

Review of Trade in Selected CITES-listed Tree Species

CITES Tree Species Programme

1. Key findings

Trade in selected CITES-listed tree species was compiled and assessed in the broader trade context. Multiple sources of data were reviewed with the objective of identifying sources of information that report trade in which individual species are recorded. Sources reviewed included: the CITES Trade Database, UN Comtrade, the Global Trade Information Service (GTIS) and selected national trade data reporting services (USA, EU). This review confirms that the only mechanism for comprehensively tracking trade in listed tree species is the annual reporting of CITES permit data and the subsequent compilation of those data in the CITES Trade Database.

The CITES-listed species examined in this report include a geographic scope that includes all three tropical regions and span a time scale starting with listings in 1975 at CoP1 and ending with listings in 2017 at CoP17.

As recorded in the CITES Trade Database, trade in the selected species includes bark, logs, sawn wood, veneer, extracts, derivatives, powder, carvings and wood products as well as small numbers of a wide variety of other items such as leaves, seeds, roots, dried plants and “specimens”. On a per unit weight/volume basis these are some of the most valuable tree products in trade, but they account for a relatively small share of total trade in wood products and tree-derived extracts and oils.

For many of the species examined, trade since listing has been intermittent and/or highly variable and generally declining; for the most recent listings there is insufficient data to determine whether this pattern will continue. For species listed with “all parts and derivatives” annotations, trade recorded as “carvings” and “wood products” is increasingly important; this is especially true for the most recent listings. However, these terms are ill-defined and this trade is typically recorded without weight or volume units; therefore, it is difficult to assess the quantity of specimens traded.

Although they cannot be used to monitor trade in individual species, aggregate trade data (such as UN Comtrade) provide a context for assessing patterns and trends in wood products and related products trade that includes both listed and other species. As an example: trade in many listed species has declined since listing but trends in aggregate trade are for the most part increasing.

Gaps and weaknesses in available data limit our ability to monitor trade in listed tree species; these shortcomings undermine the ability to assess the contribution of international trade to the utilization of listed tree species. Revisions to guidelines for collecting and reporting CITES trade data could contribute to more accurate reporting and more effective monitoring of trade. This is especially important in light of the unique role of the CITES Trade Database.

Nationally implemented modifications to the system for collecting aggregate trade data (such as using 8- and 10-digit extensions to the Harmonized System codes to identify products containing listed species) would provide complimentary support for monitoring CITES-related trade.

2. Introduction

The focus of this study is a compilation and assessment of trade in selected CITES-listed tree species. Multiple sources of data were reviewed with the objectives of (1) identifying sources of information that report trade in which individual species are recorded; and (2) compiling trade data that include both listed and non-listed species. Sources reviewed included: the CITES Trade Database, UN Comtrade, the Global Trade Information Service (GTIS) and selected national trade data reporting services (USA, EU).¹

Some information on tree species in trade is present in all sources of data; however, with the exception of the CITES Trade Database data are for the most part collected and reported for groups of species. For many traded wood products—especially secondary manufactured products—no species information is collected. The database review confirmed that the only mechanism for comprehensively tracking trade in listed tree species is the annual reporting of CITES permit data and the subsequent compilation of those data in the CITES Trade Database.

Using the CITES Trade Database,² data reporting trade in tree species listed in CITES Appendix II were extracted, compiled and summarized.³ Species selected include seven taxa or genera from Africa, five taxa or genera from Asia and nine taxa or genera from Latin America. In terms of experience of trade in listed species, the selected species include two listed in 1975 at CoP1, five listed at CoP17 in 2017 and fourteen listed at CoPs from 1992 to 2013. Because there can be up to a two year lag in reporting and compiling trade data in the CITES Trade Database (more in some cases) there is limited information on trade for species listed in 2017.⁴

In order to provide a context for assessing the patterns and scale of trade in listed species, data reporting trade in all forest products and selected related products were also extracted from various databases, including ITTO⁵ and the United Nations Comtrade database⁶.

¹ China's detailed (10 digit) trade data were requested through the State Forestry Administration but were not available.

² CITES trade statistics derived from the CITES Trade Database, UNEP World Conservation Monitoring Centre, Cambridge, UK, available at: https://trade.cites.org/en/cites_trade/

³ Data were extracted on 9 March 2019 and 15 March 2019.

⁴ See "A guide the using the CITES Trade Database" for details on reporting practices; available at (https://trade.cites.org/cites_trade_guidelines/en-CITES_Trade_Database_Guide.pdf)

⁵ http://www.itto.int/annual_review_output/

⁶ <https://comtrade.un.org/data>

The comprehensive trade data are collected by customs officials and are classified using the Harmonized Commodity Description and Coding System (HS); for the most part, these data do not separately record the individual species contained in traded wood products and therefore provide only indirect information for monitoring trade in individual species (listed and other). Most HS wood products are classified using broad categories or groups of species.⁷ An exception is trade in *Swietenia* spp sawn wood; the HS system defines a code that provides an opportunity to compare two sources of information (the CITES Trade Database and UN Comtrade) reporting this trade (see section 3.3).

Some listed tree species are used in part—or primarily—for extracts, derivatives and oils; notable examples include *Prunus africana*, *Aquilaria malaccensis* and *Aniba rosaeodora*. In the HS system, trade in the raw material for extracts (such as bark and powder) and extracts, oils and derivatives are not classified as “wood products” (HS Chapter 44); trade in these parts and products are recorded in HS Chapter 12 (Oil seeds and oleaginous fruits, miscellaneous grains, seeds and fruit; industrial or medicinal plants, straw and fodder) and HS Chapter 33 (Essential oils and resinoids; perfumery, cosmetic or toilet preparations). Here, too, the HS system provides only selected information on the species used (for the most part focused on large-scale trade) and does not identify CITES-listed species.

Unfortunately, there are shortcomings in our ability to monitor trade in the listed tree species. Data in the CITES Trade Database are extracted from the national reports of CITES Parties on trade in each listed species but there are gaps, inconsistencies and limitations in the data recorded and reported (see section 5 for details). In addition to the limited species information, there are also shortcomings, including gaps, in the more comprehensive trade databases.

This review concludes with recommendations for improvements in the collection and reporting of trade in CITES-listed tree species and corresponding complimentary improvements in the system of reporting HS data.

3. Trade in listed species

For each species, data were extracted from the CITES Trade Database using the widest possible search terms: all exporting countries, all importing countries, all sources, all purposes and all trade terms. The report type was comparative tabulations.⁸

For all species examined, annex table 1 summarizes the information in the database: trade terms reported and the cumulative count of exporter and importer reports. Note that this table shows only the number of reports recorded in the database, not the

⁷ This is the case for data up to the internationally harmonized, 6-digit level of detail; some countries use extensions (8- and 10-digit) to record more detailed information regarding trade including, for selected commodities, species-specific information. Unfortunately, the more detailed data are not easily obtained.

⁸ Data were extracted on 9 March 2019 and 15 March 2019.

quantities reported. This information illustrates the pattern of trade as recorded in the database—that is, the relative importance of different trade terms (products) recorded for each species. As an aid in interpreting annex table 1, annex table 2 provides a listing of the trade terms and explanations (definitions) given to Parties as guidance for recording trade.⁹ Note that some of these terms may overlap in part or entirely (as examples, logs and timber; and extracts and derivatives).

⁹ This information is provided in “A guide to using the CITES Trade Database” (https://trade.cites.org/cites_trade_guidelines/en-CITES_Trade_Database_Guide.pdf) and in Guidelines for the preparation and submission of CITES annual reports (January 2017) (https://cites.org/sites/default/files/notif/E-Notif-2017-006-A_0.pdf).

3.1 Trade in selected African tree species

Table 3.1.1 shows the African tree species examined, along with the year of the initial CITES Appendix II listing and current annotation. These include four taxa (*Pericopsis elata*, *Prunus africana*, *Osyris lanceolata* and *Pterocarpus erinaceus*) and three genera (*Dalbergia* spp., *Diospyros* spp. and *Guibourtia* spp.).

Table 3.1.1—Selected African tree species, initial listing date and current annotation

Genus / Species	Trade name	Initial listing on appendix II	Current annotation
<i>Pericopsis elata</i>	afromosia	1992	5
<i>Prunus africana</i>	African cherry	1995	4
<i>Dalbergia</i> spp.	rosewood	2013 / 2017	15
<i>Diospyros</i> spp.	ebony	2013	5
<i>Osyris lanceolata</i>	East African sandalwood	2013	2
<i>Pterocarpus erinaceus</i>	African rosewood	2017	none
<i>Guibourtia</i> spp.	bubinga	2017	15

As shown in table 3.1.1, for many of these species the listing is relatively recent (2013 for *Dalbergia* spp. populations of Madagascar and 2017 for the remainder; 2013 for *Diospyros* spp. and *Osyris lanceolata*; 2017 for *Guibourtia* spp. and *Pterocarpus erinaceus*). Only for *Pericopsis elata* (1992) and *Prunus africana* (1995) is there a relatively long experience with CITES-regulated trade.

Pericopsis elata

Based on the information shown in annex table 1.1, *Pericopsis elata* is traded primarily in the form of logs, sawn wood and veneer; timber is assumed to equivalent to logs. Figure 3.1.1 shows log and timber trade reported in the CITES Trade Database over the period 1995 to 2016. Figure 3.1.2 shows sawn wood trade and figure 3.1.3 shows veneer trade over the same time period. Note that there are a number of possible explanations for differences between exporter reported trade and importer reported trade. These include: the timing of shipments, the reporting basis (quantity permitted as compared to the actual quantity traded), and the use of different terms or quantity units to record and report trade.

As a reference point, the listing proposal for *Pericopsis elata* reports trade in logs and sawn wood originating from Congo, Zaire, Ghana and Cameroon.¹⁰ Citing national and industry sources, specific quantities documented for 1989 are: 23325 cubic meters of logs exported from Congo and 2204 cubic meters of sawn wood exported from Ghana.

¹⁰ See document CoP8 Prop. 93; available at <https://cites.org/eng/cop/08/prop/index.php>.

An additional 6000 cubic meters of logs are reported as exports from Zaire “annually” in the 1980s. Exports from Cameroon are also mentioned but no quantities are provided.

With the possible exception of a spike in 2013-2014, importer reported log trade has been below the quantities reported prior to the listing (figure 3.1.1). Although initially much higher (based largely on exports reported by Cameroon) (see figure 3.1.4), since the year 2000, exporter reported log trade is also roughly the same—or well below—quantities reported pre-listing. The Democratic Republic of the Congo and the Republic of Congo account for nearly all *Pericopsis elata* log trade since 2000 (figure 3.1.44).

Figure 3.1.5 shows importers of *Perciopsis elata* logs and timber: Japan was the primary importer until the early 2000s (nearly all of this is recorded as “timber” in the database); China accounts for nearly all imports 2011-2015 and remains a major importer even as quantities reported by importers have fallen sharply.

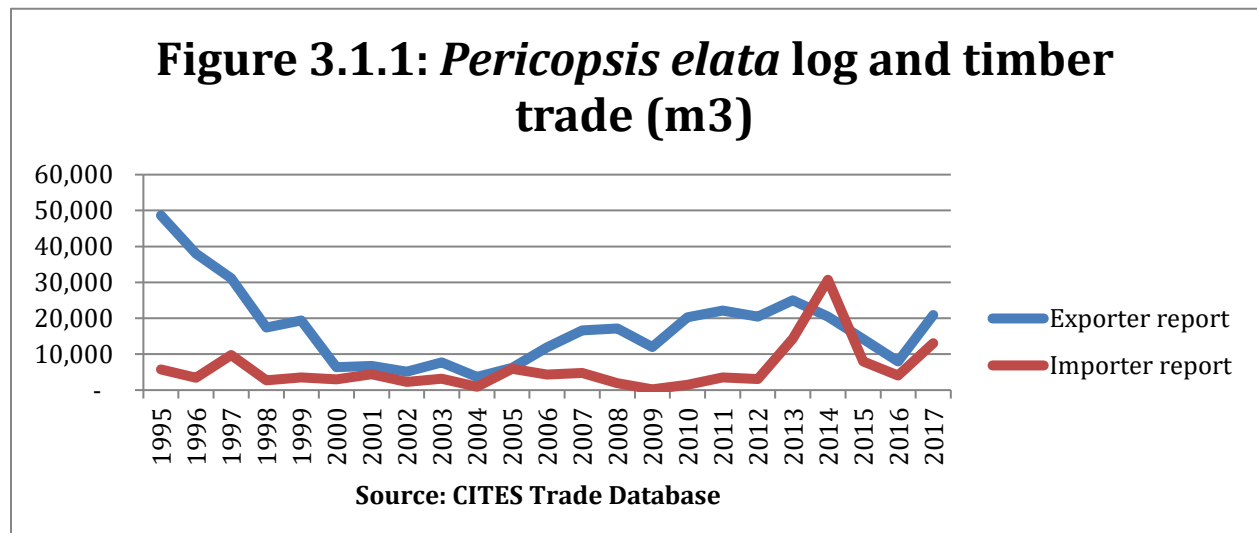


Figure 3.1.2: *Pericopsis elata* sawn wood trade (m3)

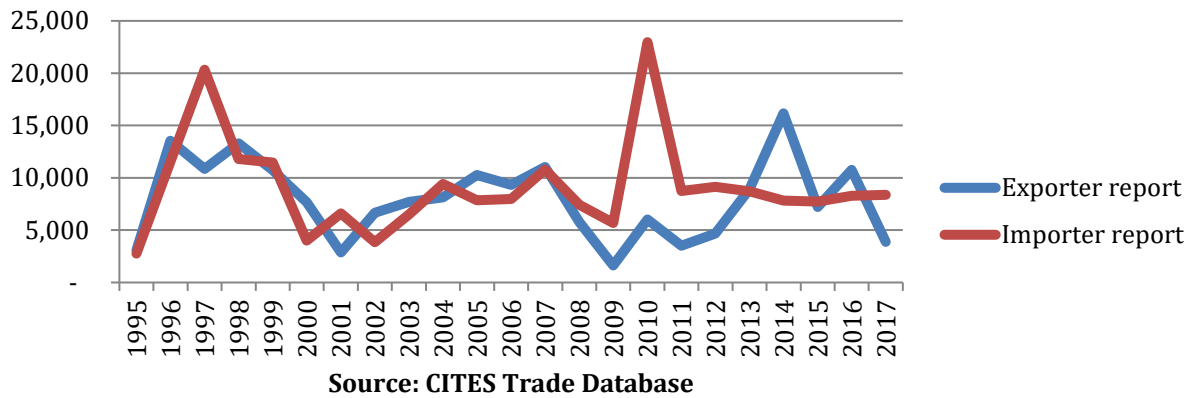


Figure 3.1.3: *Pericopsis elata* veneer trade (m2)

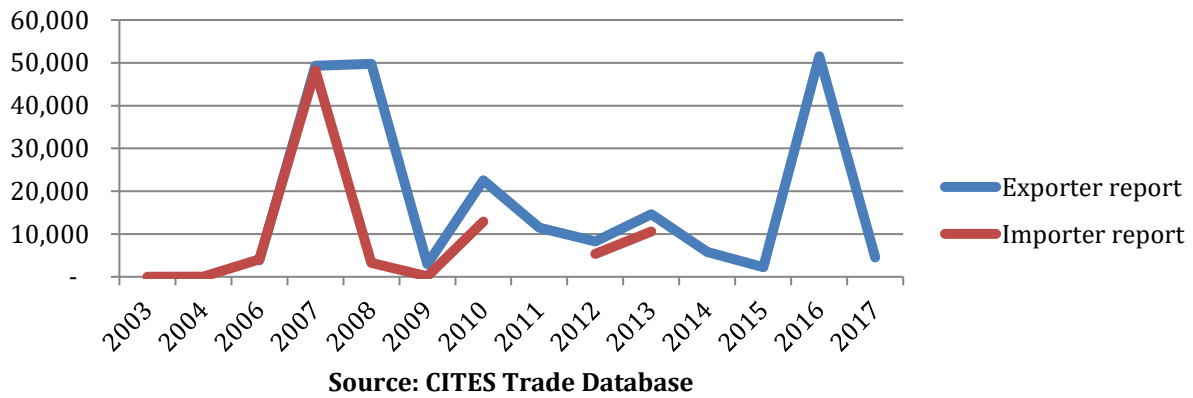


Figure 3.1.4: *Pericopsis elata* log and timber exports (m3)

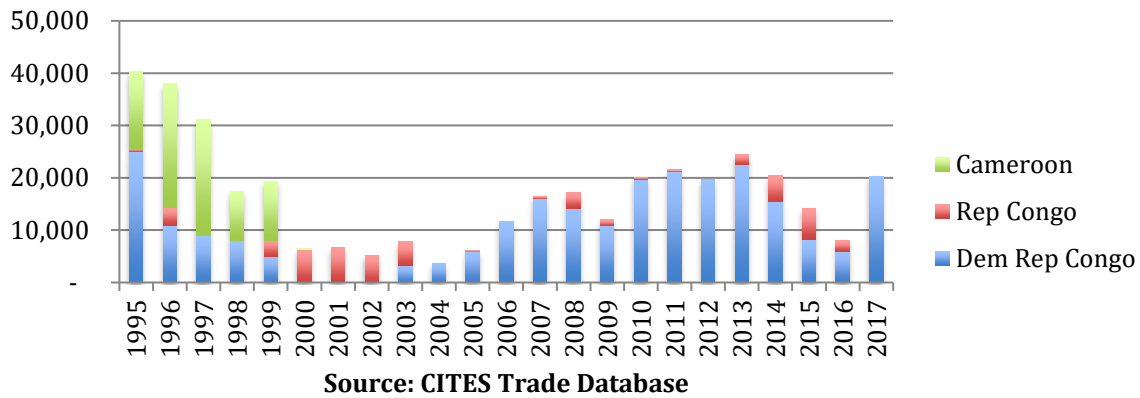
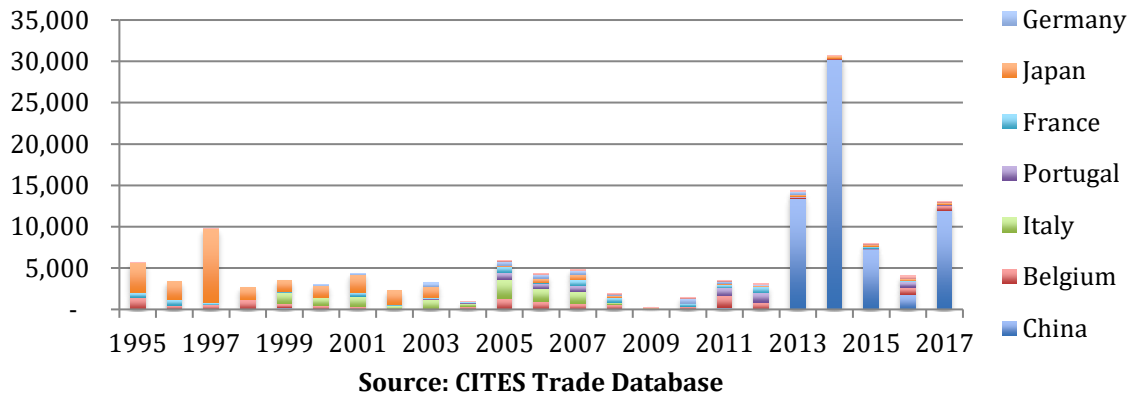


Figure 3.1.5: *Pericopsis elata* log and timber imports (m3)



Cameroon and the Democratic Republic of Congo account for nearly all *Pericopsis elata* sawn wood trade (figure 3.1.6). In contrast to log trade, post-listing trade in sawn wood is higher although the quantity cited in the listing document is likely to be incomplete as it refers only to sawn wood exports from Ghana. Figure 3.1.6 displays cycles in *Pericopsis elata* sawn wood trade (corresponding, more or less with global economic cycles) but little or no overall trend.

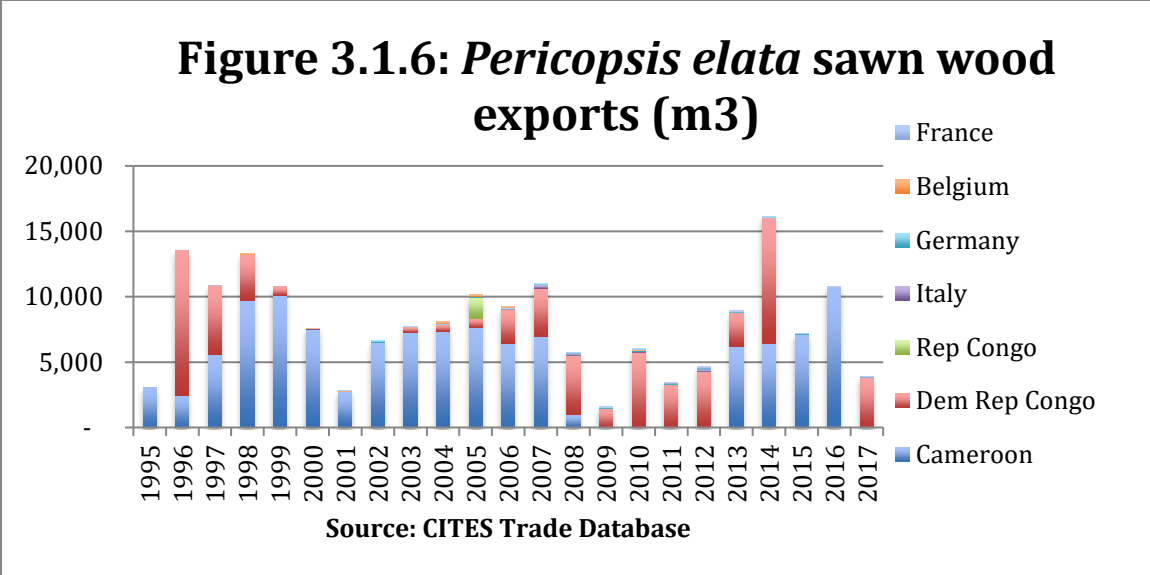
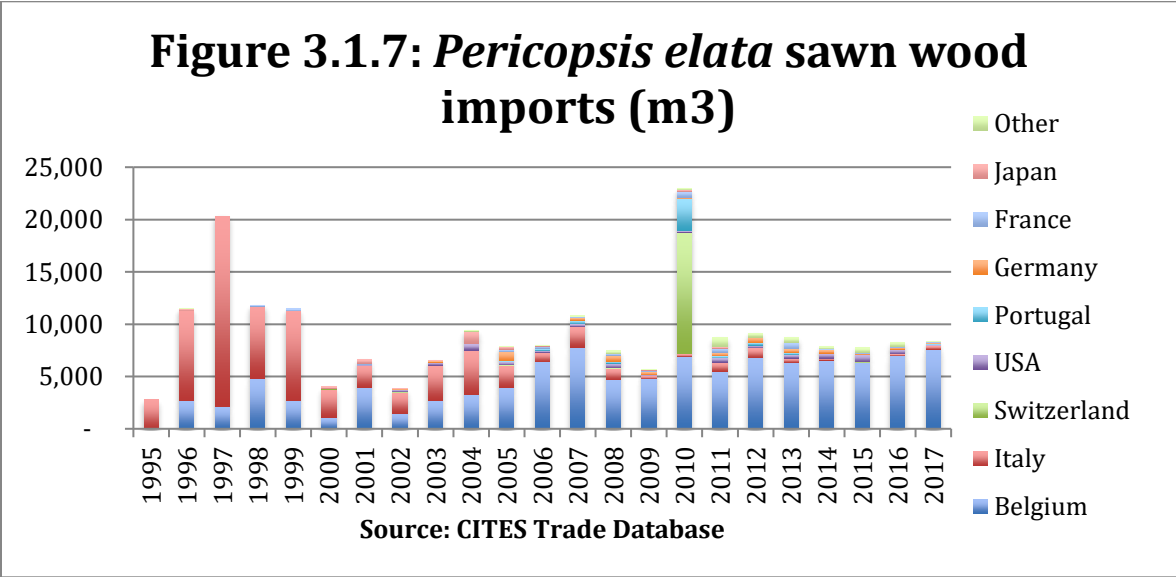


Figure 3.1.7 shows importers of *Pericopsis elata* sawn wood; European countries have been and continue to be the primary destination for this trade.



Pericopsis elata veneer trade is relatively small in comparison to log and sawn wood trade, and highly variable (see figure 3.1.3; note that data are reported in square meters). Germany, Spain and Turkey are the primary exporters (see figure 3.1.8). The Democratic Republic of Congo is the origin of the majority (85 percent) of specimens (logs) used for veneer manufacture; the Republic of the Congo and Cameroon account for the remainder. Germany, France, Italy and the United States are the primary importers of *Pericopsis elata* veneer (figure 3.1.9).

Figure 3.1.8: *Pericopsis elata* veneer exports (m2)

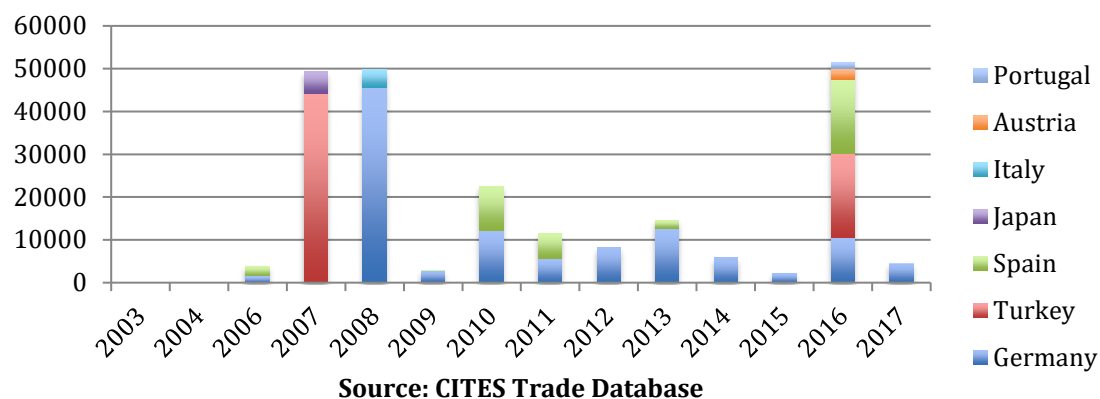
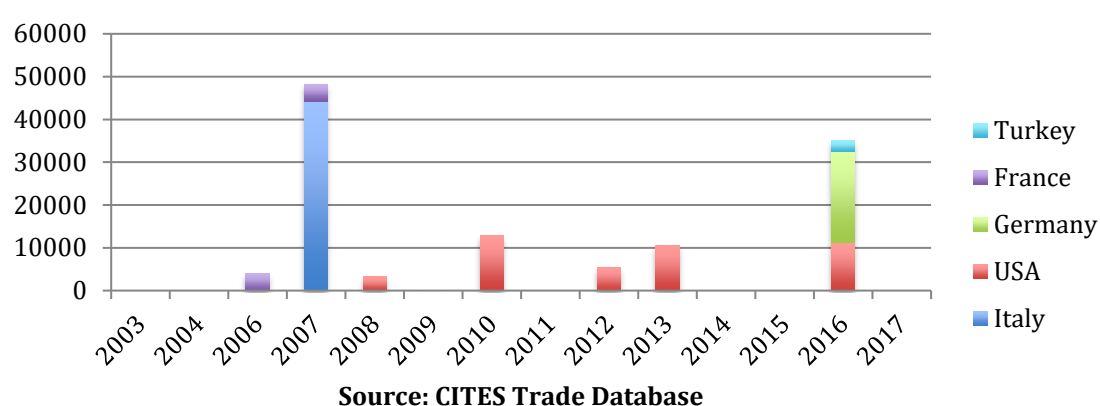


Figure 3.1.9: *Pericopsis elata* veneer imports (m2)



Prunus africana

Data in annex table 1.1 show that *Prunus africana* is traded as either raw material to be used for extracts (bark and powder) or in the form of processed extracts (extracts and derivatives). Of these, the majority of trade is in the form of bark and extracts. Figure 3.1.10 shows *Prunus africana* bark trade as reported in the CITES Trade Database; figure 3.1.11 shows *Prunus africana* extract trade. Trade in powder (figure 3.1.12) has diminished to negligible quantities; trade in derivatives (figure 3.1.13) also is no longer reported in the database.

