

Research Paper

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An Analysis of Trade in Five CITES-listed Taxa

Summary

This paper analyses trade in five timber-producing taxa listed in the appendices to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES): Ramin or *Gonystylus* spp. (Appendix II), Rosewood or *Dalbergia* spp. (various species in Appendices I, II and III), Mahogany or *Swietenia macrophylla* (Appendix II), Afrormosia or *Pericopsis elata* (Appendix II) and Red Cedar or *Cedrela odorata* (Appendix III). It provides an overview of the trade in these taxa during the last decade – both globally and into the European Union (EU) – as well as a snapshot of illegal trade.

The species under review are commodity timbers traded in high volumes (Afrormosia, Ramin, Mahogany, Red Cedar) and semi-precious or precious woods (Rosewoods) traded in smaller quantities. Trade in Afrormosia has declined during the last decade, although levels remain high. Trade in Ramin, Mahogany and Red Cedar has declined too, but there have been large spikes in trade in recent years, as evidenced by large trade volumes of Ramin reported in kg in 2007 and in m³ in 2008–09, of Mahogany in m³ in 2009–10 and of Red Cedar in m³ in 2010.

Data on trade in Appendix II- and III-listed Rosewoods are patchy, and there is little information about the patterns and volumes of trade in those species. More is known about trade in the Appendix I-listed Brazilian Rosewood, which appears to have declined. Most of the trade in Brazilian Rosewood has involved pre-Convention specimens, including as recently as 2010–11. It is unclear how the origin of those specimens is being verified by the countries trading in the species.

The EU imports all five taxa. In global terms, it is a major importer of Ramin, Afrormosia and, to a lesser extent, Rosewood and a minor importer of Mahogany and Red Cedar, although the volume of imports of the last two species is nonetheless high.

Both globally and in the EU there are concerns about a number of issues, in particular the significant discrepancies between CITES data reported by importing and exporting countries and, in the case of Mahogany, between customs and CITES data. In the case of some species, including Red Cedar and Afrormosia, exporters reported much higher levels of trade to the EU than the EU reported importing. In the case of others, including Ramin, the EU reported higher levels of imports than their trade partners reported exporting.

Commercial trade in Appendix I-listed *Dalbergia nigra* is prohibited under the EU Wildlife Trade Regulations (although there are a few exemptions). However, commercial trade in wild-sourced timber continues to be reported.

In the case of Mahogany, EU (re-)exports reported to CITES were higher than the volumes imported to the EU over the same period. This discrepancy was not seen in data collected by customs, which suggests that some trade entering the EU has slipped through CITES controls; however, this cannot be confirmed.

While there is a range of possible reasons for these inconsistencies, the scale and nature of the discrepancies for several of the species suggest that some are likely to be accounted for by unreported (intentional or unintentional) and therefore illegal trade. Illegal trade has been reported for all species, but it is difficult to assess its true scale. In some cases, such trade results from a lack of awareness of CITES provisions; but in many others, smuggling and the intentional circumvention of CITES controls have been reported.

Introduction

It is widely recognized that tropical forests are under threat from land conversion, overexploitation and illegal logging. As concerns have grown about the governance of the forestry sector and the impact of illegal trade, a number of countries have taken steps to ensure the legality of timber traded in their markets.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an international agreement between governments that aims to ensure that international trade in specimens of wild animals and plants does not threaten their survival. It regulates trade in more than 35 000 species of animals and plants through a permit system for species listed in one of its three Appendices. Initially, commercial timber species were poorly represented in the CITES Appendices; however, in recent years there has been an increased focus on timber. The most recent CITES Conference of the Parties (CoP16), which took place in March 2013, voted to list a number of tropical hardwood species in Appendix II of the convention, including Malagasy ebony (*Diospyros* spp.) and various Rosewood species (*Dalbergia* spp.) from Madagascar, Central and South America and Thailand. Other tropical timber species already listed in CITES include Mahogany or *Swietenia macrophylla*, Ramin or *Gonystylus* spp., Afrormosia or *Pericopsis elata* (all Appendix II) and Red Cedar or *Cedrela odorata* (Appendix III).

In order to tackle trade in illegally logged timber, the EU has made several policy changes, which were outlined in the Forest Law Enforcement Governance and Trade (FLEGT) Action Plan of 2003. The EU Timber Regulation (EUTR) of 2010 is aimed at preventing illegally harvested timber entering the EU market. Under the EUTR, anyone who ‘first places’ timber or timber products on the EU market must implement a system of due diligence to ensure that illegally sourced timber is not introduced. Species listed in Annexes A, B or C of the EU Wildlife Trade Regulations (which implement CITES in the EU) for which valid permits have been issued are considered to meet EUTR requirements. Any operators who import CITES-listed timber into the EU will not be subject to any further due diligence obligations under the EUTR.

This paper analyses trade in five timber-producing taxa that are listed in the CITES Appendices:¹ Ramin or *Gonystylus* spp. (Appendix II), Rosewood or *Dalbergia* spp. (various species in Appendices I, II and III), Mahogany or *Swietenia macrophylla* (Appendix II), Afrormosia *Pericopsis elata* (Appendix II) and Red Cedar or *Cedrela odorata* (Appendix III). It provides an overview of the trade in these taxa during the last decade – both globally and into the EU – as well as a snapshot of illegal trade.

This paper was originally commissioned by Chatham House as a background paper to a workshop on 12–13 December 2013, which brought together consumer- and producer-country representatives to discuss the significance of CITES-listed timber within the context of the EUTR. Further information and a summary of discussions can be found on Chatham House’s Illegal Logging Portal (<http://www.illegal-logging.info/>). A related paper by Jade Saunders and Rosalind Reeve, ‘The EU Timber Regulation and CITES’, is also available on the Illegal Logging Portal.

¹ The products covered by the CITES listing are defined by annotations against each listing; see <http://www.cites.org/eng/app/appendices.php>.

Methods

Data sources

Data on trade are taken from the CITES trade database, the United Nations (UN) Commodity Trade Statistics Database (Comtrade), the Eurostat database and the International Tropical Timber Organization's (ITTO) *Annual Review and Assessment of the World Timber Situation*. Trading price data were obtained from the *ITTO Annual Review and Assessment of the World Timber Situation*, UN Comtrade and various sources in the published literature. In the trading price data from ITTO, export values are FOB² and import values are CIF.³

The CITES trade database includes details of all export and import permits and certificates issued for CITES-listed species. It currently holds over 11 million trade records; more than 850,000 records are reported annually. For this analysis, data were downloaded from the CITES trade database for the years 2002–11 (2011 being the most recent year for which a relatively complete dataset is available). The analysis focused on direct trade from the country of origin (i.e., the country of export in which the timber was harvested) to avoid double counting re-exported timber. Analyses of re-exports are provided where appropriate (i.e., when timber has been re-exported from the country into which it was originally imported – often, such timber will be processed into another commodity or into a finished product). Trade in artificially propagated specimens was excluded from the analysis unless otherwise stated. Trade in timber for personal or educational use, scientific specimens and circus displays was very low and thus excluded. Transactions in which the units were reported as 'shipment' or no unit was reported cannot be meaningfully assessed and were therefore excluded (with the exception of trade in carvings) unless otherwise stated. Legal trade was analysed separately from illegal trade.

CITES Parties are required to issue an export permit for all trade in the species listed in Appendices I and II of the Convention. An import permit is required for Appendix I-listed species only, although in practice, many countries – including EU member states – require an import permit for Appendix II-listed species as well. For Appendix III-listed species, an export permit is required for trade from a country that has listed its populations in the Convention. A certificate of origin is required for exports from any other country.

Following the establishment of the EU Single Market on 1 January 1993, customs formalities between member states were abolished. For this reason, the CITES trade database contains few records of trade between EU countries.

UN Comtrade provides access to international trade data compiled on the basis of customs declarations. Data are collected using standard names and codes that are included in the Harmonized Commodity Description and Coding System (HS).⁴ Because most customs data on the timber trade aggregate tropical timber species (including the species discussed in this paper),

²Free on board (which means that the buyer pays for the transportation of the goods and bears the cost of damage or loss during transportation).

³Cost including insurance and freight (which means that the seller pays the costs and freight to bring the goods to the port of destination and also pays the insurance).

