr 2016 (2007= 100)



Source: ITTO IMM analysis of Eurostat

While growth in furniture manufacturing activity has been subdued in recent years, Europe remains a large force in the global furniture sector and has been highly resistant to outside competitors. Eurostat production data shows that wood furniture (excluding kitchen furniture) produced in the

EU had a total of value of €31.15 billion in 2015, whereas imports from outside the EU were worth only €5.73 billion, 13% more than in 2014, but still only 16% of furniture supply in the EU.

Flooring sector

At their board meeting in January 2017, the European parquet industry association FEP estimate that wood flooring consumption across Europe increased 0.5% in 2015 and 2% in 2016, indicating stabilisation in a market that declined 6% in 2014. While FEP report continuing high variation in performance between countries, they also note that for the first time since the onset of the financial crises, the Southern European markets, particularly Spain, are now gaining momentum.

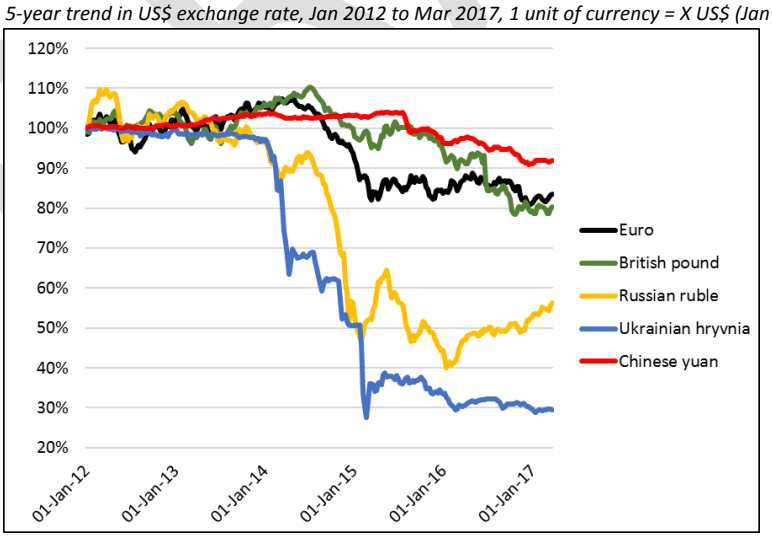
Exchange rates

Exchange rate volatility was a key factor in the EU's external wood trade between 2014 and 2016. The value of the euro fell 20% against the U.S. dollar between July 2014 and March 2015 and remained at the lower level throughout 2015 and 2016. The value of euro-linked currencies like the Swedish krona and Polish zloty fell in parallel to the euro. The value of the British pound has also been sliding against the dollar since mid-2014, plunging particularly rapidly after the Brexit vote in May 2016. By March 2017, the British pound was trading at only USD1.21, down 30% compared to July 2014. Only once before in the entire history of the two currencies, in the mid-1980s, has the British pound been valued so low against the U.S. dollar.

While the currencies of the major EU timber consuming countries in western and central Europe have remained weak in relation to the U.S. dollar, they are still strong in relation to the currencies of Russia and Ukraine, both important wood producing countries in close proximity to Europe. The Russian rouble and Ukrainian hryvnia fell respectively 50% and 70% against the U.S. dollar in 2014 and remained at this lower level through 2015 and 2016.

Meanwhile the Chinese yuan – which consistently strengthened against other currencies in the five years to 2014 - also weakened against the US dollar throughout 2015 and 2016, but not to the same extent as European currencies (Figure 4.1.4).

Figure 4.1.4: 5-year trend in US$ exchange rate, Jan 2012 to Mar 2017, 1 unit of currency = X US$ (Jan 12 = 100%)



Source: ITTO IMM analysis of www.oanda.com

The various effects of these exchange rate movements have been to: (a) increase EU import prices for products denominated in dollars – that is most wood products from the Americas, China and South East Asia; (b) reduce import prices for Russian and Ukrainian timber products, such as birch plywood, oak sawn timber and veneer; (c) make tropical wood imports from African countries more

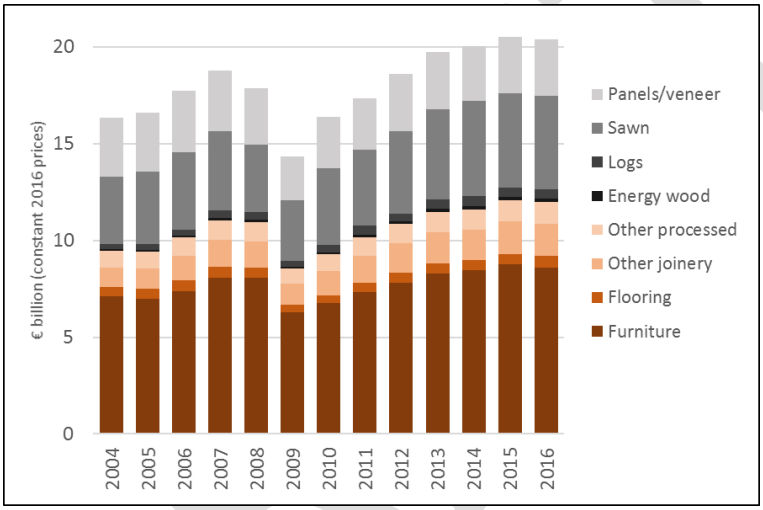
attractive, since many have euro-linked currencies and exporters tend to invoice in euros; and (d) increase the international competitiveness of wood products domestically produced within the EU.

Increased competitiveness of EU manufacturers

One indicator of increased competitiveness of EU timber products is the rising level of exports to countries outside the EU. After 6 years of continuous increase, the value of EU exports of wood products peaked at €20.51 billion in 2015, the highest level ever, and fell by only 0.5% to €20.40 billion in 2016. (Figure 4.1.5).

In 2016, the EU had a €3 billion trade surplus in wood products which compares to a €3 billion deficit before the financial crises. EU export growth has been concentrated in sawn wood and wood furniture. Although around 30% of EU wood product exports consistently go to neighbouring European countries (mainly Switzerland and Norway), since the financial crises there has been a significant in rise in exports to Africa, the Middle East and China alongside traditional markets in North America and the CIS.

Figure 4.1.5: Value of EU exports of wood products, by product group, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

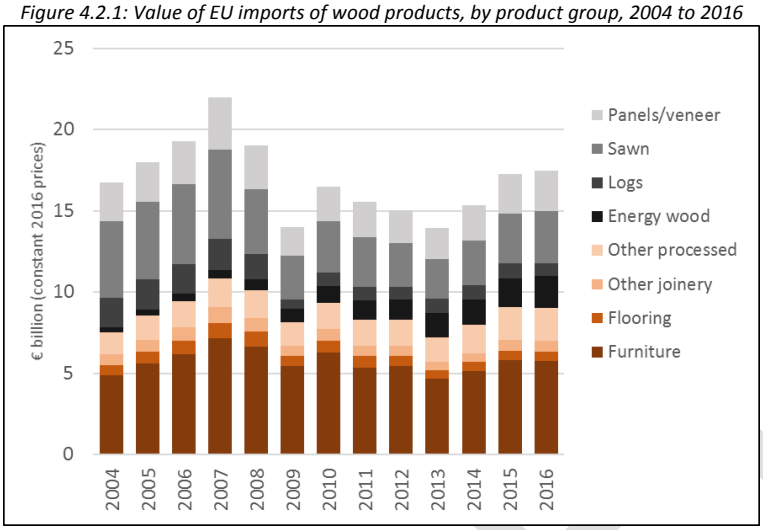
For wood exporters selling into the EU, the weakness of the euro and sharp rise in the EU's wood trade surplus imply intense competition from domestically harvested timber and manufactured wood products. Due to the wide diversity of wood manufacturing activities in the EU, this is true of nearly all wood sectors. Even in those wood sectors where European manufacturers have traditionally been weak and more dependent on imports, such as in supply of durable goods for outdoor use and in appearance grade wood, new innovative products are taking share from external suppliers. Key innovations include a wide range of new surface finishes to enhance the appearance and performance of panel products, and thermal and chemical modification processes to enhance the durability of domestic wood species.

At the same time, with traditional markets growing only slowly, EU wood manufacturers are developing new products designed to extend the range of wood into new sectors traditionally dominated by other materials, notably steel and concrete. For example, EU production of cross-laminated timber – a product which can successfully compete with steel and concrete in high-density urban construction – increased ten-fold from 100,000 m^3 in 2005 to close to 1 million m^3 by the end of 2016.

4.2 VPA share of total EU wood product import value

The total value of EU imports of wood products was €17.48 billion in 2016, 1.3% more than the previous year and 25% more than in 2013 when imports dipped sharply during the European debt crises which coincided with the slump in European construction activity. In 2016 EU import value was at the highest level since 2008 just before the global financial crises (Figure 4.2.1).

Figure 4.2.1: Value of EU imports of wood products, by product group, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

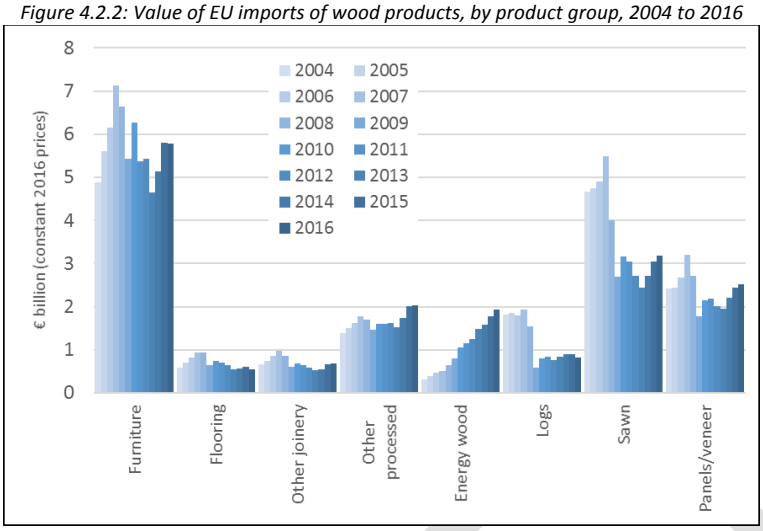
The surge in the euro value of imports during 2015 was partly owing to the weakness of the euro which on average was valued around 20% less against the dollar in 2015 compared to 2014. This meant that euro import prices for most products from the Americas and Asia increased. In 2016, the value of the euro remained relatively stable against the U.S. dollar and had much less impact on the import trend that year.

The gain in total EU imports of wood products during 2016 hides variations between product groups (Figure 4.2.2):

- following a 13% increase in 2015, the value of EU imports of wood furniture fell 0.3% to €5.78 billion in 2016, mainly due to a decline in EU imports from China.
- the value of EU imports of sawn wood increased 12% in 2015 and a further 4% in 2016, with an increase in imports from the CIS region and Africa offsetting a decline in imports from South East Asia.
- EU imports of panels (mainly plywood) increased 3.1% to €2.52 billion in 2016 following an 11% in 2015, with rising imports from Russia offsetting declining imports from China and Latin America.
- the long-term rise in EU imports of energy wood continued in 2016 to reach an all-time high of €1.93 billion, up 9% compared to the previous year and nearly four times the value of a decade ago, with imports increasingly dominated by pellets from the U.S. and CIS region.
- following a 22% increase in 2015, EU imports of other joinery products (mainly doors and glulam for window frames) increased a further 4% to €690 million in 2016 with significant gains made by Indonesia, Malaysia, Russia and Ukraine while imports from the dominant supplier China were losing ground.
- EU imports of wood flooring fell back 9% to €540 million in 2016, mainly due to a 11% decline in imports from China, by far the largest supplier.

- EU imports of "other processed products" (mainly from China and classified under HS 442190 and not separately identified) were stable at €2.02 billion in 2016 after a 17% gain in 2015.

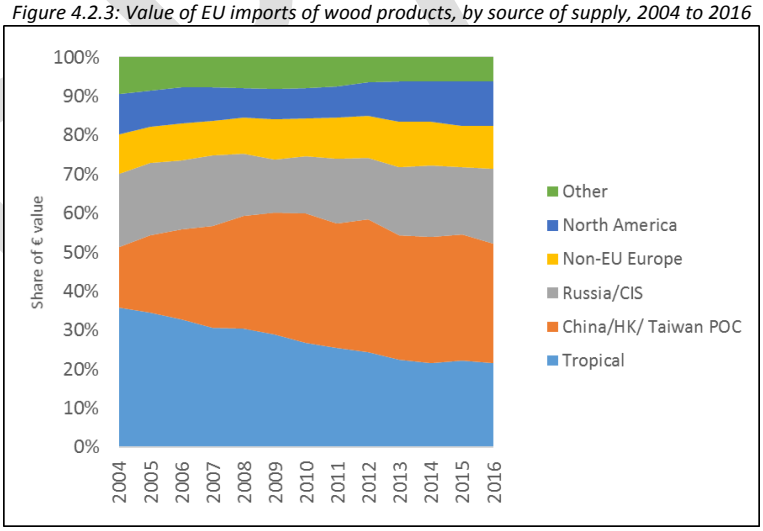
Figure 4.2.2: Value of EU imports of wood products, by product group, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

In terms of share of overall EU imports, 2015 was notable for registering the first improvement in the fortunes of tropical countries in the last decade. The share of tropical countries in total EU wood product import value fell continuously from 35% in 2004 to a low of 21% in 2014, before rebounding slightly to 22% in 2015 and 2016. Tropical countries lost share initially to China in the period 2004 to 2010, and then to North American, Russian and non-EU European countries in the period 2011 to 2014. However tropical countries regained a little share in import value mainly at the expense of Russia and non-EU European countries in 2015 and of China in 2016 (Figure 4.2.3).

Figure 4.2.3: Value of EU imports of wood products, by source of supply, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

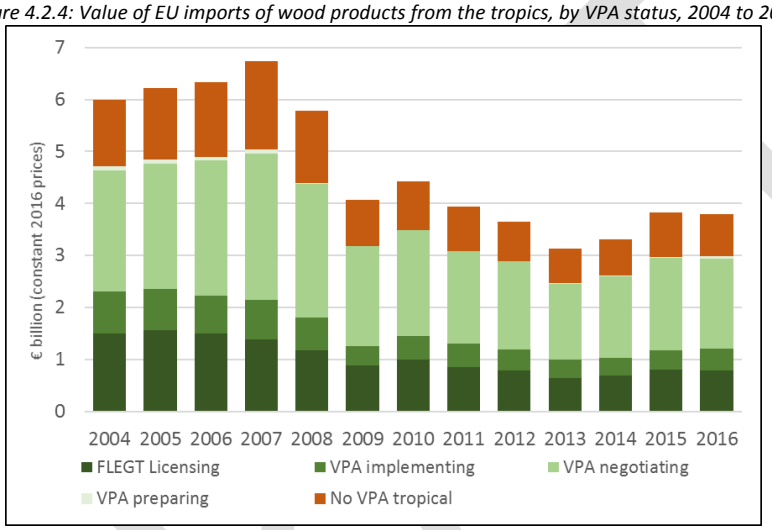
Note: CIS = Commonwealth of Independent States; Taiwan POC = Taiwan Province of China. "Tropical" includes all imports from tropical countries and all log, sawn, veneer, plywood and joinery products identified in import statistics as consisting of tropical wood from non-tropical countries.

Total EU import value of tropical wood products increased 15% to €3.82 billion in 2015 but declined 1% to €3.79 billion in 2016. Imports from Indonesia increased 16% to €796 million in 2015 and then declined 2% to €781 million in 2016. Indonesia accounted for 21% of the total value of EU tropical

wood-product imports in 2016. Imports from the five African VPA-implementing countries increased 12% to €377 million in 2015 and then an additional 13% to €426 million in 2016, accounting for 11% of the total value of tropical wood-product imports. Imports from the nine VPA-negotiating countries increased 13% to €1.78 billion in 2015 before declining 2% to 1.74 billion when they accounted for 46% of tropical wood product imports. Imports from the two VPA-preparing countries increased 38% to €23 million in 2015 and a further 55% to €36 million in 2016 accounting for 1% of tropical wood product imports.

The share of Indonesia and of the five African VPA-implementing countries in EU tropical wood product imports was unchanged between 2014 and 2016. In the same period, the share of VPA negotiating countries in EU tropical wood product imports declined slightly in favour of imports from VPA-preparing and non-VPA countries. Share of non-VPA countries in tropical wood product imports increased from 21.3% in 2014 to 21.4% in 2016 (Figure 4.2.4).

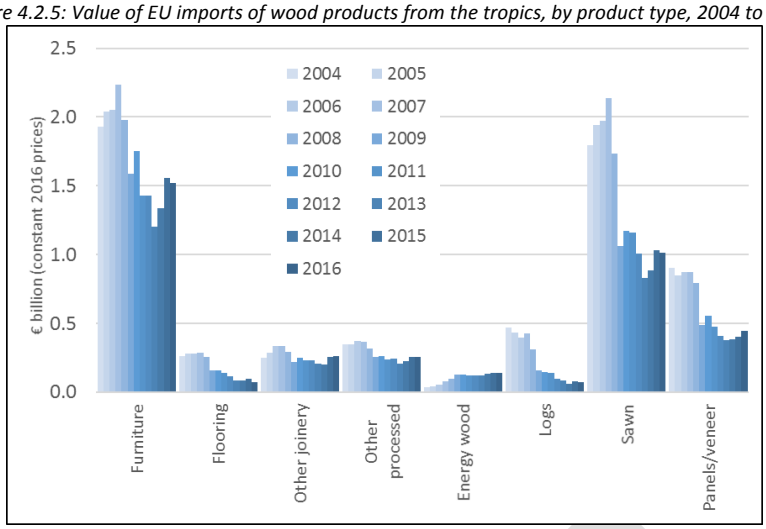
Figure 4.2.4: Value of EU imports of wood products from the tropics, by VPA status, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

The recovery in EU imports of tropical wood products in 2014 and 2015 was particularly pronounced for furniture and sawn wood, although there were more minor gains for all other product groups. In 2016, there was a partial reversal of the gains in imports of tropical wood furniture (-2.2% to €1.52 billion), sawn wood and decking (-1.9% to €1.01 billion), energy wood (-2.9% to €138.9 million), flooring (-20.3% to €76.4 million), and logs (-4.2% to €73.8 million). However, in 2016, there was continued rise in EU imports of tropical plywood and veneer (+9.5% to €444 million) and other joinery (+3.2% to €263 million - mainly glulam and doors). (Figure 4.2.5).

Figure 4.2.5: Value of EU imports of wood products from the tropics, by product type, 2004 to 2016



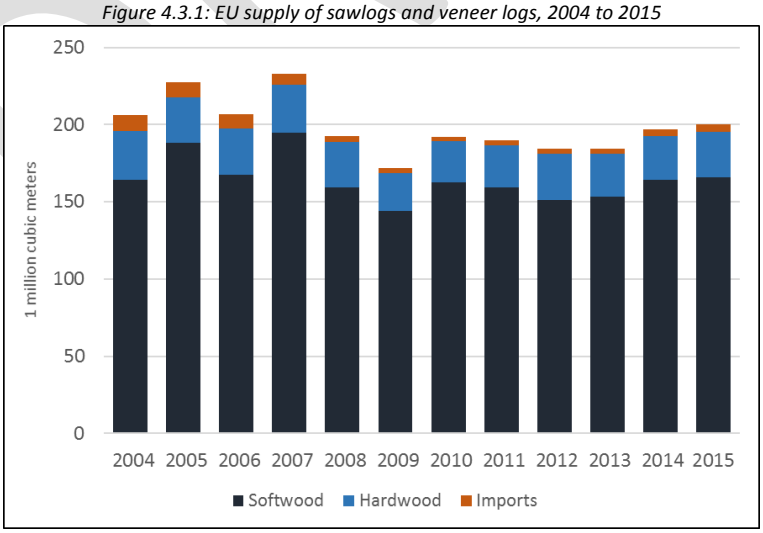
Source: ITTO IMM analysis of Eurostat COMEXT

The long-term shift in EU tropical wood imports away from primary and secondary products in favour of tertiary products (i.e. finished furniture and joinery) continued in 2014 and 2015. The share of tertiary products in total EU tropical wood-product imports increased from 48% in 2007 to 57% in 2015. However, the share of tertiary wood products fell back slightly to 56% in 2016, mainly due to a rise in sawn wood and veneer imports from Africa and plywood from South East Asia.

4.3 VPA partners in EU log supply

The total supply of sawlogs and veneer logs to the EU fell to a low of 184 million m^3 in 2013, down from around 220 million m^3 per year before the global financial crises (i.e. before 2008). Between 2013 and 2015, supply recovered to 200 million m^3, with softwood log production rising 8% to 166 million m^3, hardwood log production rising 5% to 29 million m^3, and log imports rising 39% to 4.9 million m^3. Most of the rise in imports comprised softwoods from Norway, Russia, Ukraine and Belarus. Despite the rise, imports still constituted less than 3% of EU sawlog and veneer log supply in 2015 (Figure 4.3.1).

Figure 4.3.1: EU supply of sawlogs and veneer logs, 2004 to 2015



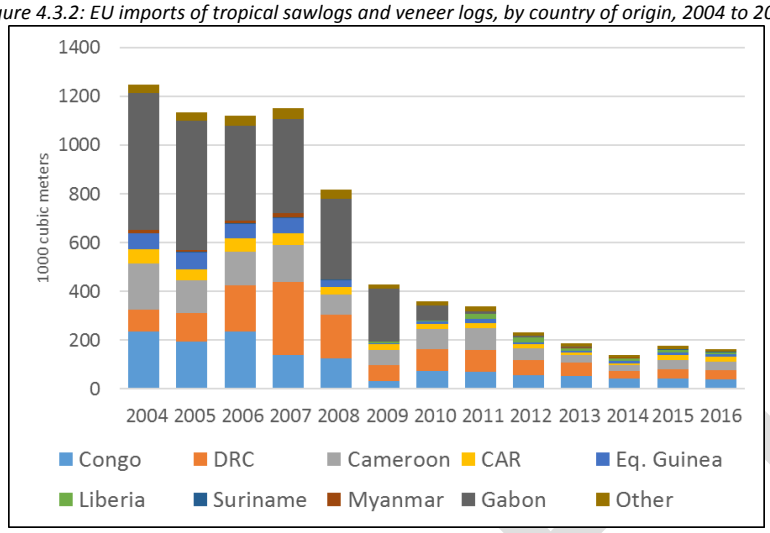
Source: ITTO IMM analysis of Eurostat PRODCOM and COMEXT

EU tropical sawlog and veneer log imports fell from over 1.2 million m^3 before the global financial crises to a low of 140,000 m^3 in 2014 due primarily to the decline in the EU tropical hardwood plywood manufacturing sector and progressive imposition of tighter controls on log exports by

tropical countries, notably the log export ban by Gabon in 2010 which was the primary source of okoume logs to the European plywood sector.

EU tropical sawlog and veneer log imports increased 25% to 176 000 m^3 in 2015 but then declined 6% to 165 000 m^3 in 2016. The large majority derived from African countries, notably Congo, DRC, Cameroon and the Central African Republic (Figure 4.3.2).

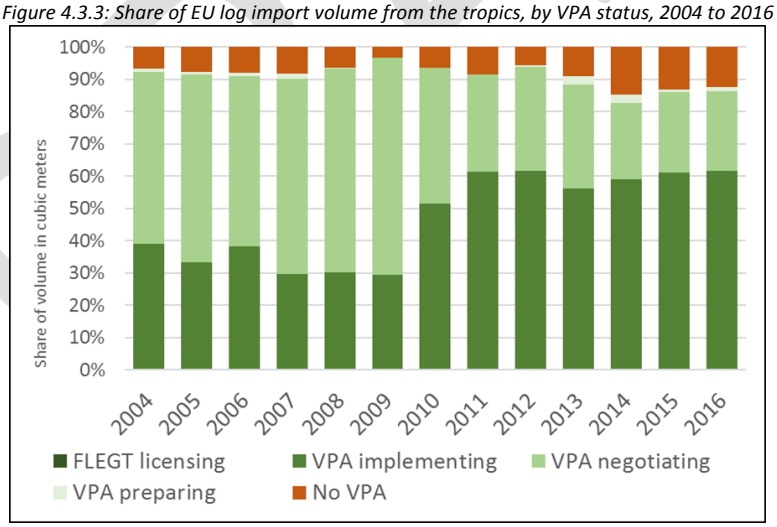
Figure 4.3.2: EU imports of tropical sawlogs and veneer logs, by country of origin, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

In 2015 and 2016, no tropical logs were supplied to the EU from Indonesia. During the same period, 61% of EU tropical sawlog and veneer log imports were from the five African VPA-implementing countries, 25% from VPA-negotiating countries, and 1% from VPA-preparing countries. (Figure 4.3.3).

Figure 4.3.3: Share of EU log import volume from the tropics, by VPA status, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

Logs imports from VPA implementing countries derived mainly from Cameroon, Congo and CAR, with a smaller volume from Liberia and negligible amount from Ghana. Nearly all log imports from VPA-negotiating countries derived from DRC. All EU log imports from VPA-preparing countries were from Myanmar which banned log exports in April 2014 – although subsequent reports suggest

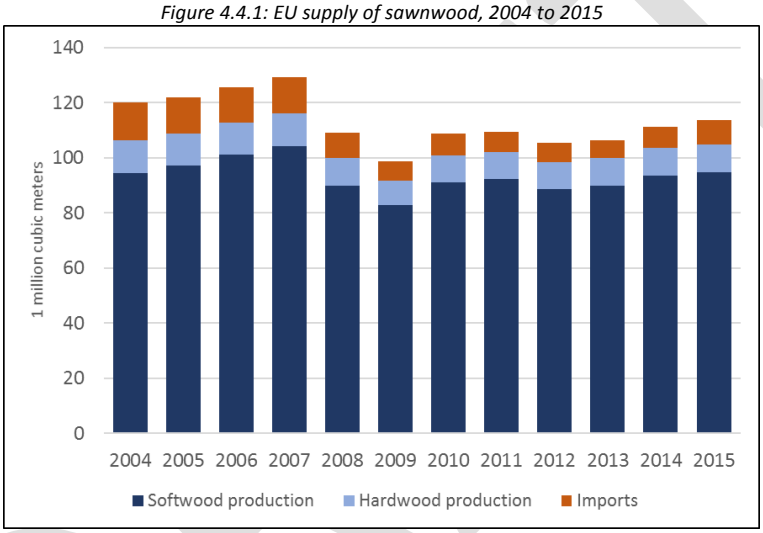
ordinary logs continued to be exported under the wrong HS code as veneer flitches to dodge the ban.[7]

In 2015 and 2016, around 20 000 m^3 (12%) of EU tropical saw and veneer log imports were from non-VPA countries. The largest non-VPA tropical log suppliers to the EU are Equatorial Guinea and Suriname, the latter having emerged as a more important supplier of FSC certified tropical wood to the EU in recent years.