Figure 3.1.10: *Prunus africana* bark trade (kg)

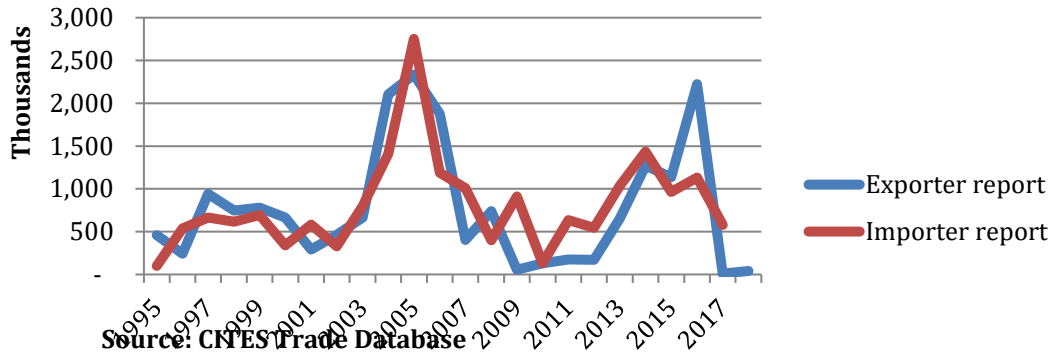


Figure 3.1.11: *Prunus africana* extract trade (kg)

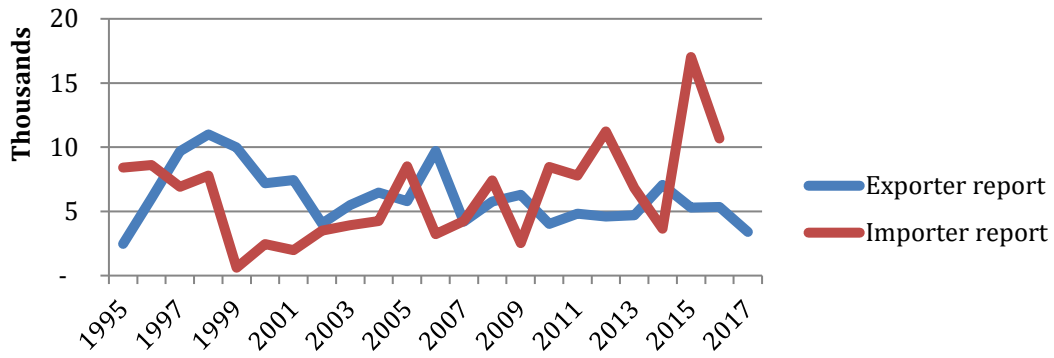


Figure 3.1.12: *Prunus africana* powder trade (kg)

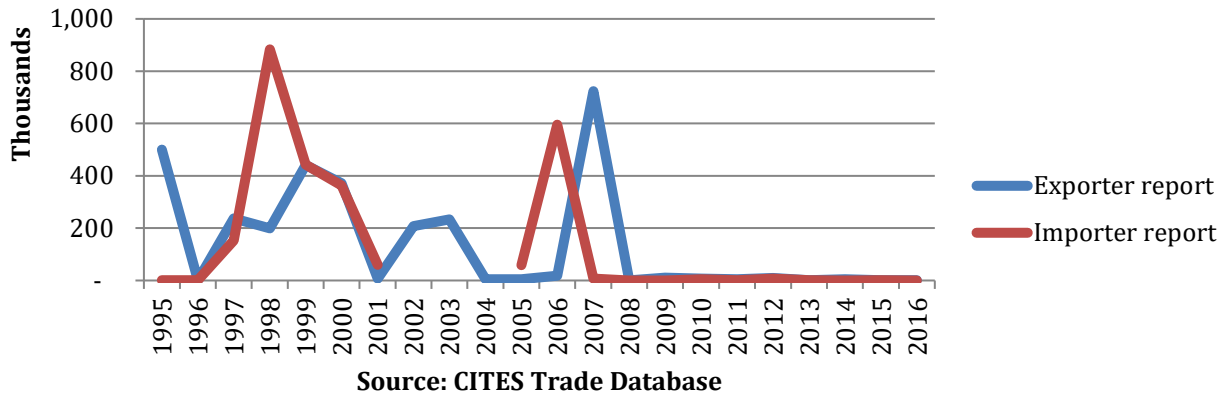
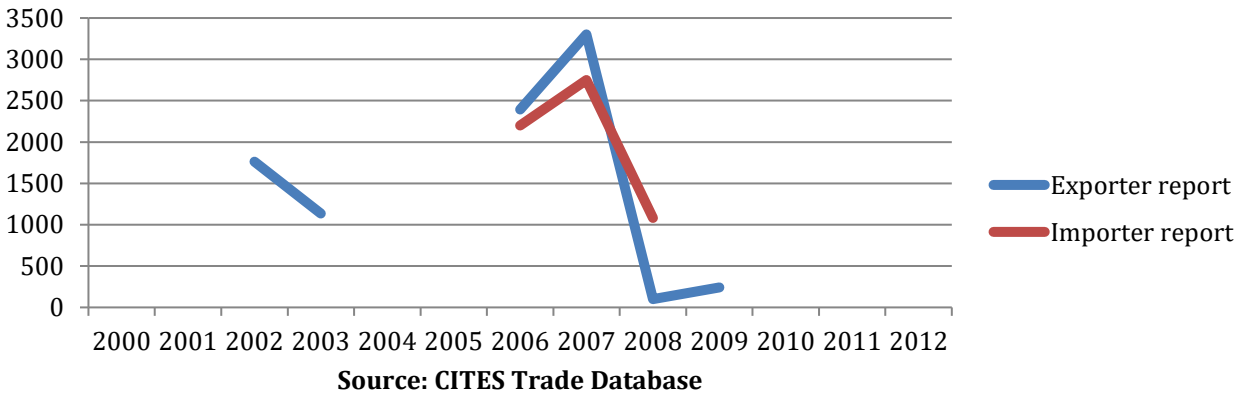


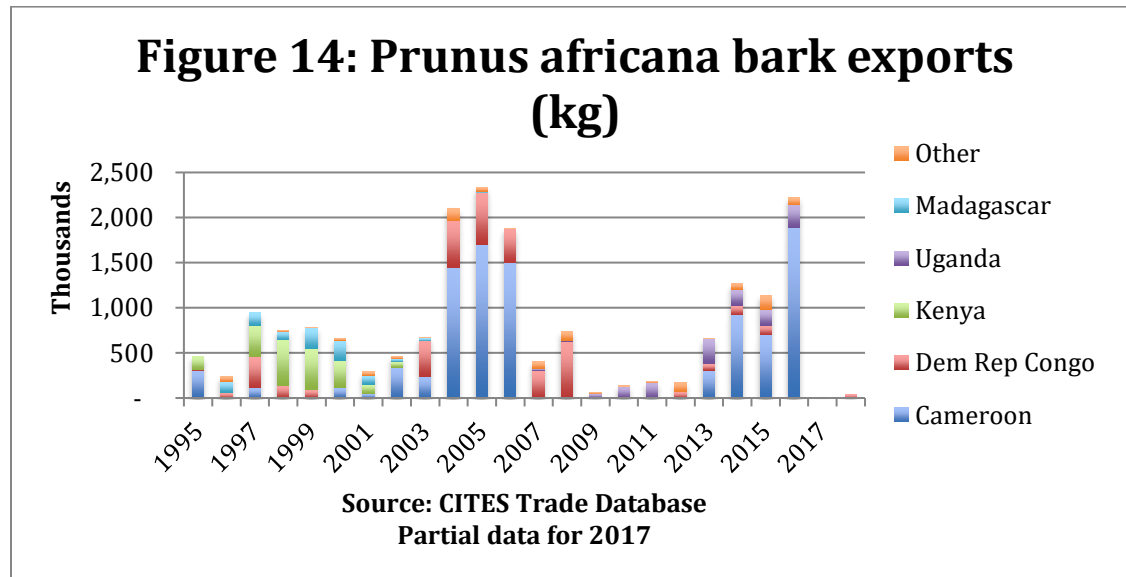
Figure 3.1.13: *Prunus africana* derivatives trade (kg)



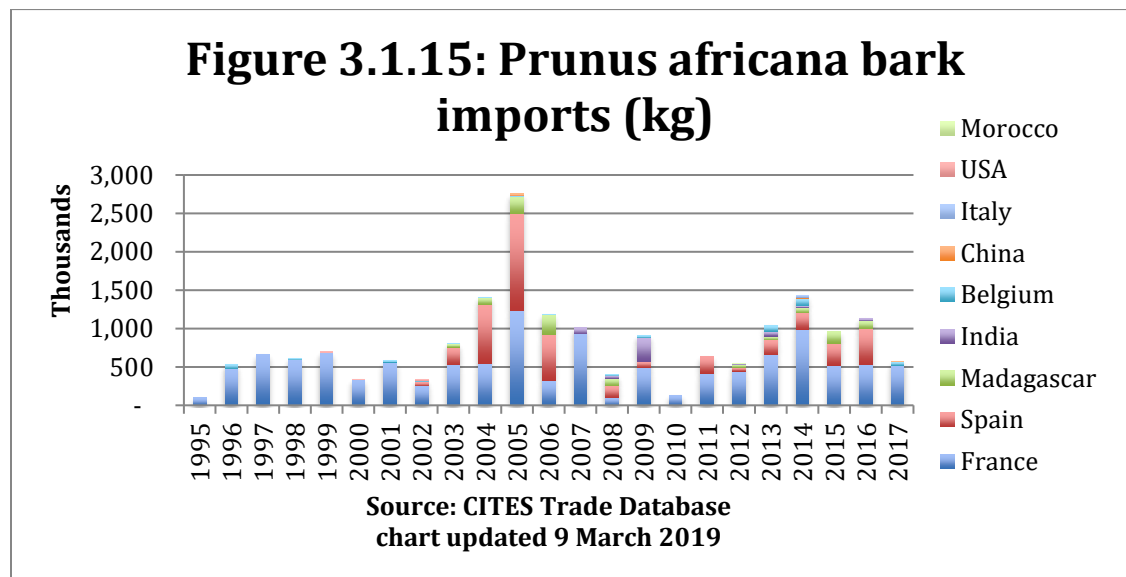
The listing proposal for *Prunus africana* provides a reference point for assessing trends in bark and extract trade.¹¹ Citing national and other sources, the proposal reports 872 metric tons of bark exports in 1990 originating from Cameroon, Kenya and Zaire; Cameroon accounts for half of the total. An alternative source of information provided in the document cites considerably higher exports from Cameroon (nearly 2000 metric tons). There is little information provided regarding extract trade; Madagascar is reported as exporting 240 kilograms in the early 1980s.

¹¹ See document CoP9 Prop 112 available at https://cites.org/sites/default/files/eng/cop/09/prop/E09-Prop-112_Prunus.PDF

With the exception of sharp spikes in 2004-2006 and again in 2016, *Prunus africana* bark trade has been roughly consistent with data provided in the listing document (see figure 3.1.10). The significant increases in exports in 2004-2006 and 2014-2016 are largely the result of exports from Cameroon and, to some extent, exports from the Democratic Republic of the Congo (see figure 3.1.14). Over the reporting period, both sources and quantities of exports have been highly variable.

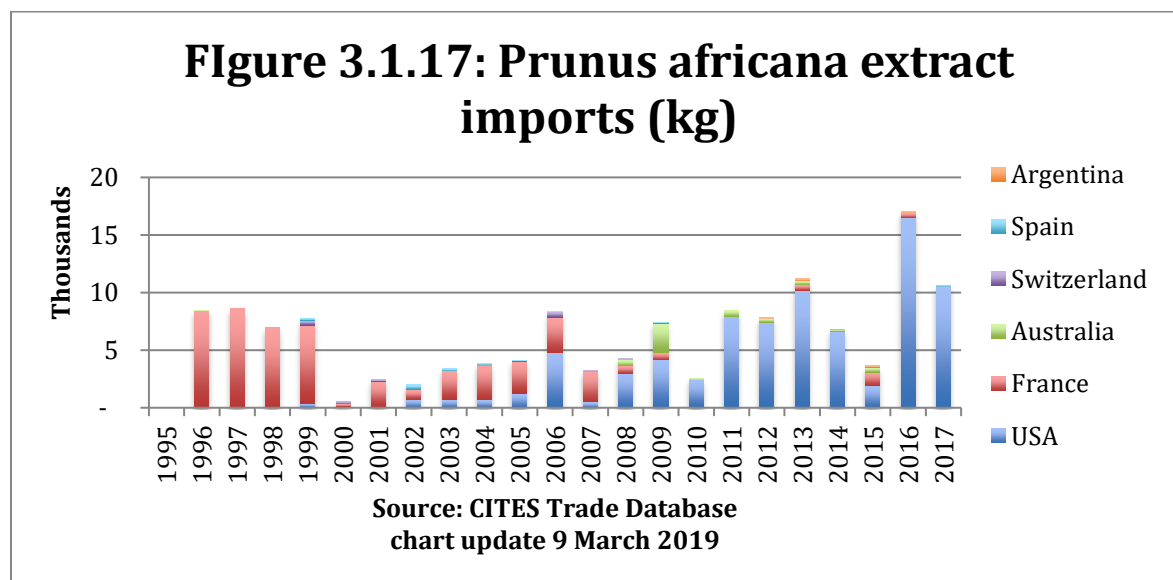
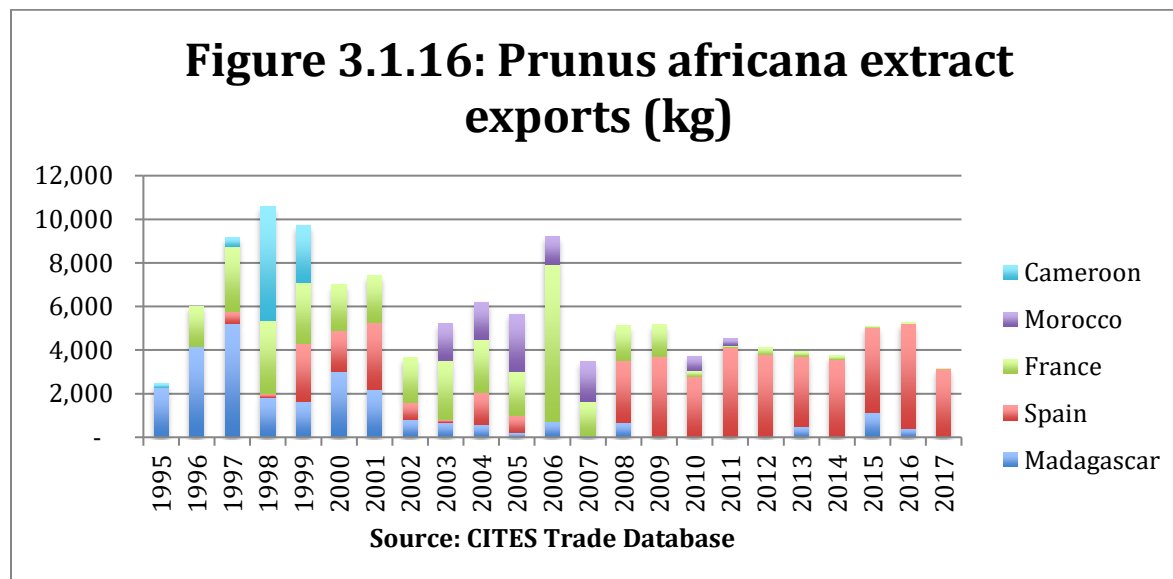


France and Spain have consistently been leading importers of *Prunus africana* bark (figure 3.1.15).



Prunus africana extract trade has also been quite variable (figure 3.1.11); however, exports have been sustained at or above 4000 kilograms annually for the past two decades. Consistent with their role as importers of bark, France (up to 2009) and Spain

(2008 to the present) have been major exporters of *Prunus africana* extract (figure 3.1.16). The origins of specimens used in exported extracts include Madagascar, Cameroon, the Democratic Republic of the Congo and Uganda. France (up to 2007) and the United States (2006 to the present) are the primary importers of *Prunus africana* extract (figure 3.1.17).



As displayed in figures 3.1.12 and 3.1.13, trade in *Prunus africana* powder and derivatives is no longer reported by either exporters or importers. Patterns of trade in powder were consistent with trade in bark: Cameroon was the primary exporter; France and Spain were the primary importers.

***Dalbergia* spp.**

The initial listing for African *Dalbergia* species was 2013 and included only the populations of Madagascar. A subsequent listing (2017) included all *Dalbergia* species. Table 3.1.2 summarizes the records for African *Dalbergia* species in the database.

Table 3.1.2—Record count of African *Dalbergia* species in the CITES Trade Database

Species	Number of records
<i>Dalbergia baronii</i> (2013)	281
<i>Dalbergia melanoxylon</i> (2017)	479
Other <i>Dalbergia</i> species (2013)	34
<i>Dalbergia</i> spp. (2013 / 2017)	96
	890

Information shown in annex table 1.1 reveals that there is relatively little data—although indications of diverse trade—for *Dalbergia* species listed in 2013 (populations of Madagascar). The listing proposal describes the commercial importance of the species but provides no specific data on quantities of legal trade.¹² Substantial illegal harvesting and associated trade is reported.

The annotation for the initial listing for *Dalbergia baronii* covered only logs, sawn wood and veneer but was later (in 2017) expanded to include all parts and derivatives (with some exceptions; see annex table 3). Very small quantities of log and sawn wood trade are reported. No log exports are reported; a small quantity of imports is reported in 2017. Reported sawn wood trade is also very small: 26 m³ total for 2013-2017 reported by exporters and 2 m³ reported by importers; see figure 3.1.18). The source of all reported sawn wood trade is “pre-Convention” (pre-listing) specimens. Spain is the primary exporter; Japan, China and USA are the reported importers. There is sparse data on veneer trade: small quantities exported by Germany and imported by Japan.

Although the scope of the annotation was expanded only recently, the database contains reports of trade in carvings and wood products starting in 2013. Germany is the exporter of carvings (sourced from pre-listing specimens) and China is the importer.

¹² See document CoP16 Prop. 63 available at <https://cites.org/sites/default/files/eng/cop/16/prop/E-CoP16-Prop-63.pdf>

Figure 3.1.18: *Dalbergia baronii* sawn wood trade (m3)

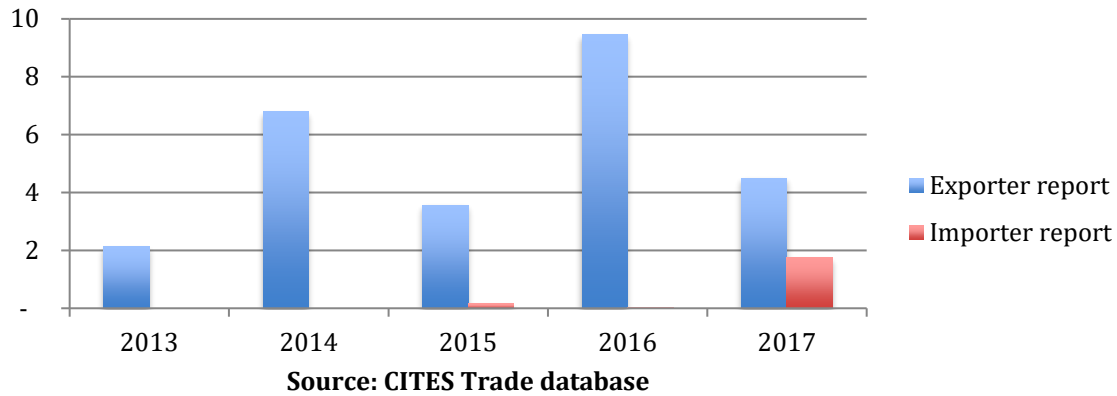


Figure 3.1.19: *Dalbergia baronii* carvings trade (number)

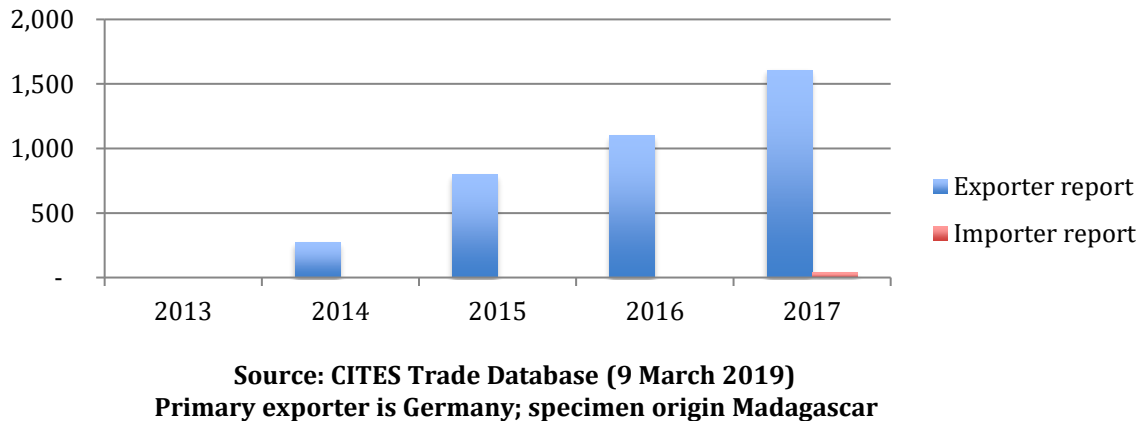


Table 3.1.3 summarizes trade in *Dalbergia melanoxylon* (listed in 2017); table 3.1.4 summarizes reported trade in all *Dalbergia* spp. (listed in 2013 for populations of Madagascar and 2017 for all others). In both cases, trade in carvings and wood products accounts for the majority of trade (see annex table 1.1) and most trade is based on pre-convention specimens.

Table 3.1.3—*Dalbergia melanoxylon* exporter and importer reported trade, 2017

Units	Carvings		Logs		Sawn wood		Wood products	
	Exporter	Importer	Exporter	Importer	Exporter	Importer	Exporter	Importer
cm3	380				3		18176	13422
g	8066	687						
kg	2875	1662			49747	4750	824	32
m							1	1
m3		3		13651	46	137	4	3
blank	4161	5750	60		5258	123	25984	31457

Table 3.1.4—African *Dalbergia* spp. exporter and importer reported trade, cumulative 2013-2017

Units	Carvings		Logs		Sawn wood		Veneer		Wood products	
	Exporter	Importer	Exporter	Importer	Exporter	Importer	Exporter	Importer	Exporter	Importer
cm3										
g										431
kg			3	36000		690			235	158
m2										
m3						688143		12173		10
blank	1	1072				2	20	270	3009	4193

***Diospyros* spp.**

Diospyros spp. (populations of Madagascar) were listed in 2013 with an annotation that covers logs, sawn wood and veneer. The listing proposal describes the commercial value of the species but does not document quantities traded.¹³

There is very little data recorded in the database (see annex table 1.1); there is no reported trade in logs or veneer and only very small quantities of sawn wood trade reported (where quantity is reported, less than 1 cubic meter). Although the listing is limited in scope (annotation #5: logs, sawn wood and veneer sheets) the database includes reports of trade (also very small quantities) in carvings and wood products. Table 3.1.5 summarizes the small quantity of reported trade in *Diospyros* spp.

Table 3.1.5: Reported trade in *Diospyros* spp., cumulative 2013-2017

Units	Carvings		Sawn wood		Wood products	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
kg			1			
m3				2		
blank	114	36	6	1	12	101

Osyris lanceolata

Osyris lanceolata was listed in 2013 with an annotation (#2) that covers all parts and derivatives, with some exceptions (see annex table 3 for details on annotations). The listing proposal describes the commercial value and patterns of exploitation (the heartwood of the species is utilized primarily for extracts and oil) but does not document quantities traded.¹⁴ Illegal trade is described and quantified (over 200 tons confiscated by Kenya between 2007 and 2011).

¹³ See document CoP16 Prop 58 available at <https://cites.org/sites/default/files/eng/cop/16/prop/E-CoP16-Prop-58.pdf>

¹⁴ See document CoP16 Prop 69 available at <https://cites.org/sites/default/files/eng/cop/16/prop/E-CoP16-Prop-69.pdf>

The database reports chip and oil exports (in both cases by Burundi) and oil imports (by India); table 3.1.6 summarizes cumulative reported trade in *Osyris lanceolata*. No data are reported for 2013-14.

Table 3.1.6: Exporter and importer reported trade in *Osyris lanceolata*, cumulative 2013-2017

Units	Chips		Oil		Timber	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
kg	102350		3500	1515		300

Pterocarpus erinaceus

Pterocarpus erinaceus was listed initially on Appendix III in 2016 (by Senegal) and subsequently on Appendix II starting in 2017. The listing proposal describes the domestic importance of the species and increasing importance in international trade as one of a number of species (“Hongmu”) highly valued in China. Species-specific trade data are not provided but trends in log and lumber trade that is likely to include *Pterocarpus erinaceus* are presented.¹⁵

Data are reported for 2016 and 2017; table 3.1.7 summarizes reported trade in *Pterocarpus erinaceus*. For log trade, Ghana is the only country reporting exports; China is the only country reporting imports. Note that importer reported log trade is considerably greater than exporter reported trade. China reports imports from Nigeria (roughly half the total), Gambia, Ghana and six additional countries. There is a similar pattern for sawn wood trade: Nigeria is the only country reporting exports and China is the only country reporting imports. Imports from Nigeria account for roughly half of China’s reported imports; Benin, Gambia, Sierra Leone, Ghana and Mali account for the remainder.

Table 3.1.7: Exporter and importer reported trade in *Pterocarpus erinaceus*, cumulative 2016-2017

Units	Carvings		Logs		Sawn wood		Wood products	
	Exporter	Importer	Exporter	Importer	Exporter	Importer	Exporter	Importer
kg				4740600		622018	550	
m2				252				
m3			78182	1010710	233744	61403		
blank		3503		85			20	3

¹⁵ See document CoP17 Prop. 57 available at <https://cites.org/sites/default/files/eng/cop/17/prop/060216/E-CoP17-Prop-57.pdf>

***Guibourtia* spp.**

Guibourtia spp. were listed on Appendix II in 2017 with an annotation (#15) that covers all parts and derivatives (with some exceptions; see annex table 3). Using national, industry and other sources, the listing proposal describes commercial use of the species and includes detailed information on log and sawn wood exports by Gabon and Cameroon, including both quantities and prices.¹⁶

The scope and variety of data reported for the species in the CITES Trade Database are shown in annex table 1.1. Two thirds of the records in the database are *G. demeusei*; nearly all of the remainder are *G. tessmanii*. Table 3.1.8 summarizes trade in all *Guibourtia* species reported in 2017.

Table 3.1.8—*Guibourtia* spp. exporter and importer reported trade, 2017

Units	Carvings		Logs		Sawn wood		Veneer		Wood products	
	Exporter	Importer	Exporter	Importer	Exporter	Importer	Exporter	Importer	Exporter	Importer
cm3	2468	14000			140				712	33666
g	2424	4500								476
kg	5092	16440			12500	20		850	142	2415
m2					19		4146	3337		
m3		4	1374	5410	97	10011	1	41	526	11
blank	1045	12084							34581	40825

For 2017, most trade is in carvings and wood products. As shown in table 3.1.8, trade in sawn wood, carvings and wood products is reported using a wide variety of units (cubic centimeters, grams, kilograms, cubic meters and number) making it difficult to characterize or summarize. To some degree, this is the case with data reported for all selected species; see section 5 for a review of the database.

The Democratic Republic of the Congo is the source of reported *Guibourtia* spp. log exports; China is the importer. The database has limited information on sawn wood exports; China and the United States account for nearly all reported sawn wood imports. For carvings, Germany, France, Spain and Italy account for most exports; India, France and Japan account for most wood product exports, in all cases using pre-Convention specimens. The United States accounts for nearly all carvings imports and more than half of wood products imports. Japan, France, Hong Kong, the United Kingdom, Netherlands and China are other significant importers of *Guibourtia* spp. wood products.

¹⁶ See document CoP17 Prop. 56 available at <https://cites.org/sites/default/files/eng/cop/17/prop/060216/E-CoP17-Prop-56.pdf>

3.2 Trade in selected Asian species

Table 3.2.1 shows the Asian tree species examined, along with the year of the initial CITES Appendix II listing and current annotation. These include two species (*Aquilaria malaccensis* and *Dalbergia cochinchinensis*) and three genera (*Gyrinops* spp., *Gonystylus* spp. and *Dalbergia* spp).

Table 3.2.1—Selected Asian tree species, initial listing date and current annotation

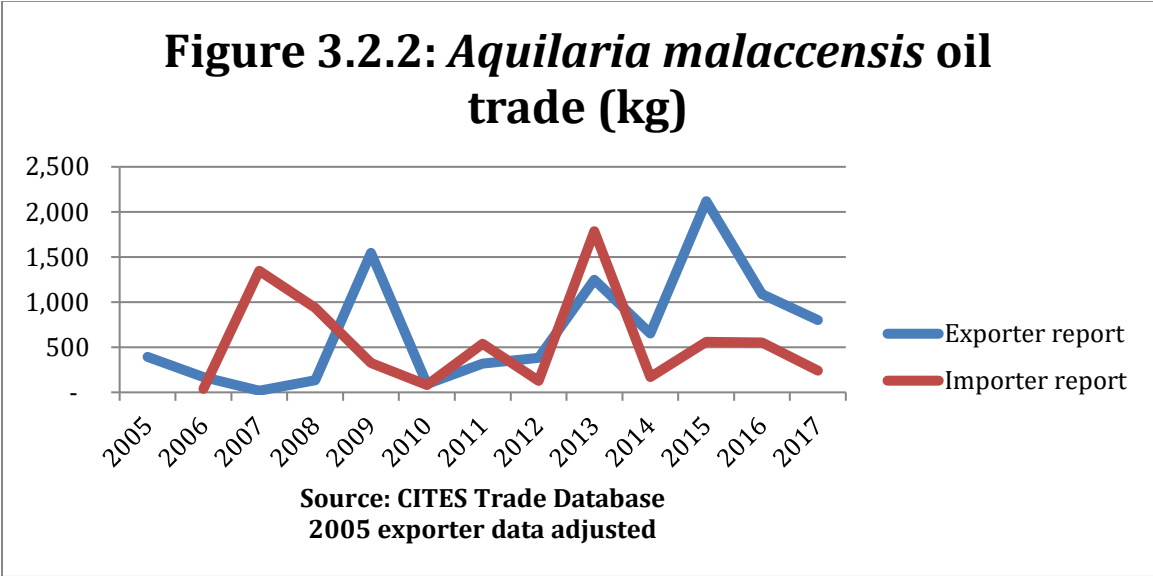
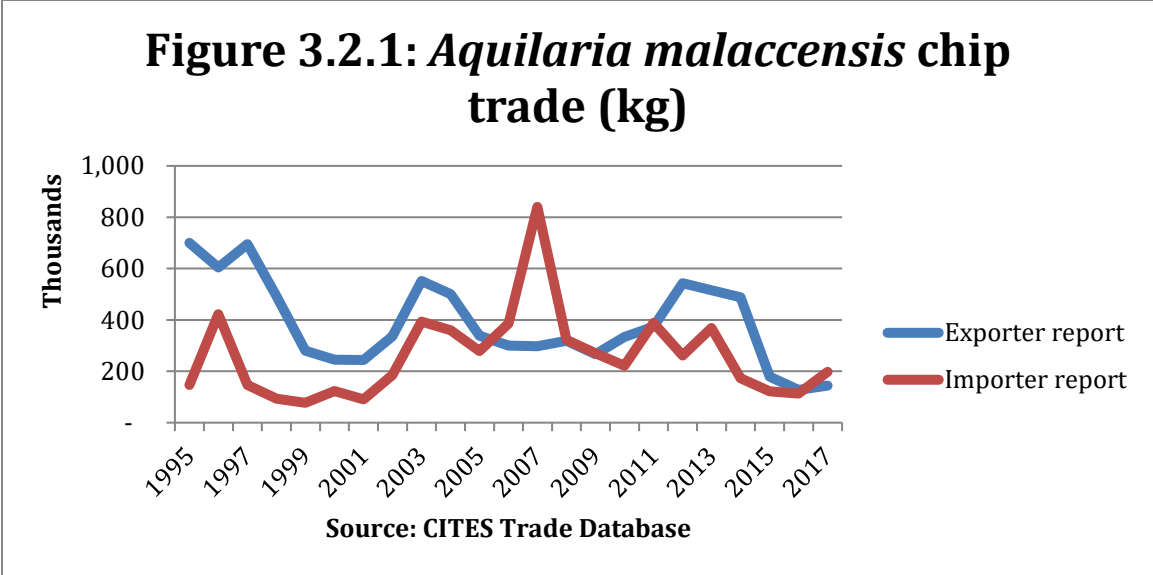
Genus / Species	Trade name	Initial listing on appendix II	Current annotation
<i>Aquilaria malaccensis</i>	agarwood	1995	14
<i>Gyrinops</i> spp.	agarwood	2005	14
<i>Gonystylus</i> spp.	ramin	2005	4
<i>Dalbergia cochinchinensis</i>	rosewood	2013	15
<i>Dalbergia</i> spp	rosewood	2017	15

Aquilaria malaccensis

Aquilaria malaccensis was listed on Appendix II in 1995; trade is primarily as chips (over half of the records in the database), oil, logs (including “timber”), derivatives, extract and powder (see annex table 1.2). Exporter and importer reported trade is summarized in figure 3.2.1 (chips), figure 3.2.2 (oil) and figure 3.2.3 (logs and timber). Trade in derivatives and extract is intermittent (and relatively small); table 3.2.2 summarizes cumulative quantities reported over the period 1995-2017.

The listing proposal for *Aquilaria malaccensis* cites reports of exports from India, Indonesia and Malaysia; data provide include quantities exported from India and the value of exports from Indonesia and Malaysia.¹⁷ The form of exports (for example, ships, extract, etc.) is not specified. Over the period 1989/90 to 1992/93, the listing proposal reports exports from India that average approximately 310 metric tons per year. In the 20+ years since listing, chip trade accounts for the bulk of *Aquilaria malaccensis* trade and averages roughly 300 metric tons per year (see figure 3.2.1).