⁴World Customs Organization (WCO), (2013): 'Nomenclature and classification of goods', <http://www.wcoomd.org/en/topics/nomenclature/instrument-and-tools.aspx>.

analysis at the species level is not possible. The exception is Mahogany: a six-digit HS code (440721) has been used for Mahogany sawn wood since 2007. Data reported in UN Comtrade under this code have been analysed for the period 2007–11. Data in trade in other forms of Mahogany (e.g., logs and plywood) are not generally collected by customs authorities.

The Eurostat⁵ database includes more detailed customs data recorded by EU member states. EU countries use the eight-digit Combined Nomenclature (CN) system to report their trade.⁶ The CN is based on the six-digit HS code and was most recently revised in Commission Implementing Regulation (EU) No 1001/2013. The CN codes for CITES-listed timber species covered in this paper are as follows: for Mahogany (*Swietenia* spp.) 44072110 (sanded; end-jointed, whether or not planed or sanded), 44072191 (planed) and 44072199 (other); and for Rosewood (*Dalbergia*) 44072920 (Palissandre de Para, Palissandre de Rio and Palissandre de Rose). Data reported using these specific codes were downloaded from the Eurostat database for the period 2007–12.

Data in the CITES trade database are reported in various units – mainly in m3 but also in kg, m2, shipments and no unit. Guidance⁷ to CITES Parties on how to report CITES trade includes explanations of the terms, units and so forth to be used. For example, the preferred unit for sawn wood and timber is m3, while trade in timber can also be reported in kg. UN Comtrade and Eurostat supply data on net weight (kg) and supplementary quantity (m3). In this analysis, where appropriate, data for Mahogany in kg have been converted to m3 using the average specific weight (0.6 g/cm3) for the species given in the CITES Identification Manual. This is to allow comparisons of data on most of the trade (reported in m3 and kg). Additional data reported in CITES in m2 or no unit are limited and generally have not been included in the analysis.

In the case of Mahogany, data on the intra-EU movement of goods for the period 2007–11 were derived from the Eurostat database.

The *ITTO Annual Review and Assessment of the World Timber Situation* provides data on the production of and trade in tropical forest products in ITTO member countries. Those data are derived from members' responses to the Joint Forest Sector Questionnaire (JQ) as well as from UN Comtrade, Eurostat and FAOSTAT.⁸ The ITTO annual review frequently offers a more detailed breakdown of trade than can be found in the Comtrade database. For this paper, data were extracted and analysed from all reports published during the period 2002–12. As regards illegal trade – which, by its very nature, is difficult to quantify – seizures data are an important, albeit unreliable, indicator. In this report, seizures data in the CITES trade database were analysed. The description of the relevant CITES source code (I) is 'Confiscated or seized specimens'. While most trade records are likely to refer to seized specimens, some records may refer to trade in or resale of seized specimens (e.g., for educational or commercial purposes).⁹ Besides CITES data, seizures included in EU member state biennial reports for 2009–10 and 2011–12 were analysed.

⁵ Eurostat is the statistical office of the EU whose aim is to provide the EU with statistics at the European level that enable comparisons between countries and regions.

⁶ European Commission (EC) (2013), 'The Combined Nomenclature', http://ec.europa.eu/taxation_customs/customs/customs_duties/tariff_aspects/combined_nomenclature/

⁷ See <http://www.cites.org/eng/notif/2011/E019A.pdf>.

⁸ FAOSTAT is a platform developed by the Statistics Division of the FAO that provides access to data on agriculture, food, fisheries and forestry; see <http://faostat.fao.org/>.

⁹ CITES Parties are requested to compile reports in accordance with most recent version of the Guidelines for the Preparation and Submission of CITES Annual Reports. However, information on seized or confiscated specimens is often lacking or insufficiently detailed. Parties are

In addition, information reported to the EU Trade in Wildlife Information eXchange (EU-TWIX) database was analysed where permitted. This is a restricted access database that centralizes data on wildlife trade seizures submitted by EU enforcement agencies (police, customs, environmental inspection services and CITES Management Authorities). Seizures reported in the TRAFFIC Bulletin and other resources, such as CITES listing proposals and ITTO market reports, were included in the analysis as well.

Trade overview

Ramin (*Gonystylus* spp.)

The genus *Gonystylus*, commonly known as Ramin, comprises more than 20 species found in Southeast Asia and elsewhere in the Pacific region. A number of species are traded, but *Gonystylus bancanus*, which grows in the peat swamps of Malaysia and Indonesia, is the main commercial source of Ramin.

Ramin was listed in CITES Appendix III by Indonesia in 2001. Four years later it was uplisted to Appendix II, which covers all parts and derivatives, with several exceptions (e.g. seeds, spores and pollen; and seedling or tissue cultures obtained in vitro). In parallel developments, the genus was listed in Annex C of the EU Wildlife Trade Regulations in 2001 and uplisted to Annex B in 2005.

Malaysia entered a CITES 'reservation' in 2001, which meant that country was not considered a CITES Party for trade in Ramin. When the genus was listed in CITES Appendix II in 2005, Malaysia entered another reservation but withdrew it later that year. The species has been the subject of various actions and suspensions by the EU Scientific Review Group (SRG) on wildlife trade, including both 'negative opinions' and 'positive opinions' on trade from Malaysia.

Products in trade

According to the CITES trade database, trade in Ramin comprises mainly sawn wood, timber and timber pieces reported in m³ and kg. Similarly, trade data submitted to ITTO is primarily for sawn wood and logs. At the same time, trade in carvings (no unit, kg and m³) is regularly reported.

The HS codes used by customs to report trade in Ramin are 4403 (logs), 4406 and 4407 (railway/tramway sleepers and sawn wood respectively) 4417 (tool handles and so forth) and 4420 (ornaments, cutlery and so forth). There are also codes for panels and frames, among other objects. All these codes are not specific to Ramin but apply to a range of tropical species.

Trading prices

Ramin is a valuable commodity. Malaysian export prices in 2011 were reported to average \$995/m³.¹⁰ Import prices reported by Japan and New Zealand averaged \$800–1,000/m³ in 2010–

encouraged to provide information on confiscations and seizures (Code I) in their reports; but few submit comprehensive seizures data, since this is not a requirement under the Convention. Thus relying on Code I information in the CITES trade database is not sufficient to provide a reliable account of recorded illegal trade.

¹⁰ ITTO, (2012): *Annual Review and Assessment of the World Timber Situation 2012* (Division of Economic Information and Market Intelligence, ITTO; Yokohama, Japan).

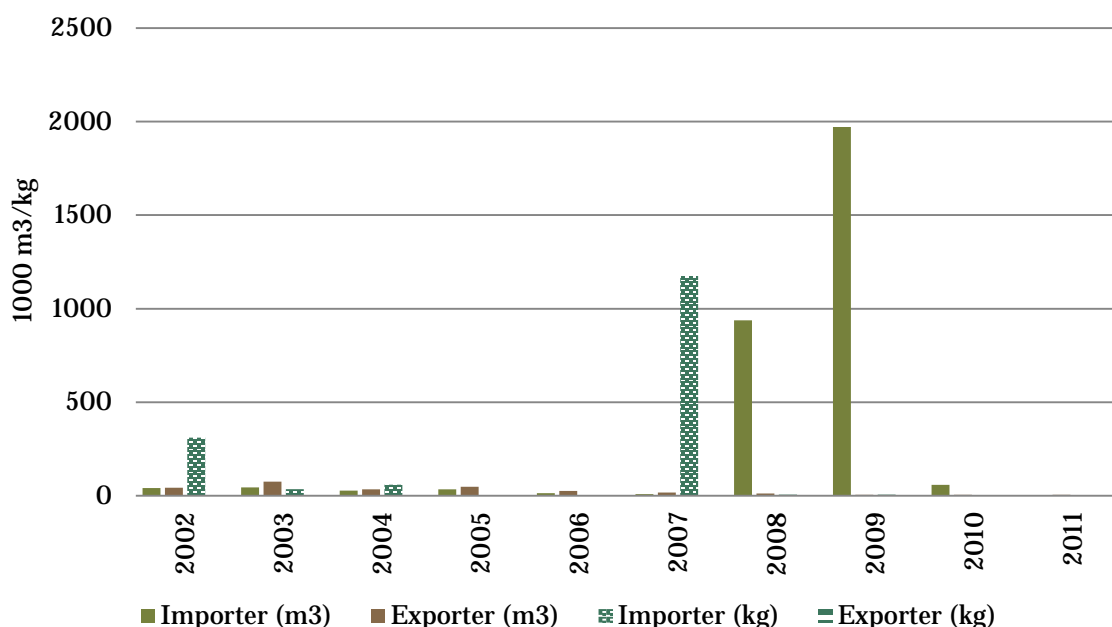
11.¹¹ New Zealand, which both imports and exports Ramin, reported re-export prices of just over \$2,000/m³ in 2010 – double the price of its imports of the genus that year.¹²

Global trade patterns

Trade data collected at the species/genus level are available for Ramin in the CITES trade database. However, species-level trade data are not available in UN Comtrade and Eurostat; in both of those databases, trade in Ramin is grouped with that in other tropical timber species. Some genus-level data have been submitted to ITTO, including by the main exporters of the species, Indonesia and Malaysia. However, since 2004 negligible export levels have been reported (rounded down to zero).