4.4 VPA partners in EU sawnwood supply

The supply of sawnwood in the EU increased 7% from 106 million m^3 in 2013 to 114 million m^3 in 2015, comprising 94.7 million m^3 (83.4%) domestic softwood, 10.2 million m^3 (8.9%) domestic hardwood, 6.4 million m^3 (5.6%) imported softwood, and 2.3 million m^3 (2.0%) imported hardwood. Imports increased share of total sawnwood supply from 6.1% in 2013 to 8.6% in 2015, mainly due to rising imports from Russia, Belarus and Ukraine in response to currency weakness and tighter controls on log exports in those countries (Figure 4.4.1).

Figure 4.4.1: EU supply of sawnwood, 2004 to 2015

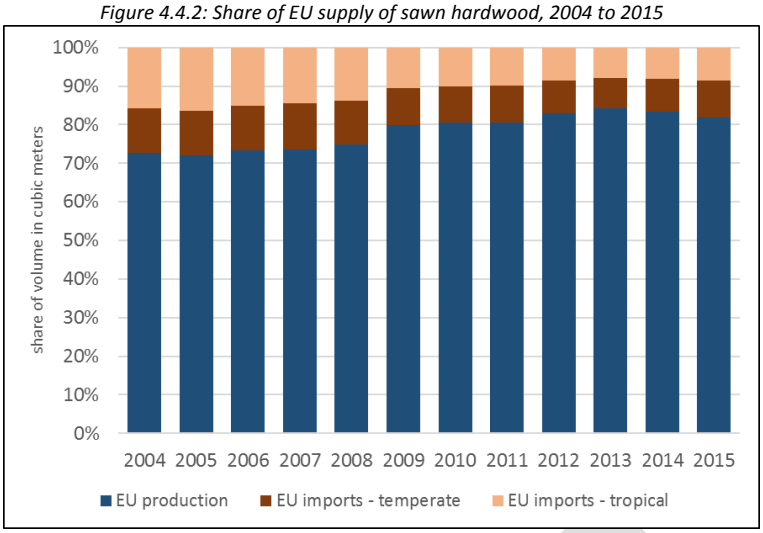


Source: ITTO IMM analysis of Eurostat PRODCOM and COMEXT

Between 2013 and 2015, share of tropical wood in total EU sawn hardwood supply increased from 7.9% to 8.5%, partially reversing a long-term decline in share. Imports of temperate hardwood also increased share from 7.8% in 2013 to 9.8% in 2015. Share of domestic production in EU sawn hardwood supply fell from 84.2% in 2013 to 81.7% in 2015 (Figure 4.4.2).

[7] http://www.gtf-info.com/news/promoting-wood-products/myanmar-timber-industry-calls-for-tighter-controls-of-log-export-ban/

Figure 4.4.2: Share of EU supply of sawn hardwood, 2004 to 2015

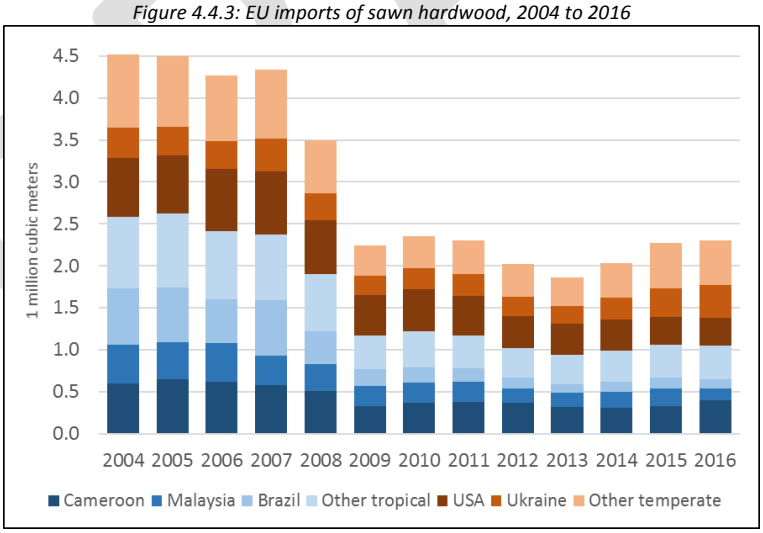


Source: ITTO IMM analysis of Eurostat PRODCOM and COMEXT

The EU market for domestically produced sawn hardwood has been very heavily focused on oak in recent years. European traders reported increasing shortages of oak from EU countries between 2013 and 2016 due to restricted harvesting and strong demand for logs from other sectors, notably the barrel stave market, and for overseas export, particularly in China and Vietnam. Meanwhile EU production of sawn beech has been falling as the species is still unfashionable and demand has been weak.

After falling to a low of 1.87 million m^3 in 2013, EU sawn hardwood imports recovered ground in the period 2013 to 2015 before stabilising at 2.3 million m^3 in 2016. However, imports in 2016 were still only half the level prevailing before the global financial crises (Figure 4.4.3).

Figure 4.4.3: EU imports of sawn hardwood, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

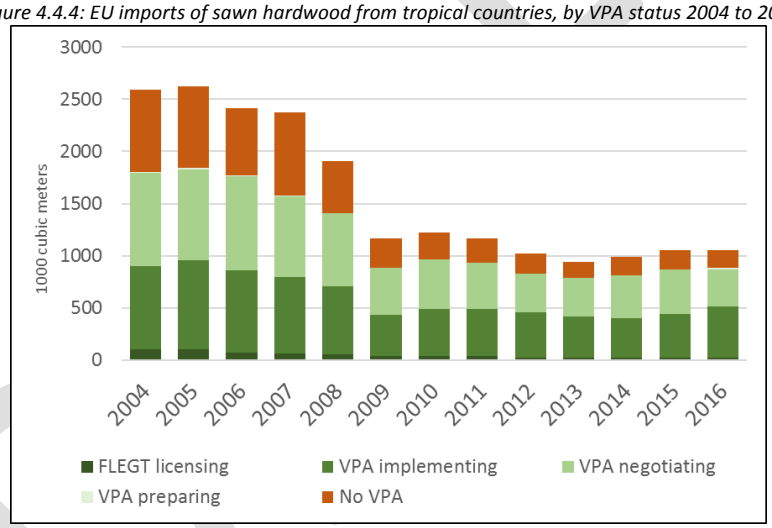
EU tropical sawn hardwood imports increased 13% from 937 000 m^3 in 2013 to 1.05 million m^3 in 2015 and remained stable at the higher level in 2016. However temperate sawn hardwood imports increased more rapidly so that the long-term decline in share of tropical countries in total EU sawn hardwood import volume continued between 2013 and 2016. Share of tropical sawn hardwood in total EU imports was 46% in 2016, down from 50% in 2013 and from close to 60% before the global financial crises.

Much of the loss in tropical sawn hardwood's share of EU imports between 2013 and 2016 was due to a sharp increase in supply of low value oak and ash from Ukraine (mainly destined for Poland and Italy), and of aspen and birch from Russia and Belarus (mainly destined for Estonia, Germany, and Lithuania).

Tropical countries lost share to U.S. hardwoods in 2014, particularly U.S. tulipwood, which was directly substituting for moulding species such as African ayous and wawa, and also to American ash, much of which was being thermally-modified for use in external applications in the EU. However, U.S. hardwoods lost share in the EU market in 2015 and 2016 due to the weakness of the euro against the U.S. dollar and tightening EU phytosanitary requirements imposed on ash imports in response to the Emerald Ash Borer outbreak in North America.

EU imports of sawn hardwood from Indonesia are negligible due to Indonesia limiting exports to "surfaced four sides" (S4S) products since 2004. EU imports of sawn hardwood from the five VPA-implementing countries rebounded 28% from a low of 381 000 m^3 in 2014 to 489 000 m^3 in 2016. In contrast, imports from VPA-negotiating countries declined 12% from 411 000 m^3 to 361 000 m^3 in the same period. Imports from VPA-preparing countries increased from 3 000 m^3 in both 2013 and 2014 to 10 000 m^3 in 2016. VPA partner countries accounted for 84% of EU tropical sawn imports in 2016, the same proportion as in 2013 (Figure 4.4.4).

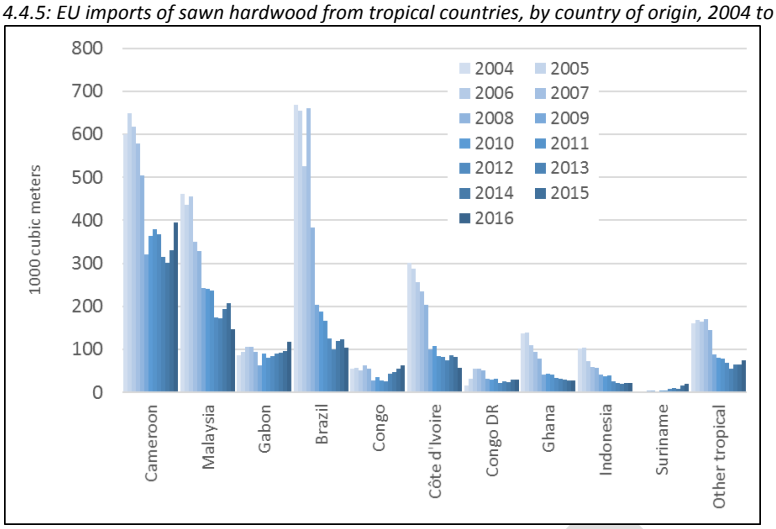
Figure 4.4.4: EU imports of sawn hardwood from tropical countries, by VPA status 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

A notable trend in the supply of tropical sawn timber to the EU between 2014 and 2016 was the rising dependence on imports from Cameroon. During this period, EU imports from Cameroon increased 31% to 395,000 m^3, growing particularly rapidly into Belgium but with robust increases also into Italy, France, Spain, the UK and the Netherlands (Figure 4.4.5).

Figure 4.4.5: EU imports of sawn hardwood from tropical countries, by country of origin, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

There was a significant increase in EU imports of sawn tropical wood from three other central African countries between 2014 and 2016. During this period, imports increased 27% to 117 000 m^3 from Gabon, 31% to 62 000 m^3 from Congo, and 24% to 30 000 m^3 from DRC. Imports from these countries mainly enter the EU by way of Belgium.

A combination of factors contributed to rising EU imports from Cameroon, Gabon, Congo and DRC between 2014 and 2016 including the relative weakness of the euro against the dollar (which tends to favour African countries where currencies are linked to the euro); continuing efforts to add value prior to export in central Africa; and recent progress to implement forest certification in the Congo region.

In contrast to imports from central Africa, EU imports of sawn hardwood from West Africa were low and declining between 2014 and 2016. During this period, imports declined 34% to 57 000 m^3 from Cote d'Ivoire and 6% to 27 000 m^3 from Ghana, a reflection of the limited availability of hardwoods favoured in the European market.

After several slow years, EU imports of sawn wood from Malaysia increased by 12% in 2014 and by another 8% to 208 000 m^3 in 2015, particularly boosted by an upturn in the Netherlands market, partly due to improvements in the Dutch construction sector and partly to Dutch government acceptance of the Malaysian Timber Certification System (MTCS) as proof of sustainability from 2014. However, the upturn was short-lived and imports from Malaysia fell back again, by 30%, to 146 000 m^3 in 2016. [8]

Imports from Brazil, the largest non-VPA supplier to the EU, also recovered some lost ground in 2014 and 2015 before falling back again in 2016. Imports from Brazil increased from 99 000 m^3 in 2013 to 124 000 m^3 in 2015 and then declined to 104 000 m^3 in 2016. Most of the increased volume in 2014

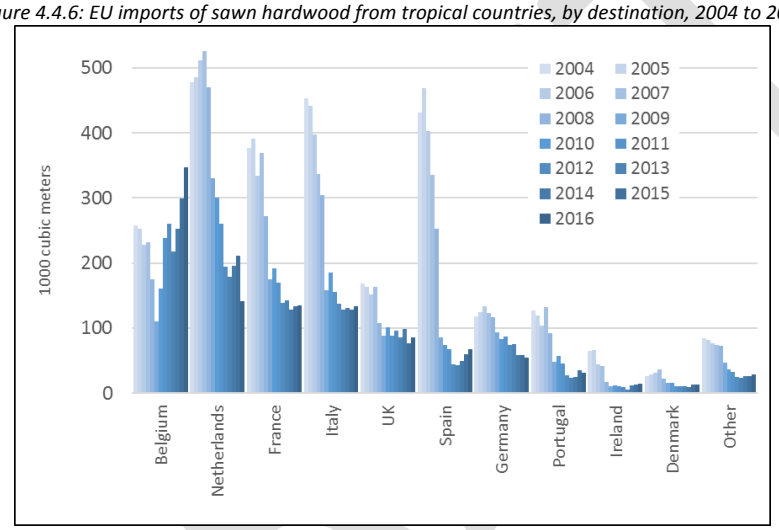
[8] Eurostat sawn hardwood import data from Malaysia has been inconsistent in recent years, mainly due to apparent discrepancies in data reported by the Netherlands. Netherlands data shows a very large upturn in import volume from Malaysia in 2015 followed by a crash in 2016. In contrast, Malaysian trade statistics indicate a more moderate rise in sawn hardwood exports to the Netherlands in 2015 followed by a less significant decline in 2016. In the data presented here, the volume of sawn hardwood imported into the EU from Malaysia during 2015 has been adjusted downwards by 30 000 m^3.

and 2015 was destined for Netherlands, France, Belgium, Spain and Portugal. Imports by the U.K., formerly a significant buyer of Brazilian sawn hardwood, fell to negligible levels in 2015 and 2016.

On the demand side, the most notable trend in EU tropical sawn hardwood imports between 2014 and 2016 was increasing concentration of trade through Belgium (Figure 4.4.6). This trend is much more indicative of changes in distribution channels for tropical wood within the EU than of variations in regional demand. For reasons probably associated with differences in transit times or local costs, EU tropical wood importers have been preferring the Belgian port of Antwerp over the Dutch and French ports. The wood entering by way of Belgium is being distributed throughout North Western Europe.

The focus on Belgium is also linked to the rising dependence on tropical sawn wood from central Africa where kiln drying facilities are restricted. Much of the African wood shipped into Belgium arrives as green lumber and will be kiln dried there, or in Netherlands or northern France, before being distributed into other parts of Europe.

Figure 4.4.6: EU imports of sawn hardwood from tropical countries, by destination, 2004 to 2016

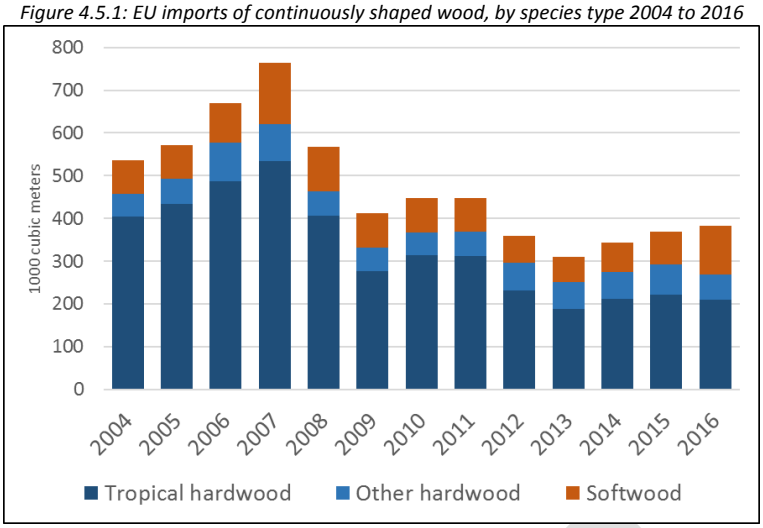


Source: ITTO IMM analysis of Eurostat COMEXT

4.5 VPA partners in EU mouldings and decking supply

EU imports of "continuously shaped" wood (HS code 4409), which includes both decking products and interior decorative products like moulded skirting and beading, fell to a low of 309 000 m^3 in 2013. However, imports recovered slowly in the next three years to 382 000 m^3 in 2016. While tropical hardwoods still made up 55% of EU imports of this commodity in 2016, share fell from 61% in 2013 and over 75% before the global financial crises. Between 2013 and 2015, share was lost primarily to temperate hardwoods, notably from Bosnia, Serbia, Ukraine and Russia. In 2016, there was a surge in imports of softwood product from Russia (Figure 4.5.1).

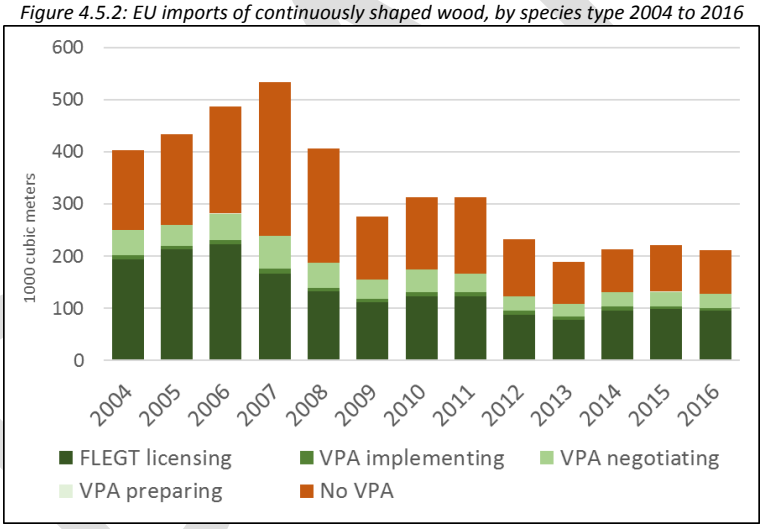
Figure 4.5.1: EU imports of continuously shaped wood, by species type 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

Tropical imports of "continuously shaped" wood increased 12% to 212 000 m^3 in 2014 and by a further 4% to 221 000 m^3 in 2015 before declining 5% to 211 000 m^3 in 2016. Of tropical imports in 2016, Indonesia accounted for 45%, FLEGT-implementing countries for 3%, VPA-negotiating countries for 13%, VPA-preparing countries for less than 1%, and non-VPA countries for 39%. (Figure 4.5.2).

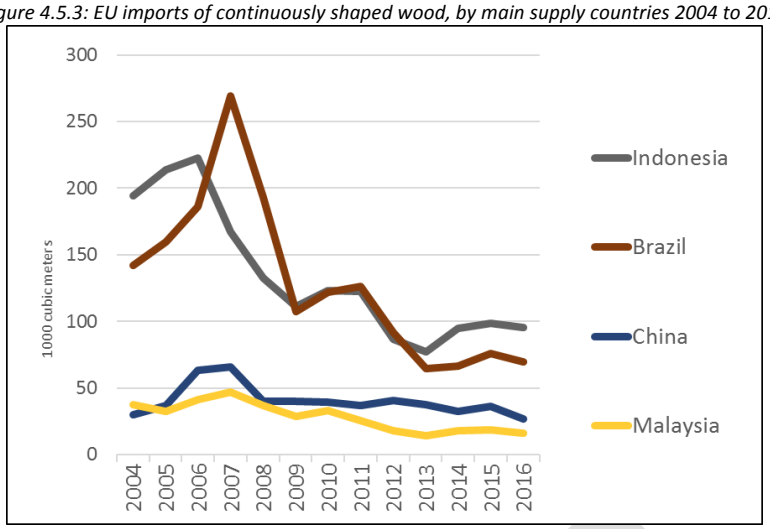
Figure 4.5.2: EU imports of continuously shaped wood, by species type 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

Of VPA partner countries, Indonesia is by far the largest supplier of this commodity into the EU. This is due both to Indonesia's trade in bangkirai, a particularly popular decking timber in Europe, and to Indonesia's ban on rough sawn exports encouraging greater focus on profiled products. Imports from Indonesia increased 23% from 77 000 m^3 in 2013 to 95 000 m^3 in 2014 and a further 3% to 99 000 m^3 in 2015 before falling back 3% to 95 000 m^3 in 2016 (Figure 4.5.3).

Figure 4.5.3: EU imports of continuously shaped wood, by main supply countries 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

Malaysia is the only other VPA partner country that is a significant supplier of this commodity to the EU. EU imports from Malaysia declined to a low of 14 000 m^3 in 2013 then recovered to 19 000 m^3 in 2015 before falling back to 16 000 m^3 in 2016.

It's notable that the rise in European imports of tropical decking from Southeast Asia in 2015 occurred despite a significant rise in prices to European importers due to the weakness of the euro. The 4% and 6% increase in import volume from Indonesia and Malaysia respectively in 2015 compares to a 25% and 27% increase in euro value. However higher prices due to the continued weakness of the euro against the dollar were evidently having an impact to reduce imports in 2016.

The largest non-VPA suppliers are Brazil and China. Brazil has access to several Amazonian species like ipe, garapa and massaranduba that perform well as decking timbers. EU imports from Brazil increased 15% in 2015 but declined 9% to 69 000 m^3 in 2016.

China depends on imported tropical timber with a strong preference for teak in the decking sector. China also supplies small quantities of interior hardwood mouldings to the EU market. Imports from China increased 11% from 33 000 m^3 in 2014 to 36 000 m^3 in 2015, but fell sharply by 26% to 27 000 m^3 in 2016.

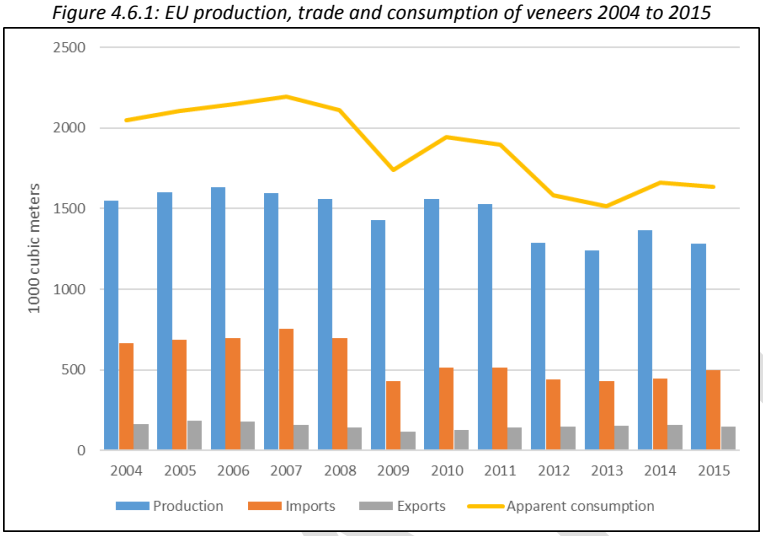
While gains were made by tropical hardwood in this market segment in 2014 and 2015 due to a slow improvement in EU construction activity, there continued to be intense competition from substitute products, notably Wood Plastic Composites (WPC), thermally and chemically modified European hardwoods and softwoods, and preservative-treated softwoods. Tropical hardwood decorative mouldings are also being replaced by European timbers and MDF.

EU imports of tropical decking and moulding products from African countries have been low and volatile in recent years. Imports from Ivory Coast and Ghana have been declining in recent years and were only 3 700 m^3 and 1 700 m^3 respectively in 2016. Imports from Cameroon increased from 2 800 m^3 in 2013 to 4 500 m^3 in 2014, but then weakened to 2 600 m^3 in 2015 and 2 500 m^3 in 2016. In contrast, there has been a consistent rise in imports from Gabon from near zero in 2011 to 4 300 m^3 in 2016. This last trend is due to efforts to find new export market applications for processed products following Gabon's log export ban in 2010.

4.6 VPA partners in EU veneer supply

EU consumption of veneer hit a low of 1.52 million m^3 in 2013, rebounded 9% to 1.66 million m^3 in 2014, before falling back 1% to 1.64 million m^3 in 2015. The rise and subsequent fall in EU consumption was mainly driven by domestic production which was around 1.37 million m^3 in 2014 and 1.28 million m^3 in 2016. Imports continued to rise throughout this period and took a larger share of the market in 2015. The share of imports in all veneer supplied into the EU increased from 10% in 2013 to 12% in 2015. (Figure 4.6.1).

Figure 4.6.1: EU production, trade and consumption of veneers 2004 to 2015

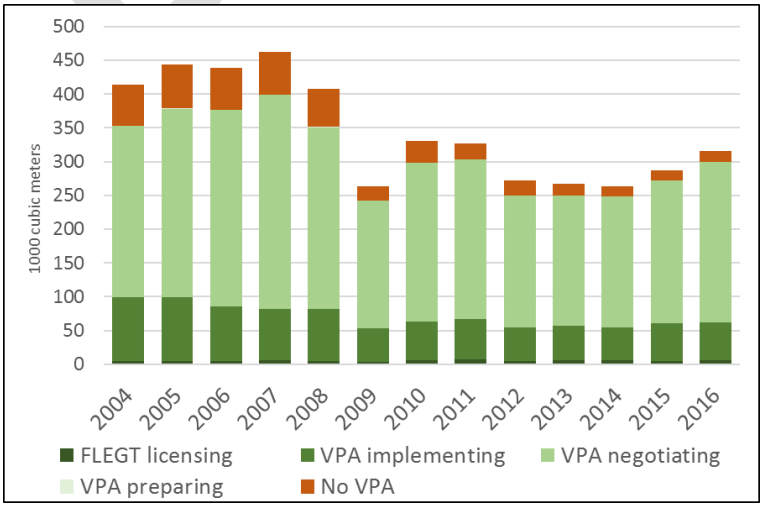


Source: ITTO IMM analysis of Eurostat COMEXT and FAOSTAT

The upturn in EU imports of veneer which began in 2013 continued into 2016. The EU imported 557 000 m^3 of veneer from outside the region in 2016, 11% more than in 2015 and 30% more than in 2016. Veneer imports from the tropics increased 10% to 316 000 m^3 in 2016, exceeding 300 000 m^3 for the first time since 2011. However, EU imports of tropical veneer are still well below volumes of over 400 000 m^3 per annum prevailing before the global financial crises.