¹⁷ See document CoP9 Prop. 115 available at: https://cites.org/sites/default/files/eng/cop/09/prop/E09-Prop-115_Aquilaria.PDF



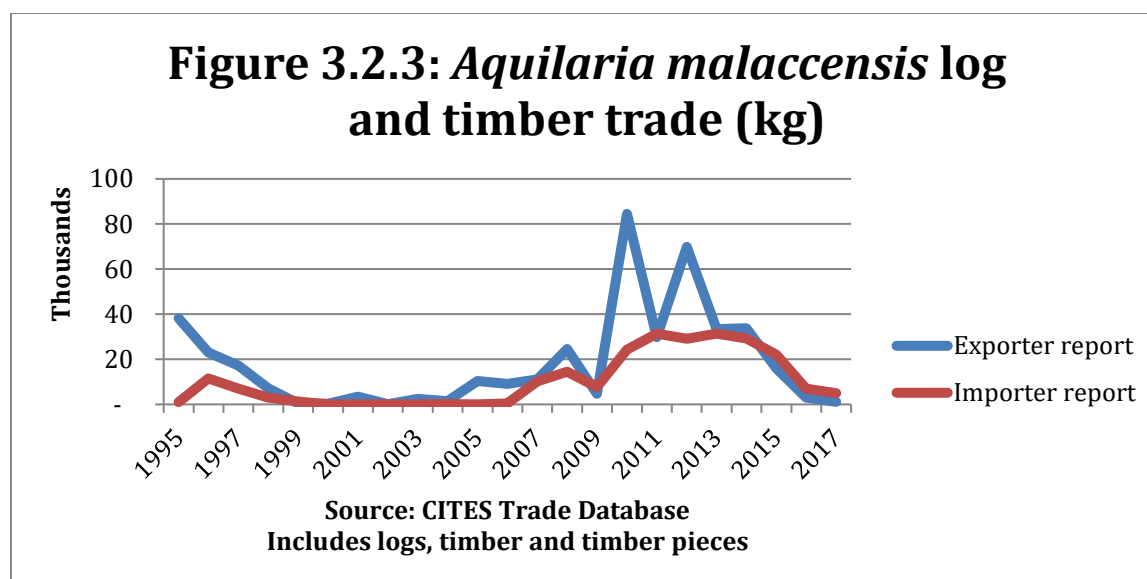
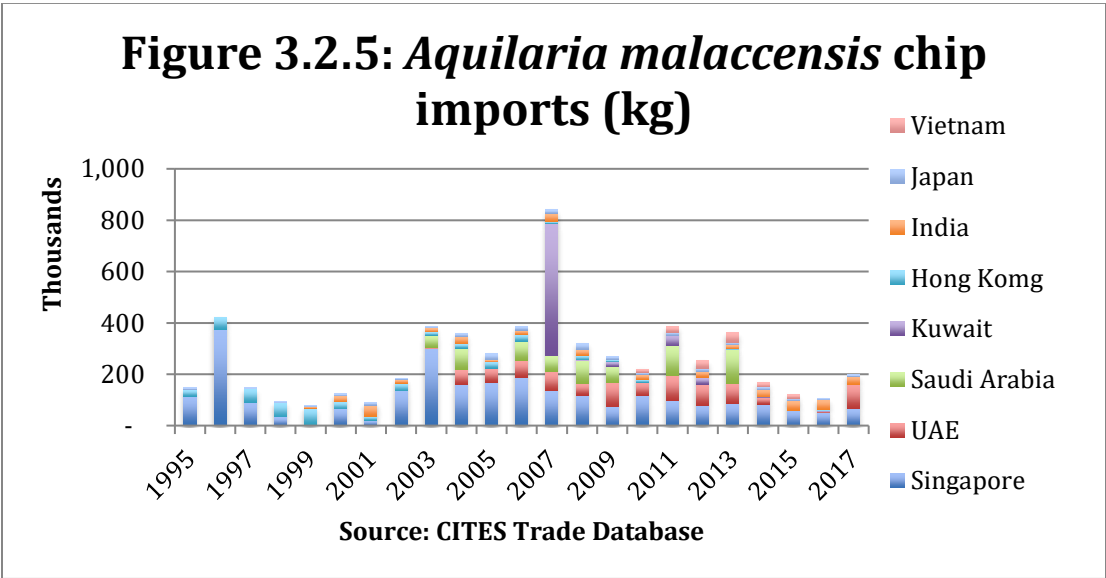
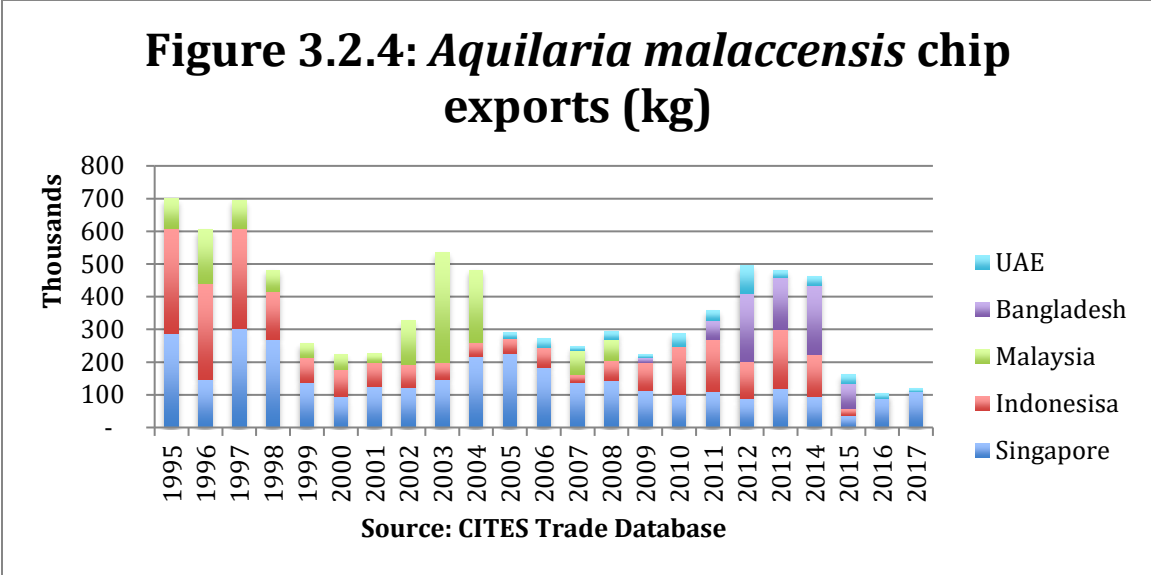


Table 3.2.2—*Aquilaria malaccensis* derivatives and extract trade, cumulative 1995-2017

Units	Derivatives		Extract	
	Exporter	Importer	Exporter	Importer
Bottles	13200			2
Cartons	5405			
g	680785	5856	1864	1030
kg	21168	2363	317	4078
mg		25580		1000
(blank)	14664	9792	5779986	234

Both exporter and importer reported chip trade has been cyclical and appears to be generally declining (note, however that the appearance of a downward trend in reported exports may be due to the absence of 2015-17 data from some historically important exporters, including Bangladesh, Malaysia and Indonesia). Importer reported trade shows similar cycles and less pronounced decline.

Indonesia, Malaysia and Bangladesh have been the primary origin of *Aquilaria malaccensis* chip exports (see figure 3.2.4); Singapore is both an importer (from Indonesia and Malaysia) and exporter of chips (see figure 3.2.5).



The CITES Trade Database reports intermittent trade in *A. malaccensis* oil prior to 2005; from 2005 to 2017 trade is highly variable and relatively small quantities (with only a few exceptions, less than one metric ton; see figures 3.2.6 and 3.2.7). Malaysia is the origin for two thirds of specimens exported as oil; Saudi Arabia, France and Singapore are the primary importers.

Primary exporters for trade in derivatives and extract (summarized in table 3.2.2) are China, France and Korea; leading importers are Germany, China and Japan.

Figure 3.2.6: *Aquilaria malaccensis* oil exports (kg)

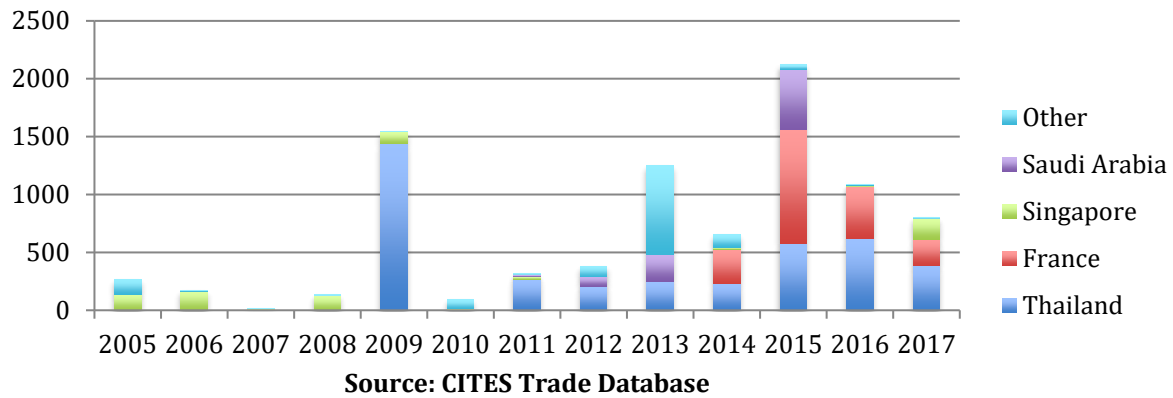
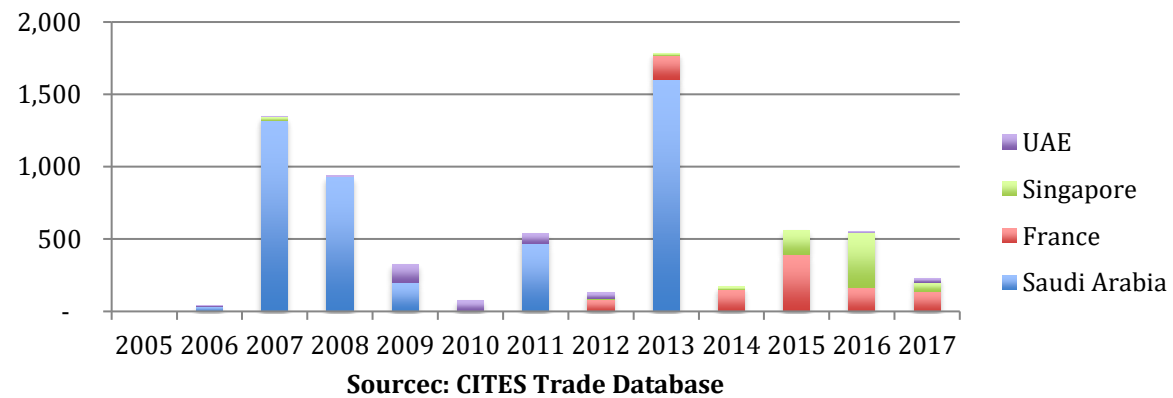
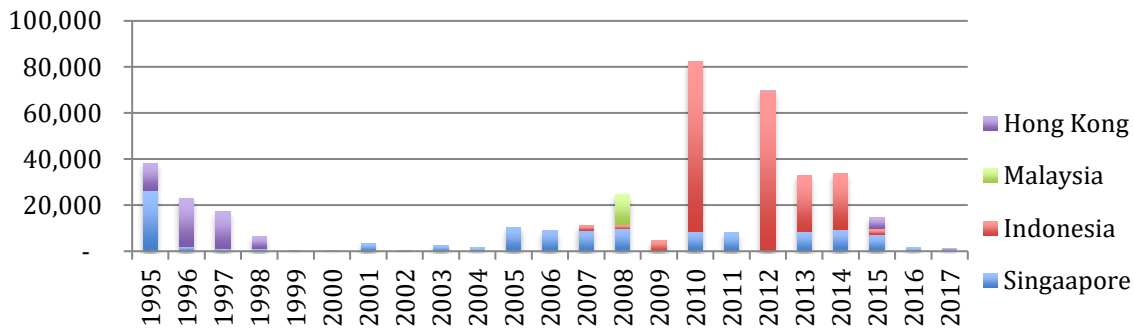


Figure 3.2.7: *Aquilaria malaccensis* oil imports (kg)



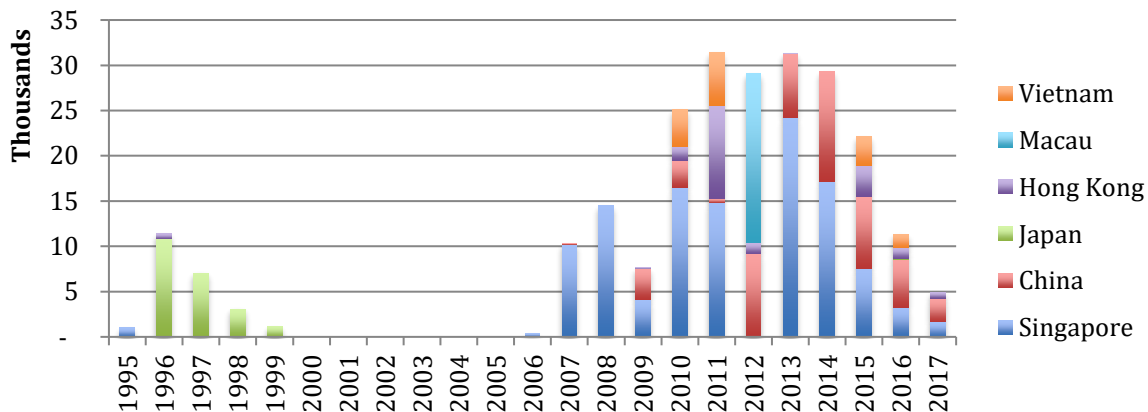
Similar to trade in oil, *Aquilaria malaccensis* log and timber trade has been highly variable over the listing period (see figures 3.2.8 and 3.2.9). Indonesia has been the primary exporter and Singapore and China have been the primary importers.

Figure 3.2.8: *Aquilaria malaccensis* log and timber exports (kg)



Source: CITES Trade Database
Includes logs, timber and timber pieces

Figure 3.2.9: *Aquilaria malaccensis* log and timber imports (kg)



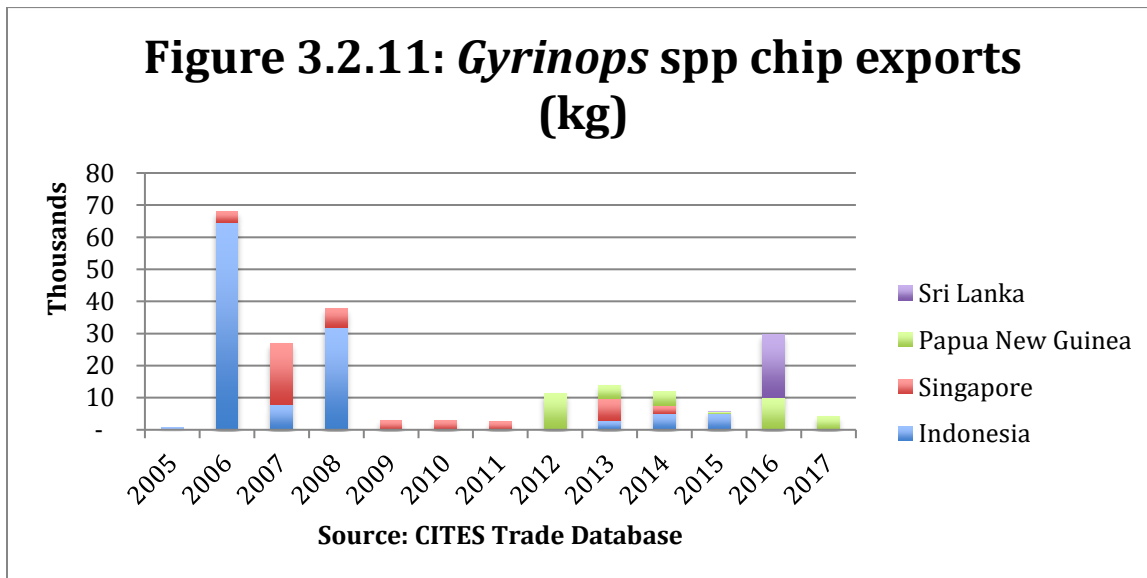
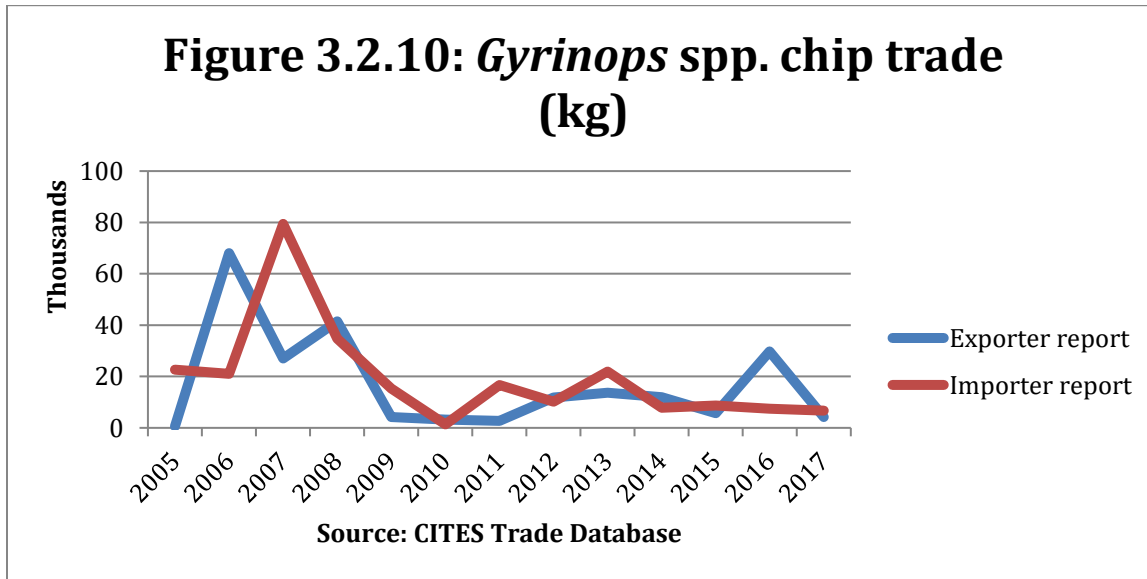
***Gyrinops* spp.**

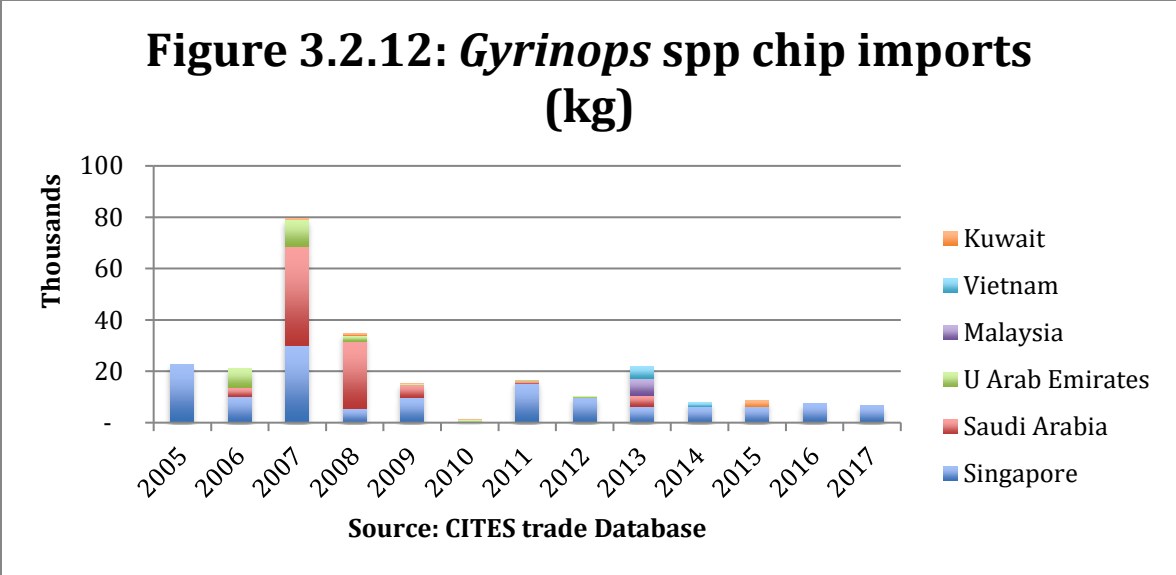
Gyrinops spp. were listed on Appendix II in 2005 (along with *Aquilaria* spp.); trade is primarily as chips (more than three-fourths of the records in the database; see annex table 1.2). The listing proposal documents exports of agarwood (form not specified) but does not provide data on trade in *Gyrinops* spp.¹⁸

Figure 3.2.10 summarizes trade in *Gyrinops* spp. chips; initially, Indonesia was the primary exporter (both directly as well as through Singapore; see figure 3.2.11); the

¹⁸ See document CoP13 Prop. 49 available at: <https://cites.org/sites/default/files/eng/cop/13/prop/E13-P49.pdf>

sharp drop in export quantity also reflects a shift in the source of exports. Singapore continues to be the primary importer (see figure 3.2.12).





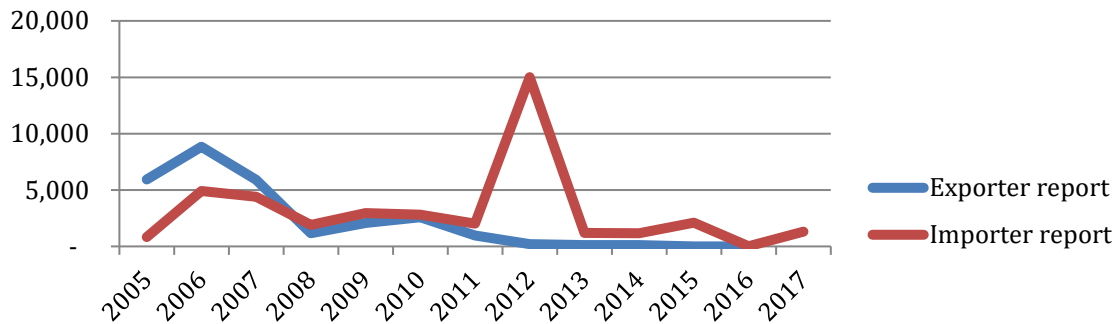
***Gonystylus* spp.**

Gonystylus spp. were listed on Appendix II in 2005; trade recorded in the database includes primary wood products (logs, timber and sawn wood) as well as further manufactured products (“carvings”). Primary products account for roughly three-fourths of the *Gonystylus* spp. records; carvings account for one quarter of the records (see annex table 1.2).

The listing proposal documents declining populations, production and trade in *Gonystylus* spp., as well as threats that include deforestation, illegal logging and associated trade.¹⁹ Trade has declined since listing (see figures 3.2.13 and 3.2.14).

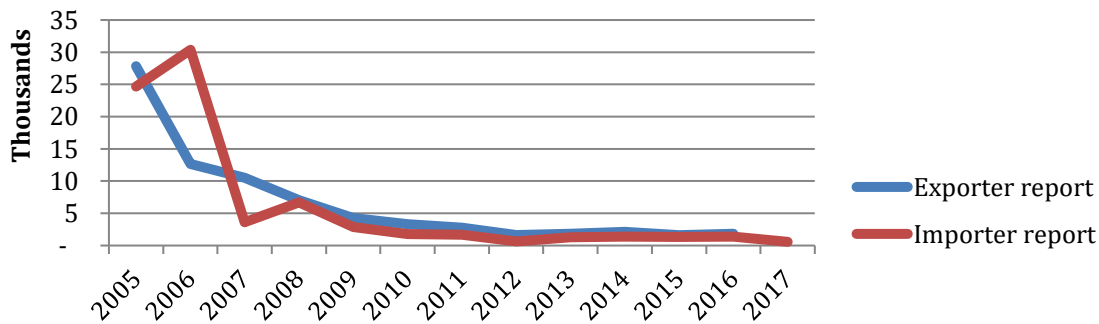
¹⁹ See document CoP13 Prop. 50 available at <https://cites.org/sites/default/files/eng/cop/13/prop/E13-P50.pdf>

Figure 3.2.13: *Gonystylus* spp timber trade (m3)



Source: CITES Trade Database
Includes logs, timber and timber pieces

Figure 3.2.14: *Gonystylus* spp sawn wood trade (m3)



Source: CITES Trade Database
No exporter data reported for 2017

Dalbergia cochinchinensis

Although *Dalbergia cochinchinensis* was listed on Appendix II in 2013, there are relatively few records reporting trade in the species. Annex table 1.2 displays the structure of this trade: logs (including timber) and sawn wood account for the majority of reports. The listing proposal describes trade as primarily in logs, sawn wood, with additional trade in handicrafts and furniture; no specific data are provided on quantities in trade.²⁰ Illegal trade is described and documented.

²⁰ See document CoP16 Prop. 60 available at <https://cites.org/sites/default/files/eng/cop/16/prop/E-CoP16-Prop-60.pdf>

Figures 3.2.15 and 3.2.16 show log trade (including timber) reported in the database; figures 3.2.17 and 3.2.18 show sawn wood trade. Because the data are limited it is not possible to draw conclusions regarding trends or patterns in trade.

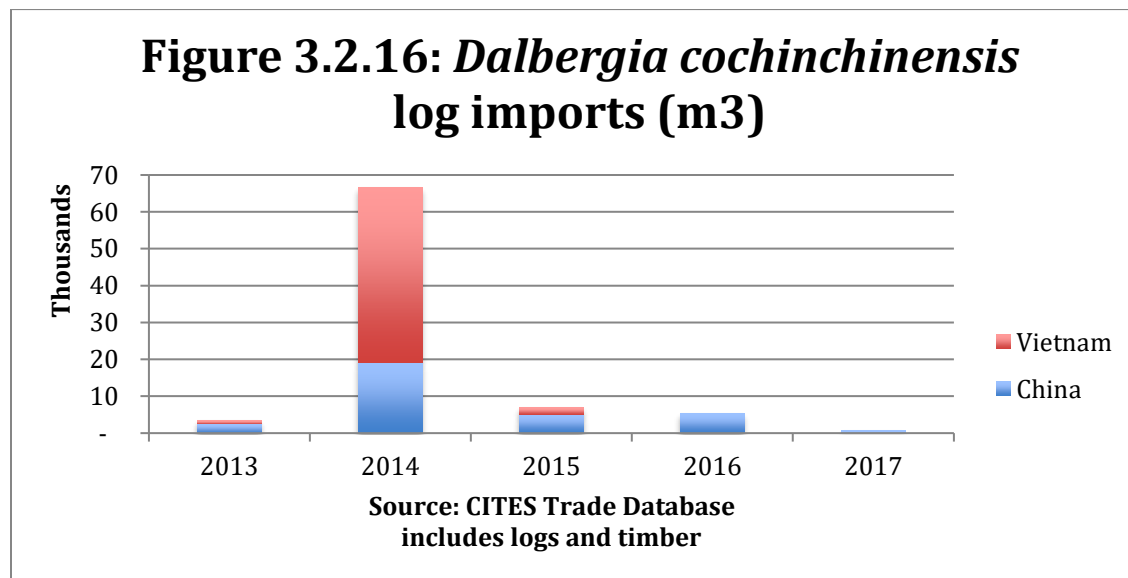
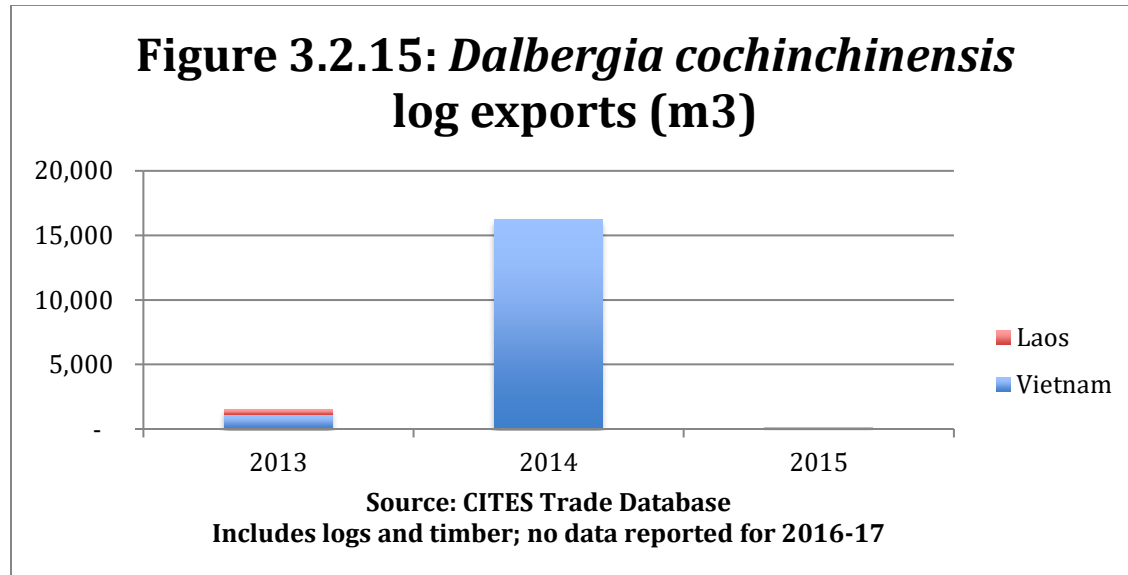
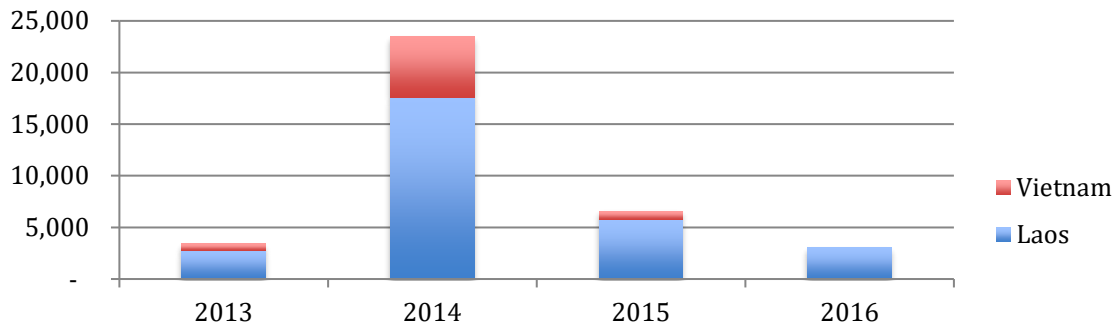
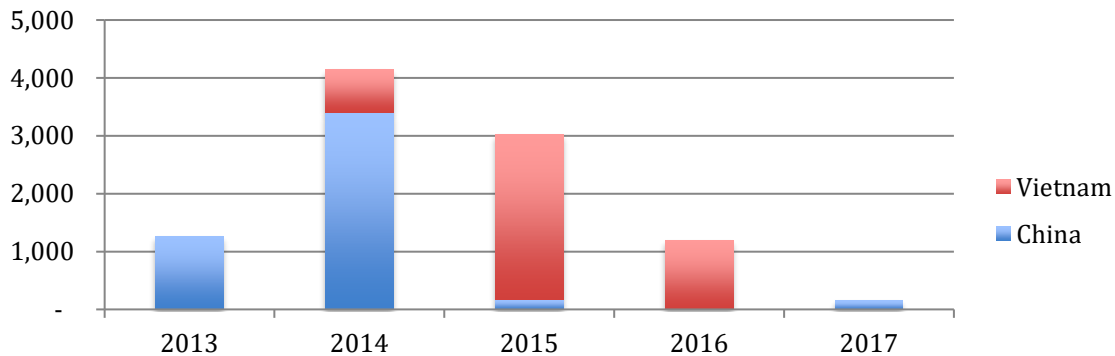


Figure 3.2.17: *Dalbergia cochinchinensis* sawn wood exports (m3)



Source: CITES Trade Database
No data reported for 2017

Figure 3.2.18: *Dalbergia cochinchinensis* sawn wood imports (m3)



Source: CITES Trade Database

***Dalbergia* spp.**

The remaining Asian *Dalbergia* species were listed on Appendix II in 2017 as part of a decision to list the entire genus. The listing proposal notes that the populations of South and Central America appear to meet the criteria for listing in Appendix II and, given the large number of *Dalbergia* species in trade, including the whole genus will eliminate the need to identify individual species and therefore aid enforcement.²¹ The listing proposal also documents increasing trade in *Dalbergia* spp. using both importer data (China) and records in the CITES Trade Database.

²¹ See document CoP17 Prop. 55 available at <https://cites.org/sites/default/files/eng/cop/17/prop/060216/E-CoP17-Prop-55.pdf>

Table 3.2.3 summarizes the record count of Asian *Dalbergia* spp in the CITES Trade Database. Asian *Dalbergia* species (other than *Dalbergia cochinchinensis*) are primarily *D. latifolia* (83% of records); the remainder of the records includes 10 other *Dalbergia* species (9%) and generic *Dalbergia* spp. (8%) (see table 3.2.3).

Table 3.2.3—Record count of Asian *Dalbergia* species in the CITES Trade Database, 2013-2017

Species	Number of records
<i>Dalbergia cochinchinensis</i> (2013)	108
<i>Dalbergia latifolia</i> (2017)	2246
Other <i>Dalbergia</i> species (2017)	237
<i>Dalbergia</i> spp. (2017)	213
	2804

Annex table 1.2 displays the structure of all reported trade; table 3.2.4 summarizes quantities reported for the trade terms that account for most records. The diversity of units, including the large number of records reported with no units (blank), make it difficult to characterize this trade. Most specimens are reported to be pre-convention, consistent with the recent listing (see table 3.2.5).