Direct global trade in Ramin totalled some 30,000–40,000 m³ annually during the period 2002–07. There was a sharp increase in trade in m³ in 2008–09 and in kg in 2007, according to data reported to CITES by importers (see Figure 1). Imports from Indonesia and Malaysia reported by the Netherlands accounted for much of that increase. Trade volumes were lower in 2011 than in any year during the period 2002–10 – around 3,000–5,000 m³. While most trade is in the species *Gonystylus bancanus*, some trade is reported at the genus level (*Gonystylus* spp.). Reported levels of trade in carvings (no unit) were high between 2002 and 2010 (up to 3 million in 2009) but declined dramatically in 2011 (634).

Figure 1: Direct trade in *Gonystylus* spp. as reported by importers and exporters, 2002–11



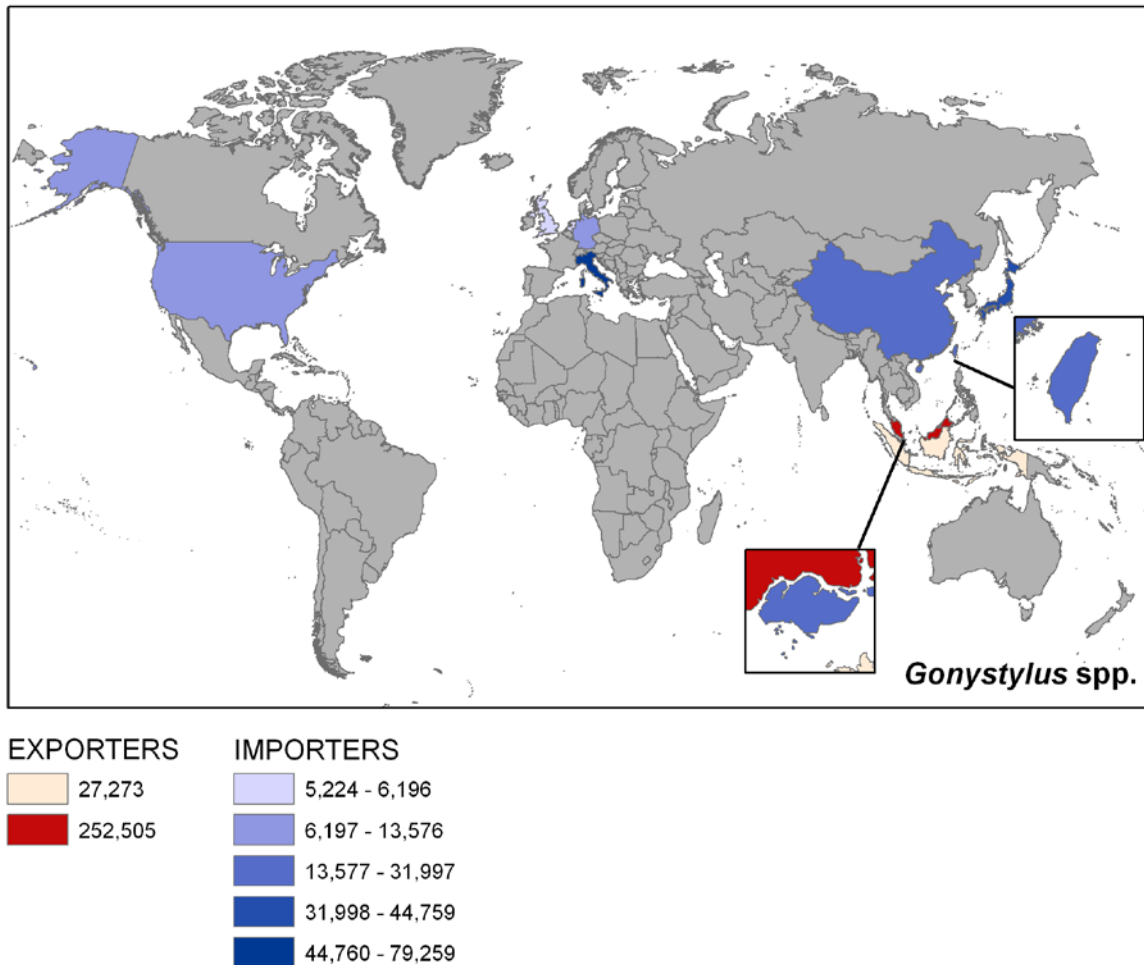
Source: CITES trade database.

¹¹ ITTO, (2011): *Annual Review and Assessment of the World Timber Situation 2011* and ITTO, (2012): *Annual Review and Assessment of the World Timber Situation 2012*

¹² Ibid.

Indonesia and Malaysia accounted for 82% and 17%, respectively, of the direct trade in the genus reported by importers (see Figure 2). Much lower levels of trade were also reported from the non-range states mainland China, Taiwan, India, Singapore, and Viet Nam.

Figure 2: The main exporters and importers of *Gonystylus* spp. (m3), 2002–11



Source: CITES trade database.

Both Indonesia and Malaysia have established export quotas for Ramin. Indonesia’s export quota in 2012–13 was 4,432 m3 for finished products, down from 5,087–8,880 m3 in previous years. Malaysia has set export quotas for the genus from Peninsular Malaysia and Sabah and for the species *G. bancanus* from Sarawak. The quotas for the former decreased from 23,000 m3 in 2006 to 10,000 m3 in 2013 and for the latter from 22,000 m3 in 2006 to 3,178 m3 in 2013.

According to exporter data for the period 2002–11, the main importers of timber reported in m3 were Italy, Japan and mainland China (Figure 2), while Switzerland, the United States and Malaysia were the biggest importers of timber reported in kg. However, exporter data (which appear less complete) show much lower volumes overall than do importer data. According to data reported to

CITES by importers, the Netherlands was the main importer of Ramin. It accounted for 92% and 69% of total direct imports during the period 2002–11 reported in m3 and kg, respectively.

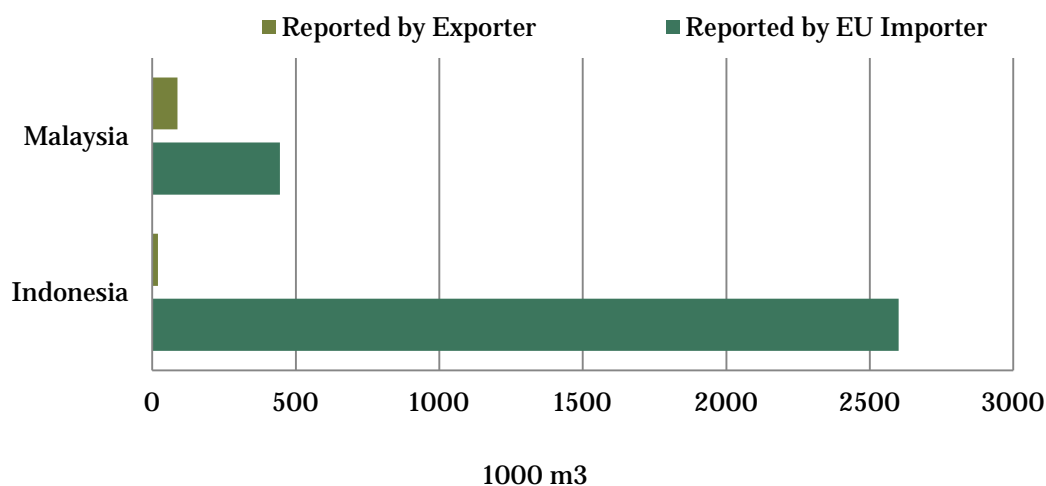
Also during this period, relatively high levels of re-exports of sawn wood and timber pieces were reported by mainland China, Germany, Italy and Singapore. Those re-exports originated in Indonesia, Malaysia and Singapore. In addition, high volumes of carvings were re-exported, primarily by India, the United Kingdom, Spain and Japan to the United States, France and Germany.