EU veneer imports from Indonesia were stable at around 6 000 m^3 between 2014 and 2016 and accounted for less than 2% of all tropical veneer imports. Imports from the five VPA implementing countries in Africa increased 17% from 48 000 m^3 in 2014 to 56 000 m^3 in 2016. During the same period imports from VPA-negotiating countries increased 22% from 194 000 m^3 to 237 000 m^3. Imports from VPA-preparing countries were negligible throughout this period. (Figure 4.6.2).

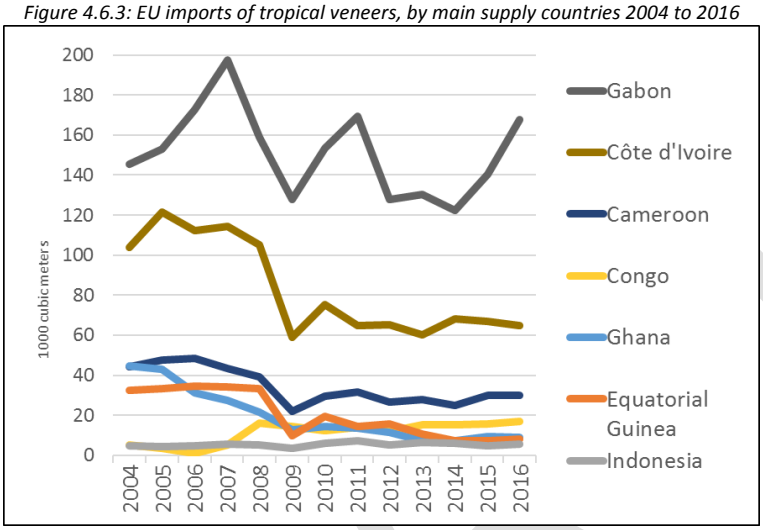
Figure 4.6.2: EU imports of tropical veneers, by VPA status 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

EU imports of veneer from Gabon, the leading tropical supplier, increased 37% from 122 000 m^3 in 2014 to 168 000 m^3 in 2016. This is due both to better consumption in the EU and to rising investment in veneer production capacity in Gabon, on-going ever since the country banned log exports in May 2010. However, it remains to be seen whether the recent surge in EU imports of veneer from Gabon will be maintained. Past increases (in the periods 2006-2007 and 2009-2011) were short-lived. The veneer exported from Gabon is mainly rotary product for plywood and much hinges on the continued survival of tropical hardwood plywood manufacturing in the EU which has suffered very low margins and widespread substitution in recent years. (Figure 4.6.3).

Figure 4.6.3: EU imports of tropical veneers, by main supply countries 2004 to 2016



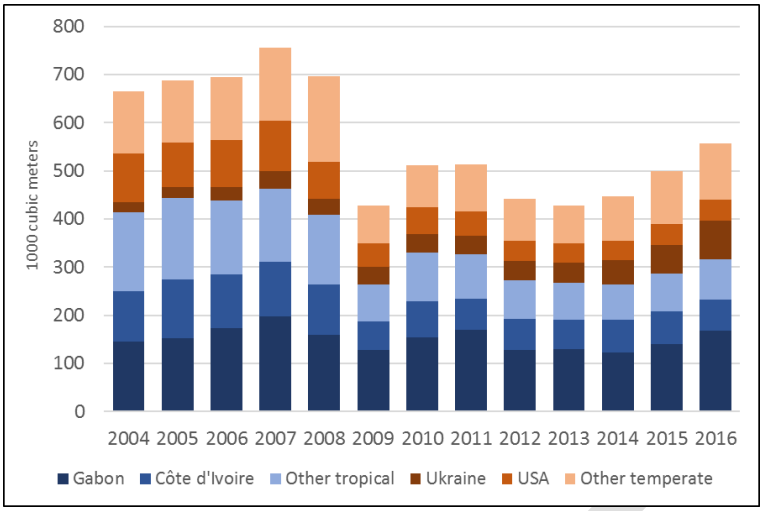
Source: ITTO IMM analysis of Eurostat COMEXT

EU imports of veneer from Cote d'Ivoire, still the largest African supplier of sliced decorative veneer into the EU despite a sharp fall in trade following the global financial crises, declined 5% from 68 000 m^3 in 2014 to 65 000 m^3 in 2016. However, imports from several other African countries increased during this period, including Cameroon (up 20% to 29 900 m^3), Congo (up 11% to 17 100 m^3), Ghana (up 21% to 9 100 m^3) and Equatorial Guinea (up 11% to 8 400 m^3).

France is the largest destination for tropical veneer in the EU, accounting for 43% of imports in 2016, followed by Italy (22%), Spain (13%), Greece (6%) and Germany (5%). The increase in tropical veneer imports into the EU between 2014 and 2016 was particularly rapid into France, but imports also increased into all the other main markets except Germany.

EU imports of veneer from temperate countries increased more rapidly than from tropical countries between 2014 and 2016, rising 31% to 241 000 m^3. This was almost entirely due to a 63% increase in EU trade with Ukraine to 81 600 m^3 following the country's decision to implement a log export ban from November 2015 which encouraged increased exports of processed hardwood products. The share of tropical countries in EU veneer imports was 56.7% in 2016, down from 58.9% in 2014. (Figure 4.6.4).

Figure 4.6.4: EU imports of veneers, by main supply country 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

The EU's domestic veneer manufacturing sector has shifted eastwards in the last decade. While around 60% of EU veneer production is still in western Europe, notably in Italy, Spain, France and Germany, 40% is now in eastern European countries, about double the proportion of a decade ago. Amongst Eastern European countries in the EU, there have been significant increases in veneer production capacity in Czechia, Estonia, Hungary, Lithuania, Slovakia and Romania during the last decade.

The combined effect of improving veneer consumption within the EU and greater supply from Eastern European manufacturers has been to increase internal EU trade in veneers. The total volume of intra-EU trade in veneer was 522 000 m^3 in 2016, 7% more than the previous year and 20% more than in 2012.

As in the sawn wood sector, domestic veneer producers within the EU were challenged by limited supply and rising prices for oak logs during 2016, although the latest market reports suggest that the oak supply situation had eased by the first quarter of 2017.

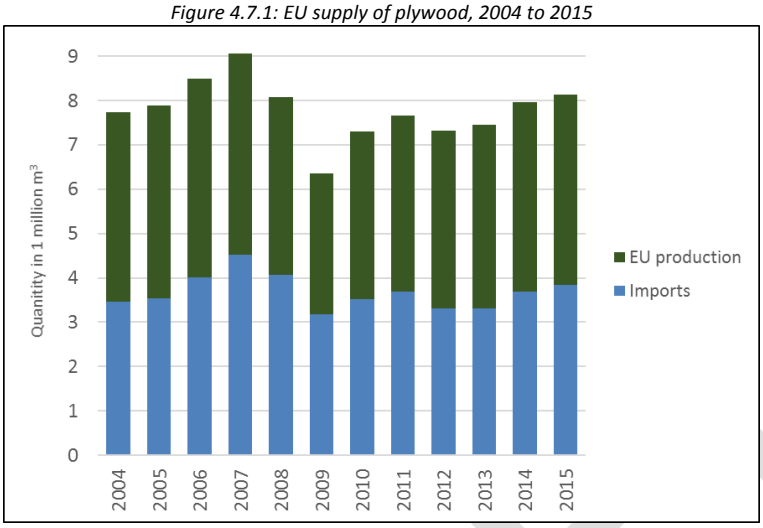
At the same time, the competition from wood look-alike products such as laminates and luxury vinyl tiles has continued to intensify, as the look and performance of artificial surfaces has progressively improved, European production capacity is large and prices remain low.

The most innovative veneer producers have responded to these challenges by improving the efficiency of processing operations, engaging in active market development campaigns to emphasise the added value of authentic natural wood products, and extending applications for real wood veneers. Perhaps the most notable example is development of machines able to slice three-millimetre thick wooden lamellas for engineered flooring products virtually without any raw material loss. These machines replace traditional saws which waste up to 50% of wood material as sawdust.

4.7 VPA partners in EU plywood supply

The supply of plywood in the EU increased 9% from 7.54 million m^3 in 2013 to 8.14 million m^3 in 2015. During the two-year period, imports increased 16% to 3.85 million m^3 while domestic production increased 3.7% to 4.30 million m^3. Imports increased share of total plywood supply from 44% in 2013 to 47% in 2015. (Figure 4.7.1).

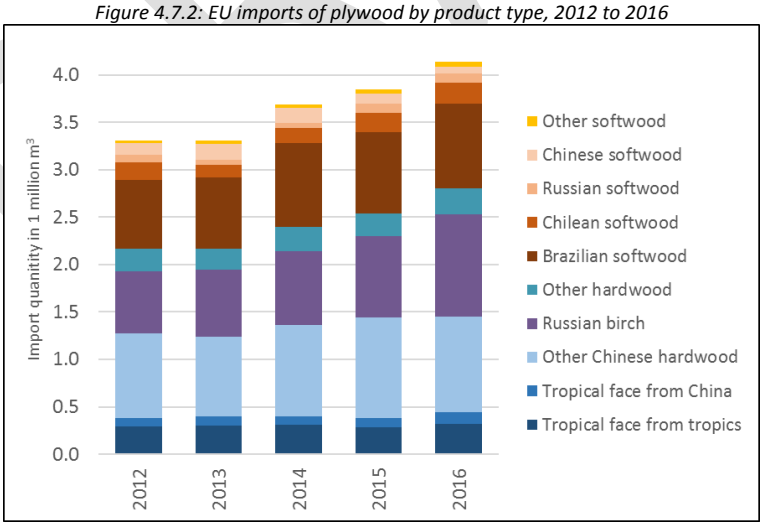
Figure 4.7.1: EU supply of plywood, 2004 to 2015



Source: ITTO IMM analysis of Eurostat COMEXT and PRODCOM

EU imports of plywood increased a further 8% to 4.13 million m^3 in 2016, the second highest level ever recorded, although some way short of the peak of around 4.50 million m^3 in 2007. Much of the rise in imports in the period 2013 to 2016 consisted of birch plywood from Russia encouraged by extreme weakness of the Russian rouble against the euro and other EU currencies. Between 2013 and 2016, EU imports of Russian birch plywood increased 51% to 1.08 million m^3, with most destined for Germany, the Baltic States, Poland, the UK and Netherlands. (Figure 4.7.2).

Figure 4.7.2: EU imports of plywood by product type, 2012 to 2016

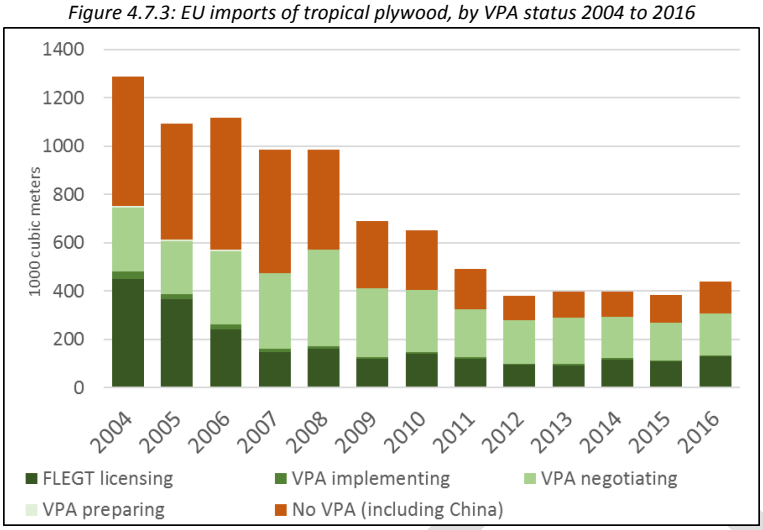


Source: ITTO IMM analysis of Eurostat COMEXT

EU imports of tropical hardwood plywood, already at historically very low levels, declined 3.9% from 399 000 m^3 in 2013 to 383 000 m^3 in 2015 before rebounding 15% to 440 000 m^3 in 2016. Imports from Indonesia increased 42% from 91 000 m^3 in 2013 to 128 000 m^3 in 2016. In contrast imports from the five VPA implementing countries in Africa declined 60% to only 3 000 m^3 in the same period. Imports from VPA-negotiating countries declined 8% from 191 000 m^3 in 2013 to 176 000 m^3

in 2016, mainly due to slowing imports from Malaysia. Imports from Gabon were quite stable between 2013 and 2016. Imports from VPA-preparing countries were negligible throughout this period. (Figure 4.7.3).

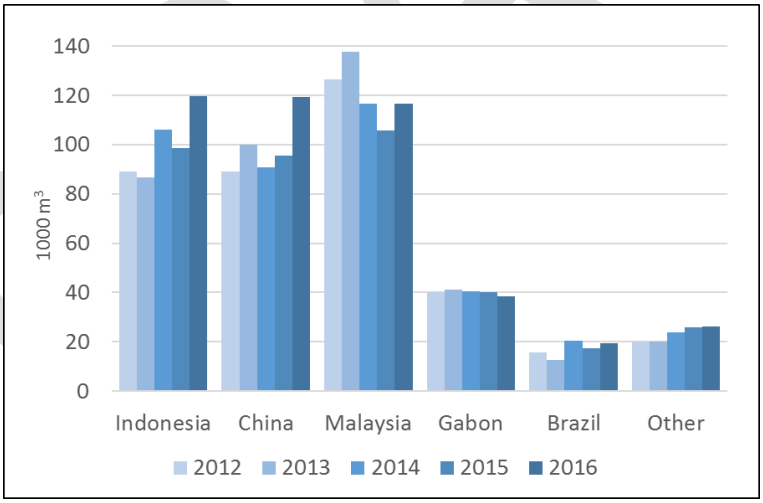
Figure 4.7.3: EU imports of tropical plywood, by VPA status 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

The share of VPA countries in total EU imports of tropical plywood fell from 68% in 2013 to 65% in 2016. Imports from tropical countries were losing share to products faced with tropical hardwoods manufactured in China during this period. Imports of tropical hardwood plywood from China increased 19% from 100 000 m^3 in 2013 to 119 000 m^3 in 2016. (Figure 4.7.4).

Figure 4.7.4: EU imports of tropical plywood, by supply country, 2012 to 2016

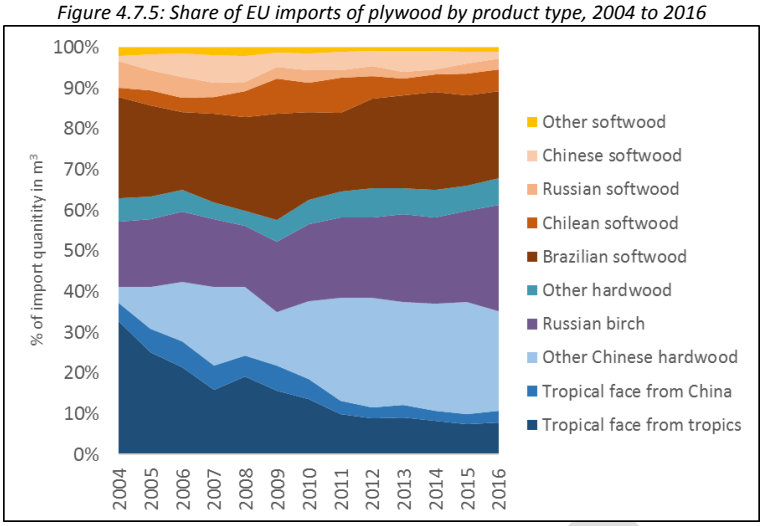


Source: ITTO IMM analysis of Eurostat COMEXT

The share of tropical countries in total EU plywood imports fell from 9% in 2013 to 8% in 2016, continuing the long-term downward trend. The share of tropical-faced plywood from China in total EU plywood imports was level at 3% during this period.

The share of Russian birch plywood in EU imports increased from 21% to 26% between 2013 and 2016. This was largely at the expense of Chinese plywood faced both with softwoods and non-tropical hardwoods (including birch plywood, mixed light hardwood made with plantation grown poplar and eucalyptus, and various other forms of combi plywood). (Figure 4.7.5).

Figure 4.7.5: Share of EU imports of plywood by product type, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

The changing composition of EU plywood imports may be partly related to enforcement of EUTR and CE marking requirements which is encouraging a shift from Chinese mixed light hardwood products to plywood containing more clearly identified species of known origin and technical performance. This factor tends to favour Russian birch plywood and Chinese plywood faced with hardwood species of known tropical origin.

It should also provide new opportunities for plywood imported directly from tropical countries. The trade data did not indicate any clear increase in share for tropical countries in the EU plywood market between 2013 and 2016, but the significant rise in direct imports from Indonesia and Malaysia in 2016 is encouraging and may be the start of a longer-term trend.

EU domestic plywood production focuses on softwood and birch products in northern regions and poplar in the south. In their market development, domestic manufacturers are seeking to differentiate from imported products, particularly from China, and to offset relatively higher costs of production through a strong emphasis on conformance to technical and environmental standards and through product innovation.

For example, one notable plywood product development in the last two years is the development by the Finnish UPM group of the Grada 2000 range, a birch plywood product which, through use of special thermoplastic foils, can be formed into 2-dimensional shapes more easily and at much lower temperatures than standard birch plywood. This offers new design opportunities in the furniture and interiors sector.

A review of the EU's okoumé plywood sector published by the EC in 2017 to assess the risk of dumping by Chinese manufacturers revealed that European production of this commodity is now very low. EU okoumé plywood production was 144 000 m^3 in 2012 rising to 148 000 m^3 in 2015, which compares to annual production of around 265 000 m^3 in 2008 and 2009. Production capacity in the EU was well under 200 000 m^3 in 2015 compared to 577 000 m^3 in 2009 following closures of several EU producers, including Plysorol formerly the largest EU manufacturer.

The EC review revealed extremely low levels of profitability in the EU okoumé plywood manufacturing sector and recommended the continuation of anti-dumping duties on okoumé plywood manufactured in China for another period of five years. The findings were not contested by the Chinese industry or government. The anti-dumping duties should improve competitiveness of

okoumé plywood manufactured both in the EU and Gabon. However, both the EC review and recent trade statistics suggest that okoumé plywood has continued to lose market share in the EU.

4.8 VPA partners in EU composite-panel supply

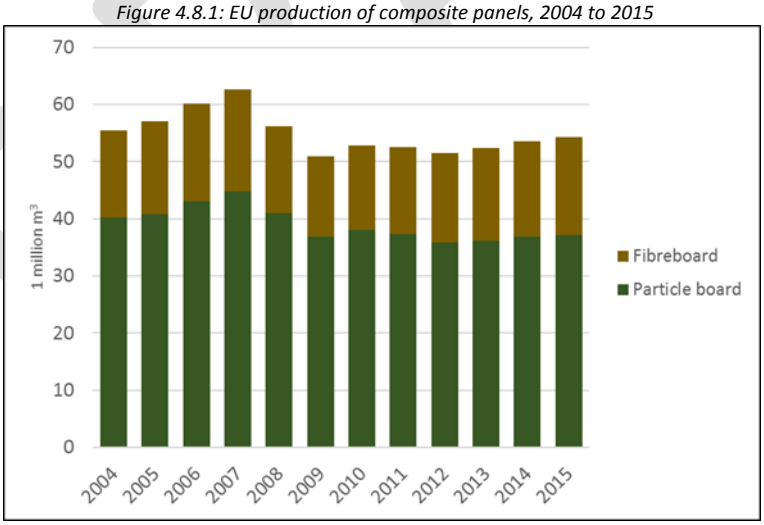
The composite panels sector in Europe is mainly of interest to VPA Partner countries for the important role it has played to drive development of tropical wood substitutes. OSB has been an important competitor for construction plywood. MDF has taken a rising share of the EU interior decorative mouldings market, to some extent replacing lighter tropical hardwoods such as wawa/ayous.

The EU panels sector remains a key source of innovation in the international forest products sector and continues to extend applications into new areas, often at the expense of tropical wood products. For example, a new process launched in 2011 to acetylate MDF has created a product that can be used for exterior applications, with a 50-year guarantee above ground and 25 years in ground, which now competes directly with tropical hardwood products in exterior applications.

Laminate flooring composed of HDF with a high resolution printed image and embossed to provide texture has been substituting for hardwood flooring now for well over a decade. However, the surface finishes continue to improve and have become so convincing that it led the European Federation of the Parquet Industry (FEP) to comment in the report of their members meeting in January 2016 that "it is becoming increasingly difficult for consumers to differentiate parquet from competitive flooring alternatives with a wood look surface."

After a dip 2012 when total production of composite panels in the EU fell to 51.5 million m^3, production increased consistently in the following three years to 54.3 million m^3. During this period, particle board production increased from 35.8 million m^3 to 37.1 million m^3 while fibreboard production increased from 15.8 million m^3 to 17.2 million m^3. (Figure 4.8.1).

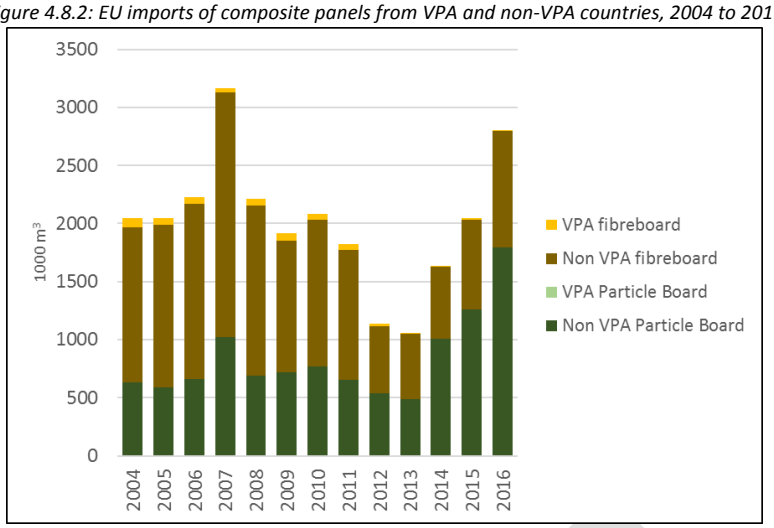
Figure 4.8.1: EU production of composite panels, 2004 to 2015



Source: ITTO IMM analysis of Eurostat PRODCOM and COMEXT

EU imports of composite panels increased between 2012 and 2016, but remain only a very small component of total supply. Imports of particle board increased from 0.54 million m^3 in 2012 to 1.79 million m^3 in 2016, mainly due to rising trade with Belarus, Russia and Ukraine. Imports of fibreboard increased from 0.60 million m^3 to 1.01 million m^3 during the same period, in this case with nearly all the gains from Belarus and Russia. (Figure 4.8.2).

Figure 4.8.2: EU imports of composite panels from VPA and non-VPA countries, 2004 to 2016



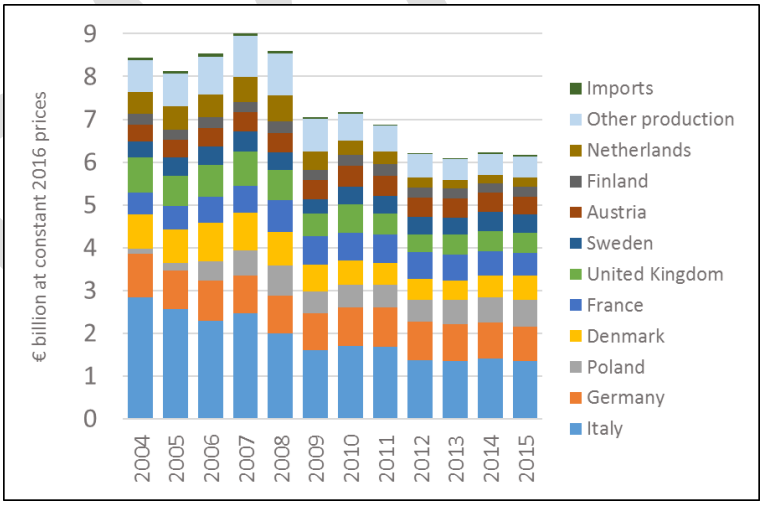
Source: ITTO IMM analysis of Eurostat COMEXT

EU imports of composite panels from all countries engaged in the VPA process are negligible; no more than 11 000 m^3 per year between 2013 and 2015, rising to 15 000 m^3 in 2016. This consisted almost exclusively of fibreboard, mainly from Thailand with a very small volume from Malaysia and Viet Nam.

4.9 VPA partners in EU wooden window supply

The market for wood windows in the EU was low and flat in the 2013 to 2016 period. The total value of wood windows supplied to the EU remained broadly static at around €6.1 billion per year between 2012 and 2015, down from around €7 billion per year in the period 2009 to 2011, and over €8 billion prior to the global financial crises. (Figure 4.9.1).

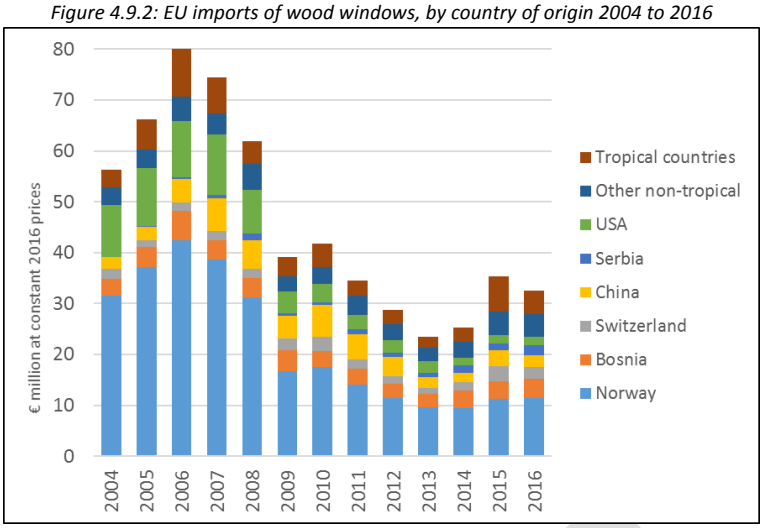
Figure 4.9.1: EU supply of wood windows, by country of production 2004 to 2015



Source: ITTO IMM analysis of Eurostat COMEXT

Imports of wood windows from outside the EU increased by 50% between 2013 and 2015 to €35 million but then fell back to €33 million in 2016. Despite the surge, imports from outside the EU accounted for less than 1% of total EU wood window supply in 2015. EU imports of wood windows derive mainly from neighbouring European countries, including Norway, Bosnia and Switzerland (Figure 4.9.2).