Table 3.2.4—Asian *Dalbergia* spp. exporter and importer reported trade, 2017

Units	Carvings		Derivatives		Sawn wood		Veneer		Wood products	
	Exporter	Importer	Exporter	Importer	Exporter	Importer	Exporter	Importer	Exporter	Importer
cm3	17473	48230			2450		513814		562594	801999
g	17229	6028							10	24408
kg	100916	5757480		7958	17	33849	4330	11944	32597	100131
m2							10700	13743		
m3	74	71			45	224918	7526	242	97792	4042
blank	136776	151444	28363	2783	507	22	1227339	166389	2407280	2311848

Table 3.2.5—Reported origin of Asian *Dalbergia* spp.

Source code	Description	Number of records
A	Artificially propagated	420
I	Confiscated specimens	43
O	Pre-Convention	1952
U	Unknown	11
W	Taken from the wild	263
Other		7

European countries are the primary exporters (Spain, Portugal and Germany) and importers (Germany, Spain, Italy) of carvings. Indonesia and China are the primary exporters of wood products; USA, Japan and France are the primary importers. Spain and India are the primary exporters of veneer; Italy and USA are the primary importers. Portugal and Spain account for most sawn wood exports; China accounts for nearly all imports.

3.3 Trade in selected Latin American species

Table 3.3.1—Selected Latin American tree species, initial listing date and current annotation

Genus / Species	Trade name	Initial listing on appendix II	Current annotation
<i>Aniba rosaedora</i>	Brazilian rosewood	2010	12
<i>Bulnesia sarmientoi</i>	Palo santo	2010	11
<i>Dalbergia</i> spp. ²²	rosewood	2013 / 2017	15
<i>Guaiaacum sanctum</i>	lignum vitae	1975	2
<i>Guaiaacum officinale</i>	lignum vitae	1992	2
<i>Guaiaacum</i> spp.	lignum vitae	2003	2
<i>Swietenia humulis</i>	mahogany	1975	4
<i>Swietenia mahagoni</i>	mahogany	1992	5
<i>Swietenia macrophylla</i>	mahogany	2003	6

Aniba rosaedora

Aniba rosaedora was listed on Appendix II in 2010 with an annotation that covers primary wood products and extracts. The listing proposal provides information on domestic consumption of essential oil (generally small quantities) and information on declining quantities and rising prices of oil exports.²³ Possible illegal trade, based on discrepancies between authorized *Aniba rosaedora* timber harvest and amounts of essential oil exported is also described.

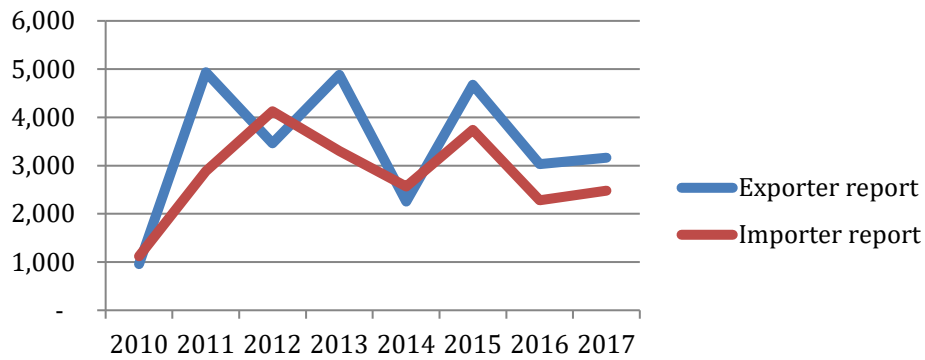
Nearly all reported trade in *Aniba rosaedora* is as oil or extract; the database records little or no trade in the unprocessed (logs) or semi-processed (sawn wood) products also covered by the listing (see Annex table 1.3). The quantity of oil trade recorded (see figure 3.3.1) shows no apparent trend and is well below the quantity reported in the listing proposal for 2008 (roughly 20 metric tons).

The importance of range countries as a source of oil exports has declined (see figure 3.3.1). Brazil and the United States are the primary exporters (figure 3.3.2); major markets include the United States, Europe and Japan (see figure 3.3.3).

²² *D. granadillo*, *D. retusa* and *D. stevensonii* were listed on Appendix II in 2013; the remaining *Dalbergia* species were listed in 2017.

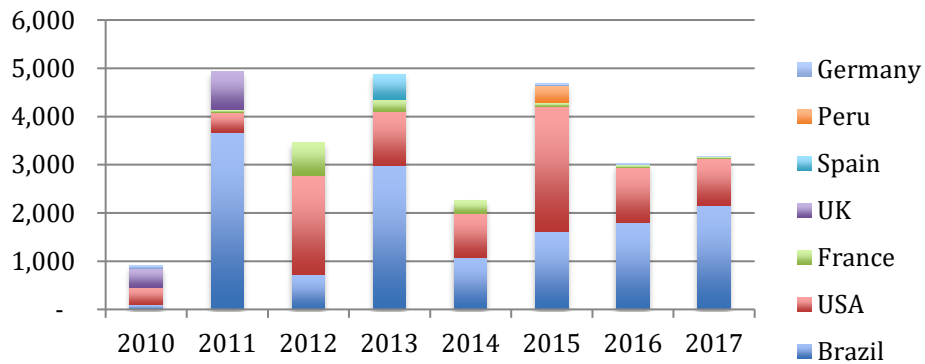
²³ See document CoP15 Prop. 29 available at <https://cites.org/sites/default/files/eng/cop/15/prop/E-15-Prop-29.pdf>

Figure 3.3.1: Aniba rosaeodora oil trade (kg)

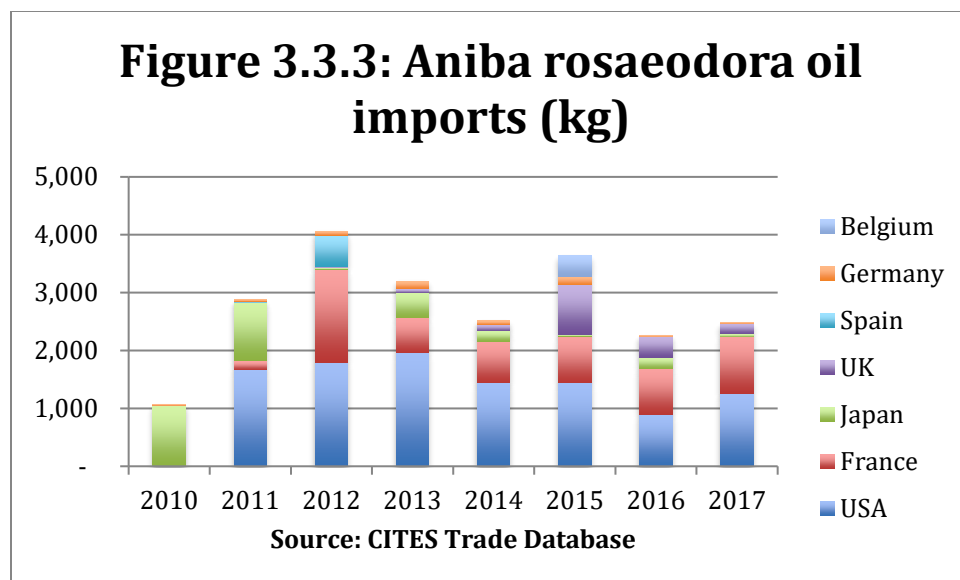


Source: CITES Trade Daatabase

Figure 3.3.2: Aniba rosaeodora oil exports (kg)



Source: CITES Trade Database



Bulnesia sarmientoi

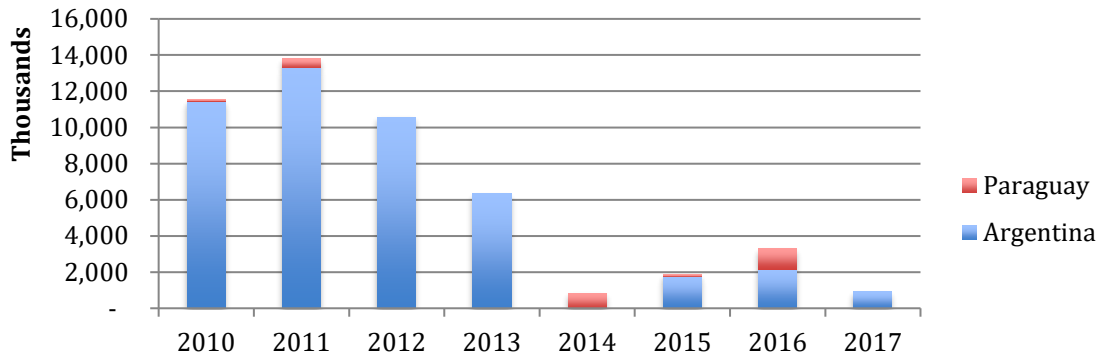
Bulnesia sarmientoi was also listed on Appendix II in 2010; the annotation (#11) is similar to the annotation used for *Aniba rosaeodora* but slightly more comprehensive (see annex table 3 for details). Trade in *Bulnesia sarmientoi* is also predominately in the form of derivatives, oil and extract; however, trade also includes exports of logs, timber and sawn wood (see annex table 1.3).

The listing proposal describes a wide variety of uses for *Bulnesia sarmientoi* as well as data on exports from Argentina and Paraguay.²⁴ Exports from Argentina are reported to have declined following the listing on Appendix III (in 2008); primary production in Paraguay is shown to have increased between 2000 and 2005.

Log and sawn wood exports have declined sharply since the listing on Appendix II (see figures 3.3.4 and 3.3.5). Argentina has been the primary exporter; China is the primary market for both logs and sawn wood.

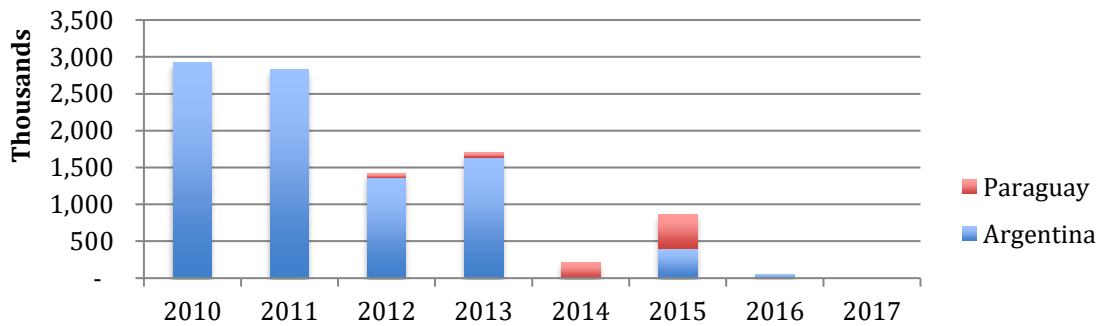
²⁴ See document CoP15 Prop. 42 available at <https://cites.org/sites/default/files/eng/cop/15/prop/E-15-Prop-42.pdf>

Figure 3.3.4: *Bulnesia sarmientoi* log exports (kg)



Source: CITES Trade Database

Figure 3.3.5: *Bulnesia sarmientoi* sawn wood exports (kg)



Source: CITES Trade Database

No data reported for 2017

Paraguay is the origin of most extract and oil exports (see figures 3.3.6 and 3.3.7). The likelihood that the terms extract and oil are used interchangeably makes it difficult to draw conclusions regarding trends in reported trade, although taken together there is some indication of a decline in exports. Europe, India and the United States are the major markets for extract and oil.

Figure 3.3.6: *Bulnesia sarmientoi* extract exports (kg)

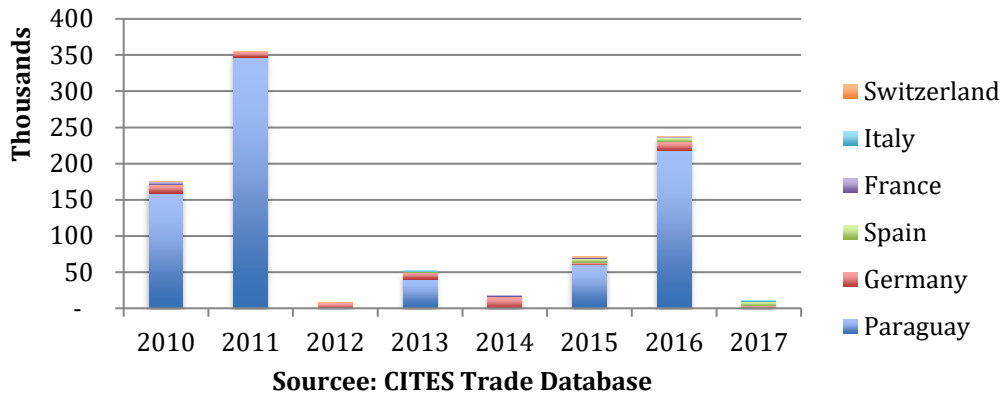
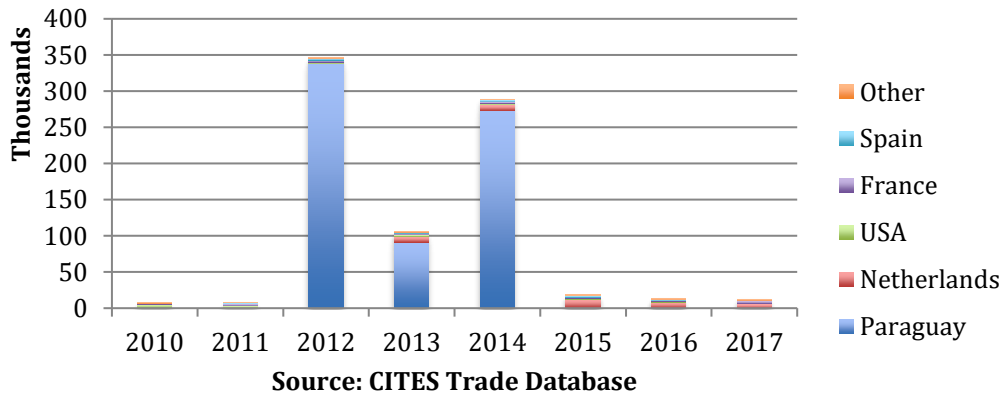


Figure 3.3.7: *Bulnesia sarmientoi* oil exports (kg)



Dalbergia spp

Latin American *Dalbergia* species listed on Appendix II includes species listed in 2013 (*D. granadillo*, *D. retusa* and *D. stevensonii*) and species listed in 2017 (all remaining *Dalbergia* spp.). Table 3.3.2 summarizes the record count for Latin American *Dalbergia* species in the database. The following summary (and annex table 1.3) shows the structure of trade in Latin America *Dalbergia* species in two parts: the group listed in 2013 (I) and the group listed in 2017 (II).

Table 3.3.2—Record count of Latin American *Dalbergia* species in the CITES Trade Database

Species	Number of records
<i>Dalbergia granadillio</i>	10
<i>Dalbergia retusa</i>	422
<i>Dalbergia stevensonii</i>	297
<i>Dalbergia</i> spp	201
	930

***Dalbergia* spp (I)**

The listing proposals for these species describe their high value, scarcity in trade and the general absence of trade data.²⁵ Annex table 1.3 summarizes the data collected since listing on Appendix II in 2013. Reported trade displays considerable diversity, including logs and timber, sawn wood, veneer, carvings and wood products, consistent with the scope of the listing (all parts and derivatives).

Figures 3.3.8 and 3.3.9 summarize trade in logs (including timber) and sawn wood; table 3.3.3 summarizes recorded trade in carvings, wood products and veneer.

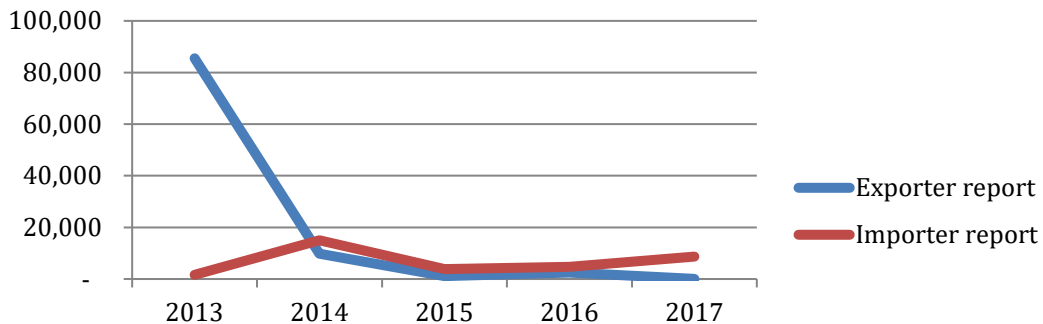
Table 3.3.3—Latin American *Dalbergia* spp. (group I) exporter and importer reported trade, cumulative 2013-2017

Units	Carvings		Veneer		Wood products	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
cm3	8109	3000	331375		126800	10290
g	3043	2734				310
kg	4541	31538		225	1	22
m2			1451			
m3	6	2	7	1	2	1
blank	281	202	9	1	2350	1003

The primary exporter for logs and timber (most exports are recorded as “timber”) is Costa Rica; Panama and Nicaragua also report timber exports. Nicaragua is the primary exporter for sawn wood. China is the primary importer of logs and timber (most imports are recorded as “logs”) as well as sawn wood. Exporters of carvings, wood products and veneer include the United States, Japan, and a number of European countries. Importers are diverse.

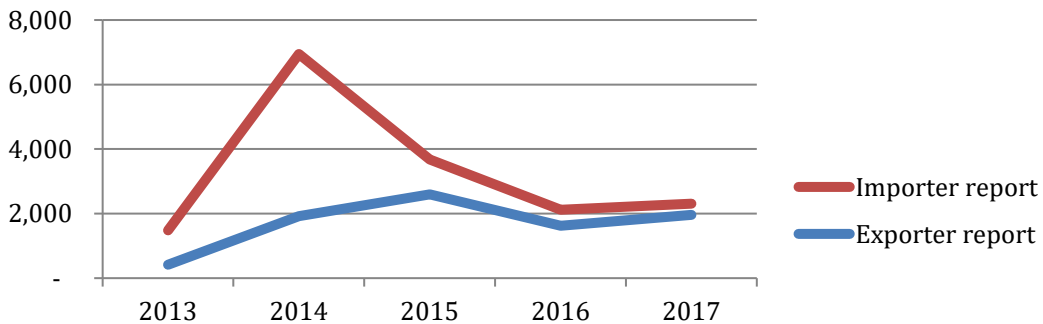
²⁵ See document CoP16 Prop. 61 available at <https://cites.org/sites/default/files/eng/cop/16/prop/E-CoP16-Prop-61.pdf> and document CoP16 Prop. 62 available at <https://cites.org/sites/default/files/eng/cop/16/prop/E-CoP16-Prop-62.pdf>

Figure 3.3.8: *Dalbergia* spp. (I) log and timber trade (m3)



Source: CITES Trade Database
D. granadillo, D. retusa and D. stevensonii

Figure 3.3.9: *Dalbergia* spp. (I) sawn wood trade (m3)



Source: CITES Trade Database
D. granadillo, D. retusa and D. stevensonii

***Dalbergia* spp. (II)**

Citing a variety of threats as well as the difficulty of identifying individual species in trade, all *Dalbergia* species were listed on Appendix II in 2017. The records in the database for this group include 8 individual species as well as a number of records for *Dalbergia* spp.; no individual taxon accounts for more than 25 percent of the total.

The structure of trade is similar to that for the *Dalbergia* species listed in 2013 with the exception that there is very little trade in logs and timber (see annex table 1.3). Table 3.3.4 summarizes recorded trade for these species.

Table 3.3.4—Latin American *Dalbergia* spp. (group II) exporter and importer reported trade, 2017

Units	Carvings		Logs		Sawn wood		Veneer		Wood products	
	Exporter	Importer	Exporter	Importer	Exporter	Importer	Exporter	Importer	Exporter	Importer
cm3	6771				6125				13400	
g										85
kg	15	2			16	11				2
m3				876	546	98		1		
blank	203	122		27	32	40			213	430

As shown in table 3.3.4, trade is generally small quantities; with only a few exceptions, reported trade is pre-convention specimens. Spain is the primary exporter of carvings, Nicaragua is the exporter of most of the sawn wood and the United States is the exporter of wood products. Importers are China (logs and sawn wood), Germany (carvings) and Japan (wood products).

***Guaiaecum* spp.**

Guaiaecum species listed on Appendix II include *Guaiaecum sanctum* (listed in 1975), *Guaiaecum officinale* (listed in 1992) and all other *Guaiaecum* species (listed in 2003). Table 3.3.5 summarizes the record count for *Guaiaecum* species in the database.

Table 3.3.5—Record count of *Guaiaecum* species in the CITES Trade Database

Species	Number of records
<i>Guaiaecum sanctum</i>	470
<i>Guaiaecum officinale</i>	73
<i>Guaiaecum</i> spp	90
	633

Guaiaecum sanctum

Annex table 1.3 summarizes the considerably diverse trade in *Guaiaecum sanctum*; the diversity reflects the all parts and derivatives annotation and the many uses for the species. The trade is diverse but generally small quantities (see tables 3.3.6 and 3.3.7); trade is also somewhat intermittent as illustrated by figures 3.3.10 and 3.3.11.

Figure 3.3.10: Guaiacum sanctum log trade (m3)

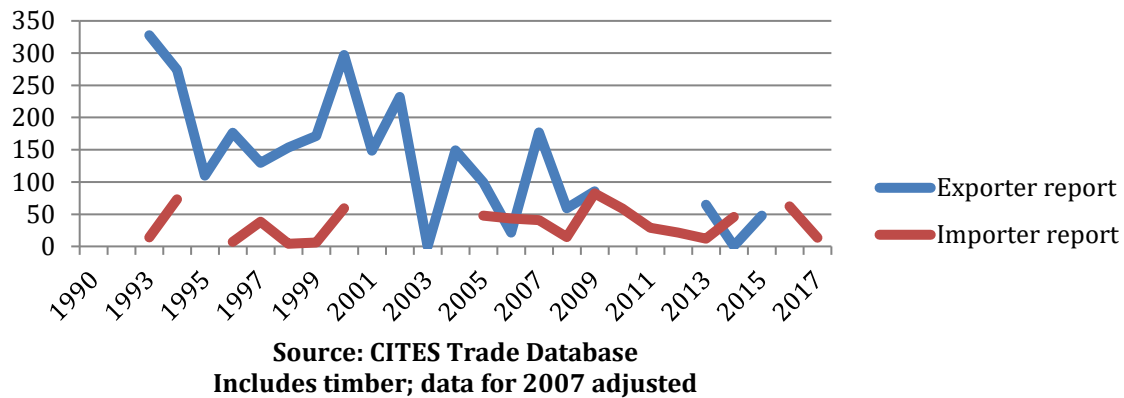


Figure 3.3.11: Guaiacum sanctum sawn wood trade (m3)

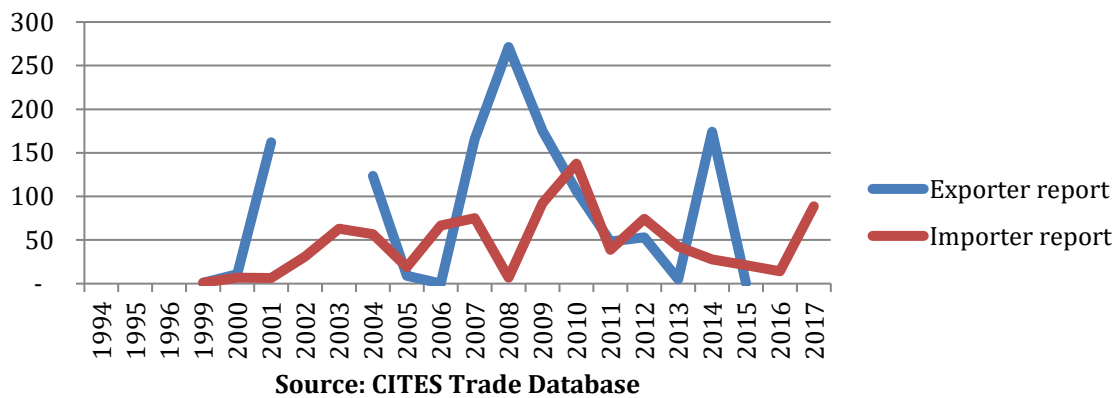


Table 3.3.6—*Guaiacum sanctum* exporter and importer reported trade, cumulative 1975-2017

Units	Chips		Logs+		Sawn wood	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
cm3			452,198	187,113	432000	
g	180766	100000	111,583	179,403	54622	300000
kg	6798	949	4,426	1,038	30763	1769
m3			4	46,987	1349	958
blank			452,198	187,113	85	1091

Logs includes timber and timber pieces.

Table 3.3.7—*Guaiacum sanctum* exporter and importer reported trade, cumulative 1975-2017

Units	Extract		Powder		Derivatives	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
g	991	56355	281	25595		
kg	709	2631	2121	150		
l	2065	3424			1445	
mg	2500					
ml		20			8300	20
m3			8		3	

Mexico is the primary exporter of logs (including timber and timber pieces) and sawn wood; China is the primary importer. Switzerland is the exporter of most derivatives and extract.

Guaiacum officinale

Guaiacum officinale was listed in 1992; the listing proposal describes trade in *Guaiacum* species in general and provides data reporting trade in “worked wood” that is likely to include *Guaiacum*.²⁶

Annex table 1.3 summarizes the records of trade in *Guaiacum officinale*. Recorded trade is small and intermittent; the most frequently recorded trade term is live specimens (accounting for half exporter records). Table 3.3.8 shows cumulative trade in *Guaiacum officinale* over the period 1992-2017. The Dominican Republic is the exporter of most live specimens and timber pieces; Japan is the exporter of sawn wood. The United States is the importer of carvings, wood products and timber pieces.

Table 3.3.8—*Guaiacum officinale* exporter and importer reported trade, cumulative 1992-2017

Units	Carvings		Extract		Timber +		Sawn wood		Wood products	
	Exporter	Importer	Exporter	Importer	Exporter	Importer	Exporter	Importer	Exporter	Importer
g			50							
kg			1	5	11048	65	15050			
m3					4			3		
blank	13	460			31623	11343	1	1	22	19

Timber includes timber pieces.

***Guaiacum* spp.**

The remaining *Guaiacum* species were listed on Appendix II in 2003. The listing proposal notes the variety of uses for *Guaiacum* species and that trade data usually do

²⁶ See document CoP8 Prop. 97 available at https://cites.org/sites/default/files/eng/cop/08/prop/E08-Prop-97_Guaiacum.pdf

not distinguish among the species. National data (from Mexico) are used to illustrate the decline in *Guaiaacum* exports over the period 1993-2002.²⁷

Guaiaacum spp. records in the database are roughly half *Guaiaacum coulteri* and half *Guaiaacum* spp.; annex table 1.3 summarizes the structure. There are relatively few records; carvings, sawn wood and timber account for most reported trade. Table 3.3.9 shows cumulative quantities reported for 2003-2017. The pattern of exporters and importers is similar to that for other *Guaiaacum* species.

Table 3.3.9—*Guaiaacum* spp. exporter and importer reported trade, cumulative 2003-2017

Units	Carvings		Timber +		Sawn wood	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
g			780	1040		
kg			2538	50	10887	48
cm3					1312989	64000
m3				18	16	30
blank	24	26	10		15	9

Timber includes timber pieces.

***Swietenia* spp.**

Swietenia species listed on Appendix II include *Swietenia humulis* (listed in 1975), *Swietenia mahagoni* (listed in 1992) and *Swietenia macrophylla* (listed in 2003). Table 3.3.10 summarizes the record count for *Swietenia* species in the database.

Table 3.3.10—Record count of *Swietenia* species in the CITES Trade Database

Species	Number of records
<i>Swietenia humulis</i>	113
<i>Swietenia mahagoni</i>	109
<i>Swietenia macrophylla</i>	1337
	1559

Annex table 1.3 summarizes the records of trade in *Swietenia humulis*; reported trade is diverse, relatively small and concentrated in carvings and sawn wood. Table 3.3.11 shows cumulative trade 1975-2017. With the exception of carvings, quantities traded have declined in the past decade.

²⁷ See document CoP12 Prop. 54 available at <https://cites.org/sites/default/files/eng/cop/12/prop/E12-P54.pdf>

Table 3.3.11—*Swietenia humulis* exporter and importer reported trade, cumulative 1975-2017

Units	Carvings +		Logs +		Sawn Wood	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
kg			500			
m3			25	17	981	649
blank	121	592	2	363		

Carvings includes timber carvings

Logs includes timber

France, the United Kingdom and El Salvador are the origin of carvings exports; Japan and the United States are the importers. Guatemala is the origin of most *S. humulis* sawn wood exports; Japan and the United States are the importers.

Swietenia mahagoni

Swietenia mahagoni was listed on Appendix II in 1992; the listing proposals presented at CoP8 advocated listing all *Swietenia* spp. in Appendix II and include detailed trade data over the period 1981-1990.²⁸ Only *S. mahagoni* was added to Appendix II at that time. Annex table 1.3 summarizes the records in the database; trade is predominantly in carvings with small quantities of logs (including timber and timber pieces) and sawn wood. Table 3.3.12 displays cumulative trade recorded over the period 1992-2017.

Table 3.3.12—*Swietenia mahagoni* exporter and importer reported trade, cumulative 1992-2017

Units	Carvings		Logs +		Sawn Wood	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
kg				82308	48122	136074
m3			346	2	346	
blank	6611	144	1746	8		

Logs includes timber and timber pieces

Bolivia is the exporter of most carvings; Spain, Italy and France are the primary importers. The Dominican Republic and Palau are the sawn wood exporters; the United States is the importer. Logs and timber are from Palau and Jamaica.