There are major discrepancies between trade in Ramin reported by importers and that reported by exporters, some of which may be explained by the lack of reporting by Malaysia during the period in which its CITES reservation was in place or the use of different terms and units by trading partners. However, it would appear that the main reason for such discrepancies during the period 2007–09 was that exporters reported much lower levels of trade than did their trading partners. For example, the Netherlands reported the import from Indonesia of 1,173,337 kg of sawn wood in 2007 and 927,984 m3 of sawn wood in 2008, but that trade was not reported by Indonesia.

Imports into EU member states

During the period 2002–11, the EU was a major importer of Ramin, although data reported by importers give it more relative importance than do data reported by exporters. Importer data suggest that the EU accounted for 97–100% of total direct global imports (3,045,556 m3, 1,592,620 kg and 238,895 timber pieces), while exporter data suggest it accounted for a much smaller proportion: 38% reported in m3 (107,661 m3), 0% reported in kg and 68% in timber pieces (1,468). But it should be noted that exporter data showed much lower volumes of trade overall and appeared less complete. Nonetheless, it seems that the two main exporters – Indonesia and Malaysia – did not report a significant proportion of their trade with the EU (see Figure 3).

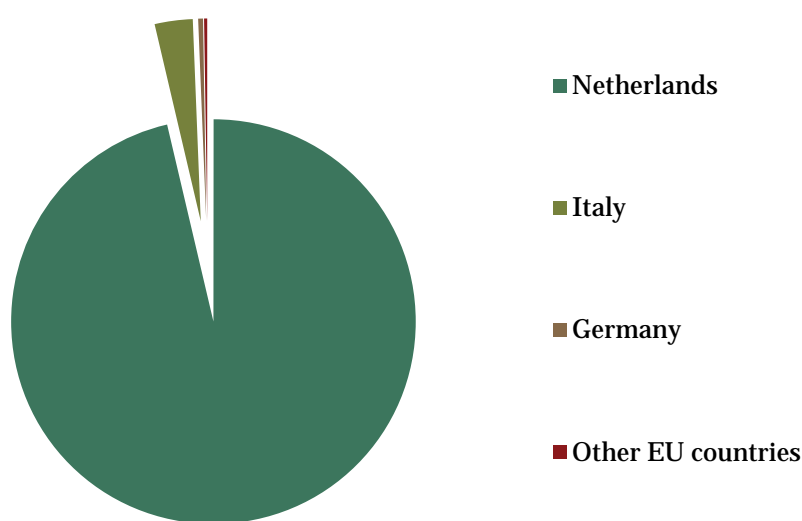
Figure 3: Direct imports of *Gonystylus* spp. to the EU as reported by the EU and its main trading partners, 2002–11



Source: CITES trade database.

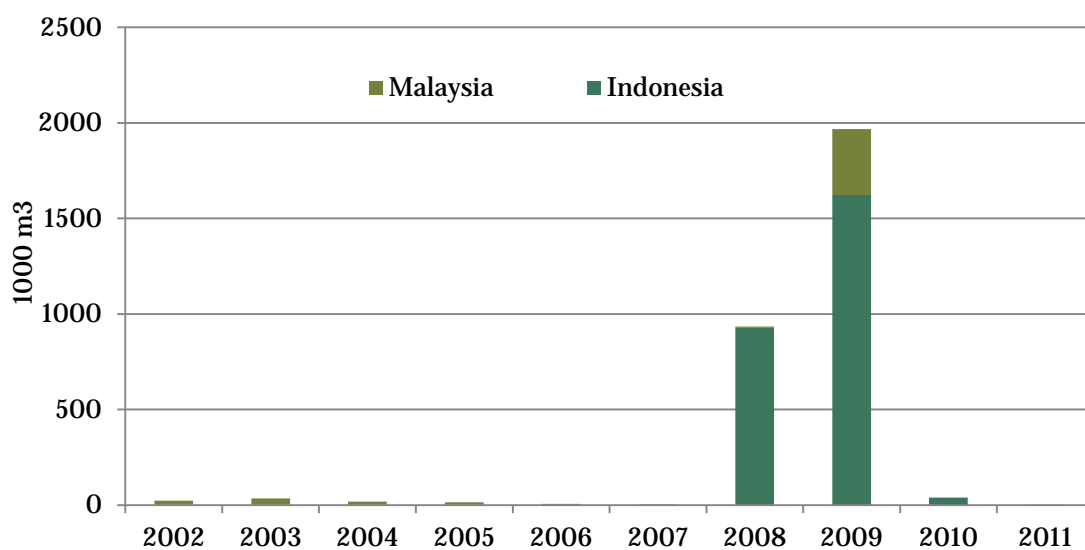
The main EU importer of Ramin during the period 2002–11 was The Netherlands (see Figure 4). EU imports reported in m3 were relatively high in 2008–09 but fell sharply in 2011 (Figure 5). In 2007 EU countries reported a high level of trade (1,173,350 kg). The same year the EU SRG issued ‘negative opinions’ (temporary trade suspensions) for Malaysia – specifically Peninsular Malaysia, Sabah and Sarawak. The negative opinions for Peninsular Malaysia and Sabah were lifted in late 2007 and that for Sarawak in 2009.

Figure 4: The main EU importers of *Gonystylus* spp. (m3), 2002–11



Source: CITES trade database.

Figure 5: Direct imports of *Gonystylus* spp. to the EU from Indonesia and Malaysia, 2002–11



Source: CITES trade database.

The EU also imported re-exports of Ramin, primarily from mainland China and Singapore.

It is likely that there is movement of Ramin between EU countries. While the Netherlands was the main importer of Ramin, the main re-exporters were Germany, Italy, Spain and the United Kingdom, suggesting intra-EU trade in this genus. The CITES trade database provides some data on trade with countries that joined the EU relatively recently. For example, Denmark and Italy reported low levels of re-exports to Cyprus and Malta as well as seven other EU countries between 2002 and 2007.

Illegal trade

Seizures of Ramin are recorded in the CITES trade database, CITES biennial reports, EU-TWIX and the TRAFFIC Bulletin.

Many seizures are of finished products such as carvings and bowls. For example, several hundreds of thousands of Ramin paint brushes and cosmetic brushes were seized in Germany in 2009; these had been imported from India and Japan over a number of years. It appeared that the companies involved were unaware of the EU requirement for import permits.¹³ The previous year, 39,998 wooden tassels from Taiwan were seized in the United Kingdom, according to the TRAFFIC Bulletin. The tassels had been imported without an export permit. Large numbers of seizures of carvings and timber pieces were reported in the CITES trade database during the period 2002–04; in more recent years (2009–11), there have been fewer such reports, and most were by the United Kingdom (see Table 1). In 2007, 281,355 dowels¹⁴ from Malaysia, packaged in 22 crates, were seized in the Netherlands en route to Belgium, according to data in EU-TWIX.

Table 1: Main trade in confiscated/seized *Gonystylus* spp., 2002–11

	2002	2003	2004	2007	2008	2009	2010
Carvings (no. unit)	154,577	50,337	613	22,113	17,447	75	1
Derivatives (no. unit)	-	-	-	-	-	4,251	-
Timber carvings (no. unit)	7,840,000	-	-	-	-	-	-
Timber pieces (kg)	-	-	34,510	-	-	-	-
Timber pieces (no. unit)	2,424,395	48,800	280,268	-	-	-	-

Source: CITES trade database.

In addition, illegal trade in sawn wood has been reported. For example, four of the eight seizures of Ramin reported in EU-TWIX for the period 2003–09 involved that commodity. Meanwhile, the smuggling of logs between Indonesia and Malaysia was reported in 2004 in the *TRAFFIC Bulletin*.