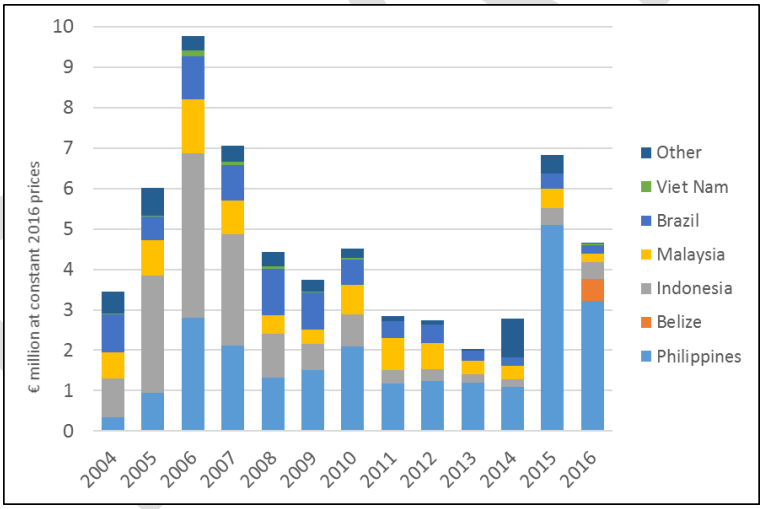
Figure 4.9.2: EU imports of wood windows, by country of origin 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

Only a limited, and very variable, quantity of wood windows is imported into the EU from tropical countries. The value of EU imports of wood windows from tropical countries increased from €2 million in 2013 to €7 million in 2015, but then declined again to €5 million in 2016. Typically, 50% to 70% of wood windows imported in the EU from the tropics each year derive from the Philippines and are destined for France and Belgium. Of VPA Partner countries, only Indonesia, Malaysia and Vietnam supply wood windows to the EU, all in negligible quantities with value of less than €500 000 per year. (Figure 4.9.3).

Figure 4.9.3: EU imports of wood windows from tropical countries, by country of origin 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

While VPA partner countries are not engaged in the EU market for finished windows, this sector is of interest as a source of demand for tropical wood material. Wood generally, and tropical wood specifically, has come under significant competitive pressure from non-wood materials in this sector.

A new report by Interconnect consulting suggests that in 2016, 69.7 million window units with total market value of €18.7 million were sold in the EU, around 2% more than the previous year. Much recent growth in sales has been concentrated in plastic windows. The share of plastic in total EU window sales increased from 41.7% in 2007 to 46.6% in 2016. Window frames combining wood and aluminium have gained share in recent years, but solid wood windows, alongside metal windows have lost share.

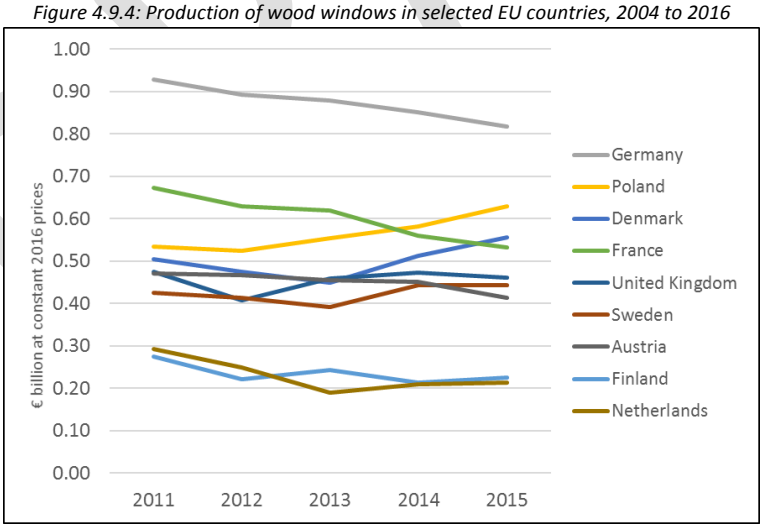
Another notable trend in the EU window sector is towards use of engineered wood in place of solid timber. This is particularly true of larger manufacturers producing fully-factory finished units that buy engineered timber by the container load. Increased use of engineered wood is closely associated with efforts by window manufacturers to meet rising technical and environmental standards, provide customers with long lifetime performance guarantees and recover market share from other materials. Increased focus on energy efficiency means that triple-glazed insulating window units with very low U-factors are now more common than double-glazed units in Europe. These units demand thicker, more stable and durable profiles that in practice can only be delivered at scale using engineered wood products.

Some suppliers of tropical timber – notably in Indonesia and Malaysia – have exploited the trend towards engineered wood and supply laminated window scantlings particularly to the Netherlands and Belgium. However, in this market they face stiff competition from treated European softwood scantlings, oak scantlings, and Siberian larch scantlings.

Smaller independent joiners still tend to rely on solid timber purchased from importers and merchants to manufacture window frames. Tropical woods such as meranti, sapele and iroko continue to supply a high-end niche in this market sector, competing directly and often successfully with oak, Siberian larch, and western red cedar.

Another significant trend is a shift in the main manufacturing locations for wood windows within the EU. Italy has maintained its position as the largest window manufacturer in the EU, with production static at around €1.35 billion per year between 2012 and 2015. However, during this period there was a significant decline in wood window production in Germany and France, while production increased in Poland and Denmark. Production in the UK and Netherlands, where the wood window sector has traditionally been a significant user of tropical hardwood, notably of African sapele and Asian meranti, was broadly flat during this period. (Figure 4.9.4).

Figure 4.9.4: Production of wood windows in selected EU countries, 2004 to 2016



Source: ITTO IMM analysis of Eurostat PRODCOM

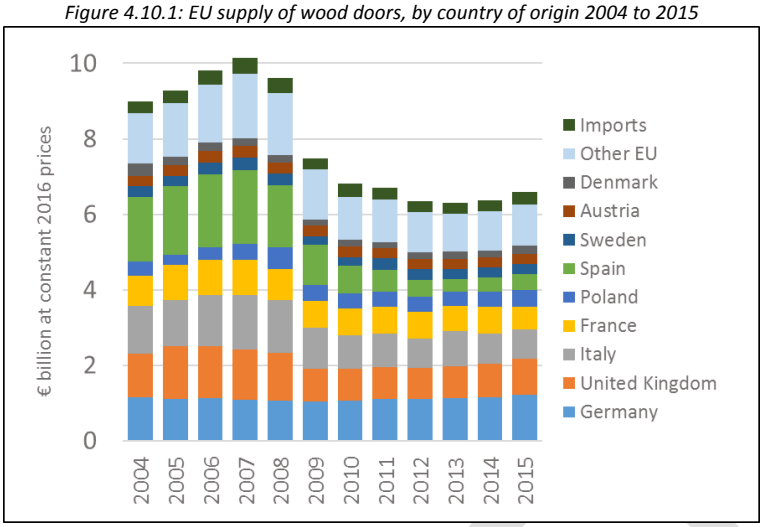
4.10 VPA partners in EU wooden door supply

Apart from Indonesia and Malaysia, which have successfully penetrated the EU market for door panels and finished wood doors, the EU door sector is mainly significant to VPA countries as a driver of imports of wood raw materials.

The total value of wood doors supplied to the EU increased by 5% from a low of €6.3 billion in 2013 to €6.6 billion in 2015. Despite the increase, the value of wood doors supplied to the EU in 2015 was

still less than in 2012, and one third down on the level prevailing before the global financial crises. (Figure 4.10.1).

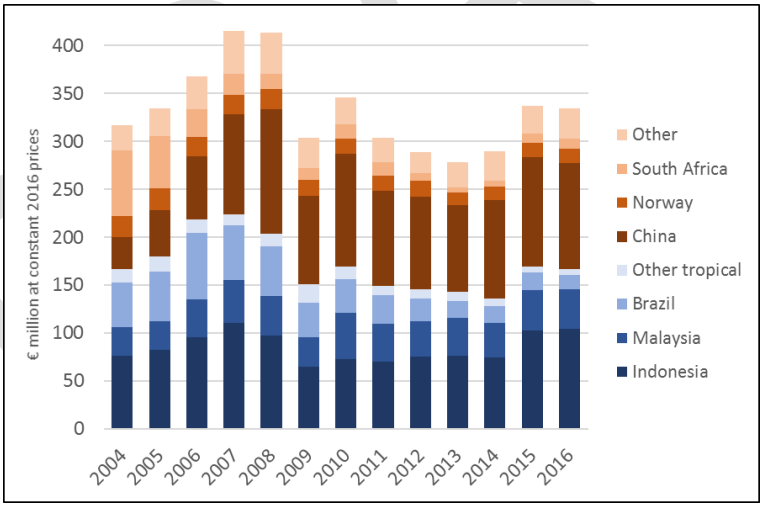
Figure 4.10.1: EU supply of wood doors, by country of origin 2004 to 2015



Source: ITTO IMM analysis of Eurostat PRODCOM and COMEXT

The value of wood door imports into the EU increased 21% from €278 billion in 2013 to €337 billion in 2015, before falling 1% to €335 billion in 2016. In 2015, imports accounted for 5% of the total euro value of wood door supply to the EU. Following the rise between 2013 and 2015, the value of EU wood door imports was 20% down on peak levels, but comparable to imports between 2000 and 2004, prior to the speculative bubble in construction in 2007 and 2008. (Figure 4.10.2).

Figure 4.10.2: EU imports of wood doors, by principal supply country 2004 to 2016



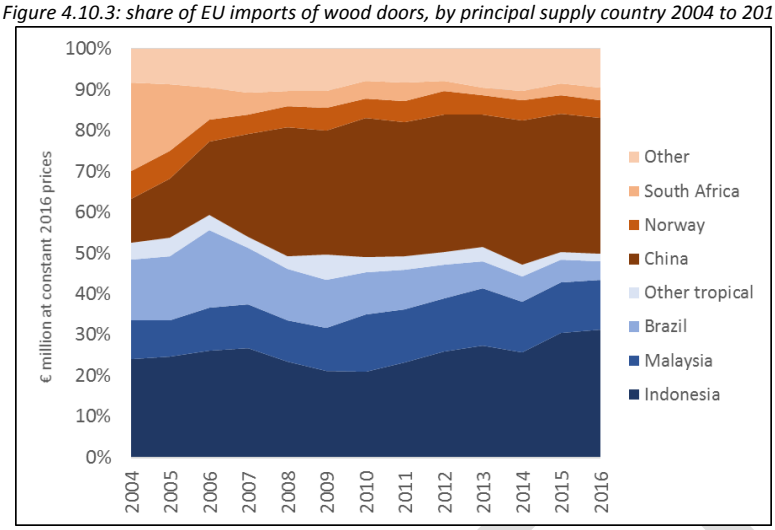
Source: ITTO IMM analysis of Eurostat COMEXT

The increase in euro import value between 2013 and 2015 was partly due to depreciation of the euro against the dollar, which led to rising import prices for goods imported from Asia and South America. In terms of quantity, EU door imports increased 10% from 141 000 tonnes in 2013 to 155 000 in 2015.

After losing share to China in supply of wood doors to the EU before and during the global financial crises, the share of tropical countries remained broadly level at around 50% in the eight years between 2009 to 2016. However, the share of Indonesia in the total value of EU door imports increased consistently throughout this period from 21% in 2009 to 31% in 2016, mainly at the

expense of Brazil. The share of Malaysia increased from 10% to 12% during the same period. (Figure 4.10.3).

Figure 4.10.3: share of EU imports of wood doors, by principal supply country 2004 to 2016

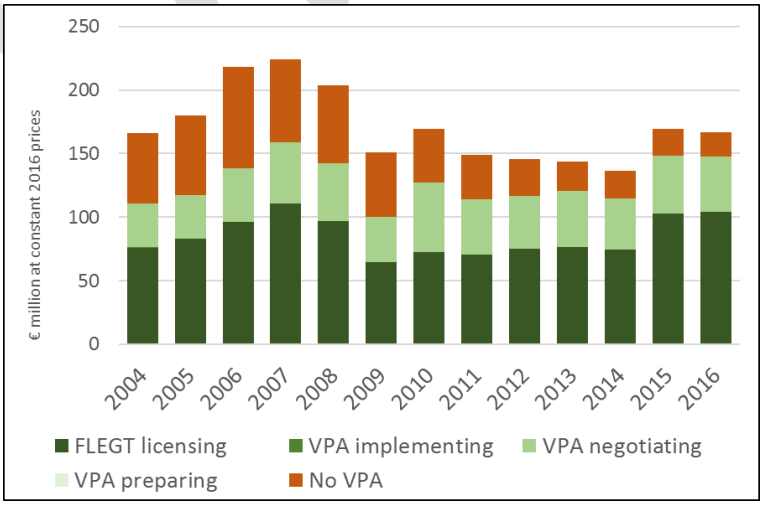


Source: ITTO IMM analysis of Eurostat COMEXT

The value of EU imports of wood doors from the tropics dipped 5% from €143 million in 2013 to €136 million in 2014, mainly due to a decline in imports from Malaysia. Tropical suppliers briefly lost market share to China during 2014. However, the value of wood door imports from tropical countries surged 24% to €170 million in 2015 before slipping to €167 million in 2016.

The value EU wood door imports from Indonesia declined from €76 million in 2013 to €75 million in 2014, before increasing to €103 million in 2015 and €104 million in 2016. Imports from VPA negotiating countries, nearly all from Malaysia and a small quantity from Viet Nam, declined from €44 million in 2013 to €40 million in 2014, before rising to €45 million in 2015 and sliding again to €43 million in 2016. Imports from VPA implementing and VPA preparing countries were negligible throughout this period. Imports from non-VPA tropical countries, led by Brazil with a small quantity from the Philippines and India, declined from €22 million in 2013 to €19 million in 2016. (Figure 4.10.4)

Figure 4.10.4: EU imports of wood doors from tropical countries, by VPA status 2004 to 2016

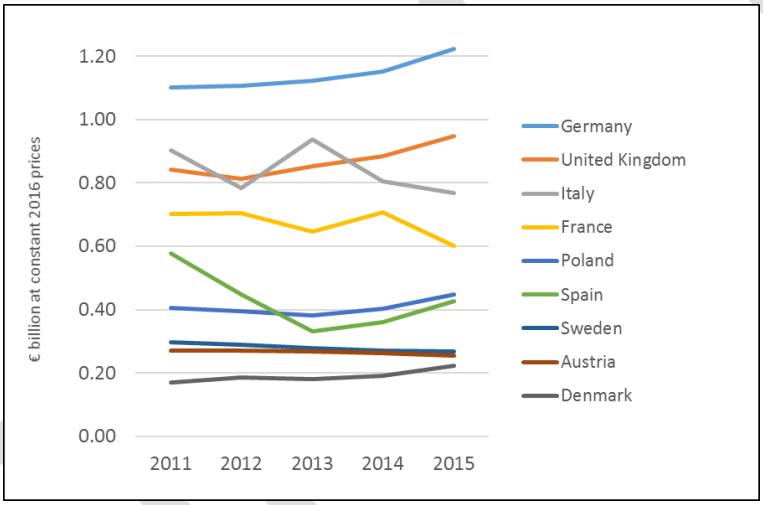


Source: ITTO IMM analysis of Eurostat COMEXT

Wood doors manufactured in Europe are now rarely made from solid timber and instead are manufactured using veneered panels and finger-jointed timbers. As in the window sector, requirements to comply with higher energy efficiency standards and efforts to provide customers with long-life time guarantees are driving this concerted shift to engineered wood products. Doors with a real wood veneer have also been losing share to doors manufactured using High Pressure Laminate (HPL) foils and white lacquered products. This is partly due to a shift in overall door production from Southern European countries such as Spain and Italy, which strongly favoured real wood veneer, to Germany where there is a very sophisticated foil and laminates industry.

Significant internal shifts in the geographical spread of door production in the EU continued between 2013 and 2015. During this period, there were large increases in production in Germany (rising 9% to €1.22 billion), the UK (rising 11% to €950 million), Poland (rising 17% to €450 million) and Denmark (rising 23% to €220 million). Production in Spain, which fell particularly rapidly during the global financial crises, recovered from a decadal low of €330 million in 2013 to €430 million in 2015. However, production continued to fall in Italy, by 18% from €940 million in 2013 to €770 million in 2015. Production in France was volatile, rising from €650 million in 2013, to €710 million in 2015 before falling back to a decadal low of €600 million in 2015. (Figure 4.10.5).

Figure 4.10.5: Production of wood doors in main EU producer countries 2004 to 2016



Source: ITTO IMM analysis of Eurostat PRODCOM

4.11 VPA partners in EU supply of modern engineered wood products

Product scope

The definition of "engineered wood product" (EWP) typically includes any product manufactured by binding or fixing the strands, particles, fibres, or veneers or boards of wood, together with adhesives, or other methods of fixation to form composite materials.

Many engineered wood products - such as plywood, finger-jointed timber, MDF and OSB - were developed decades ago and occupy mature and well understood markets. The market position of VPA partners with respect to these more familiar engineered wood products is covered in other sections.

However recently there has been a significant expansion in the range of EWPs with materials such as glue-laminated lumber (glulam), laminated veneer lumber (LVL), and 'massive' or cross-laminated

timber (CLT) becoming more widely available in the EU[9]. For clarity, the following product definitions are used here:

- Glued Laminated Timber or glulam: product made by gluing together sawn timber in parallel grain (to give strength in one direction), primarily for large structural components.
- Cross Laminated Timber (CLT): product made by gluing together layers of sawn timber perpendicular to their adjacent layers giving strength in two directions. CLT is a structural product is used for walls, floors and roofs.
- Laminated Veneer Lumber (LVL): a layered composite of rotary wood veneers and adhesive made up of parallel laminations (i.e. all layers are oriented with grain in the same direction to give elements a very high strength in their spanning direction).

Unfortunately, it is not possible to assess with any degree of accuracy the share of VPA partner countries in supply of these more modern engineered wood products to the EU market. None are identified separately in EU production data and only one – glulam – is identified separately in EU trade data[10].

This lack of data is becoming more critical as the limited statistical information that is available and anecdotal evidence suggest that some of these products are taking an expanding share of the EU market in a wide range of wood applications. These products also offer new opportunities to reclaim share lost to other materials in large volume sectors such as windows and doors and to expand into new market segments where timber is currently excluded such as structural applications in high-rise buildings.

Although there is a great deal of uncertainty surrounding the actual volumes and applications involved, the information available indicates that EU consumption of modern EWPs is rising. There are several reasons for this. More widespread use of EWPs is closely linked to the move to rising quality and efficiency standards in EU construction, and to more modular forms of off-site, prefabricated construction, which reduces costs, improves building performance and reduces the need for on-site labour. EWPs tend to offer higher dimensional stability and greater strength than solid timber products, allowing more precise engineering which in turn improves product performance and longevity. They also help increase material efficiency, allowing lower grade and smaller dimension wood to be converted into high-performance components.

[9] Other modern EWP's - such as parallel strand lumber (PSL), laminated strand lumber (LSL), and prefabricated I-beams – are sourced mainly from North America and, although used quite widely for timber building systems in parts of the EU, have recently become less widely available in the EU due to a preference for LVL and supply chain considerations.

[10] Analysis of this market sector would be improved with amendments to the international Harmonised System (HS) of product codes. In 15 March 2016, the UN Intersecretariat Working Group (IWG) on Forest Sector Statistics proposed amendments to the HS system including introduction of a new set of codes (at HS 6-digit level and therefore globally harmonised) to include modern EWPs. In submitting the proposal the IWG observed that at present in the EU "Combined Nomenclature" (CN) system, modern EWP products are distributed across tariff codes as follows: glulam is the only product separately identified and is listed as a joinery product under 44189010 (updated to 44189910 from 2017); CLT is included under 4421 with all other unspecified wood products; and LVL is included under 44129, an unspecified "other" laminated board. Adding to the complexity – and not mentioned by IWG – is that some laminated wood panels with thick cores used for door manufacturing may be classified under 441820 for door products

There is a degree of competition between glulam, which is a well-established product in the EU, and LVL which is still a niche product. CLT is also a specialist product at this stage, primarily designed to extend use of wood into high-rise construction applications currently dominated by steel and concrete.

To exploit new market opportunities in structural applications, EWP manufacturers are required to perform structural testing and make available structural strength data. This testing is too expensive and time-consuming to be carried out for individual projects. Therefore, it must be carried out well in advance and the data made readily available.

In practice, this has been challenging for external suppliers and EWP markets are heavily dominated by domestic manufacturers that are familiar with the required technical standards and well positioned to work closely with building engineers, architects and contractors. Although VPA partners in South East Asia are supplying various forms of glulam into the EU market, and possibly also LVL, this is currently restricted to non-structural applications.

As in other joinery applications, rising demand for EWPs in the EU is likely to be of more interest to many suppliers in VPA partner countries for the opportunities it creates to supply raw material rather than finished products. To date, production of glulam, CLT and LVL in the EU has been very heavily oriented towards softwood, but there is rising interest in the potential to use hardwood, which tend to provide a stronger and more durable substrate for EWPs.

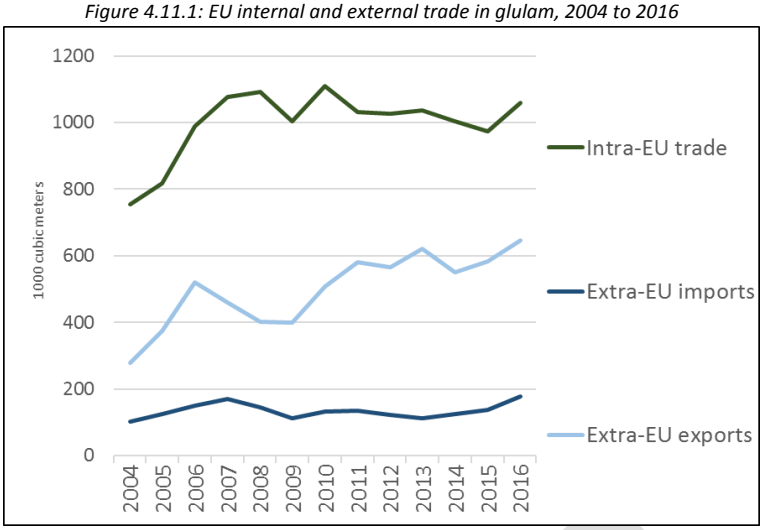
Glulam

Glulam is at present the largest volume modern EWP supplied into the EU market. EU consumption of glulam increased from around 2 million m^3 in 2004 to a peak of 3.25 million m^3 in 2007, and then dipped to 2.25 million m^3 in 2008 and stabilised at around 2.75 million m^3 in the period 2009 to 2012. During the latter period, more than 2.5 million m3 was produced in the EU each year and the EU accounted for 50% to 60% of global consumption of glulam. Germany and Austria have traditionally been the largest markets for glulam, while Italy and France showed rapid growth in consumption prior to 2007. Consumption of glulam in other European countries is still low despite significant growth potential.[11]

No glulam consumption or production data for the years following 2012 could be identified for this report, but analysis of internal and external trade flows provides insights into more recent trends. Internal EU trade in glulam remained broadly flat at around 1 million m^3 between 2013 and 2016, little changed in fact from the previous decade. However, after dipping to a low of 550 000 m^3 in 2014, EU exports rebounded in the next two years to 647 000 m^3 in 2016. Like other wood products sectors, this implies that domestic glulam manufacturers are exploiting relative currency weakness and technical know-how to expand exports at a time when domestic markets are growing only slowly. (Figure 4.11.1).

[11] From Pahkasalo, T., Aurenhammer, P. & Gaston, C. 2013. Value-added wood products markets, in UNECE, FAO. Forest products annual market review, 2012-2013. Geneva Timber and Forest Study Paper 33. United Nations Publications. Geneva

Figure 4.11.1: EU internal and external trade in glulam, 2004 to 2016

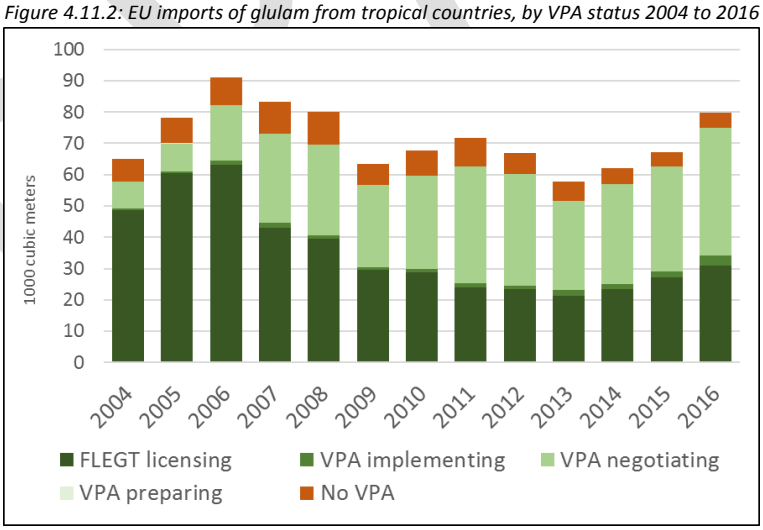


Source: ITTO IMM analysis of Eurostat COMEXT

Anecdotal reports indicate that the glulam sector in Europe struggled with over-supply and low margins in the 2013 to 2016 period. Taken together these trends suggest relatively poor prospects for external suppliers to expand glulam sales in the EU market in recent years.