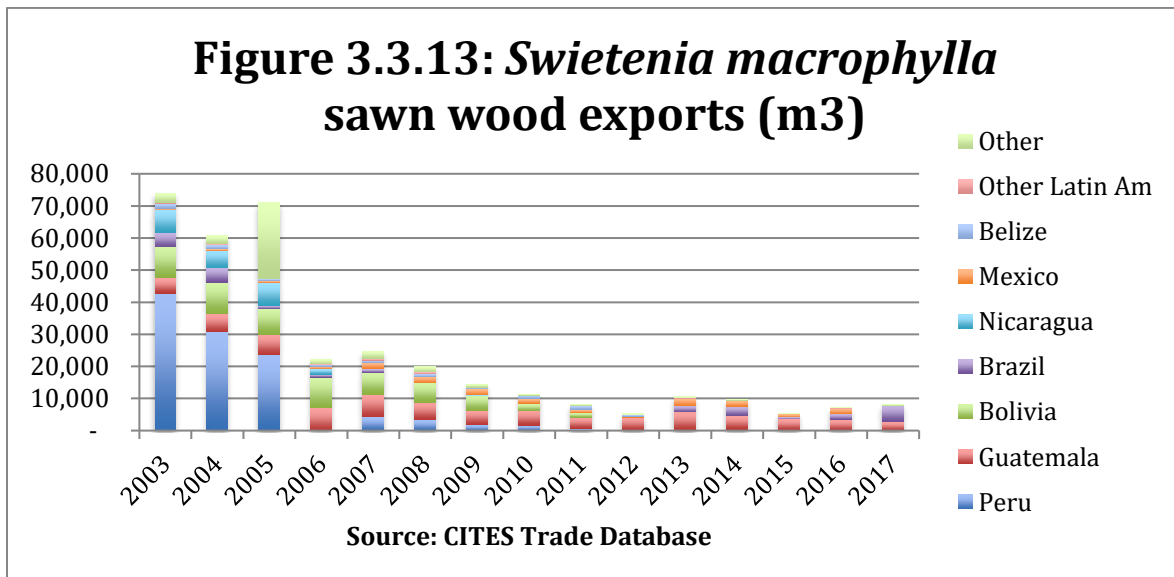
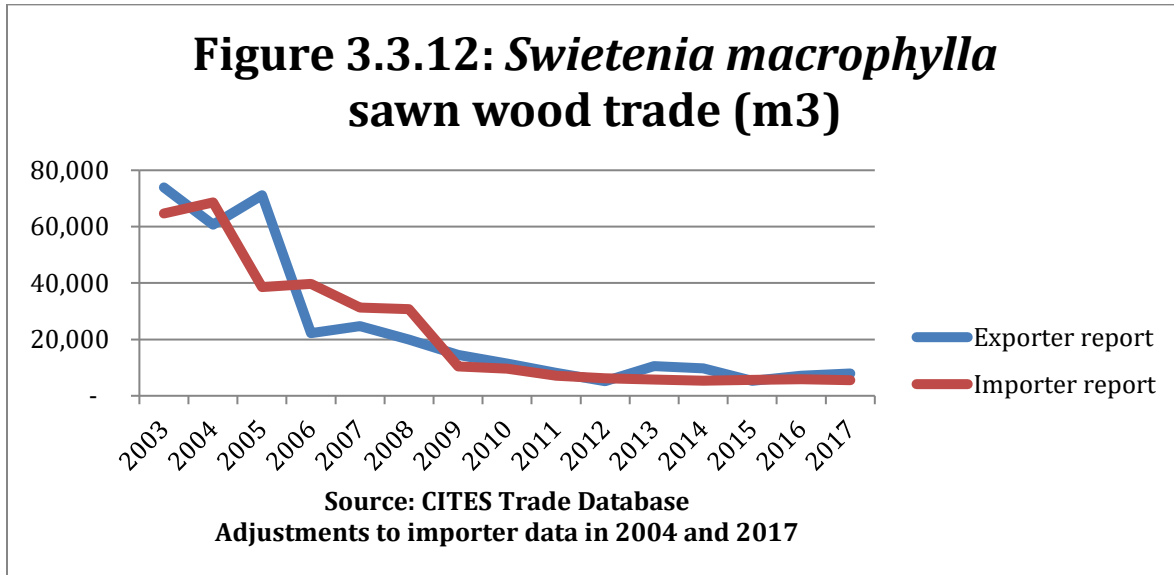
Swietenia macrophylla

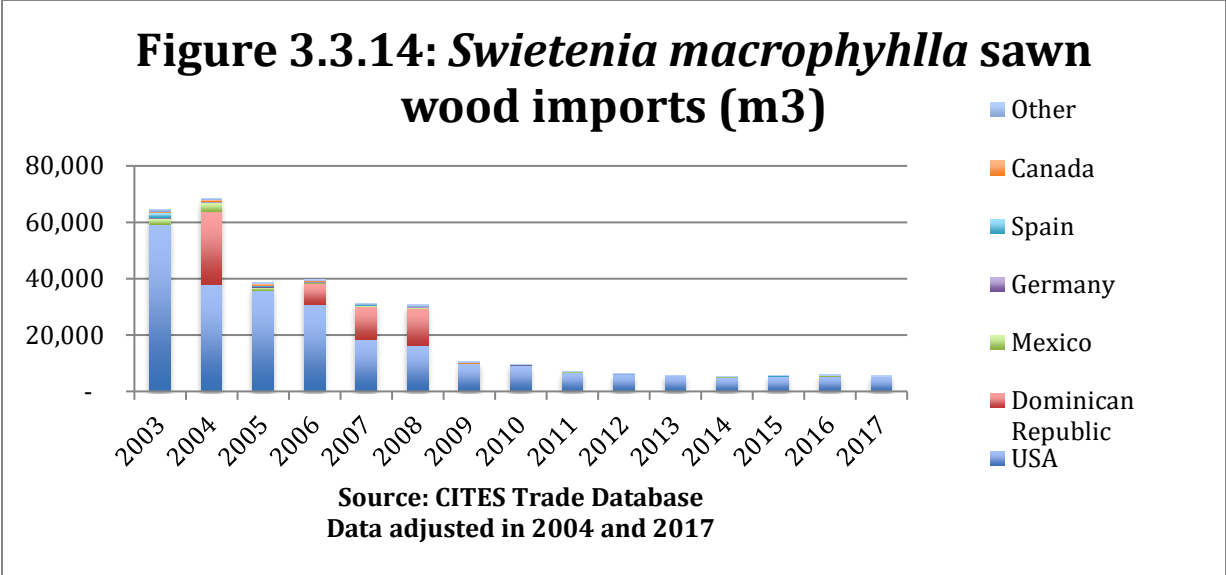
Swietenia macrophylla was listed on Appendix II in 2003; the listing proposal provides details on patterns and trends in trade and highlights the extent of illegal harvesting and associated trade.²⁹ Annex table 1.3 summarizes the records in the database; trade is

²⁸ See document CoP8 Prop 95 available at https://cites.org/sites/default/files/eng/cop/08/prop/E08-Prop-95_Swietenia.pdf; also document CoP8 Prop. 94.

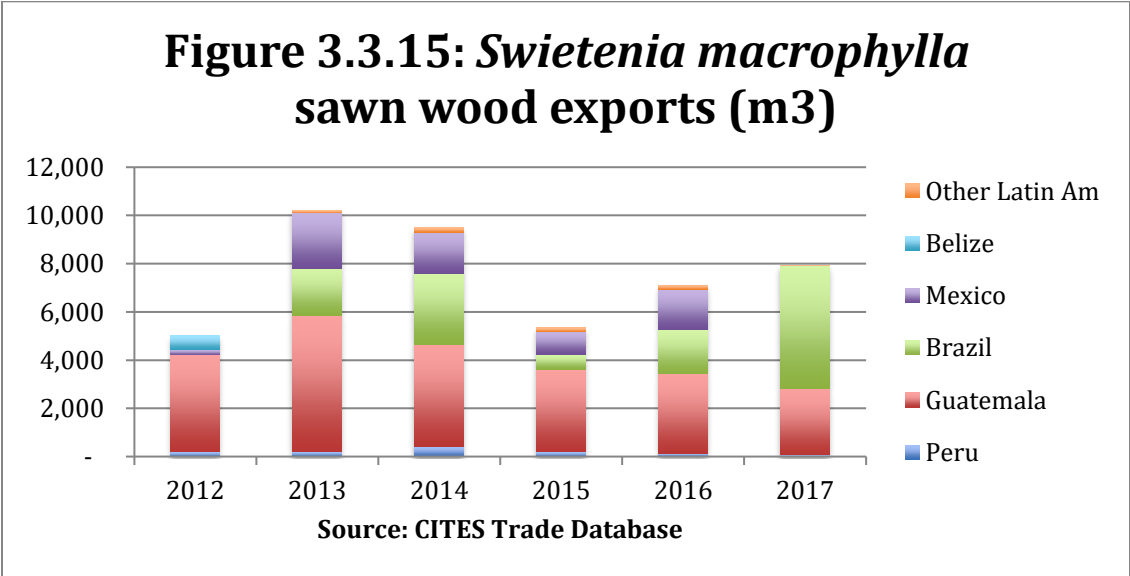
²⁹ See document CoP12 Prop. 50 available at <https://cites.org/sites/default/files/eng/cop/12/prop/E12-P50.pdf>

predominantly as sawn wood. Figure 3.3.12 summarizes *Swietenia macrophylla* sawn wood trade, 2003 to 2017. Figures 3.3.13 and 3.3.14 provide details on exporters and importers.





Figures 3.3.12 to 3.3.14 illustrate the sharp decline in *Swietenia macrophylla* sawn wood trade since listing. However, the scale of initial trade makes it difficult to discern more recent trends. Figure 3.3.15 isolates more recent data and illustrates both the variability of trade—quantities and exporting countries—as well as an upturn in 2016-17.



Swietenia spp sawn wood is an exception to the general absence of information on trade in individual tropical tree species in the Harmonized System (HS) trade data (see section 4 for more information on the Harmonized System). HS code HS 4407.21 is used to record trade in “Wood, tropical; mahogany (*Swietenia* spp.), sawn or chipped lengthwise, sliced or peeled, whether or not planed, sanded or end-jointed, thicker than 6mm”. This provides an alternative source of information.

Figure 3.3.16 compares CITES exporter reported data for *Swietenia macrophylla* and UN Comtrade data for Latin American countries. The scale and pattern of trade is similar; possible explanations for differences include: lags in reporting (for either source); UN Comtrade data may include *Swietenia* species other than *S. macrophylla*; and CITES data may include quantities on permits (not actual trade).

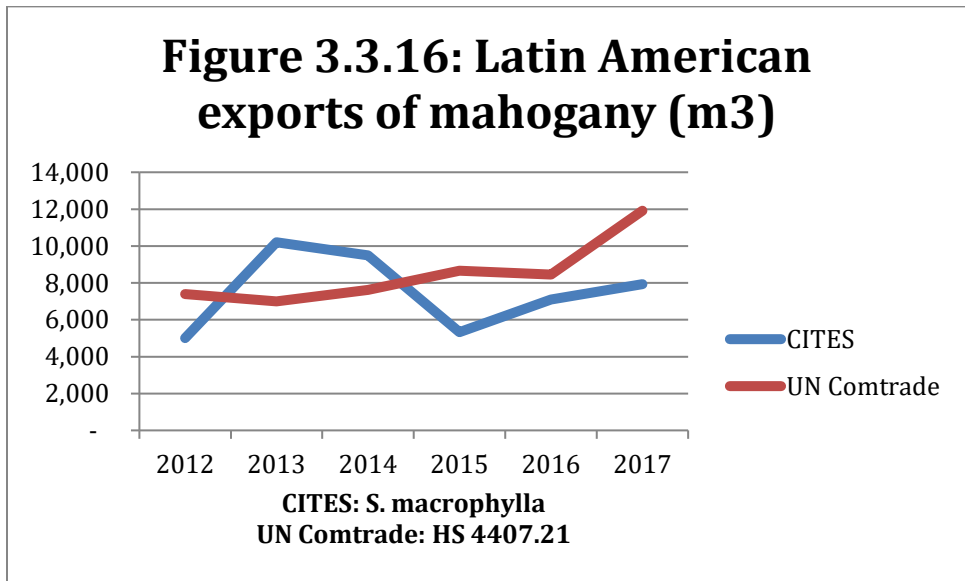
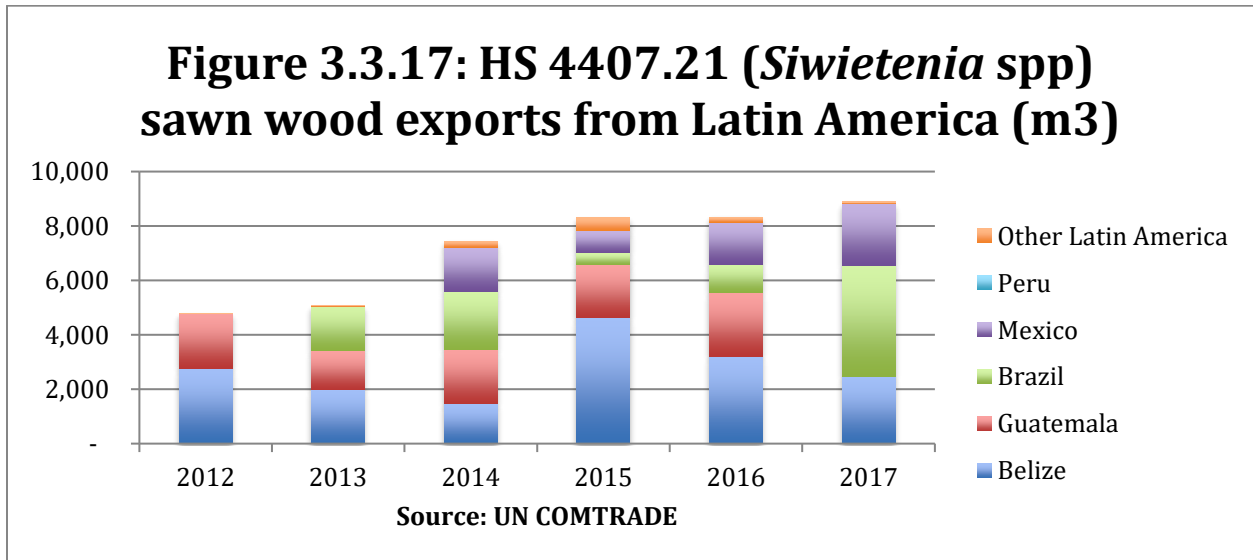
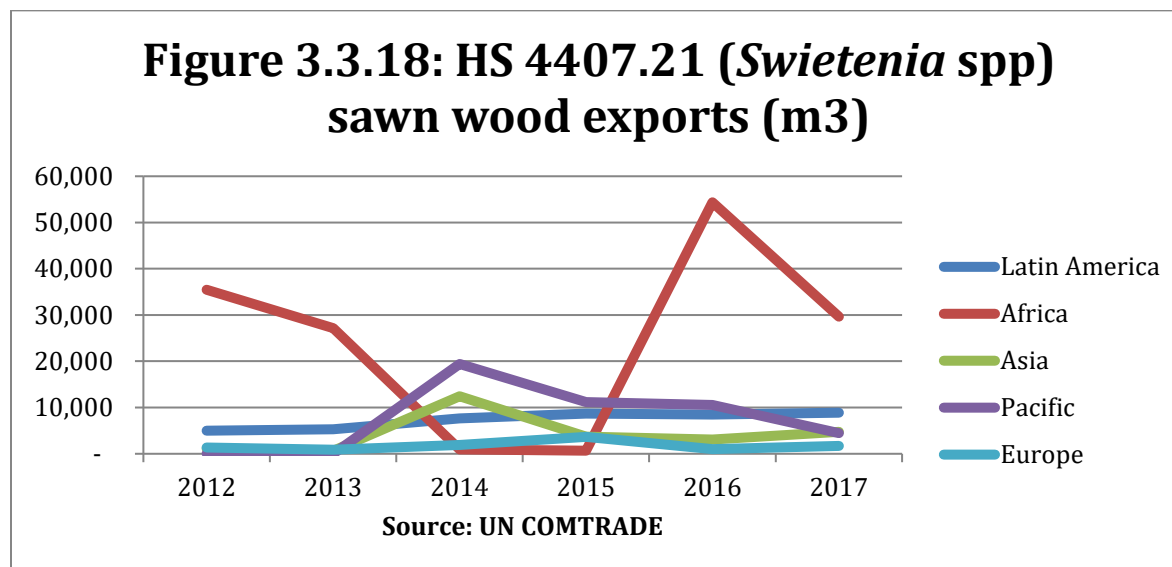


Figure 3.3.17 shows HS 4407.21 exports for Latin American exporters; compare this to figure 3.3.15. The relative importance of exporting countries is similar, for the most part. However, the HS 4407.21 data record higher levels of exports from Belize and Mexico.



The availability of HS 4407.21 data can also be used to show considerable trade originating outside the neo-tropics (figure 3.3.18). This includes exports from plantations that fall outside the scope of the CITES listing and therefore do not require CITES documentation and do not appear in the database. For some regions (Africa, for example), the HS 4407.21 data may also include “mahogany” from species other than *Swietenia* spp (such as *Khaya* spp).



Finally, table 3.3.13 summarizes cumulative data in the CITES Trade Database for *Swietenia macrophylla*. Data on sawn wood are included; note that figures 3.3.12 to 3.3.15 use only the data reported in m3.

Table 3.3.13—*Swietenia macrophylla* exporter and importer reported trade, cumulative 2003-2017

Units	Carvings		Logs +		Sawn wood		Veneer	
	Exporter	Importer	Exporter	Importer	Exporter	Importer	Exporter	Importer
cm2								155
cm3					8448756	1494455	1813896	317000
ft2								14026
m2					4592	25428	273978	80721
kg	457		150967	609	143779	221560	52504	964
m3	395		29932	136881	352791	650570	4924	636
blank	7733	17	37001	1389	42821	2124	100	

Logs includes timber and timber pieces

4. The trade context

The framework for compiling relevant data for the broader trade context is the Harmonized Commodity Description and Coding System (HS). The HS is an international nomenclature for the classification of products in trade developed by the World Customs Organization (WCO). Using HS codes, participating countries classify traded goods on a common basis for customs purposes. At the international level, the HS is a system of six-digit codes arranged in a logical structure comprising 99 chapters (2 digit), subchapters (4 digit) and products/product groups (6 digit). At the national level, countries can choose to extend the coding system with an additional 4 digits to allow for more detailed tracking of exports and imports. Approximately 5,000 commodity groups are identified and over 98 percent of merchandise in international trade is classified using the HS.³⁰

The larger context for assessing trade in the selected CITES-listed species includes trade in wood products and trade in plant-based extracts and oils. Identifying the relevant product groups for trade in wood products is straight-forward: primary products (logs, sawn wood, veneer and plywood as examples), secondary manufactured products and wooden furniture. Identifying the appropriate commodities and commodity groups for extracts and oils is more of a challenge. Annex table 4 displays commodity group descriptions and HS codes for plant parts, extracts and oils that are the most likely to include trade in the plant parts, extracts and oils from CITES-listed species.

For each of the regions, trade is summarized in broad product groups: primary wood products, secondary processed wood products (SPWP), selected plant parts and selected plant-based extracts. Data are displayed as the value of trade; the context provided by these summaries includes both scale and comparative trends.

Finally, all listed species are tropical, non-coniferous; therefore, further context is provided by displaying data on exports of non-coniferous tropical wood products as compiled and reported by ITTO.

As a starting point and in order to illustrate both similarities and differences across the three regions, the table below summarizes the trade data that are described in detail in the following sections. The table highlights the relative importance of primary wood products trade as compared to other product groups, for both Africa and Latin America, and the scale of Asia-Pacific exports—larger by a factor of ten for secondary processed wood products and by a factor of 5 for other products groups—relative to Africa and Latin America. This scale difference for SPWP is based largely on China's substantial exports of wood-based manufactured products; however, other countries in the region are also important participants in this trade (see section 4.2). China's role as an exporter of wood products relies on imports of raw materials; this contributes to the value of primary products exports for all three regions.

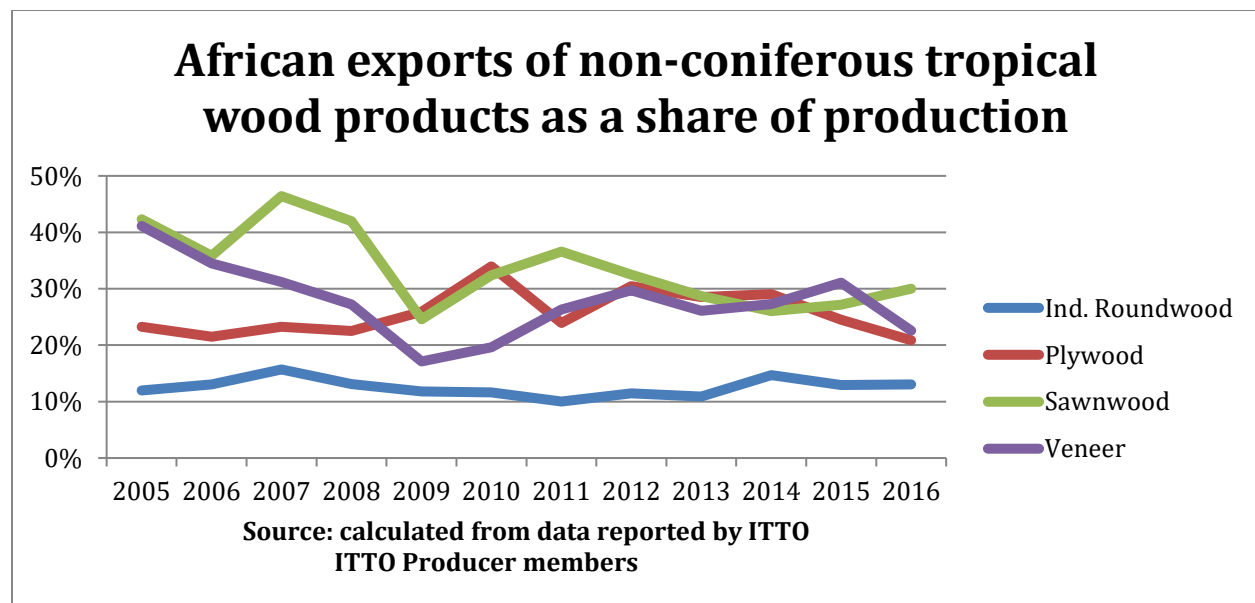
³⁰ For further information see: <http://www.wcoomd.org/en/topics/nomenclature/overview/what-is-the-harmonized-system.aspx>

Value of wood products, plant parts and plant extract exports from Africa, Asia-Pacific and Latin America, by product group, 2017 (Million USD)

Exporter	Product Group			
	Primary wood products ³¹	Secondary processed wood products ³²	Plant parts ³³	Plant extracts ³⁴
Africa	4146	264	176	171
Asia-Pacific	22760	39476	1152	1188
Latin America	5335	3480	180	172

Source: compiled from data reported by UN Comtrade; data extracted 11 January 2019.

An additional overview is provided by charts that show the relative importance of export markets as compared to domestic markets for tropical primary wood products. The relative importance of export markets varies widely across the three regions (note that the scale of the chart for Africa differs from the others). The charts show aggregate data for the region and product group; the relative importance of export markets typically varies widely for countries within each region. Finally, a decline in the relative importance of primary wood product exports can reflect either (or both) increasing domestic consumption or the use of primary products in export-based manufacturing.

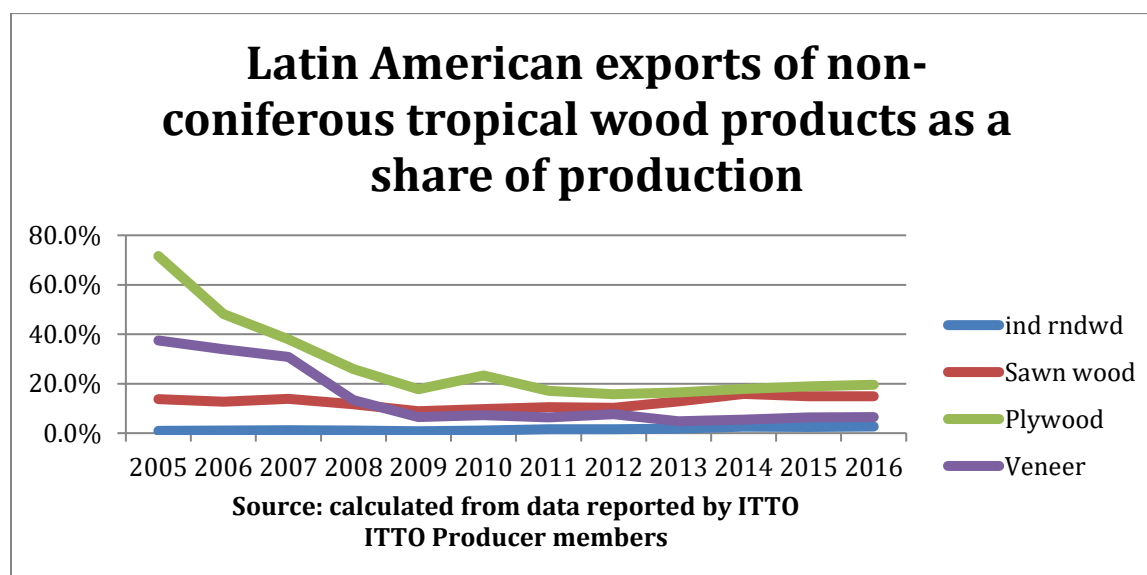
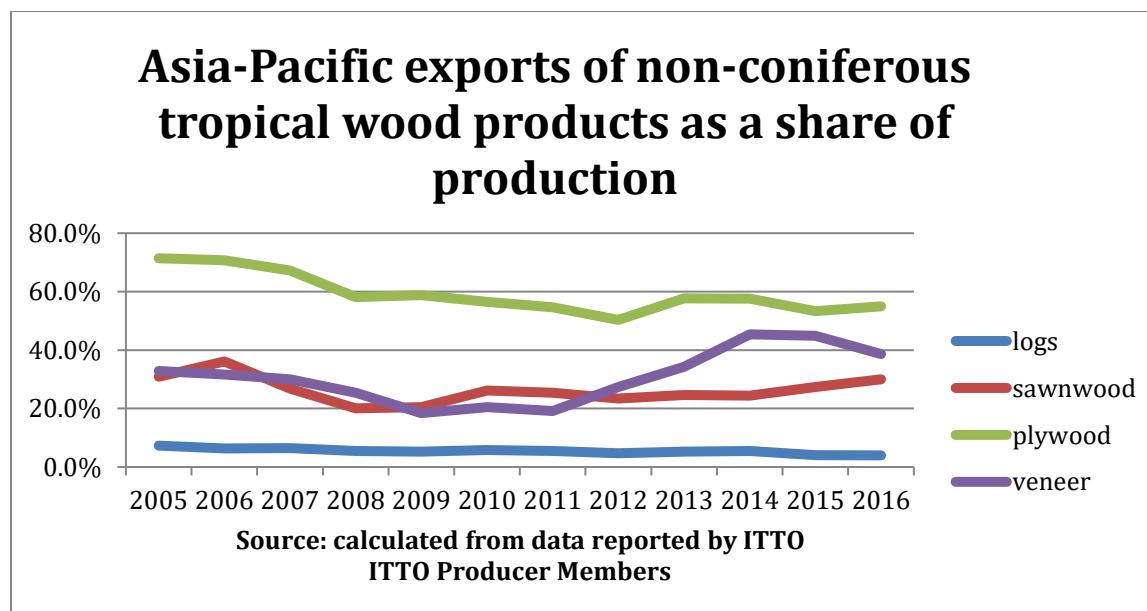


³¹ Chips, logs, sawn wood, veneer and wood-based panels.

³² Further processed and manufactured wood products, including wooden furniture.

³³ Selected plants and parts used in perfume and medicine, etc. (HS 1211.90).

³⁴ Selected plant oils and extracts (HS 3301.29, HS 3301.30 and HS 3301.90).



4.1 The trade context for Africa

Table 4.1.1 summarizes the value of African trade in wood products and selected plant parts and extracts for 2017; data are presented using geographical groupings of African countries as used by the United Nations Statistical Division (see annex table 5 for details).³⁵ Table 4.1.2 shows the value of African exports by importing region. Figures 4.1.1 to 4.1.6 show the trends in this trade over the period 2010-2017.

³⁵ Data reported are “mirror” data: the value of imports from Africa reported by all trading partners.

African exports of primary wood products were valued at USD 4.1 billion in 2017; this was a 20 percent increase in 2017 as compared to the value exported in 2010 (USD 3.4 billion) (see figure 4.1.1). Wood chips, logs, sawn wood, and veneer account for more than 90 percent of this trade; imports by European and Asia-Pacific countries region (primarily China) account for more than 90 percent of the value of Africa's primary products trade (see figure 4.1.2). Exports to Asia account for most trade in chips and logs; exports to Europe account for most trade in sawn wood and veneer. In 2017, exports to China accounted for more than half of the value of African trade in primary wood products.

Middle African countries (primarily Cameroon, Gabon, Republic of Congo, Equatorial Guinea and the Democratic Republic of Congo) account for about half (45 percent) of the value of African exports of primary products; West African countries (primarily Cote d'Ivoire, Nigeria and Ghana), followed by Southern Africa (almost entirely South Africa) and East Africa (primarily Mozambique) account for the remainder (see table 4.1.1 and figure 4.1.1).

Table 4.1.1—Value of wood products, plant parts and plant extract imports from Africa, by product group and African region, 2017 (Million USD)

African Exporting Region ³⁶	Product Group			
	Primary wood products ³⁷	Secondary processed wood products ³⁸	Plant parts ³⁹	Plant extracts ⁴⁰
Eastern	546	14	22	86
Middle	1882	21	18	-
Northern	57	39	60	68
Southern	590	169	19	16
Western	1067	20	57	1
Africa Total	4142	264	176	171

Source: compiled from data reported by UN Comtrade; data extracted 11 January 2019.

³⁶ Geographic groupings as defined by the United Nations Statistics Division; see annex table 5 for countries included in each region.

³⁷ Chips, logs, sawn wood, veneer and wood-based panels.

³⁸ Further processed and manufactured wood products, including wooden furniture.

³⁹ Selected plants and parts used in perfume and medicine, etc. (HS 1211.90).

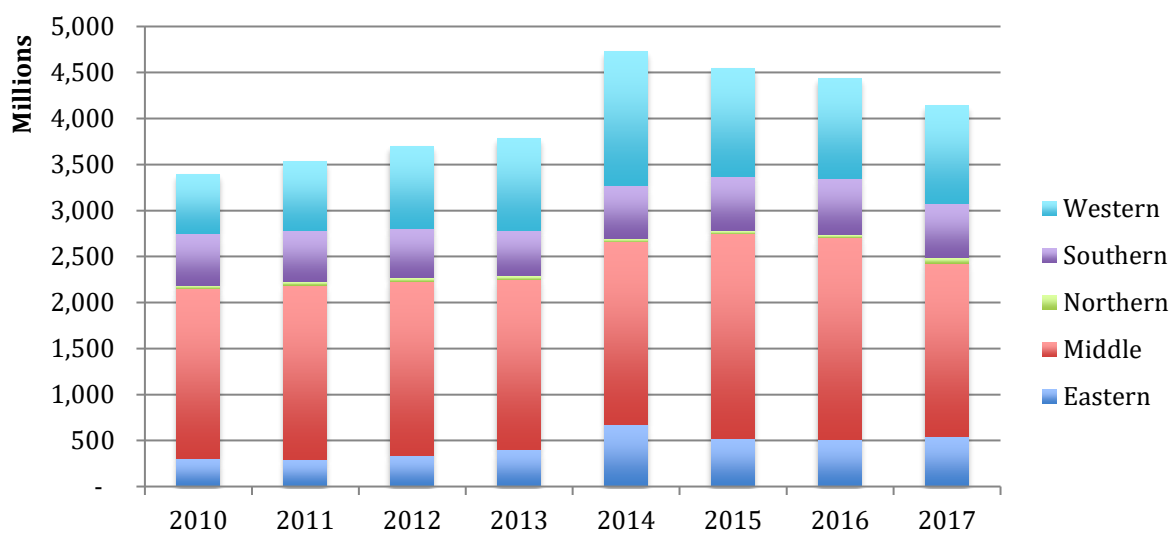
⁴⁰ Selected plant oils and extracts (HS 3301.29, HS 3301.30 and HS 3301.90).

Table 4.1.2--Value of wood products, plant parts and plant extract imports from Africa by product group and importing region, 2017 (Million USD)

Importing region	Product group			
	Primary wood products	Secondary processed wood products	Plant parts	Plant extracts
Africa	332	138	4	7
Asia	2820	6	28	34
Europe	821	95	80	104
Latin America	18	-	41	2
Middle East	64	6	5	-
North America	86	18	18	24
All regions	4142	264	176	171

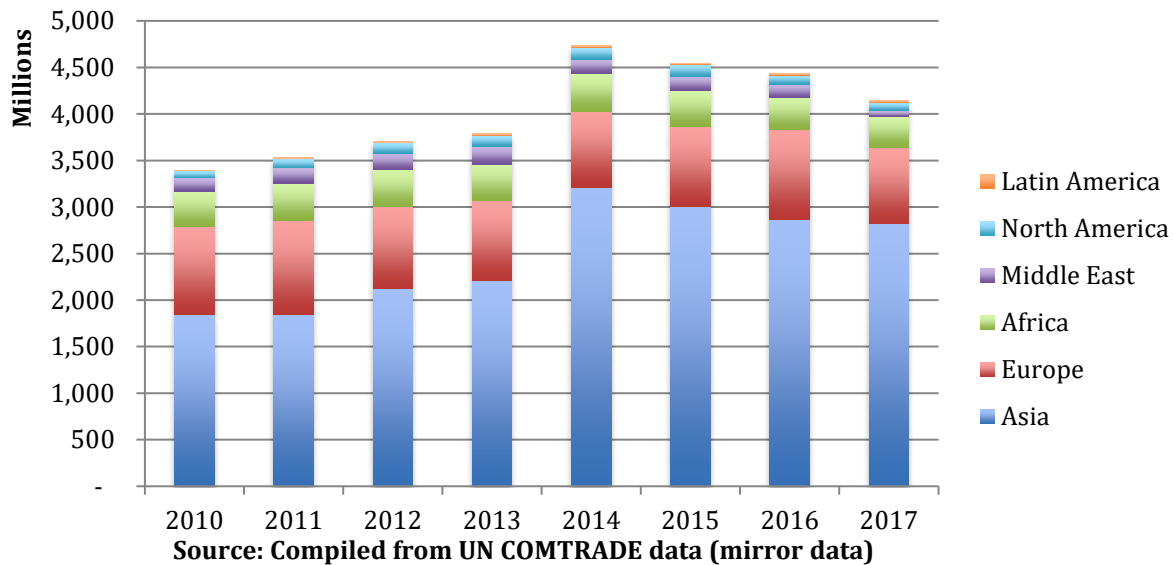
Source: compiled from data reported by UN Comtrade; data extracted 11 January 2019.
See notes to table 4.1.1.