Further details on reported seizures and illegal trade are provided in Annex I.

¹³ Jelden, D., Müller-Boge, M. and Sterz, M. (2011). German Biennial Report, 2009-10 of the Federal Republic of Germany. Convention on International Trade of Endangered Species of Wild Fauna and Flora. <http://cites.org/sites/default/files/reports/09-10Germany.pdf>

¹⁴ Solid cylindrical wooden rods used for various purposes, including to make toys and as structural supports in furniture.

Rosewood (*Dalbergia* spp.)

The genus *Dalbergia* comprises 250 species of trees, shrubs and lianas¹⁵ that are commonly known as Rosewoods or Cocobolo. It is a widely distributed genus, native to the tropical regions of Southern Asia, Africa, Madagascar and Central and South America. Many Rosewood species are 'highly valued for a range of valuable inherent qualities including appearance, tone, physical, scent, chemical, medicinal or spiritual properties, and [are] rare or of limited availability. The combination of inherent qualities and rarity usually results in higher trading prices than other categories or types of wood'.¹⁶ There is trade in many species of Rosewood, but this analysis focuses on those species that have been listed in the CITES Appendices. One species is listed in CITES Appendix I; all species of *Dalbergia* in Madagascar and four other species are listed in Appendix II; and another species is listed in Appendix III. Those listings, along with information on range states and the products covered by the CITES listing (defined through a CITES 'annotation'), are included in Table 2.

Table 2: CITES listings for species in the genus *Dalbergia*

Taxon	Range states	CITES listing (entry into force)	Previous CITES listing (entry into force)	Products covered
<i>Dalbergia</i> spp. from Madagascar	Madagascar	II (2013)	III (2011) (applied to 5 species)	Logs, sawn wood and veneer sheets
<i>D. cochinchinensis</i>	Cambodia, Lao PDR, Thailand, Viet Nam	II (2013)		Logs, sawn wood and veneer sheets
<i>D. granadillo</i>	El Salvador, Mexico	II (2013)		Logs, sawn wood, veneer sheets and plywood
<i>D. retusa</i>	Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama; possibly Colombia and Belize	II (2013)	III Panama (2011) III Guatemala (2008)	Logs, sawn wood, veneer sheets and plywood
<i>D. stevensonii</i>	Belize, Guatemala and Mexico	II (2013)	III Guatemala (2008)	Logs, sawn wood, veneer sheets and plywood
<i>Dalbergia nigra</i>	Brazil	I (1992)		
<i>Dalbergia dariensis</i>	Columbia, Panama	III Panama (2011)		All parts and derivatives except seeds, pollen, finished products packaged and ready for retail trade

Note: CITES Appendix III listed species are protected in the named country alone
Source: CITES appendices

¹⁵ Mabberley, D. J. (2008), *Mabberley's Plant-book: A portable dictionary of plants, their classifications and uses*, 3rd ed. (University of Washington Botanic Gardens; Seattle), p. 1040.

¹⁶ Jenkins, A., Bridgland, N., Hembery, R., Malessa, U., Hewitt, J. and Hin Keong, C. (2012), 'Background Paper 1: Precious Woods: Exploitation of the Finest Timber', Chatham House Workshop: Tackling the Trade in Illegal Precious Woods, 23–24 April, <http://www.illegallogging.info/uploads/PreciousWoodsbackgroundpaper1ThetradeinpreciouswoodsTRAFFIC.pdf>

The *Dalbergia* species listed in CITES Appendices I, II and III are also listed in Annexes A, B and C, respectively, of the EU Wildlife Trade Regulations. Previous CITES listings were implemented through the EU Wildlife Trade Regulations. In addition, non-CITES-listed populations of *D. granadillo*, *D. retusa* and *D. stevensonii* were listed in Annex D¹⁷ between 2008 and 2013.

Products in trade

Rosewood species are harvested for their attractive, dense and durable wood and used for a wide range of high-end products, including luxury furniture, musical instruments, gun handles, billiard cues, jewellery boxes and boats¹⁸.

The primary trade is in logs/round wood and sawn wood. Finished items manufactured in the range states are also exported¹⁹.

The HS codes used by customs to report trade in *Dalbergia* are 4403 (logs), 4406 and 4407 (railway sleepers and sawn wood respectively), 4417 (tool handles and so forth), 4420 (ornaments, cutlery and so forth), and 9401 and 9403 (wooden furniture). Other codes are used for panels, frames and so forth. These codes are not specific to *Dalbergia* but include a range of other tropical species.

Trading prices

Rosewood timber is a highly sought-after and very valuable commodity (see Table 3). In Madagascar a 150-kg log was reported several years ago to have an approximate market value of \$1,300.²⁰ Chinese customs registered the total value of Rosewood imports from 2007 to 2012 at \$61 million; their value on the retail market was/would have been considerably higher.²¹

Table 3: Trading prices of CITES-listed *Dalbergia* species

D. cochinchinensis	\$3,900–6,000/m ³ or \$50,000/m ³ on various websites ²²
D. nigra	Average market value for instrument blanks: \$211,029/m ³ ²³
D. retusa	Average market value for instrument blanks: \$93,766/m ³ ; and for sawn wood: \$13,116/m ³ ²⁴
D. stevensonii	Average market value for instrument blanks: \$77,471/m ³ ; and \$11,004/ m ³ for sawn wood ²⁵

¹⁷ Annex D of the EU Wildlife Trade Regulations contains species for which imports to the EU warrant monitoring. Trade in species listed in Annex D require an import notification.

¹⁸ CITES (2013a), 'Consideration of Proposals for Amendment of Appendices I and II: Inclusion of the Genus *Dalbergia cochinchinensis* in CITES Appendix II (CoP16 Prop. 60)', http://www.cites.org/common/cop/16/prop/raw/CoP16-Prop-TH-Dalbergia_cochinchinensis.pdf; CITES (2013b), 'Consideration of Proposals for Amendment of Appendices I and II: Inclusion of the Genus *Dalbergia granadillo* and *D. retusa* in CITES Appendix II' (CoP16 Prop. 61), <http://www.cites.org/eng/cop/16/prop/E-CoP16-Prop-61.pdf>; CITES (2013c), 'Consideration of Proposals for Amendment of Appendices I and II: Inclusion of the Genus *Dalbergia stevensonii* in CITES Appendix II' (CoP16 Prop. 62), <http://www.cites.org/eng/cop/16/prop/E-CoP16-Prop-62.pdf>; Jenkins, et al. (2012), 'Background Paper 1: Precious Woods: Exploitation of the Finest Timber' and IUCN/TRAFFIC (2012), 'IUCN/TRAFFIC Analyses of the Proposals to Amend the CITES Appendices' (prepared by the IUCN Global Species Programme and TRAFFIC for the 16th Meeting of the Conference of the Parties to CITES).

¹⁹ CITES, (2013a); IUCN/TRAFFIC, (2012) and Jenkins, et al. (2012).

²⁰ Patel, E. R. (2010), 'Madagascar's logging crisis: Separating myth from fact', National Geographic, News Watch: http://newswatch.nationalgeographic.com/2010/05/20/madagascar_logging_crisis/

²¹ Lewis, S. (2012), 'Luxury Wood Trade to China Revealed', in The Cambodia Daily, 9 October, <http://www.cambodiadaily.com/news/cambodias-luxury-wood-trade-to-china-revealed-3613/>

²² UNEP-WCMC (2012), 'CITES Trade: Recent Trends in International Trade in Appendix II-listed species (1996-2010)', <http://www.cites.org/eng/com/sc/62/inf/E62i-07.pdf> and Environmental Investigation Agency (EIA) (2012), 'Appetite for Destruction: China's Trade in Illegal Timber', <http://www.eia-international.org/appetite-for-destruction-chinas-trade-in-illegal-timber>

²³ Jenkins, et al. (2012).

²⁴ Ibid.

²⁵ Ibid.

The price of the timber at the point of harvest tends to be low compared with the (very high) prices that are paid by end-users.²⁶ Furniture sellers reported in 2012 that prices for rosewood were increasing.²⁷

Most prices reported to ITTO (by ITTO members) are at the genus level; they tend to be variable and lower than many figures reported in the published literature. Import prices reported by Germany in 2007–08 averaged \$593/m³ and export prices \$1,038/m³.²⁸ Import prices reported by Slovenia in 2010–11 averaged \$1,500–2 000/m³ and export prices \$1,400–1,500/m³.²⁹ But owing to the lack of information at the species level, it is not possible to determine whether these prices are for the CITES-listed species.