Nevertheless, EU imports of glulam increased from 112 000 m^3 in 2013 to 179 000 m^3 in 2016. Tropical countries were significant beneficiaries of the rise in EU glulam imports. Imports from tropical countries increased from 58 000 m^3 in 2013 to 80 000 m^3 in 2016. Imports from Indonesia increased from 21 300 m^3 in 2013 to 31 100 m^3 in 2016. In the same period, imports from the five VPA implementing countries in Africa increased from 1 800 m^3 to 3 200 m^3; and imports from VPA-negotiating countries increased from 28 400 m^3 to 40 100 m^3 in 2016. Imports from VPA-preparing countries were negligible throughout this period. (Figure 4.11.2).

Figure 4.11.2: EU imports of glulam from tropical countries, by VPA status 2004 to 2016

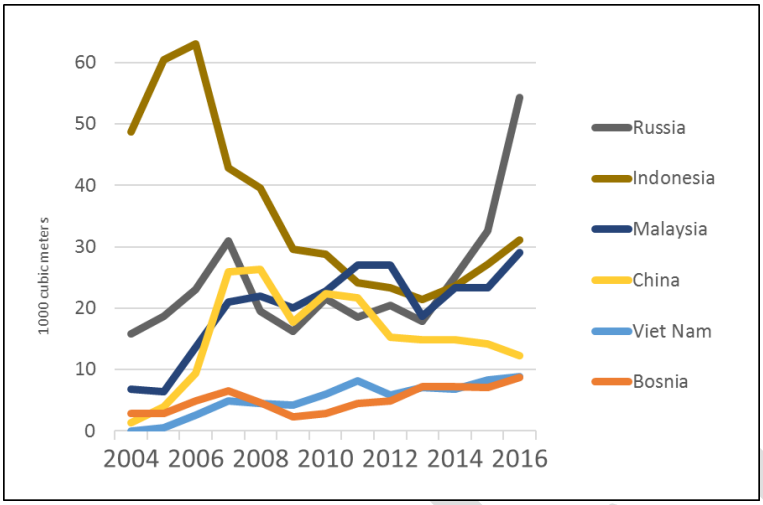


Source: ITTO IMM analysis of Eurostat COMEXT

The rise in imports into the EU at a time of intense competition in the wider EU glulam market is partly due to the specific mix of products involved. Whereas much of the EU internal market comprises large beams and other structural elements, a large proportion of imports are more specialised small dimension products for non-structural applications. Imports have risen partly in response to improved demand in specific niche sectors, notably for durable laminated window scantlings in the Netherlands and Belgium.

The rise in glulam imports is also partly due to exchange rate effects. While the euro weakened against the dollar between 2014 and 2015, it strengthened considerably against the Russian rouble. Much of the increase in EU imports of glulam products between 2014 and 2016 was due to rising trade with Russia (Figure 4.11.3).

Figure 4.11.3: EU imports of glulam from main supply countries, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

Laminated Veneer Lumber (LVL)

LVL is a large volume product in North America but demand is still relatively confined in the EU. The wood machinery manufacturer Raute reported global demand for LVL in 2013 of 3.3 million m^3, 10% more than in 2012, and projected the global market to grow to 5.2 million m^3 by 2018, mostly concentrated in North America. Raute reported that EU consumption of LVL was 172 520 m^3 in 2009, rising to 209,000 m^3 in 2013. Raute projected LVL demand in the EU to increase to around 500 000 m^3 in 2020 following large investments LVL manufacturing in Poland and Germany and in expectation of rising housing starts and share of timber frame and continuing shift to pre-fabrication in European construction.

LVL manufacturers are also confident that their product offers superior technical performance compared to glulam, providing greater strength per unit of mass and therefore allowing specification of less bulky components. Softwood dominates European LVL consumption but a new LVL mill in Germany is now producing beech LVL. The two largest European markets for LVL are the UK, which in 2012 represented an estimated 34%, and Scandinavia, which represented approximately 39% of total EU demand. Other important markets in Europe include France, Germany, Switzerland and the Benelux countries.

At least three VPA Partner countries - Indonesia, Malaysia and Thailand - are known to be producing small volumes of LVL utilising a range of species, notably rubberwood and meranti. Work to test the technical performance of LVL manufactured in a wide range of tropical species – both from plantations and natural forests – has been undertaken in South East Asia and South America. LVL has potential to extend the range of applications for tropical hardwood, particularly fast-growing plantation species.

EU trade statistics indicate that some tropical LVL may be entering the EU market. The volumes must be small but may be rising. In 2016, imports from tropical countries of "other veneered panels" covered under HS/CN code 441290 into the EU – which includes products like blockboard and battenboard alongside LVL – totalled around 20 000 m^3, all derived from Indonesia, Malaysia and

Thailand, each supplying 6000 m^3 to 7000 m^3. This compares to negligible imports listed under this product code in 2013.

Cross-laminated lumber

Use of CLT, which is extremely strong and stable and can be engineered to extremely high tolerances, is allowing timber to be used for the first time for high-density high-rise construction. The world's tallest timber building - completed in 2016 in Vancouver, Canada - has 18 storeys made possible by use of CLT. Another project launched in Amsterdam in 2016 will involve construction of a 21-storey building in CLT.

CLT production capacity in Europe has risen dramatically in Europe in recent years and now amounts to close to 1 million m^3 per year, concentrated in Germany and Austria. While production to date has been almost exclusively in softwoods (mainly Spruce), there is growing interest in using hardwoods.

The American Hardwood Export Council is playing a leading role to develop potential for hardwood CLT in Europe and elsewhere. It was involved in two high profile demonstration projects – the Endless Stair and the Smile – in which leading architects were commissioned to construct large installations as prominent features at the London Design Fair in 2013 and 2016. Both installations demonstrated CLT manufactured using American tulipwood. These demonstration projects encouraged construction of the first permanent structure in hardwood CLT, a health-related building completed in the north of England in 2016.

These various CLT projects have shown that use of hardwood for CLT is more expensive than softwood on a per cubic meter basis, but that the extra cost can be offset by the much higher strength achieved by hardwoods. This allows smaller volumes to be specified, saving on the cost of purchasing and transporting materials. Use of hardwood CLT also allows the creation of less bulky and more attractive structures, particularly as architects are increasingly keen to leave the structural CLT elements exposed for display in the finished building.

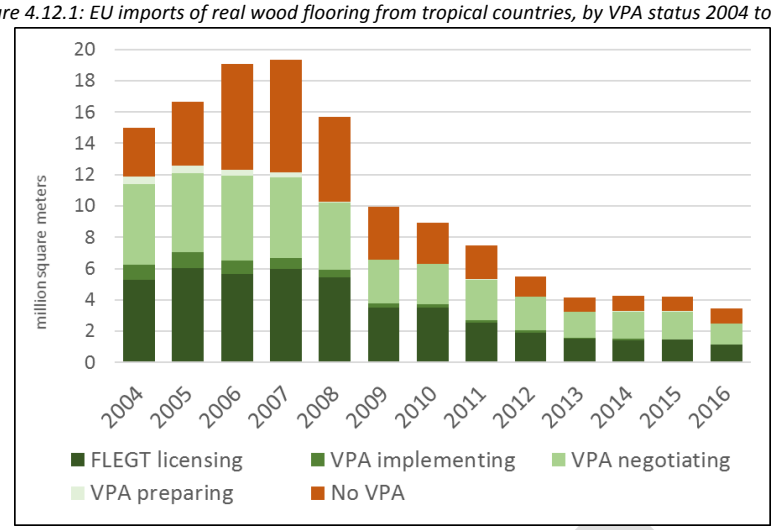
While at present only temperate hardwoods are being considered for use in CLT in the EU, some larger tropical suppliers have expressed interest in exploring the opportunities for tropical hardwood in this sector, given the high strength to weight ratio of many tropical species, and their durability (implying competitive advantages for tropical hardwoods in CLT elements exposed to the weather).

4.12 VPA partners in EU real-wood flooring supply

Between 2013 and 2016, EU demand for real-wood flooring (i.e. not including laminate flooring) recovered slowly. However, suppliers in both the tropics and China lost market share to domestic manufacturers and manufacturers in neighbouring European countries. The real-wood flooring sector also came under intensifying competitive pressure from alternative flooring surfaces, notably wood look-alike laminates and luxury vinyl tiles.

After falling 50% between 2009 and 2013, EU imports of real-wood flooring from the tropics remained flat at around 4.2 million m^2 in 2014 and 2015 and then fell a further 18% to 3.46 million m^2 in 2016. Imports from Indonesia declined 25% from 1.5 million m^2 in 2013 to 1.1 million m^2 in 2016. In the same period, imports from VPA implementing countries fell 62% to a negligible level of only 21 000 m^2. Imports from VPA negotiating countries fell 22% to from 1.66 million m^2 to 1.30 million m^2. Imports from VPA preparing countries increased 71% in this period, although the quantity was still negligible at only 32 700 m^2 in 2016. (Figure 4.12.1).

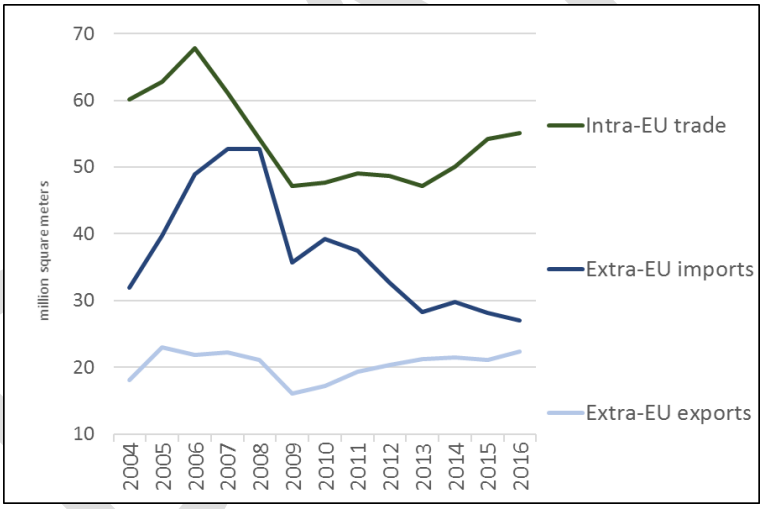
Figure 4.12.1: EU imports of real wood flooring from tropical countries, by VPA status 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

The decline in EU imports of real-wood flooring is not restricted to the tropics. Total EU imports increased 5% to 29.8 million m^2 in 2014, but then declined 9% in the next two years to 27.1 million m^2 in 2016. Throughout this period internal EU trade increased 17% from 47.1 million m^2 in 2013 to 55.1 million m^2 in 2016. A rise in EU exports also contributed to a decline in the EU trade deficit in wood flooring from 4.1 million m^2 in 2013 to 3.5 million m^2 in 2016. (Figure 4.12.2).

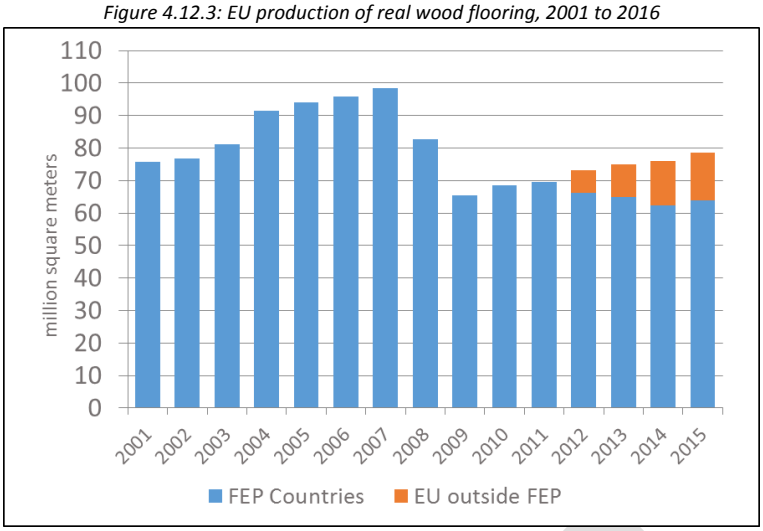
Figure 4.12.2: EU internal and external trade in real wood flooring, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

The rise in internal EU trade and narrowing of the trade deficit imply intensifying competition for imported products from domestic manufacturers in the real-wood flooring EU market between 2013 and 2016. This is also suggested by data published by the European Association of Parquet Flooring Manufacturers (FEP) which shows that real-wood flooring production in the EU increased 5% from 75.0 million m^2 in 2015 to 78.6 million m^2 in 2015. (Figure 4.12.3).

Figure 4.12.3: EU production of real wood flooring, 2001 to 2016



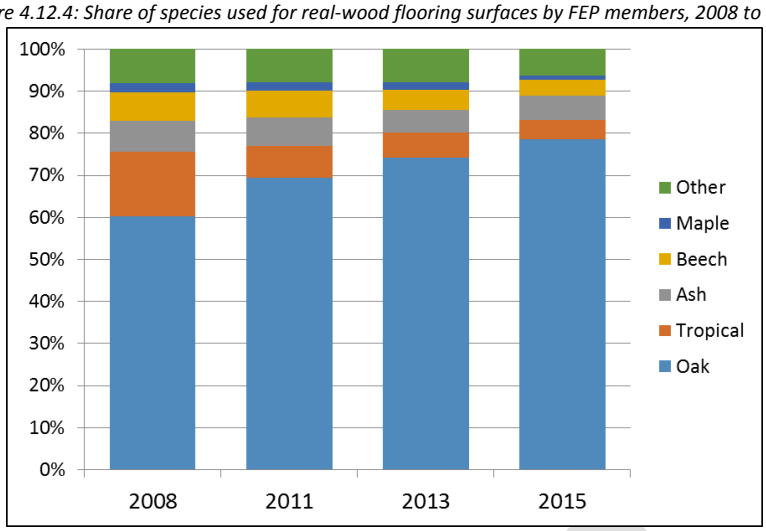
Source: ITTO IMM analysis of FEP

FEP data indicates that consumption of real-wood flooring in Europe is rising more slowly than production. Wood flooring consumption in the EU increased by 0.5% in 2015, and by 1% in 2016. In 2016, the EU consumed slightly more than 100 million m^2 of real-wood flooring, around 70% from domestic manufacturers and 30% from imports. According to FEP, the recovery in wood flooring demand became more widespread across the EU in 2015 and 2016 as southern European markets for hardwood flooring, particularly Spain, gained momentum for the first time since the onset of the global financial crisis.

According to FEP, in 2015 multilayer parquet floors accounted for 84% of wood floors manufactured in Europe, the majority comprising three-layer parquet (roughly 70 % of total market volume). Solid wood flooring accounted for only 14% of production.

FEP data highlights the increasing reliance on oak in the EU wood flooring sector, a factor which is both a result of, and serves to reinforce, the dominance of domestic suppliers in the EU market. The share of oak surfaces in European real-wood flooring production increased from 70.9% in 2013 to 77.7% in 2015. During the same period, the share of tropical timber fell from 5.8% to 4.5%, beech fell from 4.6% to 3.8% and maple fell from 1.6% to 1%. The only timber other than oak to increase share was ash, rising from 5.1% in 2013 to 5.6% in 2016, and this mainly because it is regarded as a cheap oak substitute. (Figure 4.12.4). Oak is now so dominant in the EU wood flooring sector that manufacturers were expressing concern about the relative lack of availability of oak logs in 2015 and 2016.

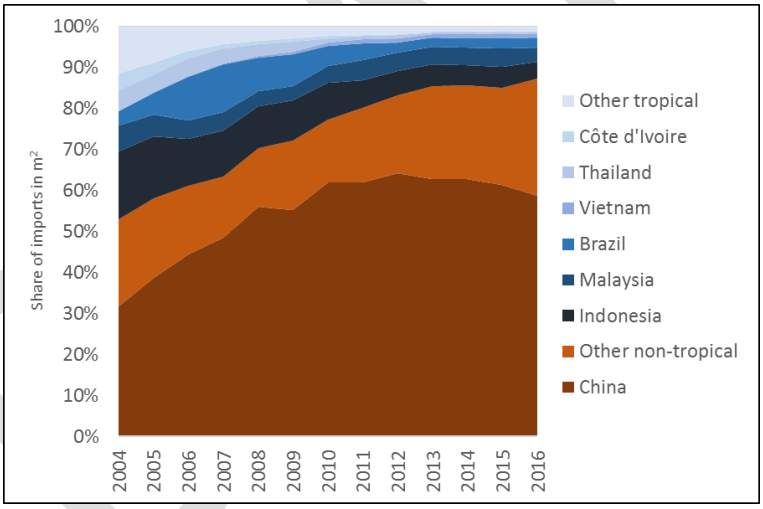
Figure 4.12.4: Share of species used for real-wood flooring surfaces by FEP members, 2008 to 2015



Source: ITTO IMM analysis of FEP

The share of tropical countries in total EU imports of real-wood flooring fell from 14.6% in 2013 to 12.8% in 2016. China's share of real-wood flooring imports also fell during this period, from 62.7% to 58.7%. During this period, several European countries neighbouring the EU significantly increased share, including Ukraine (from 8.7% to 14.7%), Bosnia (from 2.0% to 4.4%), Serbia (from 1.0% to 1.1%) and Belarus (from 0.3% to 0.9%). (Figure 4.12.5).

Figure 4.12.5: Share of EU imports of real wood flooring, by main supply countries 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

The Domotex show in Hanover during January 2017 – the largest flooring show in Europe attracting more than 1400 exhibitors from over 60 countries – also highlighted the huge dominance and sophistication of European wood flooring manufacturers and the heavy reliance on oak. Oak was everywhere and, rather than expand the range of wood species, exhibitors were more likely to create interesting visual effects by combining diverse colours, patterns, shapes and textures. There was a strong focus on longer and wider dimensions and on herringbone-patterned flooring.

On the other hand, Domotex 2017 also highlighted there are some trends in the EU flooring market with potential to offer new opportunities to manufacturers of wood products in the tropics. The desire for products which are "natural", "authentic" and "individual", and which are backed by a strong "narrative" may be turned to the advantage of tropical flooring suppliers offering FLEGT Licensed products. Sustainability was a strong theme in the show, with more wood flooring

manufacturers communicating the origins of the woods they use through forest certification and other mechanisms.

A new trend to extend wood flooring into rooms such as kitchens and bathrooms where it has not traditionally been widely used due to concerns about short service life may offer another avenue to increase market share of tropical wood. A French company exhibiting at Domotex 2017 was promoting a patented flooring system comprising strips of tropical wood, favoured both for its look and natural durability, which are pre-oiled and with an integrated jointing system to ensure the floor is easy to install and remains completely watertight. The product was offered in a variety of woods, all tropical, including doussie, wenge, mutenye, teak, acacia and iroko.

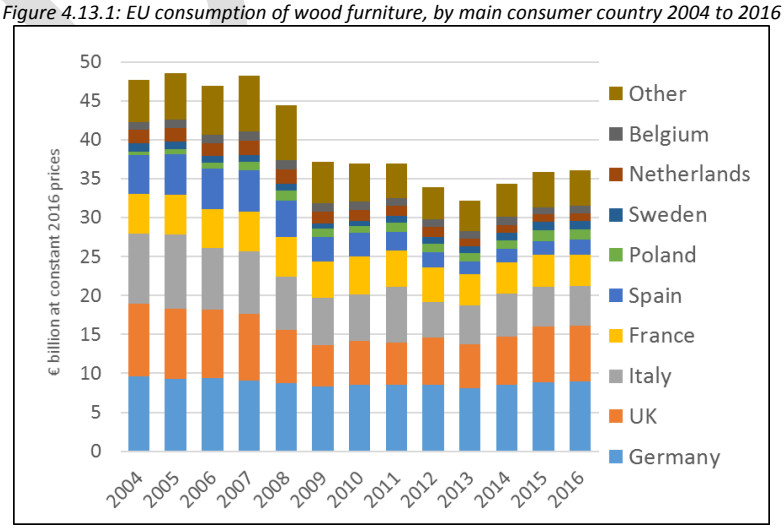
Wood flooring faces stiff competition in the European market from laminates and non-wood materials. Members of the European Producers of Laminate Flooring (EPLF) association sold 476 million m^2 of laminate flooring in 2016, of which 350 million m^2 was in Europe, over four times the volume of wood-faced flooring consumed in the region. EPLF member sales in Europe during 2016 were 5% higher than the previous year, which compares to only 1% growth in sales of real wood flooring. Competition from non-wood materials is also intense and varies between countries. For example, the challenge comes particularly from luxury vinyl tiles (LVT) in Germany and from ceramic tiles in Italy.

4.13 VPA partners in EU wood-furniture supply

Demand for wood furniture in the EU is rising but competition is also intensifying. EU manufacturers, particularly in Eastern Europe, are producing more at a time when domestic consumption is growing only slowly and exports to other parts of the world are weakening. External suppliers to the EU made significant gains in 2014 and 2015 but struggled to maintain this momentum in 2016. Tropical wood furniture suppliers face significant competition from domestic manufacturers and manufacturers in Eastern European countries outside the EU, as well as in China. Vietnam was out-performing other tropical suppliers in the EU wood furniture market between 2013 and 2016.

Although the official Eurostat annual production data for 2016 has yet to be published, a review of Eurostat indices and trade data suggests that EU consumption of wood furniture was around €36.1 billion in 2016, a gain of 1% compared to 2015. During 2016, consumption was quite stable in the largest markets including Germany, the UK, Italy and France compared to the previous year, but consumption increased slightly in Spain, Poland, Sweden and the Netherlands (Figure 4.13.1).

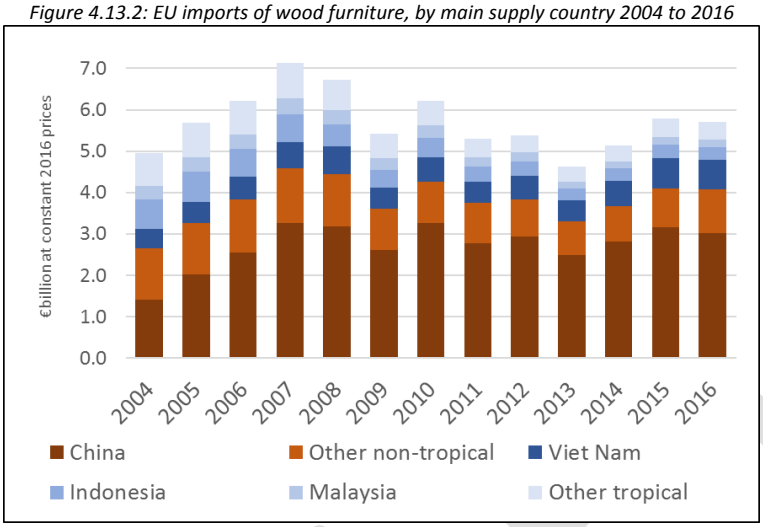
Figure 4.13.1: EU consumption of wood furniture, by main consumer country 2004 to 2016



Source: ITTO IMM analysis of Eurostat PRODCOM and COMEXT

The value of EU imports of wood furniture from non-EU countries increased 25% from €4.63 billion in 2013 to €5.79 billion in 2015 before falling 1.3% to €5.71 billion in 2016 (Figure 4.13.2). The sharp rise in euro import value between 2013 and 2015 was partly driven by depreciation of the euro against the dollar during this period. Import tonnage increased between 2013 and 2015, but by only 9% from 1.78 million tonnes to 1.95 million tonnes.

Figure 4.13.2: EU imports of wood furniture, by main supply country 2004 to 2016

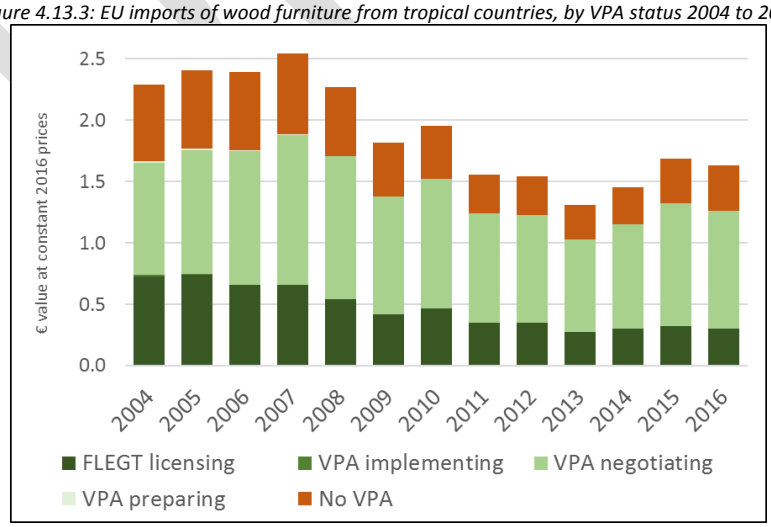


Source: ITTO IMM analysis of Eurostat COMEXT

EU imports of wood furniture from tropical countries increased 29% from €1.31 billion in 2013 to €1.69 billion in 2015 before falling 1.3% to €1.64 billion in 2016 (Figure 4.13.3).

EU imports of wood furniture from Indonesia increased 15% from €277 million in 2013 to €319 million in 2015 but then declined 6% to €299 million in 2016. EU imports from the five VPA-implementing countries were negligible during this period. Imports from VPA-negotiating countries increased 33% from €752 million in 2013 to €1002 million in 2015 before declining 4% to €962 million in 2016. Imports from VPA-preparing countries are extremely low, but there was a surge in imports from Myanmar from near zero to €2.5 million between 2013 and 2016.

Figure 4.13.3: EU imports of wood furniture from tropical countries, by VPA status 2004 to 2016

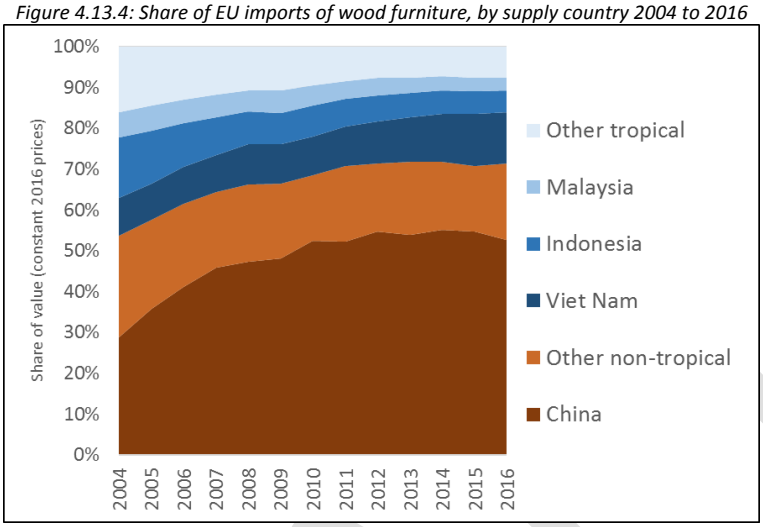


Source: ITTO IMM analysis of Eurostat COMEXT

VPA partner countries accounted for 77% of EU tropical wood furniture imports in 2016, down from 79% in 2013. The slight decline in share is due to rising imports from several non-VPA countries including India, Brazil and the Philippines.