Figure 4.1.1: Value of African exports of primary wood products



Source: compiled from UN COMTRADE data (mirror data)

Figure 4.1.2: Importing regions for African exports of primary wood products (USD)



The value of African exports of secondary processed wood products, including wooden furniture (SPWP) is less than 10 percent of the value of exports of primary wood products (table 4.1.1). There are a number of additional contrasts as compared to trade in primary products: the value of trade is not only relatively small, it has declined (figure 4.1.3); and exports to other African countries account for over half the value of trade (figure 4.1.4). Exports to Europe account for roughly one-third of this trade and exports to Asia are negligible.

South Africa accounts for more than half of the value of Africa's SPWP trade; the Middle and Western African countries that account for most primary products exports account for only a small share (less than 15 percent).

Figure 4.1.3: Value of African exports of secondary processed wood products and wood furniture (USD)

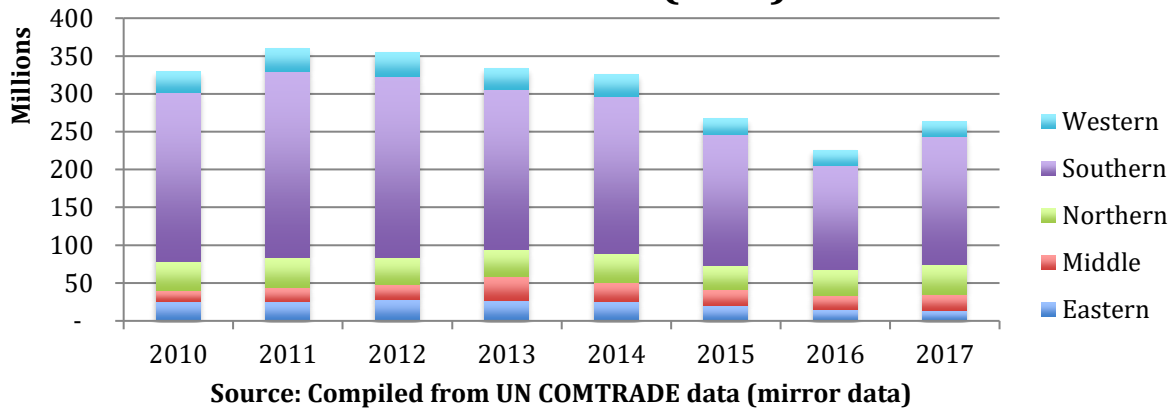
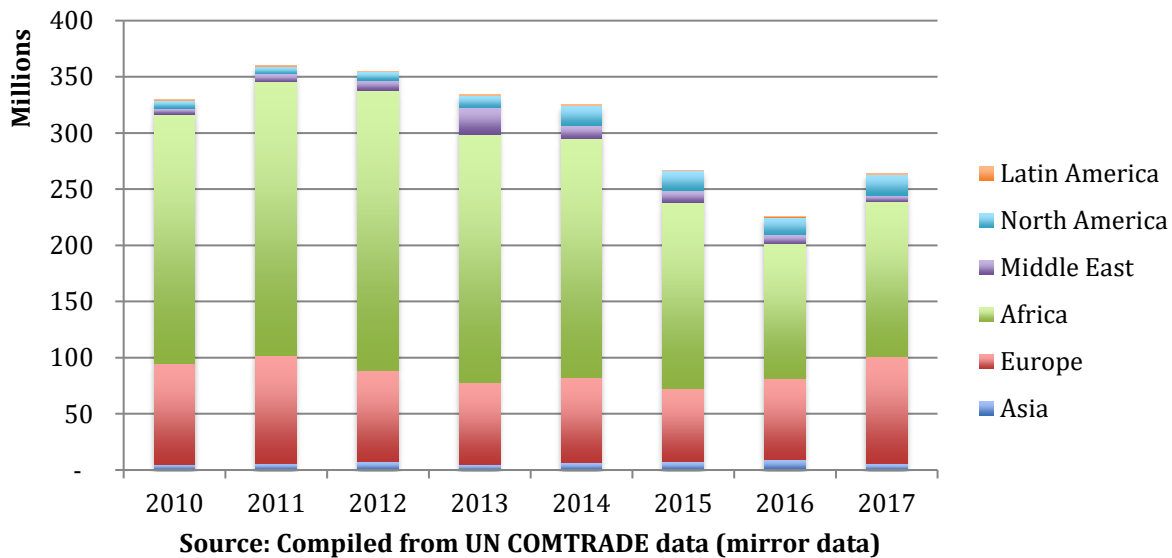


Figure 4.1.4: Importing regions for African exports of secondary processed wood products and wood furniture (USD)



Tables 4.1.1 and 4.1.2 also summarize trade in selected plant parts and extracts. See annex table 4 for details on the commodities included in these summaries.

African exports of selected plant parts were valued at roughly 180 million USD in 2017, a slight increase as compared to 2010 (see figure 4.1.5). Exports by Northern African countries (primarily Morocco) account for about one-third of exports; exports by Western African countries (primarily Nigeria) also account for about one-third of the value of African exports. Middle African countries (the Democratic Republic of the Congo, the Republic of the Congo and Cameroon) account for about 10 percent of trade.

Exports to Europe account for roughly half of this trade (figure 4.1.6); France, Germany, the Netherlands and the United Kingdom are the leading European importers. Exports to Latin America (Mexico) and Asia (India, China, Indonesia) account for about one-third of the value of exports.

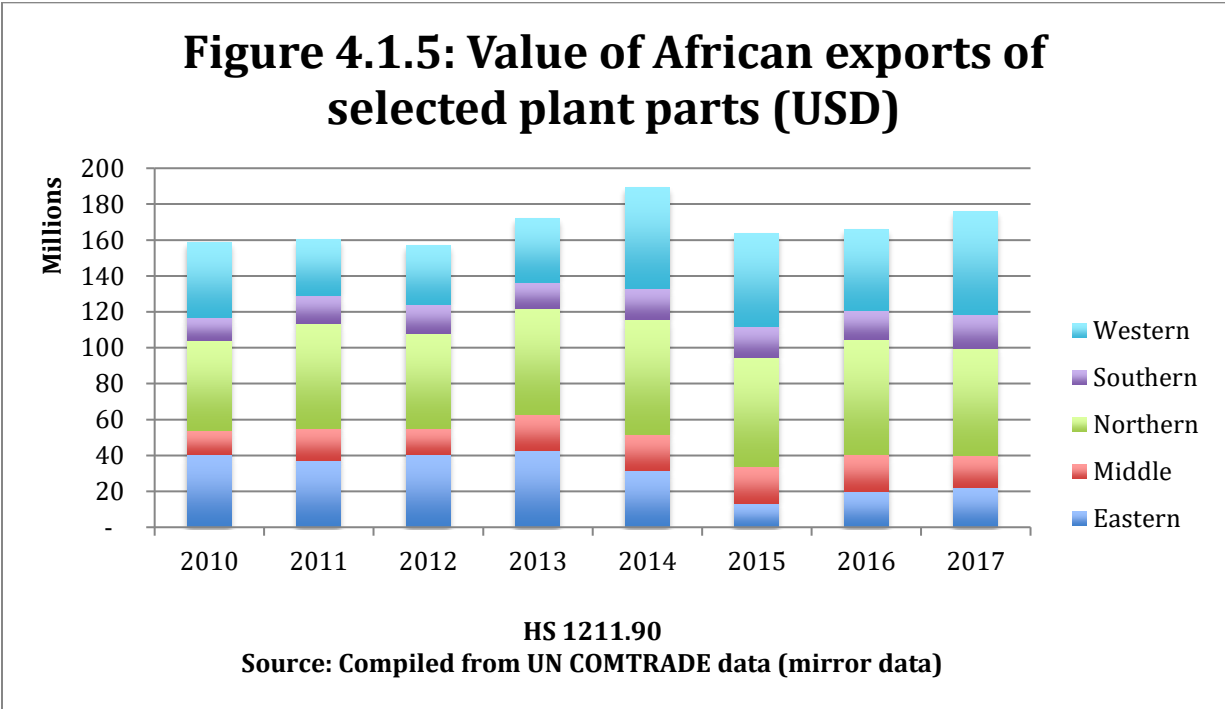
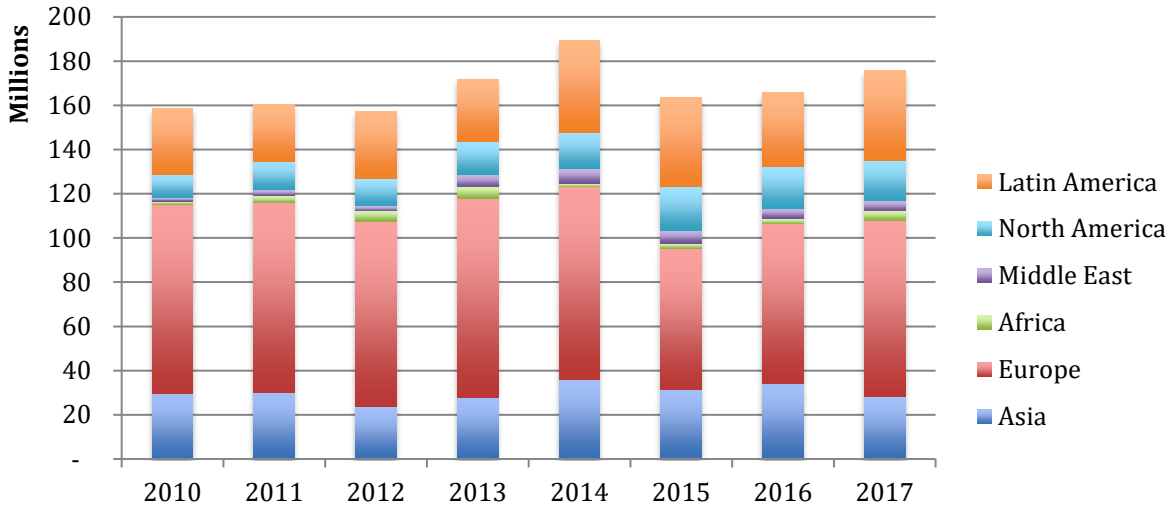


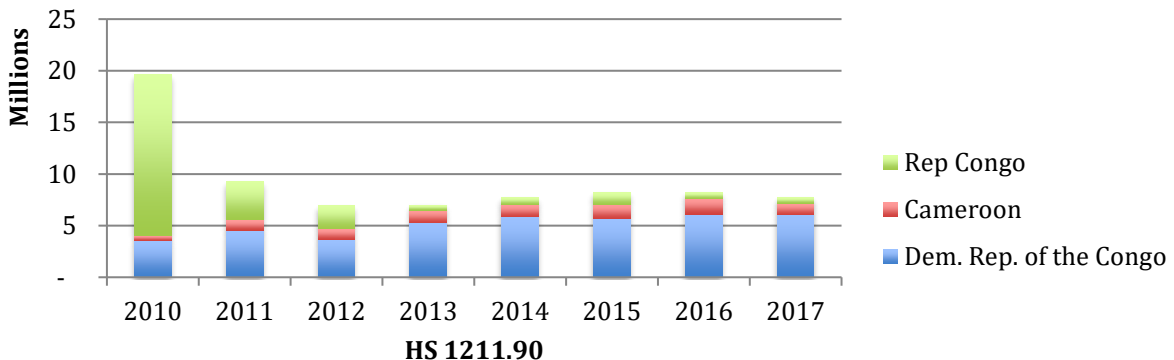
Figure 4.1.6: Importing regions for African exports of selected plant parts (USD)



HS 1211.90
Source: Compiled from UN COMTRADE data (mirror data)

For comparison with data reported for *Prunus africana* bark trade (see section 3.1), figure 4.1.7 shows the quantity of exports of selected plant parts reported by the Democratic Republic of the Congo, the Republic of the Congo and Cameroon.

Figure 4.1.7: Exports of selected plant parts (kg)



HS 1211.90
Source: Compiled from UN Comtrade database

African exports of selected plant extracts were valued at roughly 170 million USD in 2017, a significant increase (nearly double) as compared to 2010 (see figure 4.1.8). Exports by Eastern African countries (Madagascar, Comoros and Tanzania) account for half of the value of exports; exports by Northern African countries (Morocco and Tunisia) account for most of the rest. Middle African countries account for very little trade in these products (less than half of one percent of African exports). Exports to Europe account for roughly half of this trade (figure 4.1.9).

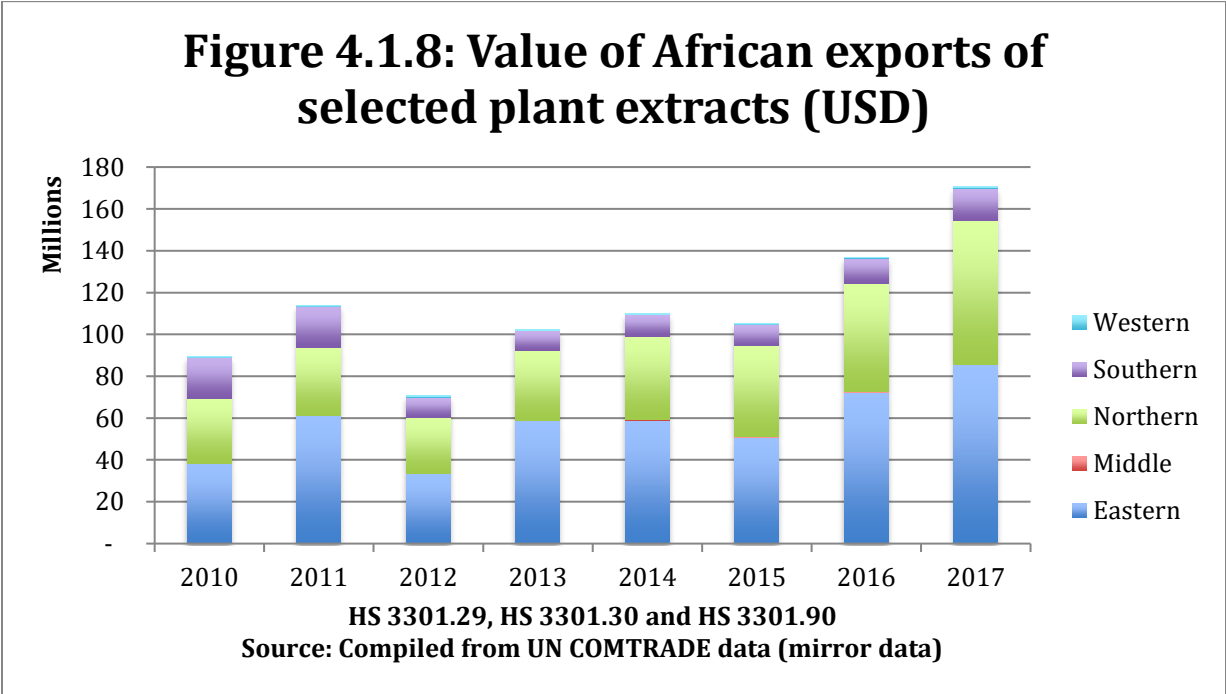
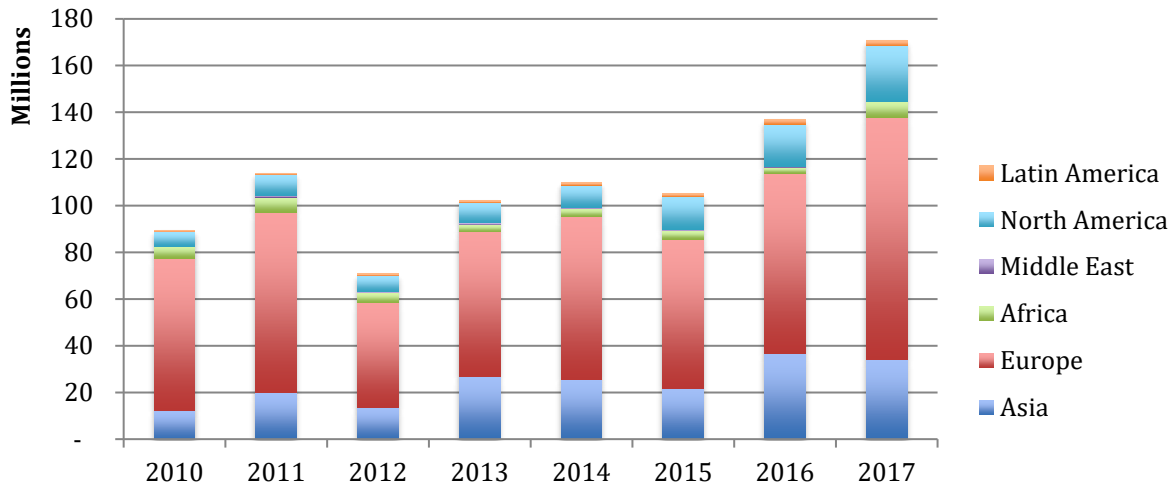


Figure 4.1.9: Importing regions for African exports of selected plant extracts (USD)

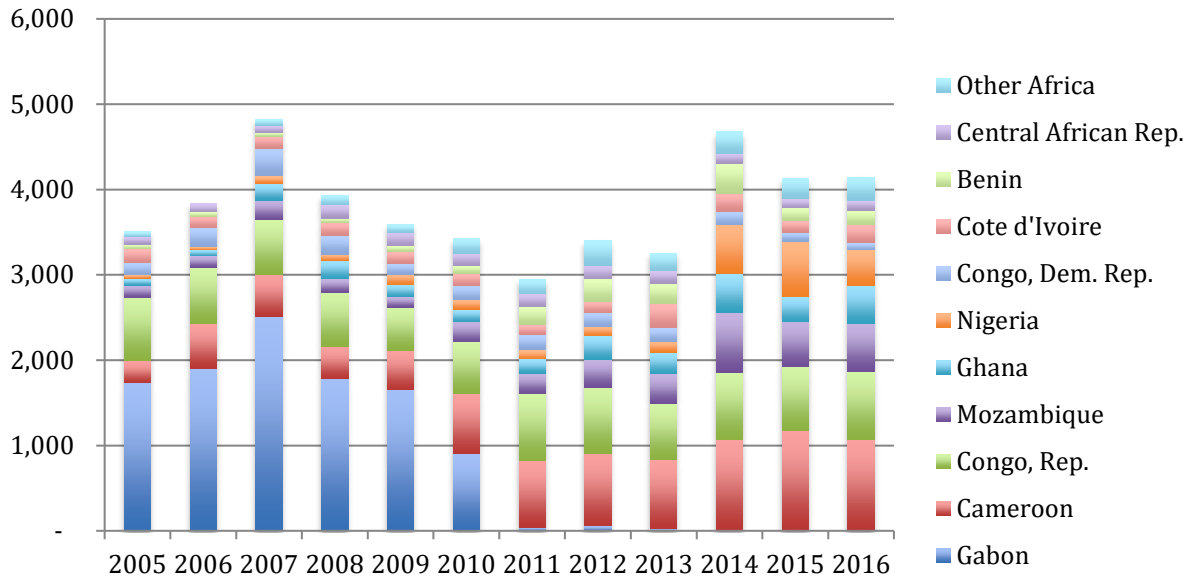


HS 3301.29, HS 3301.30 and HS 3301.90

Source: Compiled from UN COMTRADE data (mirror data)

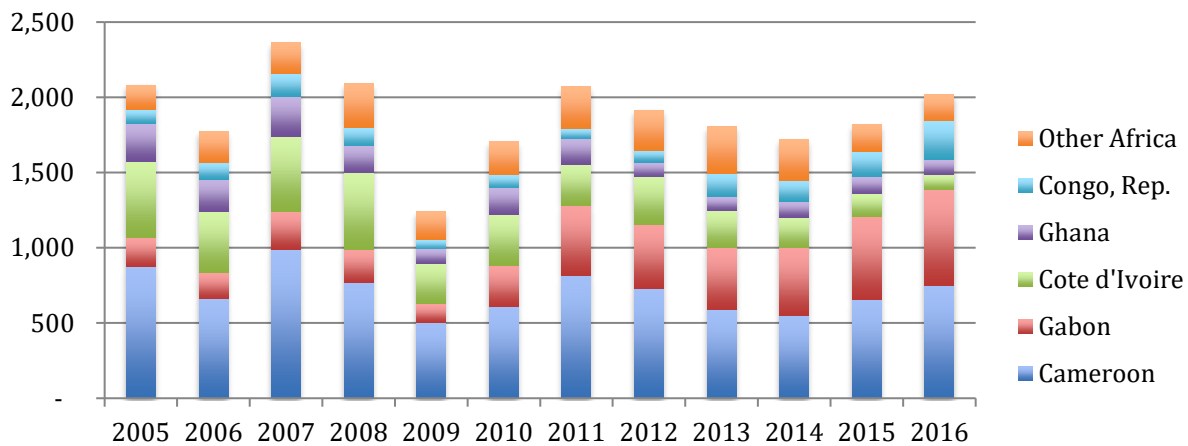
Because data in the CITES Trade Database do not include information of the value of exports, the relative—and generally small—scale of trade in listed species may not be immediately clear when compared to the aggregated data. Therefore, more detailed data on the quantity of African trade in selected primary wood products provides additional context; data compiled and reported by ITTO provide the opportunity to make direct comparisons with the quantity data reported in the CITES Trade Database. Figures 4.1.10 to 4.1.12 show ITTO data on the quantity of tropical wood products exported by ITTO African member countries, including nearly all countries reported as exporters of the selected CITES-listed species. Comparing these charts with corresponding charts for the listed species reveals the generally small contribution listed species make to the quantity of national and regional primary wood product exports.

Figure 4.1.10: African exports of non-coniferous tropical logs (Thousand m3)



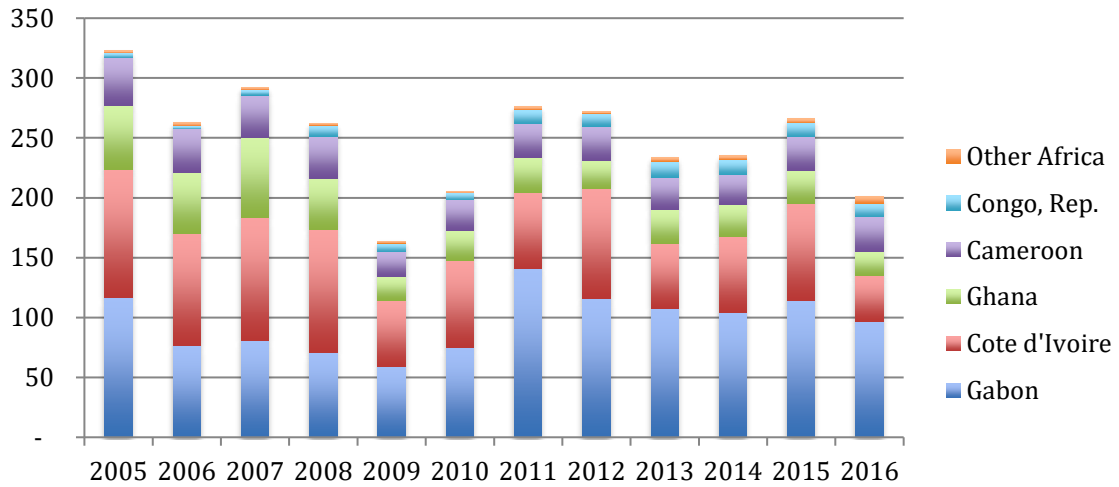
Source: ITTO

Figure 4.1.11: African exports of non-coniferous tropical sawn wood (Thousand m3)



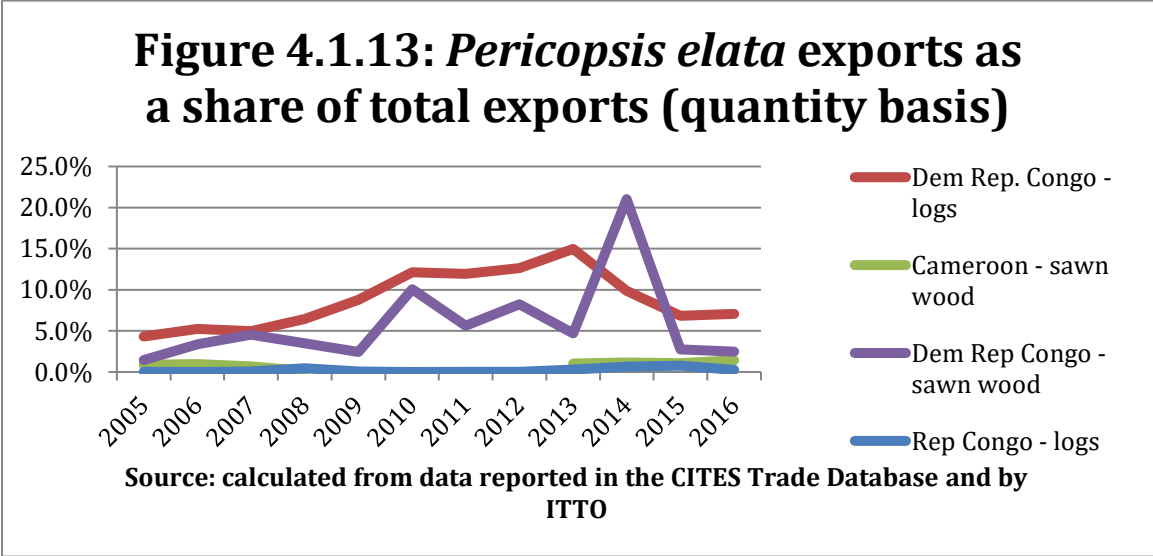
Source: ITTO

Figure 4.1.12: African exports of non-coniferous tropical veneer (Thousand m3)



Source: ITTO

Finally, Figure 4.1.13 compares the quantity of *Pericopsis elata* exports to exports of all species for Cameroon (sawn wood), the Republic of Congo (logs) and the Democratic Republic of the Congo (both logs and sawn wood). Data for Cameroon and the Republic of Congo are consistent with the assessment that *Pericopsis elata* trade is small in relative terms; data for the Democratic Republic of the Congo show a higher share for exports although declining since 2013-14.



4.2 The trade context for Asia-Pacific

Table 4.2.1 summarizes the value of Asia-Pacific trade in wood products and selected plant parts and extracts for 2017; table 4.2.2 shows the value of Asia-Pacific exports by importing region. Figures 4.2.1 to 4.2.6 show the trends in this trade over the period 2010-2017.

Table 4.2.1—Value of wood products, plant parts and plant extract exports from Asia-Pacific, by product group, 2017 (Million USD)

Exporter	Product Group			
	Primary wood products ⁴¹	Secondary processed wood products ⁴²	Plant parts ⁴³	Plant extracts ⁴⁴
China	4813	24766	599	428
Indonesia	2326	2893	55	205
Malaysia	2753	2145	15	2
Thailand	2372	518	35	12
Viet Nam	2276	6279	17	9
Australia	2020	82	21	84
New Zealand	3473	188	4	5
Other Asia-Pacific	2721	2604	405	444
Total	22760	39476	1151	1188

Source: compiled from data reported by UN Comtrade (mirror data); data extracted 11 January 2019.

Table 4.2.2--Value of wood products, plant parts and plant extract imports from Asia-Pacific by product group and importing region, 2017 (Million USD)

Importing region	Product group			
	Primary wood products	Secondary processed wood products	Plant parts	Plant extracts
Africa	228	401	4	15
Asia	17647	8382	698	369
Europe	1246	9045	198	396
Latin America	164	589	13	54
Middle East	630	325	13	23
North America	2743	20685	224	331
All regions	22760	39476	1151	1188

Source: compiled from data reported by UN Comtrade; data extracted 11 January 2019.
See notes to table 4.2.1.

⁴¹ Chips, logs, sawn wood, veneer and wood-based panels.

⁴² Further processed and manufactured wood products, including wooden furniture.

⁴³ Selected plants and parts used in perfume and medicine, etc. (HS 1211.90).

⁴⁴ Selected plant oils and extracts (HS 3301.29, HS 3301.30 and HS 3301.90).