Global trade patterns

Comprehensive data collected at the species and/or genus level are not available for *Dalbergia*. Some data can be found in the CITES trade database for Brazilian Rosewood (*D. nigra*), which has been listed in CITES Appendix I since 1992, and for *D. retusa* and *D. stevensonii*. There are also some data at the genus level in Eurostat. However, UN Comtrade provides no species-level trade data; rather, trade in Rosewoods is grouped with trade in other tropical timber species. Some genus- and species-level data have been submitted to ITTO; but since 2004, negligible volumes of exports of CITES-listed species have been reported (rounded down to zero). In future, more trade data should be available following the recent inclusion (in 2011 and 2013) of a number of Rosewood species in CITES Appendices II and III.

CITES Appendix I-listed species

According to the CITES trade database, a wide variety of terms and units are used to report trade in Brazilian Rosewood (*D. nigra*). They include carvings (kg, number of), sawn wood (kg, m³), logs (kg), timber (kg), timber pieces (number of) and veneer (kg, m², number of). The main trade (exports and re-exports) during the period 2002–11 comprised 14, 941 carvings, 11,967 kg of timber, 3,837 timber pieces and 67,859 m² of veneer.

The vast majority (96–100%) of Brazilian Rosewood in trade recorded in the CITES trade database was harvested before the CITES listing and is thus known as ‘pre-Convention specimens’. Trade in pre-Convention specimens has been reported throughout the period 2002–11, but in more recent years (from 2008 onwards) the level of trade has fallen (see Figure 6). Article VII of CITES states: ‘Where a Management Authority of the State of export or re-export is satisfied that a specimen was acquired before the provisions of the present Convention applied to that specimen, the provisions of Articles III, IV and V shall not apply to that specimen where the Management Authority issues a certificate to that effect.’³⁰ This means that the provisions for the regulation of trade in Appendix I-listed species (included in Article III of CITES) do not apply for the bulk of the reported trade in Brazilian Rosewood. However, the EU has not adopted this derogation (see the sub-section on EU imports below).

²⁶ Ibid.

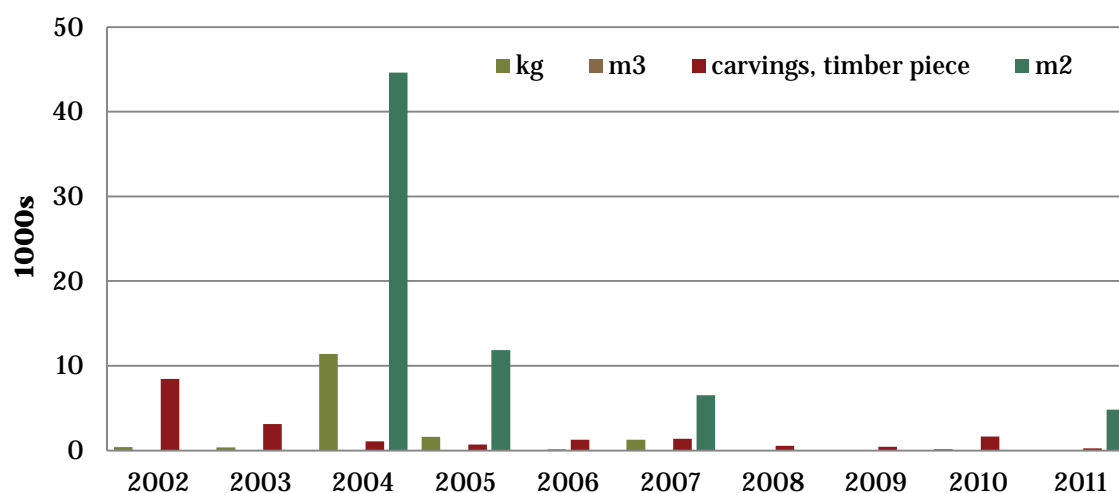
²⁷ IUCN/TRAFFIC, (2012)

²⁸ ITTO, (2008): Annual Review and Assessment of the World Timber Situation 2008 and ITTO, (2008): Annual Review and Assessment of the World Timber Situation 2008.

²⁹ ITTO, (2011) and ITTO (2012).

³⁰ See <http://www.cites.org/eng/disc/text.php#VII>.

Figure 6: Main trade (exports and re-exports) in ‘pre-Convention’ *D. nigra*, 2002–11



Source: CITES trade database.

The CITES Appendix I listing of this species means that commercial trade in wild-taken specimens is prohibited.³¹ However, there has been commercial trade in wild-source (or unknown-source) wood since the listing (see Table 4). This includes the export of 384 carvings from the United Kingdom to Japan in 2006 and the export from Brazil to the United States of 20 kg of sawn wood in 2007.

As the only range state, Brazil was the main direct exporter between 2002 and 2011. However, most of the trade in Brazilian Rosewood was re-exports from third countries (see Figure 7). According to exporters, the main importing countries were Egypt, Iran, Malaysia, Japan and the United States; according to importers, they were Japan, the United States, Canada and Spain.

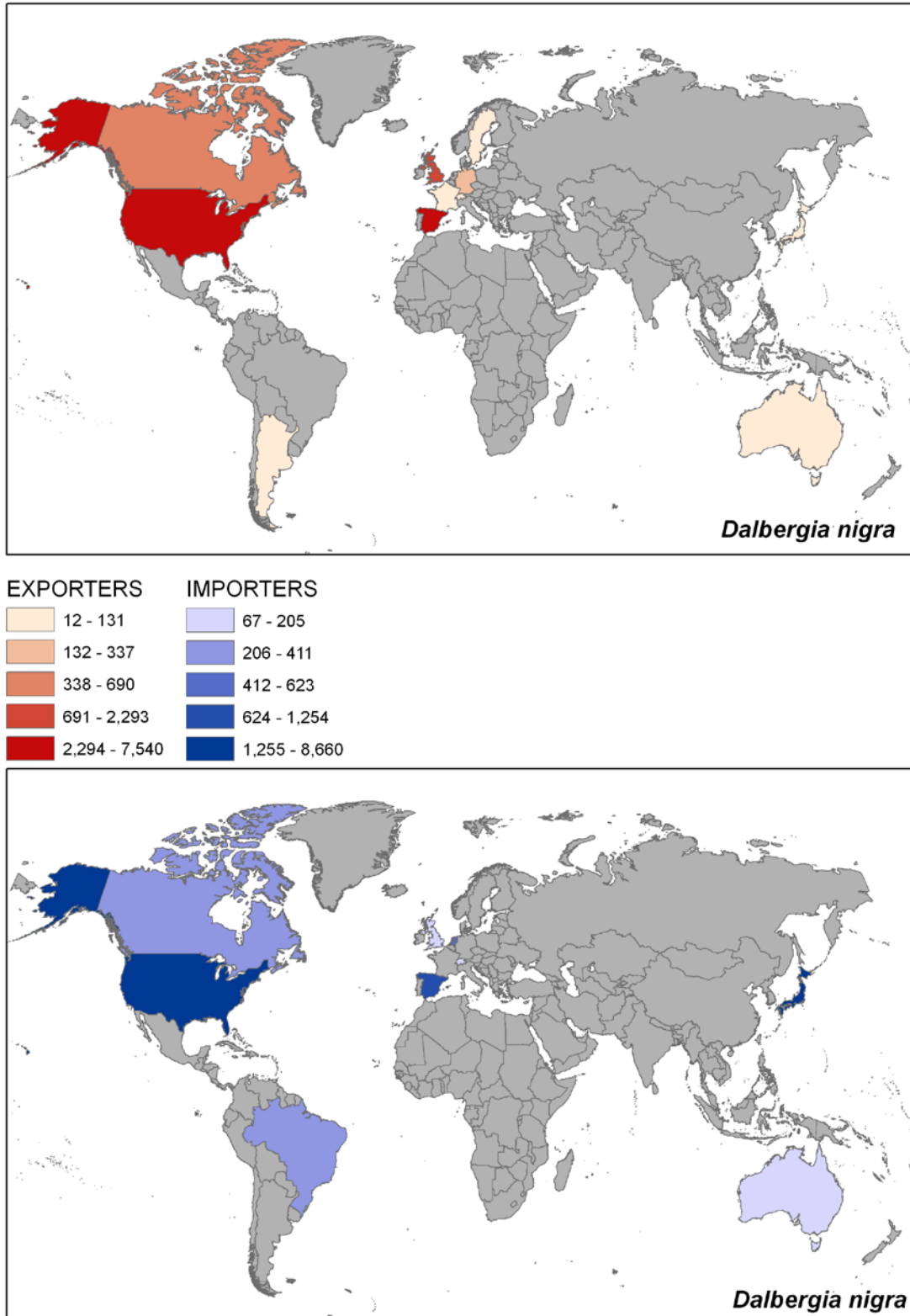
³¹ A limited number of derogations are outlined in Article VII of the CITES Convention see <http://www.cites.org/eng/disc/text.php#VII>.