The total share of tropical countries in EU wood furniture import value remained level at between 28% and 29% in the last four years. However, during this time the share of Viet Nam increased at the expense of Indonesia and Malaysia. (Figure 4.13.4).

Figure 4.13.4: Share of EU imports of wood furniture, by supply country 2004 to 2016



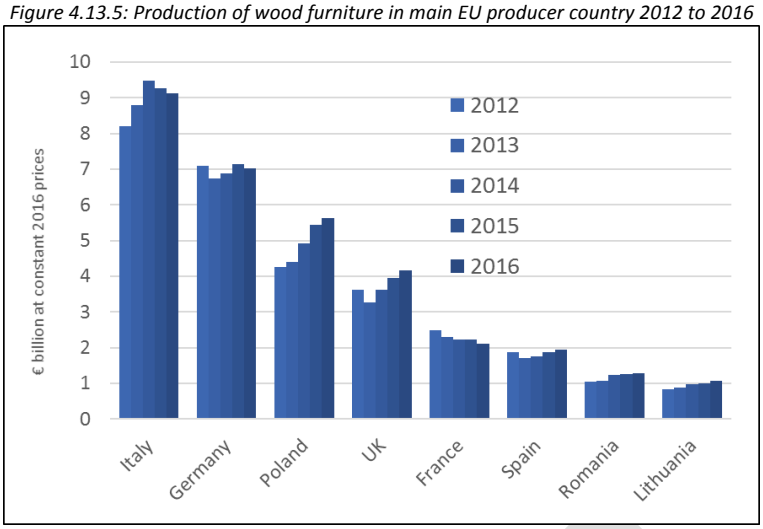
Source: ITTO IMM analysis of Eurostat COMEXT

China is the dominant external supplier of wood furniture to the EU and was gaining share in the market between 2013 and 2015. EU imports from China increased 27% from €2.49 billion in 2013 to €3.16 billion in 2015. China's share of total imports increased from 54% to 55% during this period. However, in 2016 EU imports from China fell 5% to €3.01 billion and share of imports fell to 53%. In 2016, China lost share to Viet Nam and to several non-tropical suppliers including Turkey, Serbia, Ukraine and Belarus. EU import value from non-EU temperate countries other than China increased by 14% to €1.07 billion in 2016.

Meanwhile, unlike in North America, the EU's domestic manufacturers are maintaining their domination of the European wood furniture market. In 2016, domestic manufacturers accounted for around 87% for the total value of wood furniture supplied into the EU market, the same proportion as the previous year and little changed, in fact, since 2007.

The value of EU wood furniture production was around €39.6 billion in 2016, 1% higher than the previous year, but still 20% down on the level prevailing before the financial crises in 2008. A slight slowdown in production in Italy and Germany, the two largest manufacturing countries offset gains in Poland, the UK, Spain, Romania and Lithuania. (Figure 4.13.5).

Figure 4.13.5: Production of wood furniture in main EU producer country 2012 to 2016

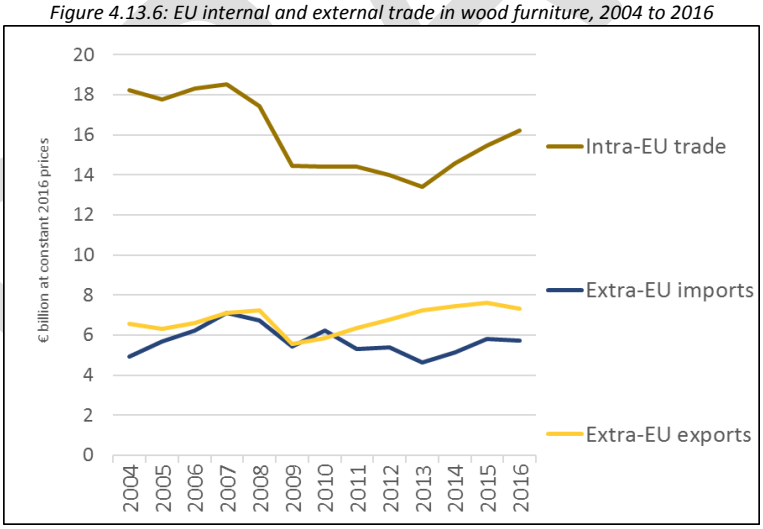


Source: ITTO IMM analysis of Eurostat COMEXT

Analysis of Eurostat trade data reveals that internal EU trade in wood furniture was €16.2 billion in 2016, 4% more than the previous year and continuing a rising trend of the previous two years. This trend is driven both by the slow rise in EU consumption and by rising dependence of the internal EU market on manufacturers located in lower cost member countries of Eastern Europe, particularly Poland, Romania, and Lithuania.

The EU has maintained a trade surplus in wood furniture since 2011 when exports to non-EU countries overtook imports from outside the EU. However, this surplus has been narrowing, falling from €2.59 billion in 2013 to €1.60 billion in 2016. (Figure 4.13.6).

Figure 4.13.6: EU internal and external trade in wood furniture, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

In 2016, EU wood furniture exports declined into the Middle East and Russia and were flat into North America, Switzerland, Norway, and Japan. Minor gains in China and a few other emerging markets were insufficient to offset declining demand elsewhere.

There are many reasons for the continuing dominance of domestic manufacturers in the European wood furniture sector. An obvious short-term factor is weakening of European currencies between 2014 and 2016 – particularly the UK pound - against the dollar and Chinese yuan.

More enduring factors include: the relative high degree of fragmentation in the European retailing sector – which greatly complicates market access for overseas suppliers; the underlying strength of European furniture manufacturers and their brands in terms of innovation and design; the obstacles to overseas suppliers complying with European technical and environmental standards; and the expansion of furniture manufacturing in Eastern Europe, a location which combines ready access to raw materials and to the internal EU market.

Although labour costs are quite high in Europe relative to China and South East Asia, furniture manufacturers in the EU are making a virtue of their shorter supply chains which not only reduce transport costs but also allow products to be delivered more rapidly.

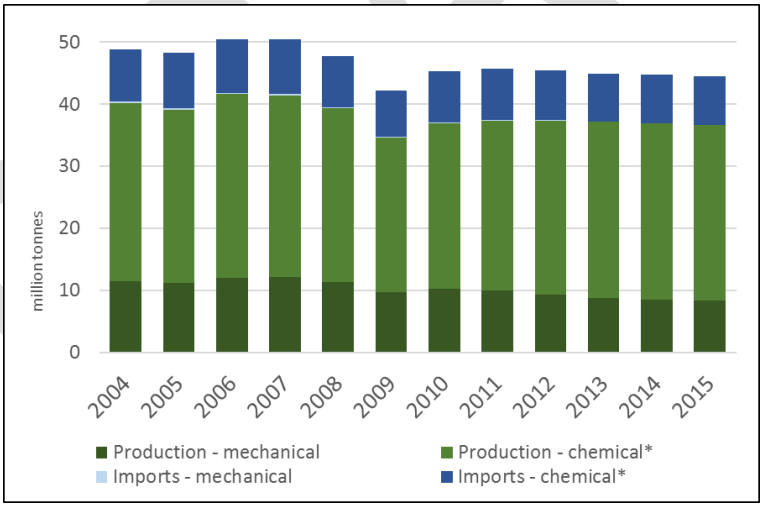
4.14 VPA partners in EU pulp supply

Wood pulp supply to the EU declined gradually but consistently between 2011 and 2015 from 45.7 million tonnes to 44.5 million tonnes. Much of the decline was due to falling production of mechanical pulp within the EU, from 9.9 million tonnes in 2011 to 8.4 million tonnes in 2015, a long-term trend encouraged by declining demand for newsprint and very high energy demands of the mechanical pulping process.

Production of chemical pulp in the EU increased from 27.3 million tonnes in 2011 to 28.3 million tonnes in 2015. The trend toward greater use of chemical wood pulp is driven by the need for greater strength as European papermakers are blending more less costly and weaker mechanical pulps and recycled paper fibres into the furnish they use to make paper.

Pulp imports into the EU, consisting almost exclusively of chemical pulp, accounted for 17.7% of total EU pulp supply in 2016, down from 18.5% in 2011. (Figure 4.14.1).

Figure 4.14.1: EU supply of wood pulp, by main product and source 2004 to 2015

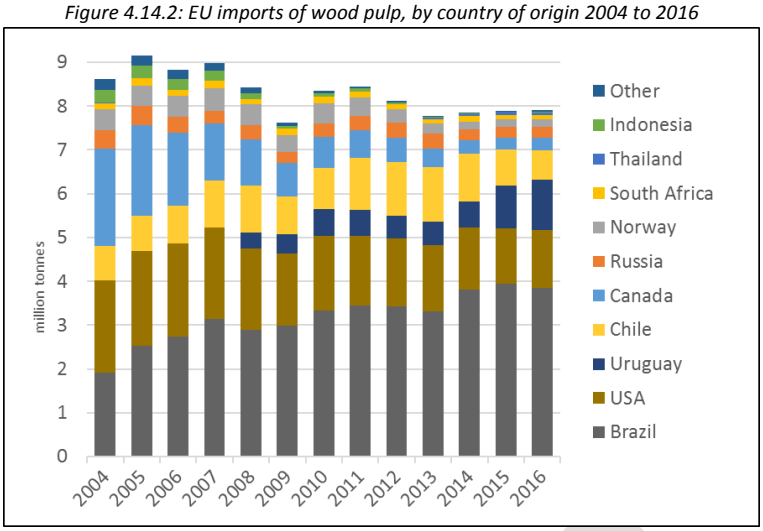


Source: ITTO IMM analysis of Eurostat PRODCOM and COMEXT

EU imports of wood pulp declined from 8.4 million tonnes in 2011 to 7.8 million tonnes in 2013, before increasing to 7.9 million tonnes in 2014, a level maintained in 2015 and 2016. Imports are almost all from South and North America, with a negligible volume from the tropics.

Brazil's share of EU wood pulp imports peaked at 50.0% in 2015 before sliding to 48.8% in 2016. The share of Uruguay in EU pulp imports increased from 7.1% in 2011 to 14.5% in 2016. After a long period of declining share, the U.S. recovered a little ground in the EU market with share rising from 16% in 2015 to 16.6% in 2016. Chile's share of EU imports fell from a peak of 15.9% in 2013 to 8.6% in 2016. (Figure 4.14.2).

Figure 4.14.2: EU imports of wood pulp, by country of origin 2004 to 2016

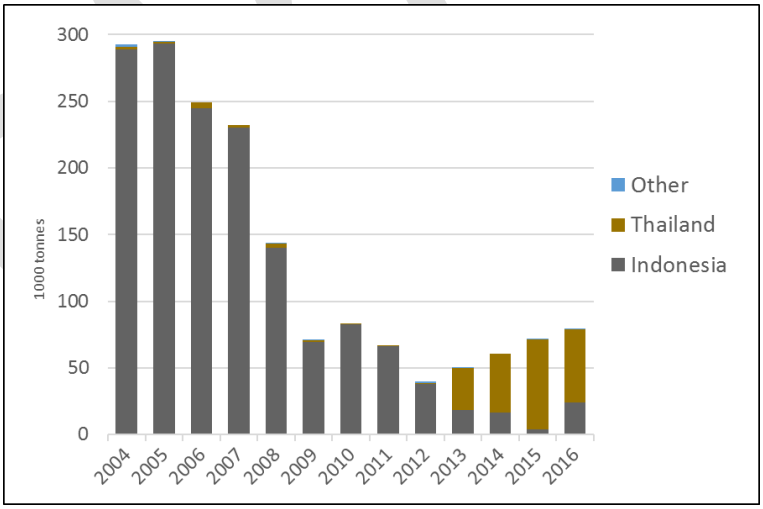


Source: ITTO IMM analysis of Eurostat COMEXT

Indonesia and Thailand are the only tropical countries supplying pulp to the EU. EU pulp imports from Indonesia, consisting entirely of chemical hardwood pulp, declined to less than 4 000 tonnes in 2015 before recovering to 25 000 tonnes in 2016. Indonesia's pulpwood plantations consist primarily of Acacia mangium with smaller quantities of Acacia crassicarpa, Gmelina arborea and Eucalyptus deglupta.

Pulp imports from Thailand, which were negligible prior to 2013, increased from 33 000 tonnes in 2013 to 68 000 tonnes in 2015, before falling back to 55 000 tonnes in 2016. Thailand's pulpwood plantations comprise mainly Eucalyptus camaldulensis, but some pulp exported to Europe may derive from palm oil[12]. (Figure 4.14.3).

Figure 4.14.3: EU imports of wood pulp from tropical countries, 2004 to 2016



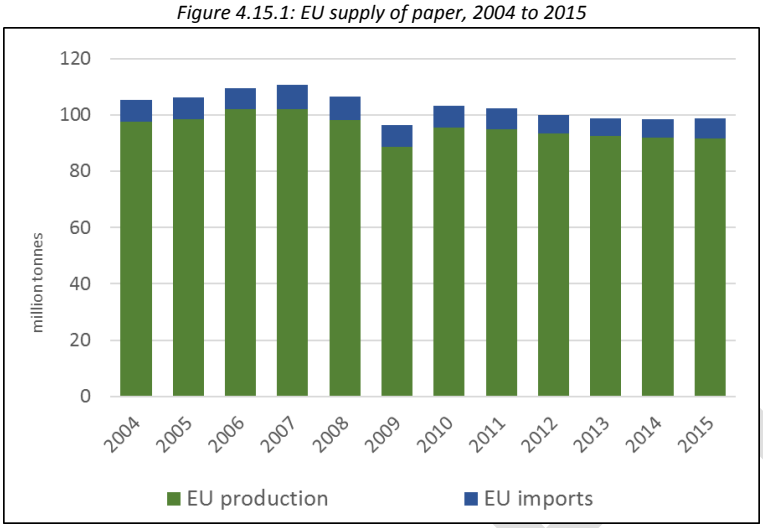
Source: ITTO IMM analysis of Eurostat COMEXT

[12] According to a report in the Eco-business website published 31 January 2014, Thailand-based Pulp Green Tech Holding (PGT) has developed and commercialised a process to produce high-grade paper pulp from the waste products of palm oil harvesting: http://www.eco-business.com/news/thai-firm-converts-palm-oil-waste-into-high-quality-paper-pulp/

4.15 VPA partners in EU paper supply

Total supply of paper products to the EU declined from 102 million tonnes in 2011 to 99 million tonnes in 2013 and remained at this lower level in 2014 and 2015. Imports accounted for 7% of total supply throughout this period. (Figure 4.15.1).

Figure 4.15.1: EU supply of paper, 2004 to 2015

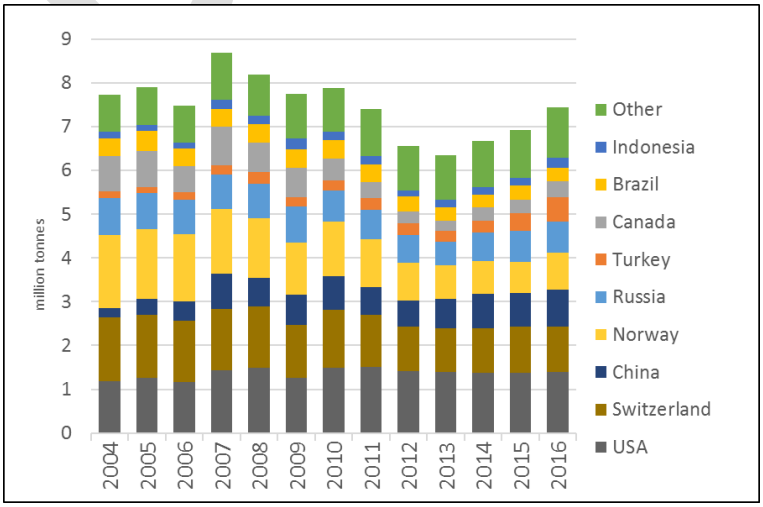


Source: ITTO IMM analysis of Eurostat PRODCOM and COMEXT

The stability in overall paper supply to the EU hides significant changes in the composition of products. EU demand for newsprint and graphic papers continued to decline during this period, whereas demand was rising for containerboards (brown fibre), and for various white papers and boards including carton-boards, tissues and speciality papers.

Imports of paper products to the EU declined from 7.4 million tonnes in 2011 to a low of 6.3 million tonnes in 2013 before rebounding during the next three years to 7.4 million tonnes in 2016. There was a notable increase in imports of paper products from China, from 674 000 tonnes in 2013 to 852 000 tonnes in 2016. Much product from China comprises relatively high value paper products such as cartons and containers, exercise books, stationery items like labels and envelopes, and paper cups and dishes. EU imports of paper products also increased from Norway, Russia, Turkey, and Canada between 2013 and 2016. (Figure 4.15.2).

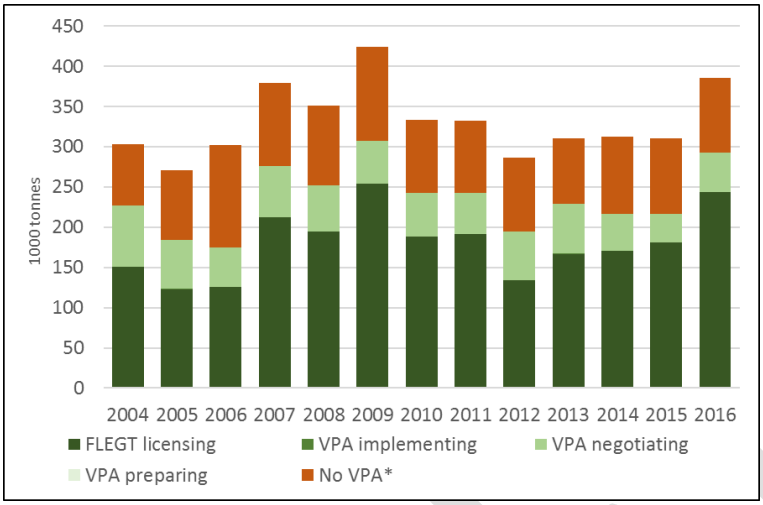
Figure 4.15.2: EU imports of paper, by main supply country, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

EU paper product imports from tropical countries remained static at 310 000 tonnes per year between 2013 and 2015 but then increased to 385 000 tonnes in 2016 when they accounted for 5% of total imports. (Figure 4.15.3).

Figure 4.15.3: EU imports of paper from tropical countries, by VPA status 2004 to 2016

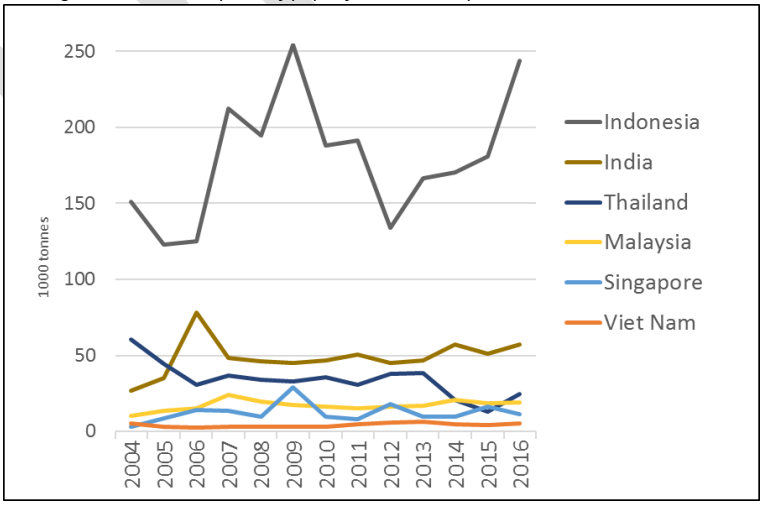


Source: ITTO IMM analysis of Eurostat COMEXT

The trend in EU imports of paper products from tropical countries is driven primarily by Indonesia, by far the largest supplier amongst tropical countries. EU imports from Indonesia increased from 167 000 tonnes in 2013 to 244 000 tonnes in 2016, close to the previous peak in 2009. Products imported from Indonesia consist primarily of uncoated papers for writing and printing, together with kaolin-coated papers for a variety of printing applications.

The only other tropical countries supplying non-negligible quantities of paper to the EU are India, Thailand, Malaysia and Singapore (the latter most likely re-exports from other Asian countries). During the period 2013 to 2016, EU imports of paper from India, Malaysia and Singapore remained relatively stable at a low level, while imports from Thailand declined. (Figure 4.15.4).

Figure 4.15.4: EU imports of paper from main tropical countries, 2004 to 2016



Source: ITTO IMM analysis of Eurostat COMEXT

5. Implementation and impact of EUTR 2014-2016

This section draws on a range of sources to assess the implementation and impact of the EUTR since its introduction in March 2013 in recognition of the central role the regulation is expected to play to generate demand for FLEGT licensed products which are given a green lane in the due diligence requirements.

5.1 Overview

In 2015 and 2016, several reports were published and survey data made available by a variety of organisations, including the EC and IMM, which together allow for a preliminary assessment of the impact of the EU Timber Regulation.

Overall these analyses identify various short-comings, notably the slow pace of EUTR implementation across the EU and the unequal levels of enforcement and penalties, and suggest there has yet to be any step-change in trade attributable to the law.

However, the underlying message is positive. There is widespread support for EUTR in the private sector in the EU, clear recognition that it is an appropriate response to the challenges of illegal timber trade, and early signs that it is already extending more responsible sourcing policies in the EU and altering operators' behaviour.

There was also an immediate response by the EC to the issues raised, including use of formal infringement proceedings against those member countries failing to implement EUTR, update and extension of the guidance for implementation, and efforts to improve coordination and communication.

5.2 Reports on EUTR implementation

Of the reports on EUTR released in 2015 and 2016, the most prominent and far-reaching is the EC's own review of the effectiveness of the EUTR published on 19 February 2016[13]. The review covers the period from March 2013 to March 2015 and is based on member countries' reports on the application of the EUTR, an open public consultation, targeted stakeholder surveys and an evaluation report produced by an external consultant. It analyses the EUTR for relevance, effectiveness, efficiency, coherence and EU-added value.

As input to the EC Review report, IMM prepared a Preliminary Assessment of the trade impact during the first 2 years of the law's implementation. Information on tropical timber importers perceptions of FLEGT licensing in the light of EUTR was also collected as part of the IMM Scoping studies undertaken in Germany, Spain and the UK in the last quarter of 2015.

A report by the European Court of Auditors was published in October 2015 reviewing the financial implications of the broader FLEGT Action Plan which included brief commentary on implementation of EUTR[14]. This was based on analysis of various FLEGT strategy documents and programme evaluations, together with interviews with a range of stakeholders (EU officials, analysts, and NGOs but not the trade).

[13] http://ec.europa.eu/environment/forests/eutr_report.htm
[14] http://www.eca.europa.eu/Lists/News/NEWS1510_22/INSR_FLEGT_EN.pdf

Client Earth, an NGO which seeks to protect the environment through advocacy, litigation and science, is also regularly reviewing implementation of EUTR, most recently publishing an update in March 2017[15].

5.3 Member country implementation of EUTR

A clear conclusion of the EC EUTR Review is that there is scope to improve administration and enforcement of the regulation, particularly in terms of its uniform application across all 28 member countries. Recognition of this fact by the European Commission led in 2015 to their increased engagement in bilateral dialogue with member countries to rapidly bring the majority to compliance.

By October 2015, 24 of the 28 EU member countries had taken all steps necessary to introduce EUTR enforcement and sanctions regimes at national level, appoint the Competent Authorities (CA), and begin checks. However, three countries - Greece, Hungary, Romania - had not agreed on penalties or undertaken any checks at that time. Another country, Spain, had agreed penalties but had yet to allocate responsibility to a national agency or to begin checks.

In response, the EC imposed formal infringement proceedings against Greece and Hungary, giving two months to take all necessary measures and threatening fines if they failed to comply. Spain and Romania avoided the threat of formal proceedings by agreeing to take immediate steps to fill the remaining gaps in the regime.

On 22 February 2017, the EC reported that all EU member countries previously identified as non-compliant were now in compliance with EUTR. However, it was noted that the EC had issued a formal notice to Slovakia in December 2016 to provide evidence that sanctions for EUTR non-conformance had been enacted into national law.

On 1 May 2015, Norway (not an EU member) implemented the EUTR, so that the regulation now applies in 29 countries.

5.4 Effectiveness of EUTR enforcement

While all EU member countries had introduced enforcement regimes required by EUTR by the end of 2016, questions remain as to whether the enforcement regimes in place across the EU are 'effective, proportionate and dissuasive'.

The EC EUTR Review was critical of the fact that penalties for EUTR infringement vary so widely across the EU and that understanding of the Regulation differs between CAs. According to the Review there had been insufficient and uneven allocation of resources to the national enforcement bodies.

The Review observes that "the EUTR has been [implemented] in a period of reduced public expenditure, which may have impacted resource allocation". The numbers of staff assigned to the EUTR in the individual member countries varies from 1 to 200. Some member countries had not allocated any additional financial resources at all for the implementation and enforcement of the EUTR. In many cases, resources appear "disproportionately low compared to the number of operators in those countries, leaving the deterrent effect of the enforcement activities rather limited". In many member countries, only a fraction of operators had been subject to checks by CAs.