Figure 4.2.1: Asia-Pacific exports of primary wood products (USD)

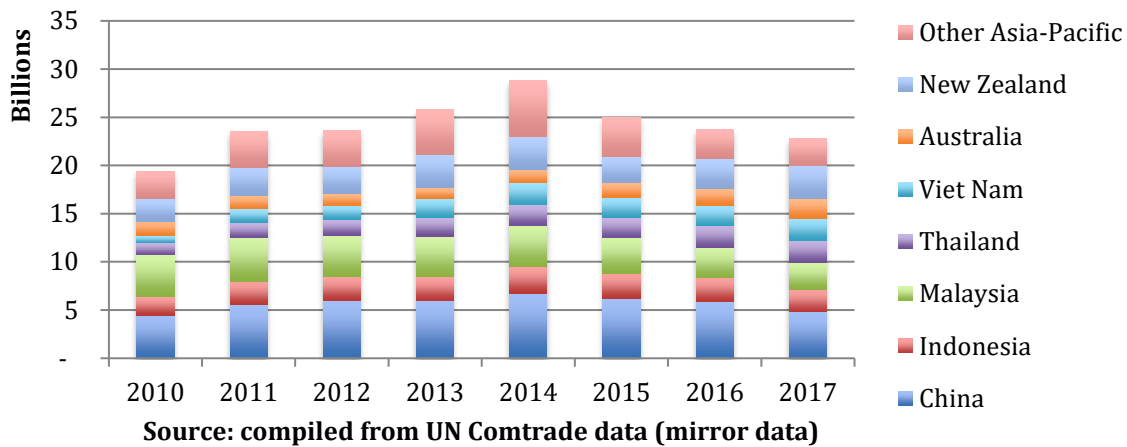
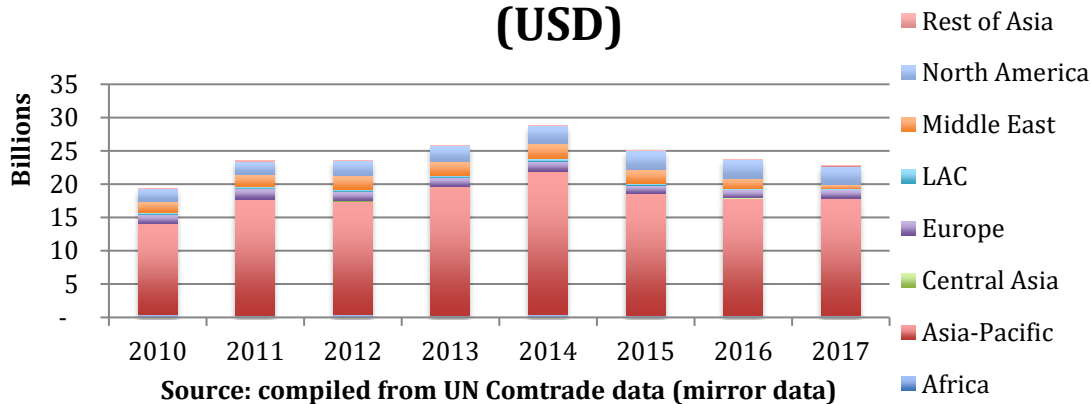


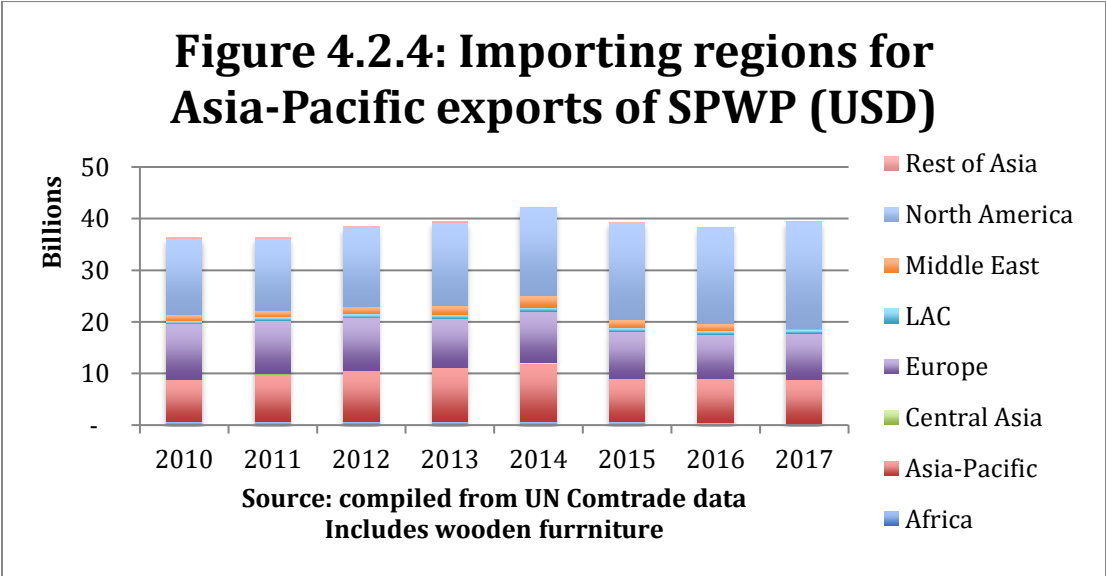
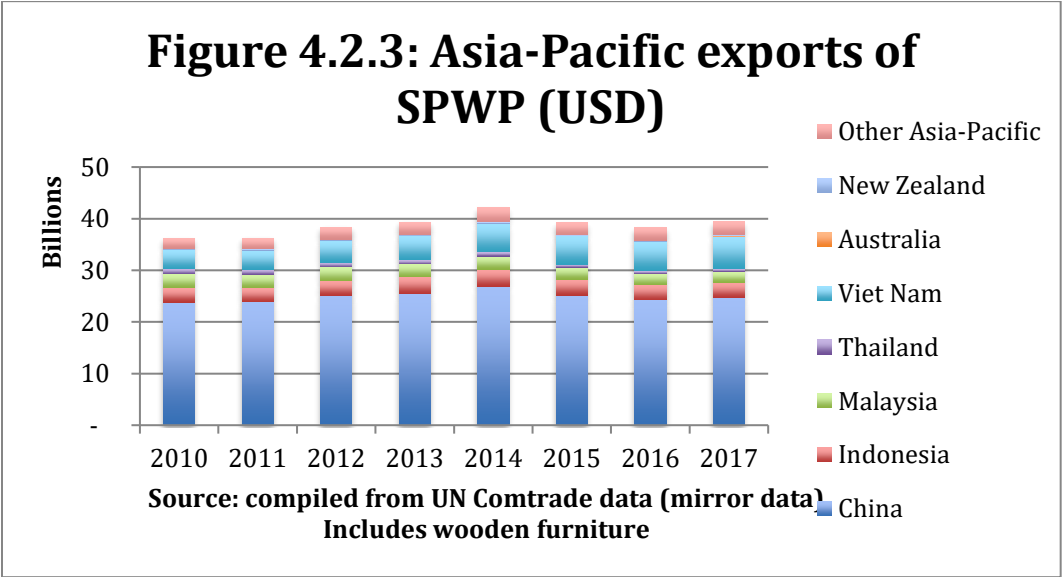
Figure 4.2.2: Importing regions for Asia-Pacific exports of primary wood products (USD)



Asia-Pacific exports of primary wood products were valued at USD 22.7 billion in 2017; this was a small increase as compared to the value exported in 2010 (USD 19.4 billion) but a continuation of a downward trend from the peak in 2014 (see figure 4.2.1). Logs, sawn wood, and plywood account for more than 70 percent of this trade; imports by Asia-Pacific countries, primarily China (37 percent) and Japan (15 percent) account for roughly three-quarters of the value of Asia-Pacific’s primary products trade (see figure 4.2.2). Exports to North America account for about 10 percent of the value of exports.

China is the region’s leading exporter (exporting sawn wood, veneer and plywood), followed by Indonesia and New Zealand (figure 4.2.1). The top exporters in the “other Asia-Pacific” aggregation include Myanmar, Papua New Guinea, Laos and the Solomon Islands.

The value of Asia-Pacific exports of secondary processed wood products, including wooden furniture (SPWP) is considerably greater than the value of exports of primary wood products—nearly double (table 4.2.1). Wooden furniture accounts for roughly 70 percent of the aggregate trade; China accounts for more than 60 percent of the region’s SPWP exports. Major markets are North America (importing over 53 percent of the region’s exports in 2017) and Europe (importing 23 percent). Asia-Pacific countries (notably Japan and Australia) are also important markets.



Tables 4.2.1 and 4.2.2 also summarize trade in selected plant parts and extracts. See annex table 4 for details on the commodities included in these summaries.

Asia-Pacific exports of selected plant parts were valued at roughly 1.2 billion USD in 2017, a substantial increase as compared to 2010 but a decline from the peak in 2014 (see figure 4.2.5). Exports by China account for about half of this trade in 2017. India accounts for more than half of the exports of the “Other Asia-Pacific” group. Major markets are Asia-Pacific countries (60 percent of the value of exports), North America (roughly 20 percent) and Europe (17 percent) (see figure 4.2.6).

Figure 4.2.5: Asia-Pacific exports of selected plant parts (USD)

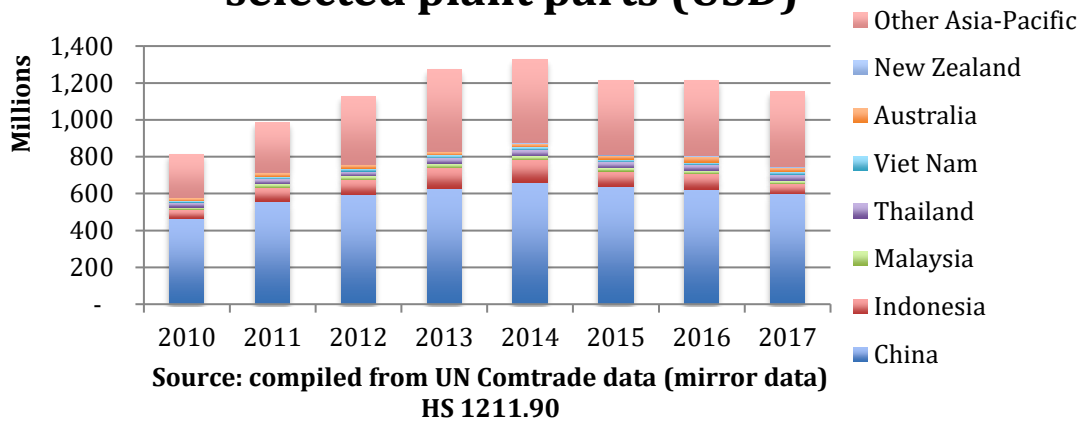
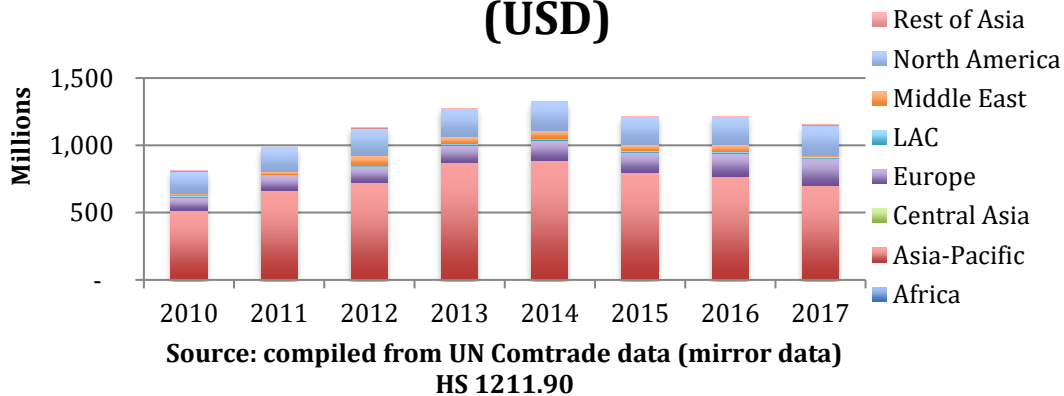
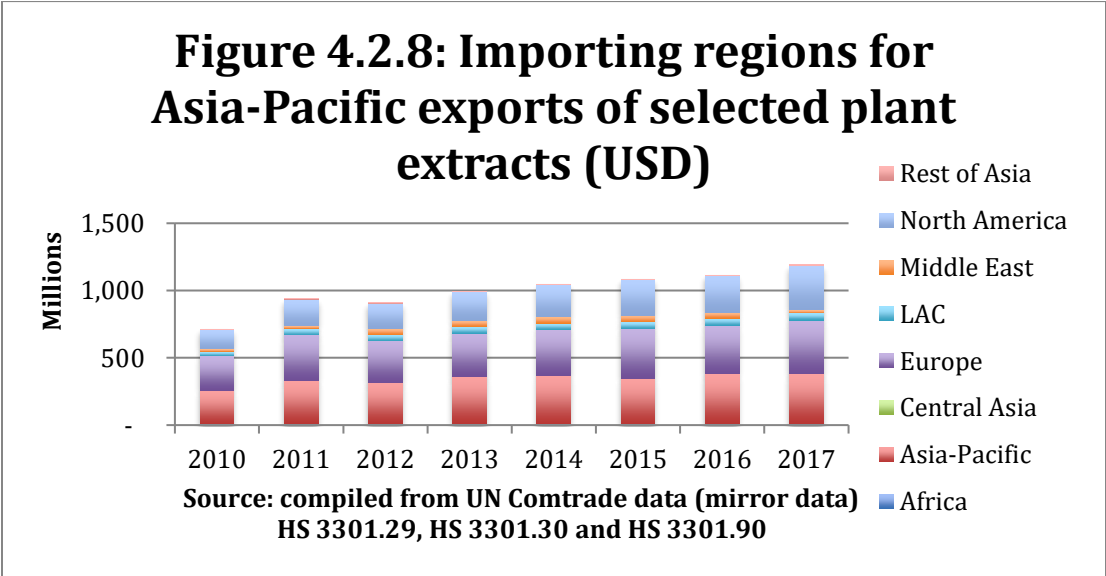
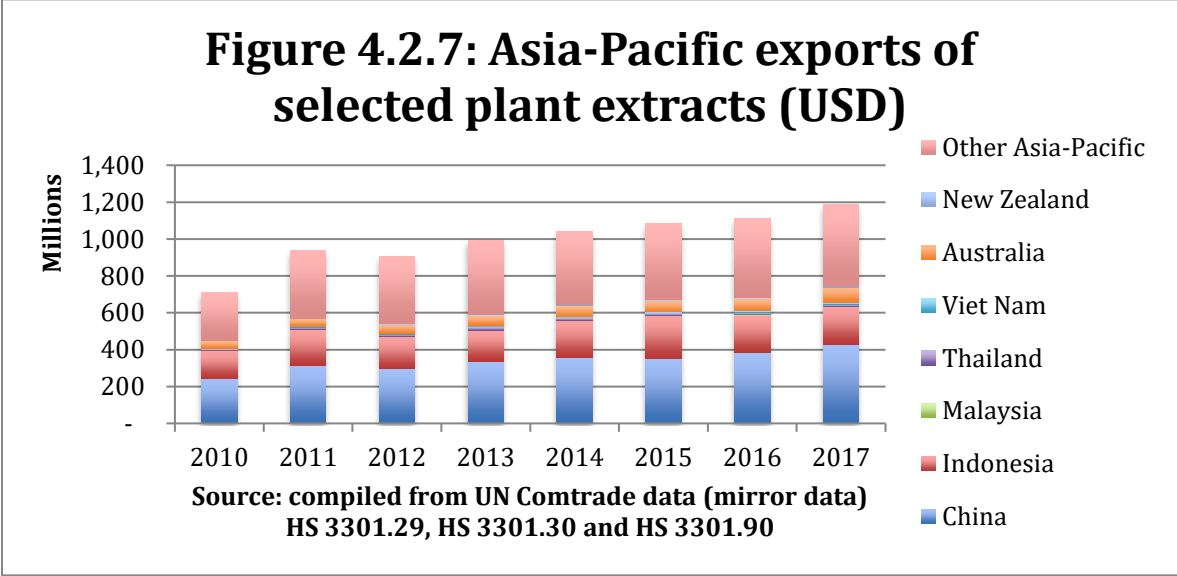


Figure 4.2.6: Importing regions for Asia-Pacific exports of selected plant parts (USD)



Asia-Pacific exports of selected plant extracts were also valued at roughly 1.2 billion USD in 2017, a significant increase (nearly double) as compared to 2010 (see figure 4.2.7). Exports by China (36 percent) and Indonesia account for more than half of total exports; as is the case with plant parts, exports from India account for the majority of the Other Asia-Pacific group. Major markets are Asia-Pacific, Europe and North America; each region imports roughly one-third of the extract exports (see figure 4.2.8).



As described in section 4.1, more detailed data on the quantity of trade in selected—tropical—primary wood products provides additional context. Data compiled and reported by ITTO provide the opportunity to make direct comparisons with the quantity data reported in the CITES Trade Database. Figures 4.2.9 to 4.2.11 show ITTO data on the quantity of tropical wood products exported by ITTO Asia-Pacific member countries, including nearly all countries reported as exporters of the selected CITES-listed species. Comparing these charts with corresponding charts and tables for the listed species reveals the generally small contribution listed species make to the quantity of national and regional primary wood product exports.

Figure 4.2.9: Asia-Pacific exports of non-coniferous tropical sawn wood (Thousand m3)

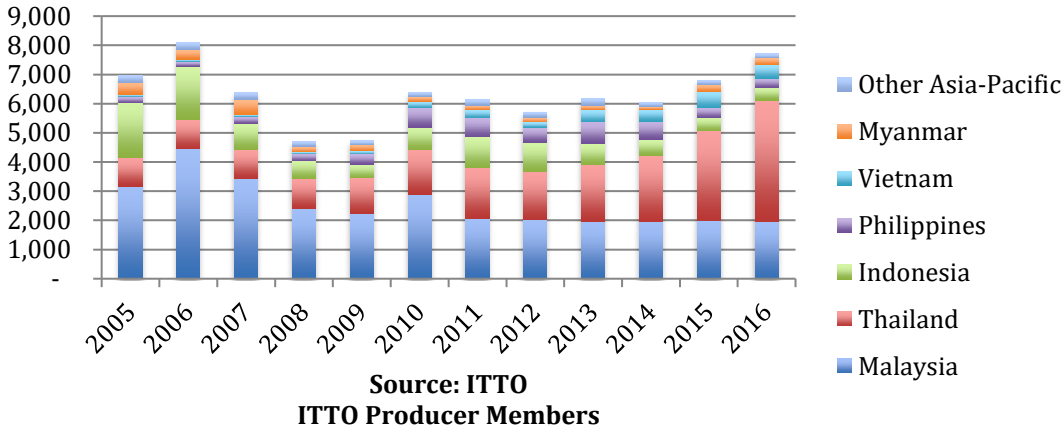


Figure 4.2.10: Asia-Pacific exports of non-coniferous tropical plywood (Thousand m3)

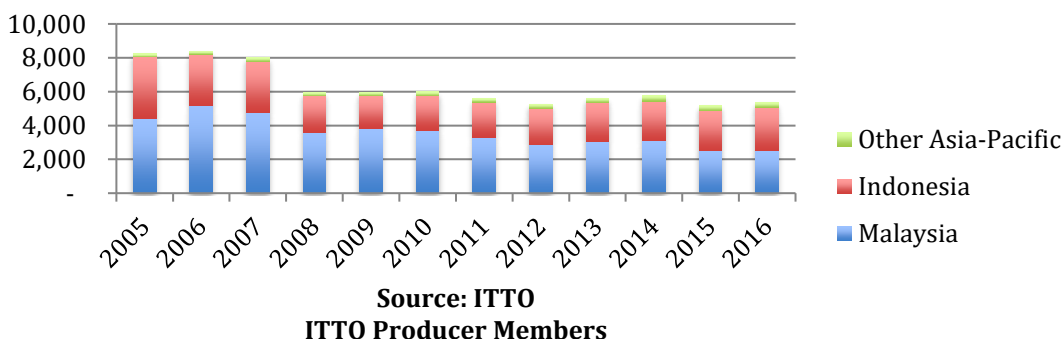
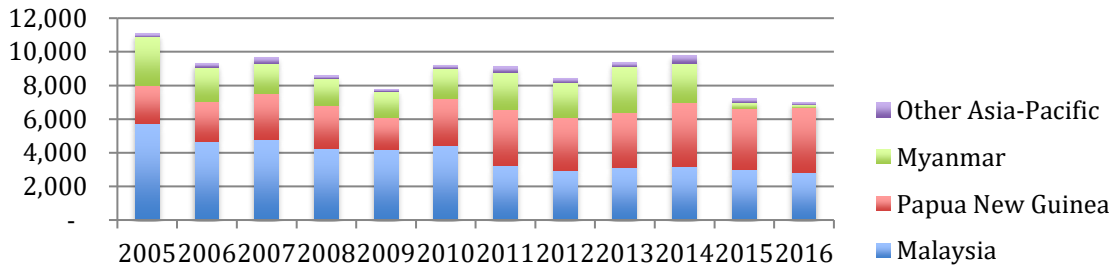
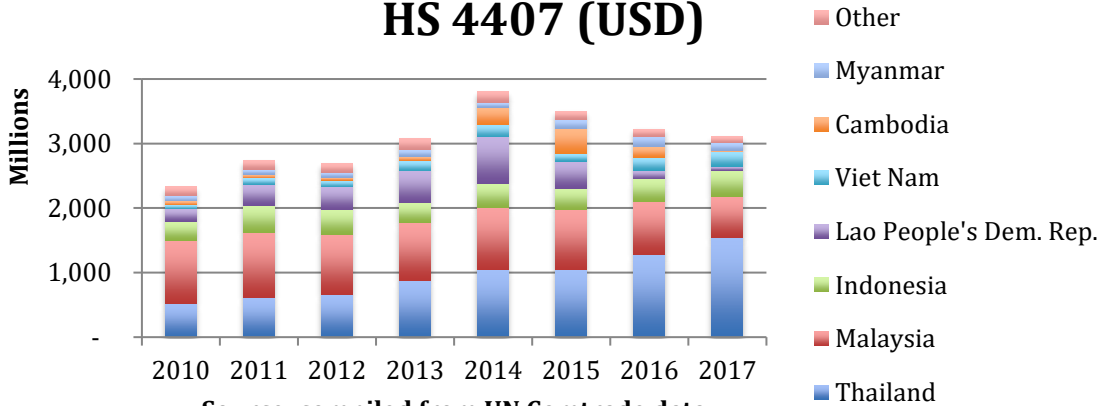


Figure 4.2.11: Asia-Pacific exports of non-coniferous tropical logs (Thousand m3)



Source: ITTO
ITTO Producer Members

Figure 4.2.12: Asia-Pacific exports of HS 4407 (USD)



Source: compiled from UN Comtrade data
Tropical countries only

4.3 The trade context for Latin America

Table 4.3.1 summarizes the value of Latin America trade in wood products and selected plant parts and extracts for 2017; table 4.3.2 shows the value of Latin America exports by importing region. Figures 4.3.1 to 4.3.6 show the trends in this trade over the period 2010-2017.

Table 4.3.1—Value of wood products, plant parts and plant extract exports from Latin America, by product group, 2017 (Million USD)

Exporter	Product Group			
	Primary wood products ⁴⁵	Secondary processed wood products ⁴⁶	Plant parts ⁴⁷	Plant extracts ⁴⁸
Brazil	1792	1452	17	66
Chile	2008	382	29	1
Mexico	87	1304	52	10
Other South America	1148	222	72	26
Other Central America	300	120	10	69
Total	5335	3480	180	172

Source: compiled from data reported by UN Comtrade (mirror data); data extracted 11 January 2019.

Table 4.3.2--Value of wood products, plant parts and plant extract imports from Latin America by product group and importing region, 2017 (Million USD)

Importing region	Product group			
	Primary wood products	Secondary processed wood products	Plant parts	Plant extracts
Africa	36	19	-	-
Asia	2190	109	9	15
Europe	744	369	52	78
Latin America	839	332	35	14
Middle East	96	10	-	1
North America	1430	2641	84	65
All regions	5335	3480	180	173

Source: compiled from data reported by UN Comtrade; data extracted 11 January 2019.

See notes to table 4.3.1.

Latin America exports of primary wood products were valued at USD 5.3 billion in 2017; this was a small increase as compared to the value exported in 2010 (USD 4.7 billion) (see figure 4.3.1). Sawn wood exports account for roughly one-third of the region's primary wood products exports; logs, plywood and veneer account for most of the

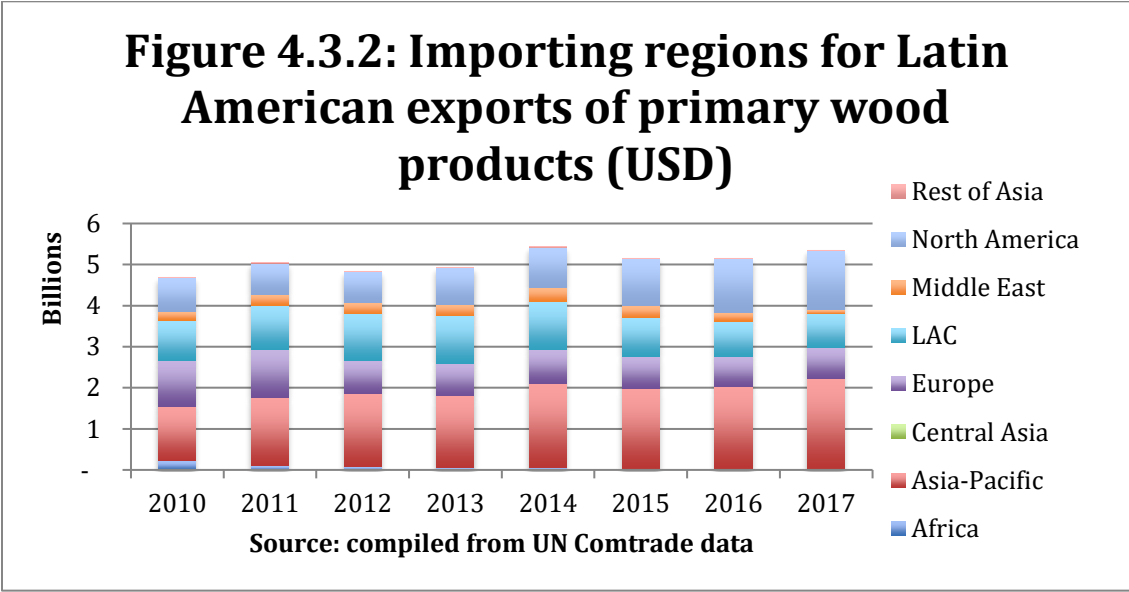
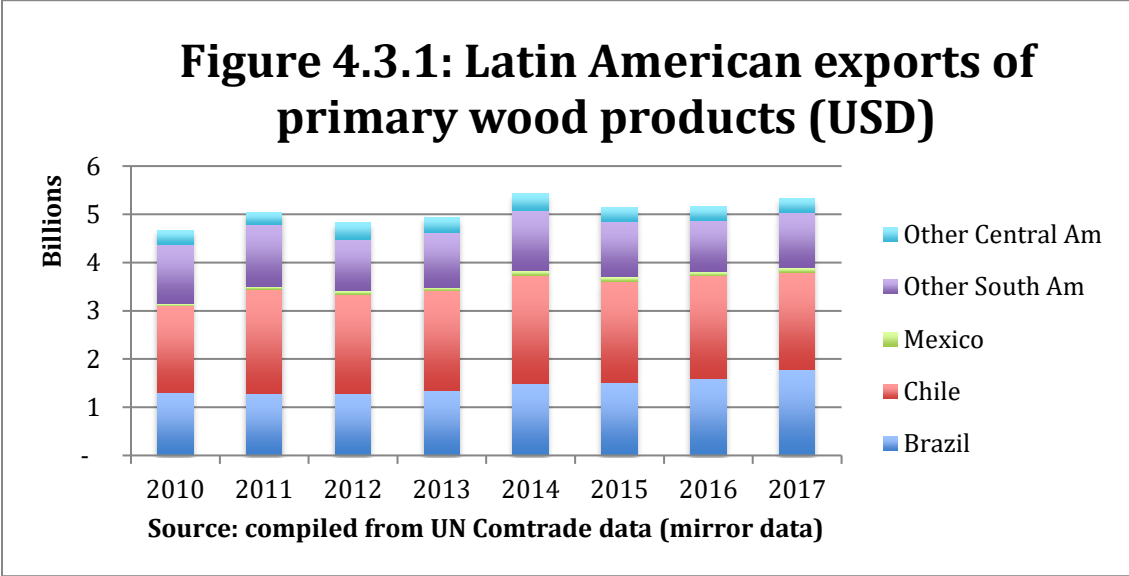
⁴⁵ Chips, logs, sawn wood, veneer and wood-based panels.

⁴⁶ Further processed and manufactured wood products, including wooden furniture.

⁴⁷ Selected plants and parts used in perfume and medicine, etc. (HS 1211.90).

⁴⁸ Selected plant oils and extracts (HS 3301.29, HS 3301.30 and HS 3301.90).

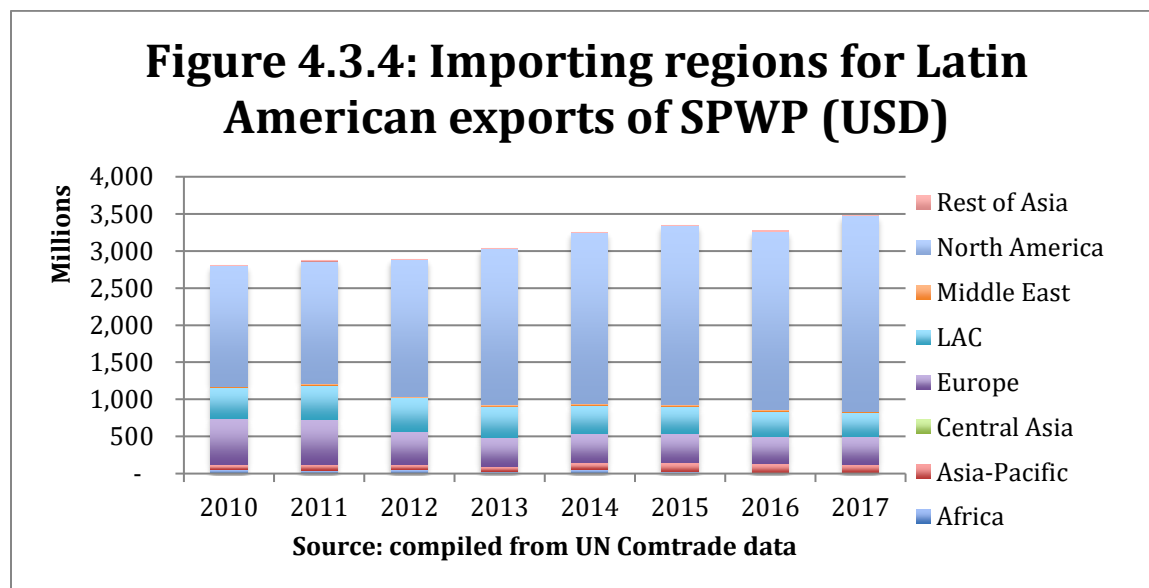
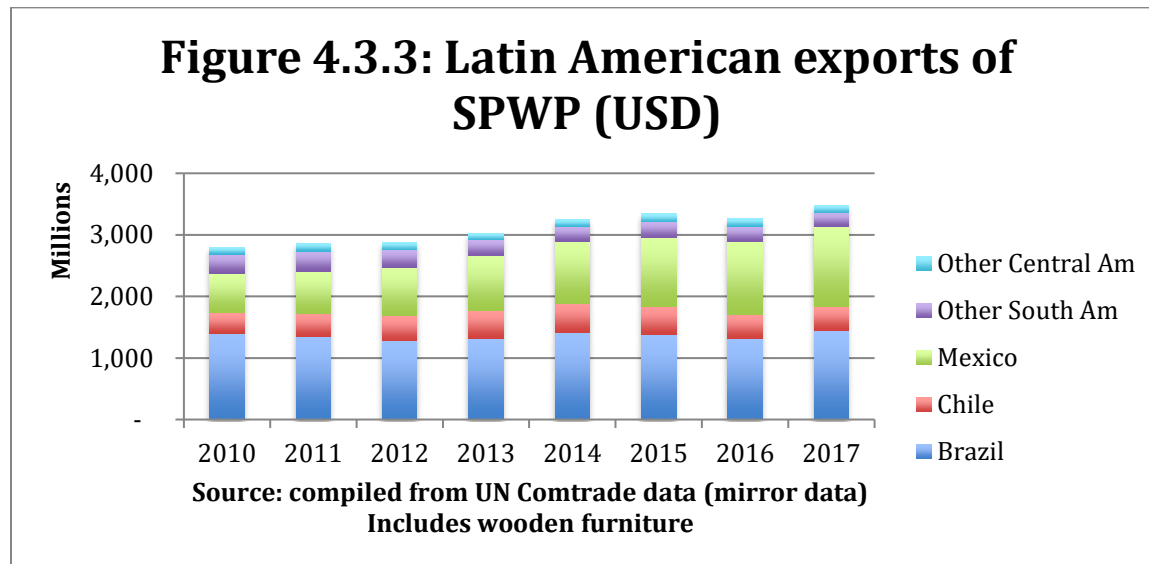
remainder. Asia-Pacific countries (primarily China) are the destination for most Latin American log exports; in 2017 the primary sawn wood export markets were Asia-Pacific (35 percent), North America (25 percent) and Europe (20 percent) (see figure 4.3.2).



Chile is the region’s leading exporter of primary wood products, followed by Brazil; together Chile and Brazil account for 70 percent off the region’s exports. The top exporters in the “Other South America” aggregation include Ecuador, Uruguay and Argentina, accounting for roughly 10 percent of primary product exports.

The value of Latin America exports of secondary processed wood products, including wooden furniture (SPWP) was 3.5 billion USD in 2017 (table 4.3.1). Wooden furniture accounts for roughly half of the aggregate trade; Brazil and Mexico account for about 80 percent of the region’s SPWP exports (figure 4.3.2). North America is the primary

market, importing over 75 percent of the region’s exports in 2017); Europe and Latin America each import roughly 10 percent (figure 4.3.4).



Tables 4.3.1 and 4.3.2 also summarize trade in selected plant parts and extracts. See annex table 5 for details on the commodities included in these summaries.

Latin America exports of selected plant parts were valued at 180 million USD in 2017, a nearly 50 percent increase as compared to 2010 (see figure 4.3.5). Exports by Mexico, Chile and Brazil account for about half of this trade in 2017 (figure 4.3.5). Peru and Colombia account for more than half of the exports of the “Other South America” group. Major markets are North America (roughly 45 percent), Europe (30 percent) and Latin America (20 percent) (see figure 4.3.6).