Table 4: Reported commercial trade in wild- or unknown-source specimens of *D. nigra*, 2002–11

Exporter	Importer	Product (unit)	Year	Reported by exporter	Reported by importer
UK	Japan	Carvings (kg)	2011	2	2
	Japan	Carvings	2006	384	384
	US	Carvings	2002	1	-
South Africa	US	Derivatives	2011	4	-
Japan	US	Carvings	2010	4	-
Denmark	Japan	Carvings	2002	2	-
Germany	China	Carvings	2002	1	-
	Japan	Carvings (kg)	2006	-	0.72
	Japan	Carvings	2003	1	-
Italy	US	Timber	2005	1	-
Canada	US	Carvings	2003	1	-
Unknown	Switzerland	Logs (m3)	2011	-	2
US	Canada	Carvings	2003	-	3
	Canada	Carvings	2004	-	2
	Canada	Carvings	2008	-	1
	Canada	Timber pieces	2004	-	1
	Denmark	Carvings	2003	-	1
	Italy	Carvings	2003	-	10
	Italy	Carvings	2005	-	1
	Singapore	Carvings	2003	-	5
	Switzerland	Carvings	2008	-	4
	UK	Carvings	2002	-	5
Spain	Switzerland	Carvings	2005	-	2
	Switzerland	Carvings	2006	-	5
Brazil	US	Sawn wood (kg)	2007	-	20

Note: Where units are not specified, these are individual pieces (i.e. no unit was recorded in the database)
Source: CITES trade database.

Figure 7: The main (re-)exporters and importers of *D. nigra* carvings, 2002–11



Source: CITES trade database.

Species listed in CITES Appendices II and III

Forty-eight species of *Dalbergia* from Madagascar³² are listed in CITES Appendix II, along with four other species: *D. granadillo*, *D. retusa* and *D. stevensonii* from Central America and *D. cochinchinensis* from Southeast Asia. The Panamanian population of *D. darienensis* is listed in Appendix III (see Table 2).

Five *Dalbergia* species from Madagascar were listed in CITES Appendix III in and all Malagasy species in Appendix II in 2013. As these are very recent listings, the CITES trade database contains no records of trade in these taxa. According to IUCN and TRAFFIC³³ exports of rosewood from Madagascar appeared to have increased since 2007 as a result of high demand. They were reported to total almost 14,000 tonnes (t) in 2008 and more than 36,000 t in 2009, compared with almost no trade during the period 2002–06³⁴; however, the 2007–08 trade figures are mainly for Rosewood seized by the state and sold by auction to a single buyer. The vast majority (95%) of exports were reported to be to mainland China and the remainder to the United States or Europe.³⁵ From 13 August 2013 to 13 February 2014 Madagascar had a zero export quota in place for all species of *Dalbergia*.

The most valuable species are believed to include *D. abrahamii*, *D. bathiei*, *D. baronii*, *D. davidii*, *D. greveana*, *D. louvelii*, *D. maritima*, *D. mollis*, *D. monticola*, *D. normandii*, *D. purpurascens*, *D. trichocarpa*, *D. tsiandalana*, *D. viguieri* and *D. xerophila*.

D. cochinchinensis occurs in Cambodia, Lao PDR, Thailand and Viet Nam. It was listed in CITES Appendix II in 2013. Because the listing is very recent, the CITES trade database does not yet contain any records of trade. Few trade data at the species level are available, and illegal trade appears to be a major problem.³⁶ A 2012 Environmental Investigation Agency (EIA) report (cited in IUCN/TRAFFIC, 2012) identified a company based in Haiphong (Viet Nam) that was offering up to 50,000 m³ of *D. cochinchinensis* and *D. oliveri* for export. About 70% of Viet Nam's 450 export companies are reported to specialize in exports of indoor furniture made of *D. cochinchinensis* (and other valuable timber species) mainly to Asian destinations such as mainland China, Hong Kong, Taiwan and Singapore³⁷.

D. retusa grows in Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama and possibly in Belize and Colombia as well. There is little information available about international trade in the species.³⁸ According to CITES,³⁹ the wood is exported directly from range states and re-exported as timber or small high value products (e.g., pen blanks and gun handles). A very low level of trade has been reported in the CITES trade database: Spain and the United States reported the import of a total of 24 m³ of sawn wood from Guatemala in 2008, while Guatemala reported the export of 18 m³ of sawn wood to Hong Kong in 2011. At the same time, re-exports were reported –

³² See Annex 1 of the document at <http://www.cites.org/eng/cop/16/prop/E-CoP16-Prop-63.pdf>

³³ IUCN/TRAFFIC, (2012).

³⁴ Ibid.

³⁵ Ibid.

³⁶ CITES, (2013a) and IUCN/TRAFFIC, (2012).

³⁷ Department for International Development (DFID), (2010), 'Forest Governance, Markets and Trade: Implications for Sustainability and Livelihoods. Timber Markets and Trade Between Laos and Vietnam: A Commodity Chain Analysis of Vietnamese Driven Timber Flows' http://www.forest-trends.org/documents/files/doc_2365.pdf.

³⁸ CITES, (2013b) and IUCN/TRAFFIC, (2012).

³⁹ CITES, (2013b).

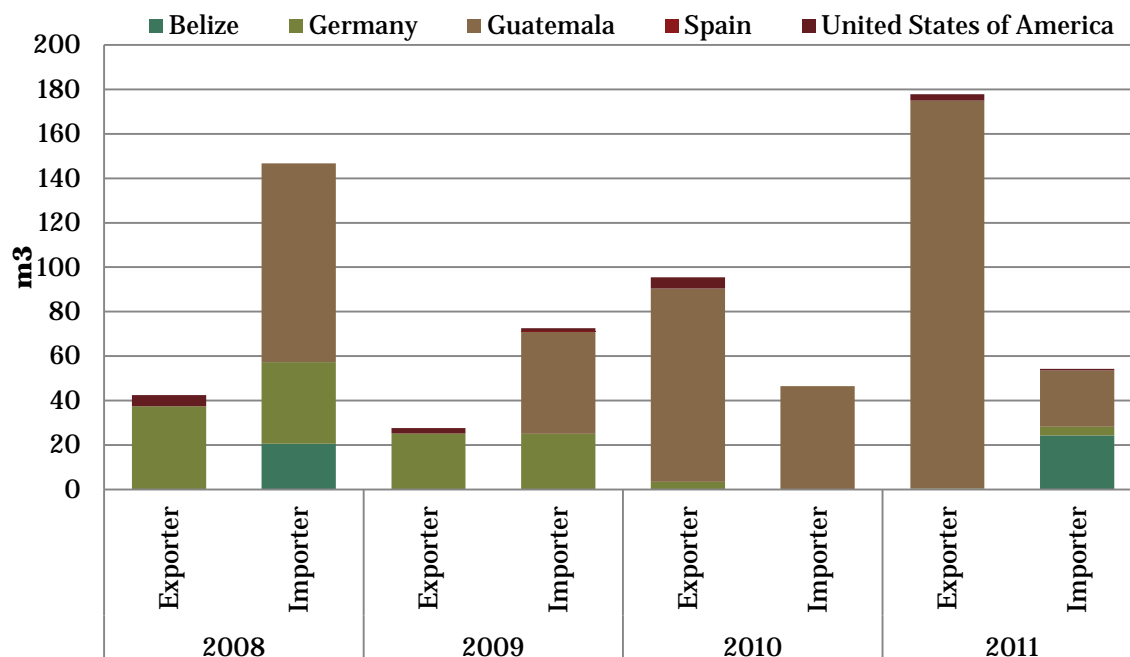
notably, the 2010 import, reported by Germany, of 824 kg of sawn wood that was first imported into the United States from Mexico.