More positively, Client Earth observed in March 2017 that "after a slow start for most EU member countries during the first two years of EUTR implementation (2013-2015), there was, in certain

[15]http://www.documents.clientearth.org/download/12520/

member countries, an increase in the number of EUTR enforcement checks during 2016. In France for example, during the first half of 2016, about 103 checks were carried out by the two ministries in charge of enforcing the EUTR. By March 2016, the Dutch Competent Authority had checked approximately 150 operators for compliance with the EUTR. Between mid-2013 and January 2016, the German Competent Authority checked around 370 timber operators. The Danish Competent Authority carried out 46 checks in 2016, and the Finnish Competent Authority undertook 32 checks on imported timber and 19 on domestic timber between March 2015 and November 2016".

Some of these checks led to sanctions being imposed. Setting a new legal precedent, a Swedish court ruled in November 2016 that a company importing timber from Myanmar was in breach of the EUTR. Fines were also imposed in The Netherlands in November 2016 for companies not meeting the EUTR due diligence requirement for timber imported from Cameroon.

Nevertheless, by the end of 2016, only a limited number of penalties had been applied so there is relatively little practical experience to draw on. This is partly because those member countries that introduced tough sanctions and started to undertake regular checks relatively early on made clear that they deliberately introduced a grace period to provide time to build understanding both in government agencies and the timber trade of the practical steps required for effective due diligence.

There are indications that EU authorities are being strict in their interpretations of EUTR requirements which, in practice, are likely to create significant challenges for supply of wood products from countries where there are high levels of corruption without some form of third party audited traceability system. Updated EU guidance on EUTR implementation issued in February 2016 states that "in cases where the risk of corruption is not negligible even official documents issued from authorities cannot be valued as reliable in themselves" and highlights the need for more far-reaching risk mitigation actions in such cases.

Meanwhile, CAs in some EU member countries have been subjecting timber products obtained from EU importers to microscopic, DNA and chemical analysis to identify the species and country of origin as far as possible. Even though this form of analysis in isolation is rarely if ever sufficient to identify wood of illegal origin, importers are being sanctioned under EUTR for their failure to correctly identify species content in product on grounds that it indicates inadequate due diligence procedures. This is putting importers on notice that they must accurately identify the exact species composition of products irrespective of the complexity of the supply chain or the underlying risks of illegal origin.

5.5 Extent of private sector compliance

There is some evidence that a significant proportion of those importing companies first targeted for inspections in member countries that implemented enforcement early-on already had due-diligence systems in line with EUTR requirements. Representatives of CAs in Germany and the Netherlands speaking at FLEGT Week in March 2015 both reported that about 75% of companies assessed so far had adequate due diligence systems in place. In early 2015, the UK CA indicated that all of the largest UK retailers of plywood had implemented due diligence systems in accordance to EUTR requirements.

However, based on more detailed feedback from CAs, the EC EUTR Review commented that "operators have not consistently implemented due diligence requirements" during the reporting period but that the situation is gradually improving. One of the main points of criticism identified by CAs during checks was that there was often a lack of understanding of all elements needed for the due diligence system, so "while many operators had some type of DDS, they did not always meet the EUTR requirements".

The EC EUTR Review found that small and medium-sized enterprises (SMEs) were struggling more than larger companies to fulfil EUTR obligations. According to the review, SMEs consider EUTR compliance "a challenge, due to difficulties in understanding the technical requirements of the due diligence system (DDS), lack of staff with adequate knowledge and experiences necessary for exercising the DDS and/or limited financial resources".

Enlisting the help of a Monitoring Organisation (MO), which provide compliant DDS, may be helpful in many of these cases. However, the review found that operators' interest in MO services has so far been very low. This was partly attributed to the fact that MOs are obliged to alert the CAs in cases of major EUTR infringements.

5.6 Measurable EUTR effects on trade flows

In the second quarter of 2015, IMM prepared a Preliminary Assessment of the trade impact of EUTR as input into the EUTR Review process. Using publicly available statistics, the assessment considered three specific questions identified as of particular concern to key stakeholders in the EUTR process: has EUTR increased reliance on domestic production at the expense of imports; has EUTR led to a shift from sources perceived to be "high-risk" to those perceived to be "low risk; and has EUTR led to diversion of EU imports from "high-risk" sources away from member countries with fully implemented regulatory regimes towards those where regulatory regimes are yet to be implemented? [16].

The analysis concluded that the trade data revealed no clear step-change in EU trade that could be readily attributable to EUTR. There were some trends which seemed, on the surface, to be partly driven by EUTR. For example: a shift to rely more on internal suppliers and reduce dependence on imports in some sectors such as flooring and bedroom furniture; an increase in imports from high risk countries in the CIS region into EU member countries that had been relatively slow to introduce EUTR sanctions regimes; and an increased concentration of tropical wood imports through ports in Belgium.

However, on closer inspection it was clear that most of these changes were a continuation of long-term trends dating to before EUTR, or were otherwise more readily explained by reference to other market factors such as: exchange rates; controls on log exports imposed by key exporting countries such as the Ukraine; logistical factors encouraging a shortening of supply chains; rising imports of tropical wood from countries without kiln drying facilities (necessitating kiln drying in Belgium prior to distribution); and an overall shift in the regional distribution of wood processing in the EU from west to east (which went hand in hand with rising trade with neighbouring CIS countries at the expense of Atlantic trade).

The impression that EUTR had only a minor impact on overall trade flows in the early years of implementation was reinforced by other trade flow trends which seemed entirely contrary to expectations following EUTR, such as the continuing increase in imports of plywood from China, typically regarded as "high risk", into EU member countries that were relatively quick to implement active EUTR regulatory regimes.

[16] The key question from an IMM perspective – to what extent is EUTR impacting on the trade in FLEGT Licensed timber – could obviously not be addressed directly due to lack of availability of any licensed timber during the period of review. However, consideration of these three questions should give some indication of the overall effectiveness of enforcement and likely efficiency of the EUTR in helping drive demand towards licensed product and away from potentially risky sources.

Another key output of the analysis was to highlight the critical need for additional new sources of information to reliably assess the trade impact of EUTR; for example, data on the actual volumes of third party certified and legally verified wood in trade, and more reliable indices of forest governance risk in timber supplying countries and of the extent and depth of EUTR sanctions regimes in different EU member countries. It also emphasised that analysis of trade statistics is insufficient to assess EUTR impacts in isolation and must be combined with interviews of individual operators to identify and assess the relative importance of different market drivers.

5.7 Anecdotal evidence of EUTR impact

While IMM's assessment of trade flow data indicated no clear step-change readily attributable to EUTR, there is anecdotal evidence to suggest that EUTR is contributing to significant changes in trade attitudes, structure and distribution networks. Few of these changes are likely to be observable from analysis of trade flow data. Based largely on informal interviews with timber traders, the following effects of EUTR have been identified in a variety of published sources:

- a switch to lower risk plantation-grown face veneers in the plywood sector[17];
- a greater focus on a more limited number of overseas suppliers better able to provide the assurances required[18];
- greater demand for third party legally verified and/or certified products from countries where there are perceived risks of illegal harvest and shift to third party legally verified and/or certified wood products by suppliers in these countries [19];
- reduction in focus on single certification systems in responsible procurement by importers and growing interest in a wider range of legality verification systems (such as OLB from Bureau Veritas, TLTV from SGS, VLC from the Rainforest Alliance)[20];
- increased trade by way of larger EU importers with more resources for due diligence and decrease in direct imports by smaller operators[21];
- greater risk adversity and reduced speculative purchasing from tropical countries[22];
- operators suspension of all procurement and sales of specific species identified as high risk (e.g ipe decking from Brazil)[23].

Another source of anecdotal evidence for EUTR impact is the EC EUTR Review which was informed by an on-line stakeholder consultation undertaken between April and July 2015. The survey indicates that amongst respondents there was a relatively high degree of support for EUTR and that it was an effective, proportionate and appropriate response to the problem of illegal timber trade. The survey also suggests that EUTR is altering procurement behaviour and trade flows in favour of lower risk supply sources. A summary of responses to the stakeholder consultation from the perspective of market impacts is provided in Annex 4.

[17] ITTO Tropical Timber Market Report, May 2013
[18] ITTO Tropical Timber Market Reports July 2013, August 2013, and May 2014
[19] Timber Trade Journal (TTJ), April 2014
[20] Timber Trade Journal (TTJ), April 2014
[21] European Timber Trade Federation (ETTF) Newsletter Winter 2014/2015
[22] Presentation by FLEGT IMM to ETTF in June 2014
[23] ITTO Tropical Timber Market Reports January 2015

6. FLEGT licensing in relation to other verification frameworks

This section considers the positioning of FLEGT Licenses in relation to private sector third party certification and legality verification, both in terms of availability of supply and perceptions of level of assurance and their respective contribution to forest governance goals.

6.1 EU trade access to certified and legally verified product

Assessing the current availability of third party verified products in the EU market is difficult since no data is regularly or systematically collected on the actual volume or value of trade in these products. The international FSC and PEFC certification frameworks that might be expected to collect such data only monitor the area of certified forest and the numbers of chain of custody certificates issued.

Nevertheless, an effort has been made to overcome this problem. In 2015 IMM updated an analysis originally undertaken by Forest Industries Intelligence Ltd in 2012 to estimate "level of exposure to 3rd party verified/certified wood"[24].

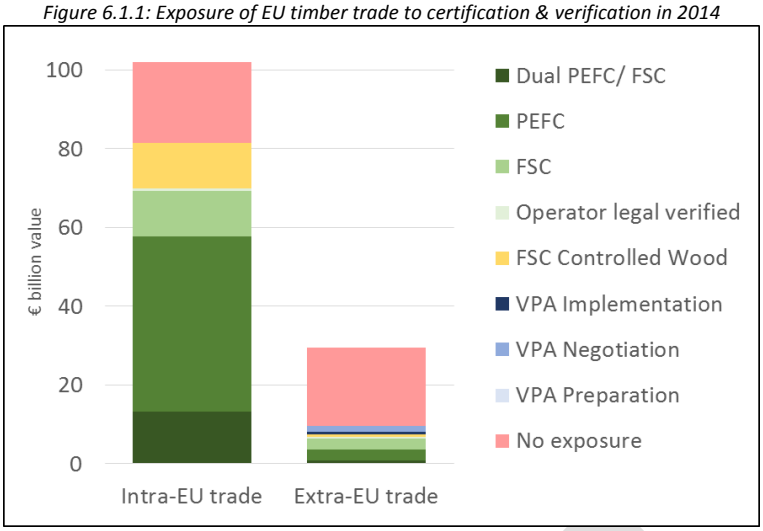
The 'level of exposure' is a rough measure to identify gaps in forest coverage of independent certification and legality verification systems. It is based on the percentage area of certified or legally verified commercial forest area in each individual supplier country. For example, if 40% of its forest area is known to be independently certified or legally verified, the level of exposure of a country's wood production and exports is also assumed to be 40%. The certified/verified forest areas are calculated by comparing data from the various certification and verification systems with UN FAO figures for areas of productive forest land.

'Level of exposure' data can be broken down by verification system, including FSC, PEFC, or operator-based systems of legality verification (such as SGS TLTV, Smartwood VLO, or OLB). For this assessment, wood from countries covered by FSC-endorsed National Controlled Wood Risk Assessment is also considered '3rd party verified'. To avoid double counting, areas dual certified to FSC and PEFC are accounted separately. Adjustments are also made for a few countries, such as Brazil and the USA, where there is a big difference in the level of certification in hardwood and softwood forests.

The new assessment indicates that in 2014, around 80% of internal EU trade in timber products (including all wood, wood furniture, pulp and paper) was "exposed" to some form of certification or legality verification. This is simply due to the fact that a very large proportion of forest area within the EU is either certified or assessed to be low risk of illegal harvest in an FSC national controlled wood assessment (Figure 6.1.1).

[24] The 2012 analysis by Forest Industries Intelligence Ltd formed part of a project joint funded by the UK Department for International Development (DFID), the EU Timber Trade Action Plan, and European Timber Trade Federation (ETTF)

Figure 6.1.1: Exposure of EU timber trade to certification & verification in 2014



Source: ITTO IMM analysis of Eurostat COMEXT and certification system websites

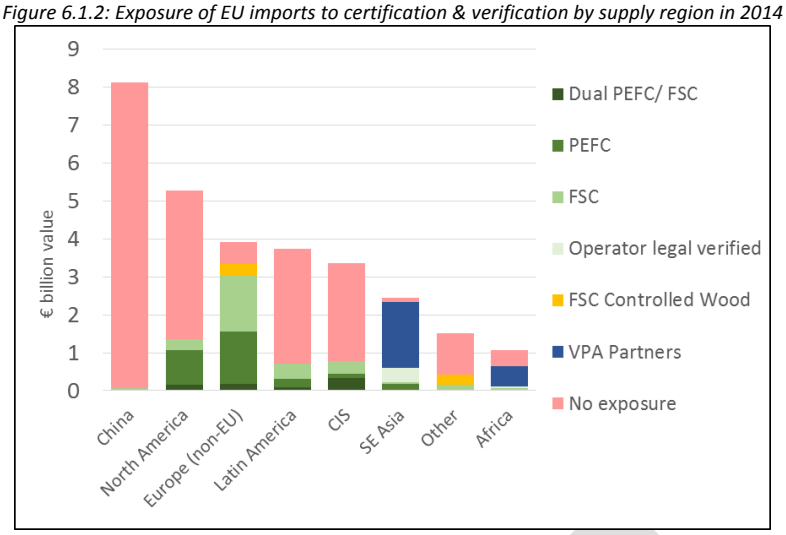
In contrast to intra-EU trade, level of exposure to some form of certification or legality verification of all EU timber products imports from outside the EU was only around 25% in 2014. While low, this figure is heading in the right direction, rising from 19% in 2007.

The assessment indicates that if all timber from the 17 countries that are now engaged in FLEGT VPAs had been licensed in 2014, the level of exposure to legally verified timber in EU external trade would have been 8% higher, at 33%. The increase due to VPA countries excludes areas already certified or legally verified in these countries (notably by SVLK in Indonesia, PEFC/MTCS in Malaysia and FSC in Central Africa) which are already included in the 25% figure.

Obviously, that leaves a large proportion of EU imports which are unlikely to be from third party certified or legally verified sources and which are not engaged in the VPA process.

Figure 6.1.2 shows that China dominates amongst EU-supplying countries with low exposure to verified timber. China's level of exposure to certification is expected to increase in the future, but the rate of change is uncertain. The 2014 data does not include figures for the China Forest Certification System (CFCS) which was endorsed by PEFC in February 2014 but had yet to register any PEFC-certified forest at the end of that year. By the end of 2015, 5.6 million hectares were registered as PEFC certified in China and more recent reports from the China State Forestry Administration indicate that around 10 million hectares of forest are now certified – although most of that area is natural protection forest and China's large area of production plantation forest is still largely uncertified.

Figure 6.1.2: Exposure of EU imports to certification & verification by supply region in 2014



Source: ITTO IMM analysis of Eurostat COMEXT and certification system websites

North America is identified as another region with "low exposure" to legality verification and certification. Most commercial forest land in Canada is certified. In contrast, the U.S. has a large area of private non-industrial forest land which is not certified. The US government also has a long-standing policy commitment not to pursue certification of federal forest lands.

Latin America is assessed to have relatively low level of exposure to certification and verification. However, this figure is severely distorted by reliance on forest area to calculate the index. The Amazonian rain forest is, of course, huge and only a tiny proportion is certified. But this area only contributes a relatively small volume of timber to international trade. Most of wood product imported into the EU from Brazil now constitutes softwood or eucalyptus from plantations outside the tropical zone, many of which are certified. Therefore, the index probably underestimates the real level of exposure of Latin American wood products in trade.

While the VPA process captures only a relatively small proportion of total EU imports of timber and timber products, it is very significant amongst tropical supplying countries in South East Asia and Africa. If all timber products imported by the EU from VPA countries were FLEGT licensed, the level of exposure to verified timber from South East Asia would rise from 25% to 95% and from Africa from 11% to 60%.

6.2 Level of assurance provided by FLEGT licenses and forest certification

The market interaction between FLEGT licensing and other verification systems is not only dependent on their relative geographic coverage, but also on their perceived level of assurance, both with respect to the credibility of auditing procedures and the content of standards. Work undertaken and contacts made by IMM during the review period highlighted the lively debate on this issue which will only find resolution with practical experience and greater understanding of the respective roles of FLEGT licencing and certification.

Interviews with the private sector undertaken for IMM scoping studies emphasised that a large proportion of EU timber buying organisations, particularly larger private corporations and public institutions, have been implementing responsible procurement policies now for many years. These policies typically set out minimum criteria for legality and sustainability going beyond the requirements of EUTR and giving preference to FSC or PEFC certified products. The interviewees were seeking greater clarity on the scope and content of FLEGT licensing procedures in each partner country to better assess where licenses sit in relation to other forms of verification.

Interviewees also noted that FSC and PEFC were already ramping up legality assurance aspects to increase their value under the EUTR and were calling for these systems to be given equivalent 'green lane' status to FLEGT licenses. This call was becoming more urgent with rising impatience over delays in arrival of the first FLEGT licensed timber.

The scoping studies also provided preliminary indications of market segmentation in attitudes to FLEGT licenses in relation to other forms of legality and environmental assurance, both across sectors and in different regions within the EU. This variation will need to be explored in much more detail in subsequent IMM surveys once FLEGT licences are more widely available.

For example, interviews with furniture industry representatives in the UK, the largest EU importer of furniture from outside the region, highlighted that FLEGT licenses are likely to be particularly valuable for small and medium sized importers and retailers in this sector. These companies, which have lacked resources for due diligence and have had less leverage than larger corporations to demand FSC or PEFC certification of suppliers, would particularly benefit from the green lane through EUTR offered by FLEGT licensed goods.

While some IMM interviewees were concerned about the potential competition between FLEGT licenses and other forms of assurance, the overall impression from IMM preliminary surveys and contacts during the review period was of broad recognition and acceptance of their complementarity. Large campaigning environmental groups interviewed during IMM scoping studies in the EU, many of which are also active supporters of FSC, all expressed strong support for the concept of FLEGT licensing alongside the EUTR and other components of the wider FLEGT Action Plan.

7. Recommendations

7.1 Recommendations for future IMM monitoring

Drawing on experience gained in the IMM scoping studies and analysis of trade statistics and other data, the following recommendations are made for future IMM monitoring:

- Considerable work is still required to improve the quality, regularity, accessibility and visualisation of trade flow and other relevant economic data, to allow effective and accurate assessment of FLEGT market impacts. This needs to be a significant focus of on-going IMM work and will also help better satisfy the growing demand for such data from other agencies engaged in FLEGT work.
- The FLEGT licensing system itself offers a potentially valuable additional source of trade flow data, providing more immediate and detailed information than national customs and statistical agencies. IMM would benefit from regular access to FLEGT license databases in both the EU and partner countries. There may also be a significant task to reconcile statistical data from the different information sources.
- There are significant gaps in existing statistical data limiting the ability of IMM to reliably assess the trade and competitiveness impact of FLEGT licensing. For example, there is no data on the actual volume of trade in timber which is independently certified or legally verified through non-VPA mechanisms, and a need for more reliable indices of forest governance risk in non-VPA supplying countries.
- There is on-going need for IMM to build and maintain strong links with other agencies engaged in FLEGT work – most notably EFI, FAO and WCMC (in their work on the EUTR biennial review), to reduce duplication and improve the flow of information.
- While important, analysis of trade statistics in isolation will be insufficient to assess impacts of FLEGT licensing and must be combined with surveys of operators to identify and assess the relative importance of different market drivers.
- The IMM scoping studies demonstrated the value of recruiting national correspondences with expert knowledge of the local forest products sector to undertake on-ground surveys for IMM and to act as a point of liaison between the IMM and national FLEGT agencies.
- Information on market conditions and on corporate and other organisation attitudes to FLEGT licensing is best acquired using semi-structured interviews undertaken by national correspondents using a standard, but flexible template, prepared centrally by IMM.
- On-line survey tools are useful for compiling and analysing data but emails requesting the trade to respond to on-line surveys will not illicit a positive response.
- Surveys can be effectively targeted to specific geographic areas and sectors using trade statistics. For example, survey work focusing on just seven EU member countries will capture 90% of all imports of wood products from VPA partner countries into the EU (Belgium, France, Germany, Italy, Netherlands, Spain and the UK).
- The IMM scoping studies in the EU during the review period focused heavily on the traditional timber importing sector and there is a need to significantly increase coverage in other sectors, notably furniture manufacturing and retailing, and joinery and engineered wood products.
- IMM surveys need to capture the full range of operators, both large and small. While large corporations are often major buyers and will significantly influence wider consumer behaviour and public policy, demand for FLEGT licensed timber products may be particularly strong amongst smaller operators that lack resources for due diligence.

- IMM needs to communicate widely, regularly and concisely, both on activities and market conditions. This is required not only to satisfy IMM's reporting mandate, but will also encourage greater input and support for IMM data collection in the private sector and make a significant contribution to raising trade awareness of the role of FLEGT licenses.

7.2 Recommendations for FLEGT license market development

Drawing on contacts and interviews with a wide range of interests in government, industry and civil society during IMM activities between 2014 and 2016, the following observations are made with respect to future strategies for market development of FLEGT licensed timber:

- EU efforts to ensure consistent and effective enforcement of EUTR provide the most immediate, and likely most effective, market advantage for FLEGT licensed timber in the EU and should continue to be prioritised.
- Market development for licensed timber would benefit from more widespread acceptance of FLEGT licensed timber as appropriate evidence of both "legality" and "sustainability" in EU member state public procurement policies, recognising the wider governance reforms required for licensing. Public sector policies are important not only for their direct influence over government procurement but also for the signal they send out to the wider market.
- There is a critical need to improve communication and raise market awareness of the steps required to implement a FLEGT licensing system. Currently there is a gap between European timber trade perceptions of a "legality verification scheme" and the comprehensive forest sector reform measures of the FLEGT VPA process.
- Extending the assurance provided by FLEGT licenses to operators in the EU beyond the first placer requires consideration of chain of custody procedures for licensed timber within the EU. This may be best achieved through co-operation with existing private sector initiatives with well established procedures and a large existing network of certified operators in the EU.
- The FLEGT licence is a credible endorsement and an essential underpinning for market development in the EU, but is unlikely to deliver significant or sustained increases in market share in isolation. Imported timber products, not just from the tropics, are struggling to compete with domestic suppliers and non-wood substitutes in the EU. All actors need to avoid raising expectations of immediate market gains in what is better presented as a long-term process of market transformation. FLEGT partners also need to consider how FLEGT licenses fit within their broader timber industry and export development strategy.
- The private sector needs to be actively engaged in the positive marketing of FLEGT licensed timber, and not treated as a passive actor responding to regulatory signals. This requires targeted communication so that individual businesses in VPA partner countries, the EU and other export markets fully appreciate the role of licensing and the marketing and investment opportunities it creates. Accurate messages about FLEGT licensing need to be introduced into business-to-business dialogue and considered within the context of real products and supply agreements.
- There is an opportunity to build on public statements of support for the FLEGT VPA process by influential civil society groups in the EU to overcome market prejudice against tropical timber. In a market where buyers are highly sensitive to environmental campaigns, maintaining the support of EU civil society will be necessary to build long-term market advantage. This in turn will require continued commitment to maintaining the integrity of auditing frameworks, transparency of licensing procedures and standards, and broad stakeholder participation.

- Equally, civil society groups in the EU need to be aware of the fragility of EU markets for timber products from VPA partner countries and that their leverage in VPA processes is significantly dependent on ensuring that FLEGT licenses deliver real market advantages.
- While the EU market environment is challenging for VPA partners, there are trends with potential to offer new opportunities for FLEGT licensed products. Sustainability, traceability, authenticity and "narrative" are strong themes running through design and the marketing of wood and other materials in the EU, all themes that can be turned to the advantage of suppliers offering FLEGT licensed products through creative communication strategies.
- For many VPA partner countries, the EU is currently declining in importance as a market for timber products relative to the domestic and emerging markets. Encouraging recognition for licensed timber in due diligence legislation and in public and corporate procurement in large markets outside the EU should be a priority.

Annex 1 Indonesia market position and prospects

New opportunities for FLEGT Licensed timber from Indonesia

Indonesia issued the first FLEGT licenses in November 2016. While FLEGT VPA implementation has broader benefits, for instance in terms of better forest management and increased tax revenue collection, the key issue for IMM is the extent to which the licenses improve the competitiveness of Indonesian forest products in the EU and wider international market place. Immediate advantages should derive from EU regulatory and procurement processes. FLEGT licensing gives a green lane through the EUTR due diligence procedures. Some EU member countries also recognise FLEGT licensing as giving the assurance of legal and sustainable timber required in public sector procurement.

There may be other benefits to competitiveness as FLEGT licensing improves public perceptions of Indonesian forest products and provides a foundation for marketing initiatives and encourages greater investment in the industry. There may also be specific logistical advantages and efficiencies gained through development of a single unified system of regulatory and environmental assurance for all exporters compared to other supplying countries reliant on a range of competing voluntary initiatives.

Other competitiveness issues facing Indonesia

Balanced against these potential benefits is the fact that prospects for Indonesian forest products, as with any other timber supplier into the EU market, are not only dependent on their ability to provide legality or environmental assurances. A whole host of other competitiveness issues which impact on product prices, delivery time, product quality, effectiveness of marketing and customer demand need to be considered.

Various indices of international competitiveness suggest that Indonesian exporters face challenges on these wider market issues. In 2016, the World Bank ranked Indonesia 91st on the "Ease of Doing Business" (EDB), a significant improvement compared to 2015 (ranked 120th) but still lower than Indonesia's direct competitors in the forest products sector such as Malaysia (23rd), Thailand (46th), China (79th) and Viet Nam (82nd). The UNCTAD Line Shipping Connectivity Index shows that the logistics of shipping to world markets are significantly more challenging in Indonesia than in other South East Asian countries. In practice, these indices imply that Indonesian products tend to be more expensive and subject to longer delivery times than competing products from elsewhere.

The wider macro-economic background in Europe also presents challenges to Indonesian forest products. In 2016 and 2017, Indonesian exporters must contend with the relative weakness of the euro, slow pace of recovery from the financial crises, the dominant position of European and Chinese manufacturers, the strong fashion for temperate woods and intense and rising competition from a wide range of non-wood substitutes.

Changing profile of Indonesian forest products

The task of assessing the impact of FLEGT Licensing on Indonesian trade with the EU and other markets is complicated by the changing profile of timber product exports from Indonesia.