Figure 4.3.5: Latin American exports of selected plant parts (USD)

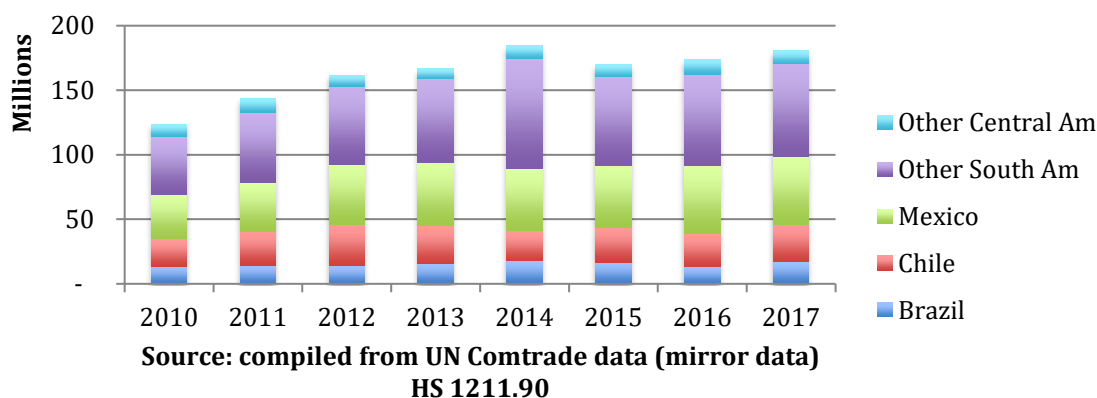
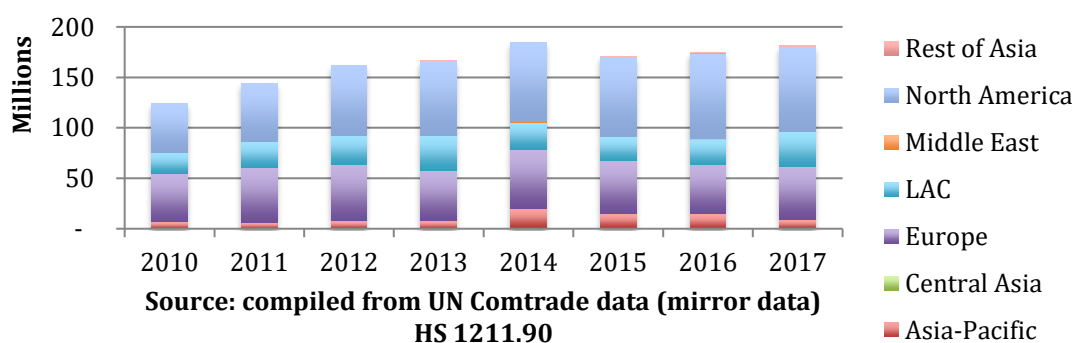
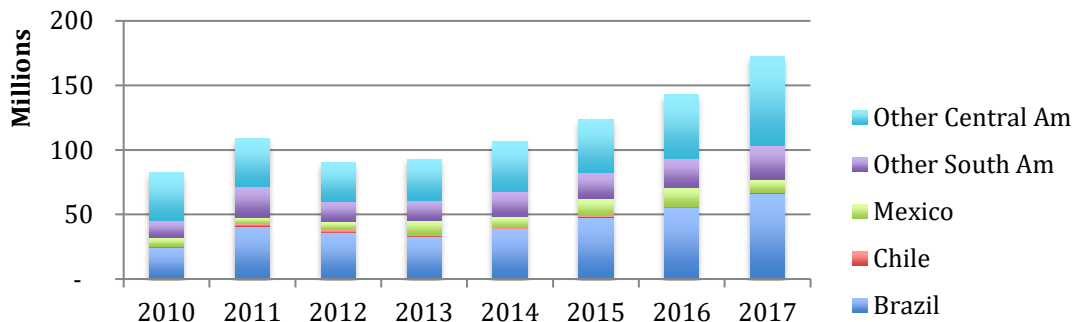


Figure 4.3.6: Importing regions for Latin American exports of selected plant parts (USD)



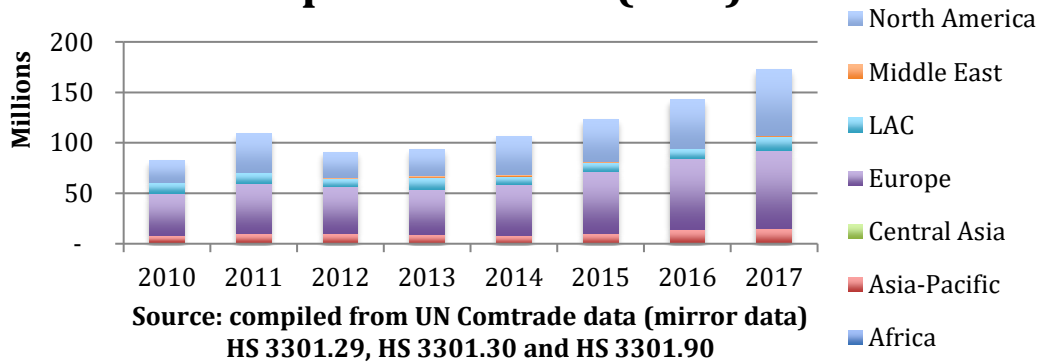
Latin America exports of selected plant extracts were valued at 173 million USD in 2017; as with selected plants parts exports, this was a significant increase (more than double) as compared to 2010 (see figure 4.3.7). Exports by Brazil (38 percent) and Mexico (6 percent) account for less than half of total exports. Haiti and Guatemala account for 33 percent of exports (shown as “Other Central America”); Paraguay, Argentina, Ecuador and Peru account for 14 percent (shown in “Other South America”). Major markets are Europe (45 percent) and North America (38 percent); Asia-Pacific and Latin America each account for about 8 percent of the extract exports (see figure 4.3.8).

Figure 4.3.7: Latin American exports of selected plant extracts (USD)



Source: compiled from UN Comtrade data (mirror data)
HS 3301.29, HS 3301.30 and HS 3301.90

Figure 4.3.8: Importing regions for Latin American exports of selected plant extracts (USD)



Source: compiled from UN Comtrade data (mirror data)
HS 3301.29, HS 3301.30 and HS 3301.90

As described in the previous sections, more detailed data on the quantity of trade in selected—tropical—primary wood products provides additional context. Data compiled and reported by ITTO provide the opportunity to make direct comparisons with the quantity data reported in the CITES Trade Database. Figures 4.3.9 to 4.3.11 show ITTO data on the quantity of tropical wood products exported by ITTO Latin America member countries, including nearly all countries reported as exporters of the selected CITES-listed species. Comparing these charts with corresponding charts and tables for the listed species reveals the generally small contribution listed species make to the quantity of national and regional primary wood product exports.

Figure 4.3.9: Latin American exports of non-coniferous tropical logs (Thousand m3)

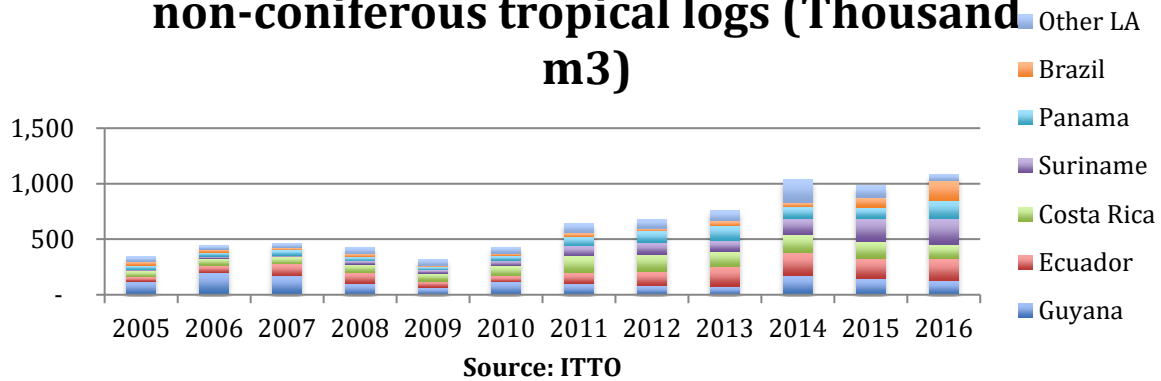


Figure 22: Tropical Sawnwood Exports Thousand m3

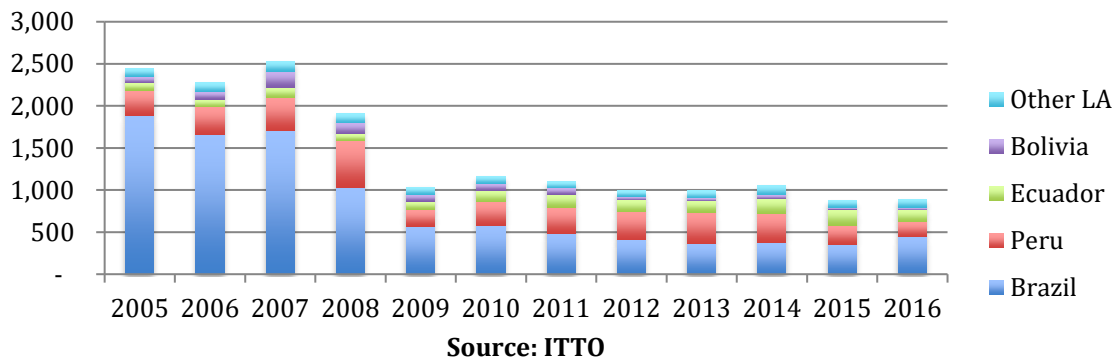
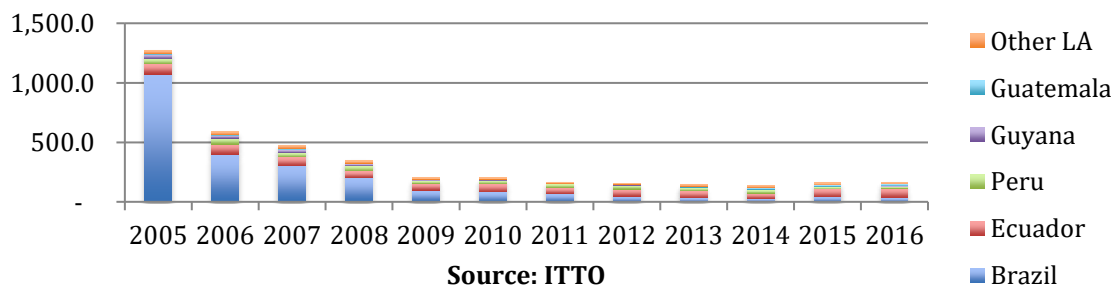


Figure 23: Tropical Plywood Exports Thousand m3



5. Review of the CITES Trade Database and Recommendations

The CITES Trade Database is an element of the internationally agreed framework for regulating trade in species that are or may be threatened by trade. The database relies on information gathered as part of the system of permits required for trade in CITES-listed species and reported annually by Parties to the Convention. By relying on the permits issued by national authorities and reported by those authorities as a condition for effective implementation of the Convention, the database provides a unique and potentially powerful tool for monitoring trade.

In spite of these strengths, the database has a number of weaknesses and leaves gaps in our understanding of trade in individual species. Some of these weaknesses and gaps are especially problematic for monitoring trade in listed tree species.

First, as noted in “A guide to using the CITES Trade Database” (Version 8 / October 2013)⁴⁹, Parties reporting data in annual reports commonly depart from reporting guidelines. Resulting shortcomings in the database include:

- The source of data is unclear (quantity actually traded as compared to the maximum quantity allowed on issued permits);
- Source and purpose coding are absent, ambiguous or inconsistent;
- Non-standard units are frequently used;
- Information on seized/confiscated specimens is absent or insufficient; and
- Information on specimens in manufactured products is limited or absent.

The consequences of these departures from guidelines are illustrated in data compiled for this report. These include:

- Inconsistent exporter and importer reports;
- The use of inappropriate or un-interpretable trade terms;
- A wide variety of units used to report quantities traded; and
- Frequent data anomalies (spikes or absent data).

Limited or ambiguous information on manufactured products is especially problematic for monitoring trade in timber species listed with annotations covering all part and derivatives. These products are increasingly important for listed species (as examples, carvings and wood products account for more than 80 percent of records for *Dalbergia* species)—and fall within the scope of the listing for a number of the selected species; nevertheless, guidance provided to the parties⁵⁰ is that “information on trade in manufactured products is of limited use...” and it is recommended that “trade in manufactured specimens of species in Appendices II and III be summarized.”

⁴⁹ Available at: <https://trade.cites.org/>

⁵⁰ CITES Notification to the Parties No. 788 (10 March 1994) as referenced in “A Guide to Using the CITES Trade Database” version 8 October 2013.

The “Guidelines for the preparation and submission of CITES annual reports” (version October 2017) state (emphasis added): “A separate section *may be included* to summarize the imports, exports and re-exports of manufactured products derived from species included in Appendices II and III. For many species this information is absent although data on wood products are reported for most species in annex table 1. Nevertheless, ambiguity in definitions (“wood products” is a broad and ill-defined term) and reporting units (quantity units are typically left blank, indicating only the number of wood products, with no information on the type) make it difficult to assess the overall impact of trade.

Additional problems and shortcomings of the database include:

- Terms are poorly defined
- Terms are, or appear to be redundant (as examples, “timber” and “logs”; and “extract” and “oil”)
- Units reported frequently differ from the preferred and alternative units, vary widely across reporting Parties and in some cases appear to be inconsistent with the terms for which they are used
- No value information is requested or reported

Poorly defined terms is a particular problem for recording trade in tree species. As illustrated in annex table 2, the explanations of terms (effectively the definitions) provided to Parties vary from terse to extensive but in many cases do not draw clear distinctions. Notable examples in the context of trade in the selected tree species include: “logs” and “timber” (these appear to be used interchangeably); and “extracts”, derivatives” and “oil” (no useful definitions or distinctions are provided). As another example, some Parties may use the term “carvings” to report trade in specimens of wood that have been manufactured, not “carved” as such. Because the definition of “carvings” is brief (and appears to have its origin in regulating ivory trade) it is not possible to tell for sure.

The diversity of quantity units reported—for nearly all species and terms (as illustrated in tables in section 3)—makes it difficult to accurately calculate the total quantity of each species that is traded. In turn, this ambiguity in quantity traded undermines the contribution of the trade data to an assessment of the effect of trade on the species population.

Recommendations

- Review and revise guidelines for reporting trade in timber species, drawing on expertise in commodity trade
 - Make terms and descriptions more precise and examples more relevant
 - Draw definitions from the HS trade classification system
- Eliminate or redefine apparently redundant terms (for example, timber and logs)

- Expand the terms covering manufactured wood products (using HS examples) and request Parties collect and report this trade
- Provide instructions on units appropriate for each term
- Clarify the reporting basis to be used (that is: actual trade)
- Provide training for CITES permitting authorities in the classification of wood products in trade
- For import permits: provide the customs classification (HS 6 digit or more detailed) associated with the shipment
- For import permits: add value information (based on customs documentation)
- Request Parties who have not already done so to expand their use of 8- and 10-digit HS codes to identify listed species in commodity trade

6. Notes on data

CITES Trade Database

For nearly all species and trade terms reported in the CITES Trade Database, data are reported using a variety of quantity units. In general, data used in this report are the quantities reported with appropriate quantity units (cubic meters for logs and sawn wood, kilograms for bark and extracts). In some cases, conversions were made to aggregate data for trade terms reported with multiple units. In a few cases obviously anomalous data were adjusted.

UN Comtrade

Data shown are “mirror” data: all trading partner reports of imports from African exporters; import data are frequently more complete and may be more accurate as compared to exporter reported data.

Annex Table 1.1—Trade terms reported and cumulative count of exporter and importer reports in the CITES Trade Database for selected African tree species⁵¹

Trade terms used	Species and reporting period					
	<i>Pericopsis elata</i>		<i>Prunus africana</i>		<i>Osyris lanceolata</i>	
	1995-2017		1995-2017		2013-2017	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
Bark			190	145		
Carvings	5	1		4		
Chips		2	1	1	3	
Derivatives	1	1	83	22		
Dried plants			8	4		
Extract			664	220		
Fruit			1	1		
Leaves			10	3		
Live	4	3	1	2		
Logs	284	125		2		
Medicine			7	20		
Oil					3	2
Plywood		1				
Powder			78	38		
Roots			1			
Sawn wood	578	320	1			
Seeds			1			
Specimens	2	1	13	9	1	1
Stems			1			
Timber	201	72	2	3		
Timber carvings	1					
Timber pieces	7	4		1		
Unspecified						
Veneer	73	30				
Wood products	2	4		1		
Total, all terms	1153	564	1065	476	7	3

⁵¹ Data extracted 9 March 2019

Annex Table 1.1 (continued)—Trade terms reported and cumulative count of exporter and importer reports in the CITES Trade Database for selected African tree species⁵²

Trade terms used	Species and reporting period						
	<i>Guibourtia</i> spp.			<i>Diospyros</i> spp.			<i>Dalbergia baroni</i>
	2017			2013-2017			2013-2017
	Exporter	Importer		Exporter	Importer	Exporter	Importer
Bark							
Carvings	165	58		13	7	65	19
Chips					1		
Cosmetics	1						
Derivatives							
Dried plants				2			1
Extract							
Fruit				2			
Jewelry					1		
Leaves				1			1
Live				1	1		
Logs	3	5					22
Medicine							
Oil							
Plywood							
Powder							
Sawn wood	21	23		3	3	76	15
Specimens				5	1		
Timber	7	3					
Timber pieces							
Veneer	9	4				15	3
Wood products				3	5	75	23
Total, all terms	236	275		30	19	231	64

⁵² Data extracted 9 March 2019

Annex Table 1.1 (continued)—Trade terms reported and cumulative count of exporter and importer reports in the CITES Trade Database for selected African tree species⁵³

Trade terms used	Species and reporting period					
	<i>Dalbergia melanoxylon</i>		<i>Dalbergia</i> spp.		<i>Pterocarpus erinaceus</i>	
	2017		2013-2017		2017	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
Bark						
Carvings	102	36	1	4		2
Chips						
Derivatives	7					
Dried plants			2	8		
Extract						
Fruit						
Leaves			1	9		
Live	1					
Logs	1	3	1	1	2	34
Medicine						
Oil						
Plywood						
Powder						
Sawn wood	32	9	1	6		
Seeds			1			
Specimens			4		1	15
Timber	9		1			4
Timber pieces	5					
Veneer			1			
Wood products	219	93	53	32	11	3
Total, all terms	376	141	66	69	14	58

⁵³ Data extracted 9 March 2019

Annex Table 1.2—Trade terms reported and cumulative count of exporter and importer reports in the CITES Trade Database for selected Asian tree species⁵⁴

Trade terms used	Species and reporting period					
	<i>Aquilaria malaccensis</i>		<i>Gyrinops</i> spp.		<i>Gonystylus</i> spp.	
	1995-2017		2005-2016		2005-2017	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
Bark						
Carvings	9	14			302	119
Chips	1673	926	99	71	3	1
Derivatives	215	79			2	4
Dried plants	2	6				
Extract	59	18				
Fruit						
Leaves	3					
Live	11	12			1	2
Logs	60	18	1	2	1	9
Medicine	26	20			1	
Oil	363	205	12	7	11	2
Plywood						
Powder	227	99	8	4		
Roots	14	7				
Sawn wood	44	32	1	1	315	177
Seeds						
Specimens	7	2	4		1	2
Stems	29	7				
Timber	172	94	1	4	195	133
Timber pieces	46	22	2	1	223	32
Unspecified	4				1	
Veneer	1					1
Wood products	3	7			16	6
Other	2	3			30	
Total, all terms	2970	1571	128	92	1106	488

⁵⁴ Data extracted 15 March 2019

Table 1 (continued)—Trade terms reported and cumulative count of exporter and importer reports in the CITES Trade Database for selected Asian tree species⁵⁵

Trade terms used	Species and reporting period					
	<i>Dalbergia cochinchinensis</i>		<i>Dalbergia</i> spp.			
	2013-2017		2017			
	Exporter	Importer	Exporter	Importer	Exporter	Importer
Bark						
Carvings	6		457	258		
Chips				2		
Derivatives			72	12		
Dried plants			3			
Extract						
Fruit						
Leaves	1			1		
Live	1		4			
Logs	6	23	1	16		
Medicine			1			
Oil						
Plywood			2	1		
Powder						
Sawn wood	21	19	31	33		
Specimens				1		
Timber	14	19	6	16		
Timber pieces		2	1			
Veneer	1	1	64	19		
Wood products	7	10	1277	600		
Other		1	10	4		
Total, all terms	57	75	1929	958		

⁵⁵ Data extracted 15 March 2019

Annex Table 1.3—Trade terms reported and cumulative count of exporter and importer reports in the CITES Trade Database for selected Latin American tree species⁵⁶

Trade terms used	Species and reporting period					
	<i>Aniba rosaeodora</i>		<i>Bulnesia sarmientoi</i>		<i>Dalbergia</i> spp. (I) ⁵⁷	
	2010-2017		2010-2017		2013-2017	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
Bark						
Carvings	3	2	9	1	134	28
Chips			2	1		
Derivatives	7		23	6	1	
Dried plants						
Extract	24	19	396	143		
Fruit						
Leaves						
Live				1	1	
Logs			24	36	10	50
Medicine						
Oil	147	95	418	174		
Plywood						
Powder						
Roots						1
Sawn wood	1		54	41	141	90
Seeds						
Specimens	1				2	3
Stems						
Timber	1	1	30	8	39	12
Timber carvings						
Timber pieces			1			
Unspecified			1			
Veneer			2		15	7
Wax						1
Wood products	1		3	1	194	81
Total, all terms	187	117	963	412	537	273

⁵⁶ Data extracted 15 March 2019.

⁵⁷ Includes: *Dalbergia granadillo*, *Dalbergia retusa* and *Dalbergia stevensonii*.

Annex Table 1.3 (continued)—Trade terms reported and cumulative count of exporter and importer reports in the CITES Trade Database for selected Latin American tree species⁵⁸

Trade terms used	Species and reporting period					
	<i>Dalbergia</i> spp. (II) ⁵⁹		<i>Guaiacum sanctum</i>		<i>Guaiacum officinale</i>	
	2017		1975-2017		1992-2017	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
Bark			1			
Carvings	50	13	1	2	7	6
Chips			16	6		
Derivatives	3		7	2		
Dried plants			1	1	1	2
Extract			23	21	2	1
Flowers			1	1		
Fruit						
Leaves			3		1	
Live			34	3	28	4
Logs		3	26	15	1	
Medicine						
Oil			8	1		
Plywood						
Powder			35	9		
Sawn wood	20	14	79	47	3	2
Specimens			4		3	
Stems				1		
Timber	1	1	115	43	4	1
Timber pieces			7	7	6	1
Unspecified				3		
Veneer	5	1	3			
Wood products	60	46			3	1
Total, all terms	139	78	366	162	59	19

⁵⁸ Data extracted 15 March 2019

⁵⁹ Includes all *Dalbergia* taxa listed in 2017.

Annex Table 1.3 (continued)—Trade terms reported and cumulative count of exporter and importer reports in the CITES Trade Database for selected Latin American tree species⁶⁰

Trade terms used	Species and reporting period					
	<i>Guaiaacum</i> spp. ⁶¹		<i>Swietenia humulis</i>		<i>Swietenia mahagoni</i>	
	2003-2017		1975-2017		1992-2017	
	Exporter	Importer	Exporter	Importer	Exporter	Importer
Bark						
Carvings	17	12	37	30	51	21
Chips						
Derivatives	3	4	1		1	
Dried plants			2	2	1	
Extract	3					
Fruit						
Furniture			2		5	
Leaves						
Live	2	3	2	2		
Logs			2		2	1
Medicine						
Oil						
Plywood						
Powder						
Sawn wood	26	6	15	10	8	2
Specimens			2	1	3	1
Timber	9	7	1	1	3	5
Timber carvings			2			
Timber pieces	3	2		1	4	
Unspecified				1	1	
Veneer					5	1
Wood products		1		1		1
Total, all terms	63	35	71	53	85	32

⁶⁰ Data extracted 15 March 2019.

⁶¹ Includes *Guaiaacum coulteri* and *Guaiaacum* spp.

Annex Table 1.3 (continued)—Trade terms reported and cumulative count of exporter and importer reports in the CITES Trade Database for selected Latin American tree species⁶²

Trade terms used	Species and reporting period					
	<i>Swietenia macrophylla</i>					
	2003-2017					
	Exporter	Importer	Exporter	Importer	Exporter	Importer
Bark						
Carvings	44	10				
Chips						
Derivatives	4					
Dried plants	3					
Extract						
Fruit						
Furniture	4					
Leaves	2	1				
Live	2	1				
Logs	3	9				
Medicine						
Oil						
Plywood	5	2				
Powder						
Sawn wood	721	442				
Seeds		1				
Specimens	8	6				
Timber	59	111				
Timber pieces	3	4				
Unspecified	11					
Veneer	133	46				
Wax	1					
Wood products	7	6				
Total, all terms	1000	639				

⁶² Data extracted 15 March 2019.

Annex Table 2—Guidance for recording trade in timber species (extracted from Table 6.a in “Guidelines for preparation and submission of CITES annual reports”⁶³

Description	Code	Preferred unit	Alternative unit	Explanation
Bark	BAR	kg	No.	Tree bark (raw, dried, powdered, unprocessed)
Carving	CAR	kg	No.	Carved products other than ivory, born or horn—for example coral or wood
Chips	CHP	kg		Chips of timber, especially <i>Aquilaria spp.</i> , <i>Gyrinops spp.</i> , and <i>Pterocarpus santalinus</i>
Derivatives	DER	kg/l		Derivatives (other than those included elsewhere in this table)
Extract	EXT	kg	l	Extract – usually plant extracts
Logs	LOG	m ³		All wood in the rough, whether or not stripped of bark or sapwood, or roughly squared, for processing notably into, pulpwood or veneer sheets. NB: trade in logs of special purpose timbers traded by weight (e.g. lignum vitae, <i>Guaiaicum spp.</i>) should be recorded in kg.
Oil	OIL	kg	l	Oil—e.g. from turtles, seals, whales, fish, various plants
Plywood	PLY	m ²	m ³	Material consisting of three or more sheets of wood glued and pressed one on the other and generally disposed so that the grains of successive layers are at an angle
Sawn wood	SAW	m ³		Wood dimply sawn lengthwise or produced by a profile-chipping process; normally exceeds 6mm in thickness. NB: trade in sawn wood of special purpose timbers traded by weight (e.g. lignum vitae, <i>Guaiaicum spp.</i>) should be recorded in kg.
Stem	STE	No.	kg	Plant stems NB: for the agarwood-producing taxa <i>Aquilaria spp.</i> and <i>Gyrinops spp.</i> the preferred unit is ‘kilograms’. The alternative unit is ‘number’.
Timber	TIM	m ³	kg	Raw timber except saw-logs and sawn wood
Veneer sheets - rotary veneer - sliced veneer	VEN VEN	m ³ m ²	kg kg	Thin layers or sheets of wood of uniform thickness, usually 6mm or less in thickness, usually peeled (rotary veneer) or sliced (sliced veneer), for use in making plywood, for veneering furniture, veneer containers, etc.
Wood product	WPR	No.	kg	Manufactured wood products, including finished wood products such as furniture and musical instruments

⁶³ October 2017 version. Other terms used for recording trade in timber species include: “dried plant” (DPL), “live” (LIV), “leaf” (LVS) and “wax” (WAX).

Annex Table 3—Description of annotations used for selected tree species

Annotation #	Description
2	All parts and derivatives except: a) seeds and pollen; and b) finished products packaged and ready for retail trade
4	All parts and derivatives, except: a) seeds (including seedpods of Orchidaceae), spores and pollen (including pollinia). The exemption does not apply to seeds from Cactaceae spp. exported from Mexico, and to seeds from <i>Beccariophoenix madagascariensis</i> and <i>Dypsis decaryi</i> exported from Madagascar; b) seedling or tissue cultures obtained in vitro, in solid or liquid media, transported in sterile containers; c) cut flowers of artificially propagated plants; d) fruits, and parts and derivatives thereof, of naturalized or artificially propagated plants of the genus <i>Vanilla</i> (Orchidaceae) and of the family Cactaceae; e) stems, flowers, and parts and derivatives thereof, of naturalized or artificially propagated plants of the genera <i>Opuntia</i> subgenus <i>Opuntia</i> and <i>Selenicereus</i> (Cactaceae); and f) finished products of <i>Euphorbia antisiphilitica</i> packaged and ready for retail trade
5	Logs, sawn wood and veneer sheets
11	Logs, sawn wood, veneer sheets, plywood, powder and extracts. Finished products containing such extracts as ingredients, including fragrances, are not considered to be covered by this annotation.
12	Logs, sawn wood, veneer sheets, plywood and extracts. Finished products containing such extracts as ingredients, including fragrances, are not considered to be covered by this annotation
15	All parts and derivatives are included, except: a) Leaves, flowers, pollen, fruits, and seeds; b) Non-commercial exports of a maximum total weight of 10 kg. per shipment; c) Parts and derivatives of <i>Dalbergia cochinchinensis</i> , which are covered by Annotation # 4; d) Parts and derivatives of <i>Dalbergia</i> spp. originating and exported from Mexico, which are covered by Annotation # 6 Refer to Notification No. 2017/078 for an interim definition of the terms used in paragraph b) of annotation #15.

Source: Checklist of CITES species (available at <http://checklist.cites.org/#/en>)

Annex Table 4—Selected chapters and subchapters of the Harmonized System (HS) relevant to trade in parts, oils and extracts of CITES-listed tree species

HS Chapter	Description
Chapter 12	Oil seeds and oleaginous fruits, miscellaneous grains, seeds and fruit; industrial or medicinal plants, straw and fodder
HS 1211	Plants and parts of plants (including seeds and fruits), of a kind used primarily in perfumery, in pharmacy or for insecticidal, fungicidal or similar purposes, fresh, chilled, frozen or dried, whether or not cut, crushed or powdered
HS 1211.90	Plants and parts (including seeds and fruits) n.e.c. in heading no. 1211, of a kind used primarily in perfumery, in pharmacy or for insecticidal, fungicidal or similar purposes, fresh, chilled, frozen or dried, whether or not cut, crushed or powdered
Chapter 33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations
HS 3301	Essential oils (terpenelss or not), including concretes and absolutes; resinoids; extracted oleoresins; concentrates of essential oils in fats, in fixed oils, in waxes or the like, obtained by enfleurage or maceration; terpenic by products of the deterpenation of essential oils; aqueous distillates and aqueous solutions of essential oils
HS 3301.29	Oils, essential; n.e.c. in heading no. 3301 (terpeneless or not), including concretes and absolutes
HS 3301.30	Resinoids
HS 3301.90	Oils, essential; concentrates in fats, fixed oils, waxes and the like, terpenic by-products, aqueous distillates and solutions, extracted oleoresins, n.e.c. in heading no. 3301

Annex table 5—Countries included in regional groupings for Africa⁶⁴

Eastern Africa			
Burundi	Kenya	Mozambique	South Sudan
Comoros	Madagascar	Reunion	Tanzania
Djibouti	Malawi	Rwanda	Uganda
Eritrea	Mauritius	Seychelles	Zambia
Ethiopia	Mayotte	Somalia	Zimbabwe
Middle Africa			
Angola	Democratic Republic of the Congo	Republic of the Congo	
Cameroon	Equatorial Guinea	Sao Tome and Principe	
Central African Republic	Gabon		
Northern Africa			
Algeria	Morocco	Western Sahara	
Egypt	Sudan		
Lybia	Tunisia		
Southern Africa			
Botswana	Lesotho	South Africa	
Eswatini	Namibia		
Western Africa			
Benin	Ghana	Mauritania	Sierra Leone
Burkina Faso	Guinea	Niger	Togo
Cabo Verde	Guinea-Bissau	Nigeria	
Cote d'Ivoire	Liberia	Saint Helena, Ascension and Tristan de Cunha	
Gambia	Mali	Senegal	

⁶⁴ Geographical groupings established by the United Nations Statistical Division (<https://unstats.un.org/unsd/methodology/m49/>)