In Europe, the trade has traditionally viewed Indonesia primarily as a source of tropical hardwood plywood and decking. While these products are still significant, Indonesia has evolved a very diverse wood manufacturing sector and supplies the EU with an increasingly wide range of more added value wood products such as furniture, doors and other joinery.

In 2016, the value of EU imports of joinery products from Indonesia was close to €75 million and wood furniture around €300 million. This compares to EU imports of around €70 million of decking and other mouldings and €75 million of plywood from Indonesia.

In 2016, the EU also imported pulp and paper products from Indonesia with a total value of €225 million. Although this is only a very small proportion of both EU and Indonesian trade in pulp and paper, the industry is so large that this value is comparable to that of wood products.

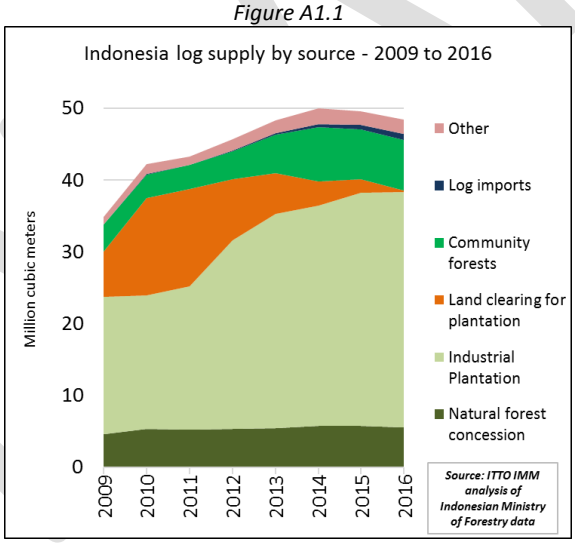
If all these products are considered and Brazil is excluded (since most Brazilian wood product exports now derive from outside the tropical region), Indonesia is the largest tropical supplier of forest products to the EU by a significant margin.

Total EU forest product imports from Indonesia were just over €1 billion in 2016, up 3% on the previous year. This compares to EU imports of €816 million from Vietnam and €550 million from Malaysia (both of which unlike Indonesia exported less to the EU in 2016). In 2016, Indonesia accounted for 24.4% of EU imports of timber and timber products from the tropics (by value), up from 23.8% the previous year.

Changing structure of Indonesian forest resource

The changing profile of Indonesia in product supply is closely tied to the changing structure of the resource. Ministry of Environment and Forestry data shows that industrial plantations are becoming increasingly important in wood supply in Indonesia while the share of supply from natural forests is falling. Production from sustainably managed concessions in natural forest was stable between 2009 and 2016, but there was a sharp decline in forest conversion operations (Figure A1.4.1).

Figure A1.1



Source: ITTO IMM analysis of Indonesia Ministry of Environment and Forestry data

In 2016, Indonesia produced 47.5 million m^3 of logs of which 69% derived from industrial plantations (HTI), 15% from community forests (HTR), 12% from natural forest concessions (HPH), less than 1% from land clearing, and 4% from a variety of other sources. This compares to 2009 when log production was 34.8 million m^3 of which 55% was from industrial plantations (HTI), 11% from community forests (HTR), 13% from natural forest concessions (HPH), 18% from land clearing operations, and 3% from a variety of other sources.

EU share of Indonesian wood product exports

Another complexity in monitoring market impacts of FLEGT licensing is that the EU only takes a relatively small share of Indonesia's total timber product exports. The priority attached to the EU in

market development, and the size of flows to the EU, are therefore heavily dependent on events in other parts of the world.

Ministry of Environment and Forestry data shows that total forest product exports covered by Indonesia's V-Legal system were 17.46 million metric tonnes with a value of USD9.27 billion in 2016. Of these exports, the EU accounted for only 4.7% of tonnage and 9.4% of value. The large majority of Indonesian forest product exports are destined for other Asian markets (86% of tonnage and 71% of value) while exports to North America are also significant (4.3% of tonnage and 10.7% of value).

While the EU has a low share of Indonesia's total forest product exports, the data is influenced by the small proportion of Indonesian pulp and paper destined for the EU. In the EU, Indonesia faces very stiff competition from domestic and Brazilian producers in the market for chemical pulp (which derives from fast-growing plantations of eucalyptus and other hardwood species) and from domestic European producers in supply of finished paper products. The large majority of Indonesia's pulp and paper product exports are destined for China and other Asian markets.

The EU is relatively more important in Indonesian exports of some wood products, most notably furniture. Of Indonesia's total wood furniture exports of 435 000 tonnes with a value of USD1.34 billion in 2015, 127 000 metric tonnes (29%) with a value of USD319 million (24%) were destined for the EU.

Varying prospects by product sectors

In practice, the competitive position of Indonesian timber products in the EU varies widely between product sectors. FLEGT licensing should offer an immediate opportunity for Indonesian suppliers to retake share in those sectors – such as decking, plywood and flooring - where Indonesian products are familiar to EU importers and already favoured for their strong technical performance, but where demand has been dampened by concerns over the legality of wood supply.

However, FLEGT licensing, in isolation, is less likely to generate immediate benefits in those high value sectors like furniture and joinery where the specific technical and environmental features of Indonesian wood products have been less significant barriers to competitiveness than wider issues such as labour costs, red tape, logistics, processing efficiency, innovation, and marketing.

In these sectors, increasing share is only likely to be achieved if FLEGT licensing is combined with market development initiatives to improve the international competitiveness of Indonesian wood manufacturers across a wider range of issues. However, the long-term benefits of investment in these initiatives, alongside FLEGT licensing, would be considerable given the sheer size of markets for consumer products like furniture, the relatively high proportion of Indonesian furniture exports already destined for the EU, and the greater potential to add value to wood fibre.

Near real-time monitoring of FLEGT licensed trade

The following charts show the evolution of EU imports from Indonesia, on a monthly basis, in the 7-year period running up to, and immediately following the issue of the first FLEGT licenses in November 2016. The charts establish the baseline against which the impact of FLEGT licensing on Indonesia's trade with the EU trade will be assessed by IMM.

Because EU imports from Indonesia tend to be highly seasonal (furniture imports rise sharply in the run-up to Christmas and January sales, while decking importers build stock in the winter months in preparation for the spring and summer surge in demand), the charts show 12-month rolling average data to remove short-term variability and highlight long term trends.

Tonnage data is provided rather than value data to remove variations due to very volatile exchange rates during the period – notably the 20% fall in the value of the euro (and linked currencies like the Polish zloty and Swedish krona) against the U.S. dollar between 2014 and 2015, and a 30% decline in the value of the British pound between mid-2014 and the end of 2016 (with a particularly steep plunge after the Brexit vote in May 2016).

Trend in EU imports from Indonesia by major product groups

Figure A1.2 shows that while pulp and paper have recently become more important in the mix of products imported into the EU from Indonesia, imports of wood products (i.e. those listed in Chapter 44 of the HS system of product codes) are still the largest component.

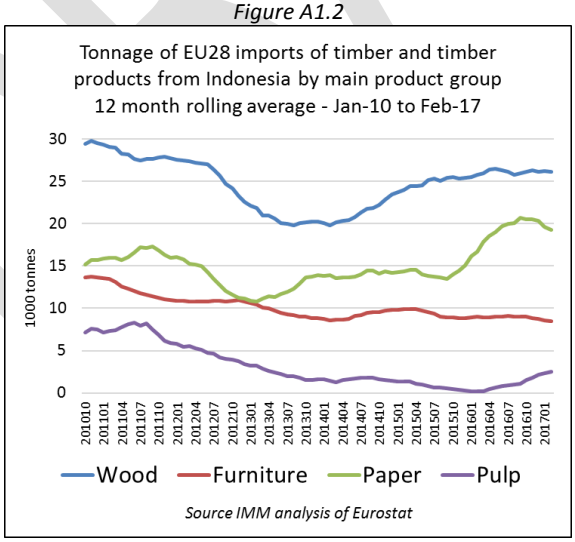
After a period of recovery in 2014 and 2015, EU imports of Chapter 44 wood products from Indonesia stabilised at the higher level in 2016 (averaging around 25 000 tonnes per month). There was no immediate discernible uptick in total EU imports of these products between December 2016 and February 2017 after the first FLEGT licenses were issued.

EU imports of wood furniture from Indonesia were declining between 2010 and 2013 and then in 2014 showed slight and short-lived signs of recovery. In 2015 and 2016, the decline in imports resumed and continued through to February 2017.

Trends in pulp and paper imports from Indonesia have followed a different path. The EU was importing small volumes of Indonesian chemical wood pulp before 2013, but these volumes fell to negligible levels in 2014 and 2015 in the face of very stiff competition from Brazil and domestic producers. However, there were signs of a revival in EU imports of Indonesian wood pulp from the middle of 2016, although the volumes involved are still very restricted.

EU paper product imports from Indonesia, while still limited, also recorded a significant uptick in 2016, averaging below 15 000 tonnes per month at the start of the year rising to over 20 000 tonnes per month at the end of 2016. EU paper imports from Indonesia dipped a little at the start of 2017.

Figure A1.2



Source: ITTO IMM analysis of Eurostat COMEXT

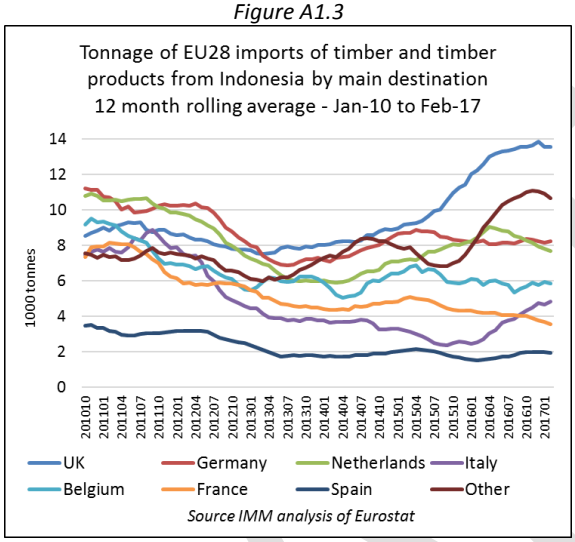
Trend in EU imports of forest products from Indonesia by EU member countries

Figure A1.3 shows how EU imports of Indonesian forest products have varied in different EU member countries over the last seven years. Following a surge in imports between 2014 and 2016, the UK has emerged as by far the largest single importer in the EU. The recent surge in UK imports from Indonesia has been distributed across a range of product groups including paper, plywood, and

wooden doors and furniture. This highlights the significance of Brexit negotiations due to start in June 2017 on the future direction of policy in relation to FLEGT licensing.

Another notable trend is the recent sharp rise in imports by Italy and a range of "other" EU countries not previously significant importers of Indonesian forest products. Italy has emerged as the leading destination for EU imports of Indonesian wood pulp in the last two years, and is also importing a small but rising volume of Indonesian paper products. The "other" EU countries now importing more from Indonesia are also mainly trading in Indonesian paper products and all are in South-Eastern Europe – Slovenia, Romania, Hungary, and Greece.

Figure A1.3



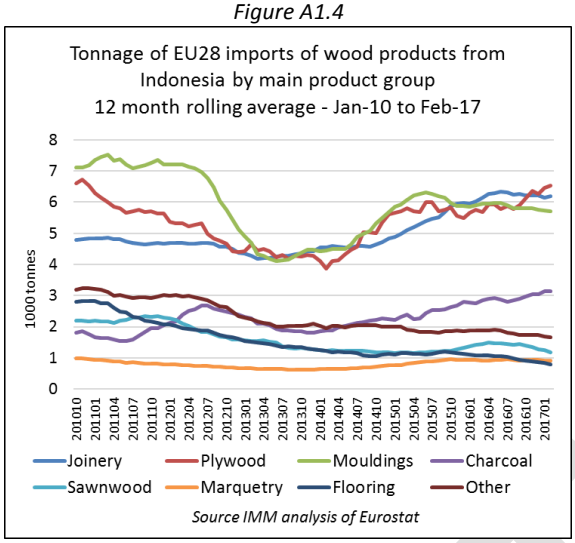
Source: ITTO IMM analysis of Eurostat COMEXT

Trend in EU imports of wood products from Indonesia

Figure A1.4 focuses on trends in EU imports of HS Chapter 44 wood products from Indonesia. It shows that EU imports of Indonesian joinery products (mainly doors and glulam), mouldings (mainly external decking) and plywood all increased in 2014 and 2015, before stabilising and converging at around the same level of 6 000 tonnes per month throughout 2016. Of these products, only plywood registered an uptick in early 2017 lending some early statistical support to anecdotal reports of EU importers stocking up immediately following issue of the first FLEGT licenses.

Notable trends in other product groups are the progressive rise in EU imports of charcoal from Indonesia – a product which incidentally is excluded from both the FLEGT licensing requirements in Indonesia and the due diligence requirements of the EUTR – and the continued slide in EU imports of Indonesian wood flooring to negligible levels.

Figure A1.4



Source: ITTO IMM analysis of Eurostat COMEXT

Conclusion and next steps in 2017

Excepting a slight upturn in plywood trade, it is too early to discern from trade statistics any significant trade trends resulting from issue of first FLEGT licenses by Indonesia in November 2016. During 2017, IMM will regularly monitor, at least on a quarterly basis, the evolution of all these trade flows and comparing as far as possible with those of competing products, while also monitoring underlying economic conditions, and factors such as exchange and freight rates with an important bearing on relative competitiveness.

The statistical analysis of trade data will be supported by the network of IMM correspondents recruited in 2017 to liaise with relevant authorities and keep track of important developments on the supply side in Indonesia, and to undertake market assessment interviews with traders and other interests in seven EU countries which together account for over 90% of all imports of wood products from VPA partner countries into the EU (Belgium, France, Germany, Italy, Netherlands, Spain and the UK).

Annex 2: Ghana scoping study report

The IMM Correspondent for Ghana undertook a scoping study to assess the current market situation for Ghanaian timber products to provide a baseline for assessment of future impacts of FLEGT licensing. The scoping study included analysis of timber production and trade data alongside interviews with Ghanaian government agencies and timber industry representatives.

The scoping study highlighted key challenges in the Ghanaian forest sector which have an important bearing on future development of export market demand and the role of FLEGT licensing in the country. Over the last decade, availability of the more desirable species such as sapele and odum/iroko has fallen considerably in Ghana due to past over-exploitation. These are now restricted species requiring special permits to be issued for harvest. Species that were previously lesser-used now dominate both the domestic and export trade. Denser wood species such as denya and plantation timbers such as teak and gmelina are now exported in relatively large volumes.

Furthermore, most wood continues to be exported from Ghana in the form of primary or secondary processed products with only limited development of tertiary industries (such as furniture and joinery) which are competitive in export markets. Ghana faces significant obstacles to value addition in the timber products sector, notably declining availability, rising cost of good quality raw material, and outdated and inefficient production capacity and technology leading to high levels of waste.

While Ghana remains relatively uncompetitive in export markets for value-added timber products, domestic consumption and trade across the land borders has been rising and now stands at around 1.4 million m^3 per year, exceeding overseas exports in volume terms. It is estimated that 80% of domestic sawn wood is supplied from chain saw operators that both harvest and cut the timber to size. These operators are not registered and are operating outside the law while the timber is being procured without due process. In practice, this means that the timber legality assurance system must deal effectively with timber for both domestic and export markets.

The scoping study suggests that the legality assurance system and other measures implemented under the terms of the VPA will likely have a significant impact on supply of wood for both export sales and the domestic market. It will result in tighter regulation of harvesting volumes and exports of timber will lean increasingly towards small volume higher value products. Introduction of a public-sector timber procurement policy in Ghana should ensure that the 30% of domestic supply destined for government projects will derive from verified legal sources.

Introduction of the legality assurance system is widely expected to lead to a sharp fall in supply of timber to the domestic market as illegal timber is removed. Since local processors are already experiencing timber shortages, domestic prices are almost certain to increase. Steps are being taken to prepare for this eventuality through introduction of an enabling framework for “artisanal milling” to replace illegal chainsaw milling. It is envisaged that registered artisanal millers will process lesser used timber species for the domestic market. Other measures being considered are to encourage imports from other countries in the region and to replace timber with other materials in construction.

Interviews with representatives of the Timber Validation Department (TVD) of the Forestry Commission (FC) indicate that the Wood Tracking System (WTS) and its verification protocols have been completed and field tested. From a technical systems perspective, Ghana is almost ready and could begin issuing FLEGT licenses before the end of 2017. However, there is still a need to step-up technical and operational training on the WTS for FC operational staff, private sector timber

companies and custom officials. Capacity gaps identified during trial technical audits are being addressed through training for regulators, producers and civil society organisations who will also contribute to monitoring of implementation of the legality process.

Work is also required to complete remaining forest management plans and to review manuals which guide forestry officials' day-to-day operations to ensure alignment with VPA legal definitions and standards. A public web portal is under development to share information on the WTS to address civil society transparency concerns.

Before a definitive time to issue FLEGT licenses can be recommended by the Joint Monitoring and Review Mechanism (JMRM) of the VPA, outstanding legal and regulatory gaps need to be filled by the newly elected government. Parliamentary approval is required for a new legal instrument to consolidate the laws and regulations that enable the grant of rights to legal timber and for conversion of forest concession leases to Timber Utilisation Contracts (TUCs) which are mandatory in the legality standard.

Ghanaian timber exporters interviewed as part of the scoping study expressed concern that the WTS may be laborious given the data to be captured and information to store. They suggested that some processes need to be clearer and simpler to be practically applicable. Smaller companies and those serving domestic markets are less prepared compared to the larger exporting companies.

Representatives of some larger exporting companies expressed support for the FLEGT licensing process on grounds that it would remove low-priced illegal wood from the market, promote operating efficiencies in their companies and provide tools for sustainable forest management, such as forest management plans. They also hope to exploit opportunities arising in the EU market for more specialized and high value products. However, representatives of smaller companies and informal enterprises are less supportive, expressing concern that it will reduce their access to timber supply. Many smaller companies are currently dependent on unregulated timber supplies and believe that legally verified supplies will be inadequate for their needs.

Annex 3: Pilot surveys of trade in Germany, Spain and the UK

Three pilot surveys of market conditions and readiness for acceptance of FLEGT Licensed timber were carried out in Germany, Spain and the UK during the period 1 September 2015 to 31 December 2015. Together Germany, Spain and the UK captured around 36% of all timber imported into the EU from VPA Partner countries in 2014. Each survey team member was required to: liaise with FLEGT Competent Authorities to assess readiness for acceptance of FLEGT Licenses; liaise with EUTR Competent Authorities for monitoring the effects of the regulation; undertake a pilot assessment of market demand for products from VPA countries, and assess trade attitudes to the FLEGT licensing process.

The pilot surveys confirmed that the FLEGT Licensed Authorities in all three countries are already prepared for receiving the licenses. All have developed their own software system to register the paper-based FLEGT licenses and exchange information with customs authorities. If licenses are to be issued early in 2016, the national level software can be used until the EU Commission's harmonised system, which is under development and expected to be ready for EU-wide rollout in mid-2016, will become available.

The overall thrust of comments made by timber traders in interviews was positive. The large majority of EU importing companies interviewed in the three countries: are well aware of the VPA process and what it means; urgently want FLEGT-licensed timber to be available as it will reduce legality risk and costs of due diligence for that timber to zero; expect to give preference to FLEGT licensed timber over unlicensed timber; and would be willing to pay a small price premium (figures mentioned range from 2% to 5%). Some larger influential companies expressed very positive views about the potential of the FLEGT VPA process to help restore the image and market share of tropical timber.

A key factor driving demand for FLEGT Licenses is the difficulties interviewees were experiencing in undertaking due diligence in many tropical countries. They were often struggling to take on additional tropical suppliers or expand their tropical product ranges as procedures for thoroughly investigating new suppliers and establishing a reliable system of documenting supply chains were considered too time-consuming and costly.

Nevertheless, there was also rising impatience over delays in arrival of the first FLEGT licensed timber amongst interviewees. Some suggested that the longer it takes to deliver FLEGT licensed timber, the less relevant it may become for the trade. It was noted that FSC and PEFC schemes are already ramping up legality assurance aspects to increase their value under the EUTR and there is mounting pressure for these systems to be given equivalent fast-track status to FLEGT Licenses.

There was also a strong demand for better communication, particularly about what FLEGT is achieving on the ground in supplier countries and progress through the initiative. The long wait and previous missed deadlines for licensing risked the initiative going off the trade's radar and FLEGT cynicism becoming engrained. Interviewees were particularly looking for clear regular concise bulletins rather than occasional detailed reports.

There was also a strong demand for clearer technical information. Many interviewees had already established Corporate Social Responsibility Policies setting out minimum criteria for legality and sustainability which went beyond the requirements of EUTR. They therefore needed to have clarity on the scope and content of FLEGT Licensing procedures in each partner country to better assess where licenses sit in relation to other forms of verification.

Preliminary interviews with furniture industry representatives in the UK, the largest EU importer of furniture from outside the region, highlighted that FLEGT Licenses are likely to be of particular value to small and medium sized importers and retailers in this sector. These companies, which lack resources for due diligence, would particularly benefit from the green lane through EUTR offered by FLEGT licensed goods. However, the success of licensing in generating new demand in this sector will require availability and momentum. Industry take-up of FLEGT licensed products will depend on achieving critical mass, so once the first countries start supplying them, others need to follow quickly behind.

Large campaigning environmental groups interviewed for the survey all expressed strong support for the concept of FLEGT licensing alongside the EUTR and other components of the wider FLEGT Action Plan. For example, a representative of the WWF Global Forest and Trade Network (GFTN) whose membership includes many large and influential EU retailing and timber trading companies and which has long supported procurement policies centred on FSC, noted that the various FLEGT initiatives help to underpin their work. GFTN is also actively lobbying for tougher and more consistent enforcement of EUTR and its extension to a wider range of products, which would feed through into better demand for FLEGT licensed timber.

Annex 4: Summary of EC EUTR Review On-line Consultation

The European Commission's review of the EUTR published on 19 February 2016[25] was informed by an on-line stakeholder consultation undertaken between April and July 2015. There were close to 250 responses, around 160 of which came from trading companies or their representative associations, the remainder coming from government authorities, service provides (certifiers, consultants) and NGOs. Both a summary of the responses and redacted versions of all individual responses were published by the EC.

The stakeholder consultation provides useful insights into the current and potential impact of the EUTR. However, some caution is required in interpretation given that responses derived only from a relatively small and unrepresentative sample of traders and other organisations. This sort of survey based on invited responses is also self-selecting and inevitably leans towards organisations already more engaged in the EUTR process. There is a large silent majority of trading companies whose views have yet to be captured.

The following is IMM's summary of key points from the EC EUTR Review survey data.

- 75% of respondents disagreed that the EUTR's objectives could have been achieved more effectively through measures at national level without any EU action.
- Respondents were more inclined to disagree (41%) than to agree (34%) that other market instruments could potentially be more cost-effective than the EUTR – this despite the long-standing alternative of private sector certification and responsible procurement policies.
- 65% agreed that "the EUTR is complementary to other existing legislation (such as the FLEGT VPAs and CITES) and has a coherent approach", whereas only 17% disagreed.
- Respondents were more inclined to agree (48%) than disagree (25%) that operators have set up and maintain effective due diligence systems.
- Respondents were more inclined to agree (54%) than disagree (35%) that operators are sufficiently aware of the requirements of EUTR.
- Respondents were much more inclined to agree (56%) than to disagree (27%) that EUTR has so far been effective in preventing illegal wood to be placed on the EU market (16% had no opinion).
- Only around 15% of respondents disagreed that the prohibition on placing illegal wood on the market combined with the due diligence system requirements were effective in meeting the aims of the EUTR.
- Respondents were evenly split on whether existing penalties were effective (30% each) and proportionate (26% agree and 31% disagree), and on whether sufficient checks on operators were being undertaken (27% agree and 33% disagree).
- However, 37% of respondents agreed that the measures were "dissuasive in discouraging infringements" compared to only 23% that disagreed.
- 36% agreed that EUTR has encouraged more procurement of certified or legally verified timber on the EU market while only 22% disagreed (the rest expressed no opinion).
- Around 31% of respondents agreed that the EUTR was altering the areas of origin of timber and timber entering the EU market, whereas 22% disagreed.
- Only 13% of respondents agreed that EUTR was leading to a reduction in timber imports from outside the EU, 35% disagreed and the remainder expressed no opinion.

[25] http://ec.europa.eu/environment/forests/eutr_report.htm

- 26% of respondents agreed that EUTR was altering the mix of wood species imported into the EU, while 22% disagreed and the remainder had no opinion.
- 25% of respondents agreed that EUTR was altering the entry points of timber and timber products into the EU and 21% disagreed while 50% had no opinion.
- 50% of respondents agreed EUTR had increased the level of engagement in legality verification in timber exporting countries, only 15% disagreed (and 31% expressed no opinion).
- Respondents identified the following challenges to EUTR implementation: the level of penalties; resources for enforcement; complexities of implementing due diligence; difficulty of gathering information on applicable legislation; encouraging co-operation in timber supplying countries; confusion over the role of certification in EUTR; and the definition of legality and risk.
- 38% of respondents agreed that monitoring organisations are helping operators to assess and mitigate risk of placing timber on the EU market while 17% disagreed.
- However, 40% also agreed that MO due diligence systems need to be improved while only 6% disagreed.
- Only 15% agreed MOs were affordable to the small operators they are primarily designed to help while 21% disagreed.
- 37% agreed that "MOs have so far developed due diligence systems that do not currently have a market while other services are preferred (i.e. training, free access to information other tools)" while only 11% disagreed.
- There was an even split amongst respondents on whether Competent Authorities were responding appropriately to substantiated concerns – 26% agreed they had responded appropriately whereas 22% disagreed.
- While respondents were reasonably positive about the effectiveness of enforcement, they were more divided about the underlying business case for this type of legislation. Only 34% agreed that the "overall benefits of implementing the EUTR outweigh the costs regardless of the type and size of business" while 45% disagreed.
- Similarly, only 31% reckoned EUTR "has created direct benefits for businesses in general" whereas 37% disagreed.