D. granadillo has been listed in the CITES Appendices because it is considered indistinguishable from *D. retusa*. However, no separate trade data for this species are available.

D. stevensonii occurs in Belize, Guatemala and Mexico. It is highly sought after but of limited availability.⁴⁰ Timber on the international market is often reported to be from Belize.⁴¹ According to the CITES trade database, during the period 2008–11 exporters reported direct exports of *D. stevensonii* totalling 261 m3 of sawn wood and importers 252 m3. During the same period re-exports of the species were reported – particularly sawn wood (kg and m3) that originated in Guatemala and was exported by Germany to Japan, the United States and Turkey. In total, 30,632 kg and 68 m3 of sawn wood were reported by the re-exporters and 40,173 kg and 82 m3 by re-importers.

The main range states exporting the species were Guatemala and Belize (see Figure 8) and the main importers were Germany and the United States.

Figure 8: Exports and re-exports of *D. stevensonii* as reported by exporters and importers, 2008–11



Source: CITES trade database.

⁴⁰ CITES, (2013c).

⁴¹ Jenkins, et al. (2012).

It was reported that between January 1999 and January 2012, a total of 10,892,972 board feet (bf) or 25,705 m³ of timber identified as 'Rosewood' was exported from Belize; most of that wood was thought to be *D. stevensonii*.⁴² Another 583,909 bf (1,378 m³) were exported from Belize between February 2012 and July 2012.⁴³

D. darienensis is categorized by Jenkins et al.⁴⁴ as a potential 'precious wood species' for which further research on its usage price/value and conservation status is needed. No trade data are available in the CITES trade database for the species. Overall, data on reported legal trade indicate fairly low levels of direct trade in CITES Appendix II-listed *Dalbergia* spp. and some re-exports. However, some trade is not reflected in the data because it involved finished products that were not covered by the Appendix III annotations in use before 2013 (e.g., *D. retusa* – see CoP16 Doc. 69 [Rev. 1]). In other cases, there may be differences in how countries report Appendix III trade – particularly as the listing applies only to some populations of the species. Hence, it is apparent that for many species, no reliable trade data collection mechanism exists; for this reason, the real scale of the trade is unknown. The 2013 CITES Appendix II listings should improve data collection for these species.

Despite the lack of consistent trade data, global demand for *Dalbergia* appears to be increasing. For example, Chinese customs data suggest demand for Rosewood (genus/species not specified) increased from 66,000 m³ in 2005 to 565,000 m³ in 2011.⁴⁵ Similarly, exports from Madagascar appear to have increased, as discussed above.

Imports into EU member states

According to the CITES trade database, most of the *Dalbergia* imported into the EU during the period 2002–11 was re-exported from third countries. If direct exports and re-exports via third countries are combined, the EU accounted for 26–50% of global trade reported in m³, around 10% of carvings and timber pieces, 1–2% of global trade reported in kg and almost none of trade reported in m², according to exporter and importer data, respectively.

EU imports of the Appendix I-listed Brazilian Rosewood have been reported (see Table 5). These were primarily pre-Convention specimens imported by Spain from the United States (see Figure 9). However, imports of wild-source specimens from the United States were reported in 2002, 2003 and 2005 by the United Kingdom, Italy and Denmark, while re-exports of wild-source specimens from the EU were reported in 2002, 2003, 2005, 2006 and 2011 (see Table 4). Neither pre-Convention nor wild source specimens of Appendix I-listed species should be imported into the EU for commercial purposes unless they fall under the narrow exemptions provided by Council Regulation (EC) No. 338/97.

⁴² CITES, (2013c).

⁴³ CITES, (2013c) citing the Belize Forest Department.

⁴⁴ Jenkins, et al. (2012).

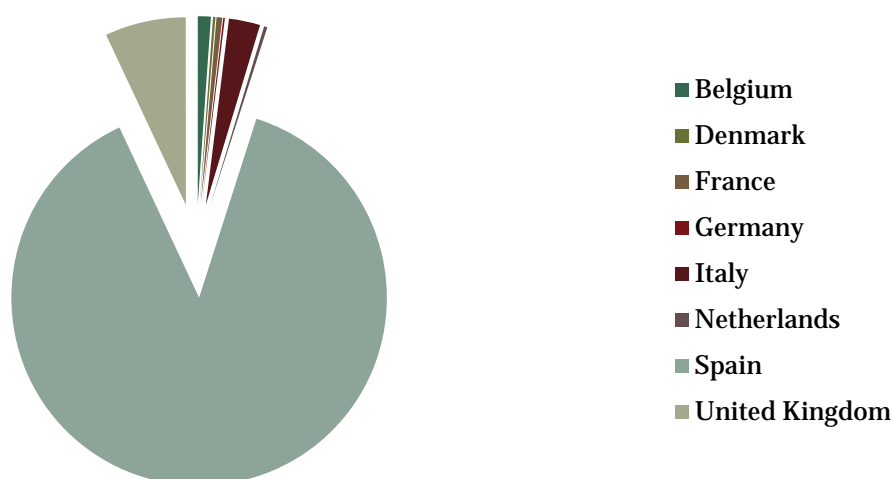
⁴⁵ EIA, (2012).

Table 5: Imports of Appendix I-listed *D. nigra* to the EU, 2002–11, according to importer data

Source	Unit	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Pre-Convention	kg	-	-	1	-	-	20	-	-	-	-
	m3	-	-	-	-	3	0.19	0.1	-	0.1	-
	-	1249	2	2	3	28	31	8	16	24	11
Unknown	-	-	2	-	8	-	11	4	-	1	1
Wild	-	5	11	-	1	-	-	-	-	-	-

Source: CITES trade database.

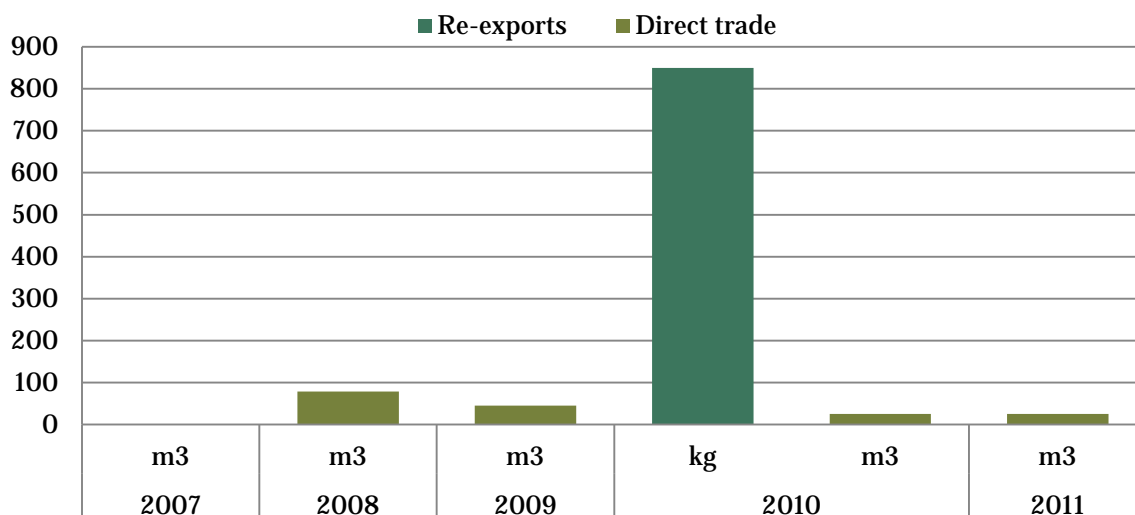
Figure 9: EU importers of *D. nigra* carvings and timber pieces, 2002–11, according to importer data



Source: CITES trade database.

According to the CITES trade database, during the period 2002–11 trade in Appendices II- and III-listed *Dalbergia* species reported by the EU was at a low level (see Figure 10). Guatemala, Belize and the United States were the main exporters and Germany the main importer.

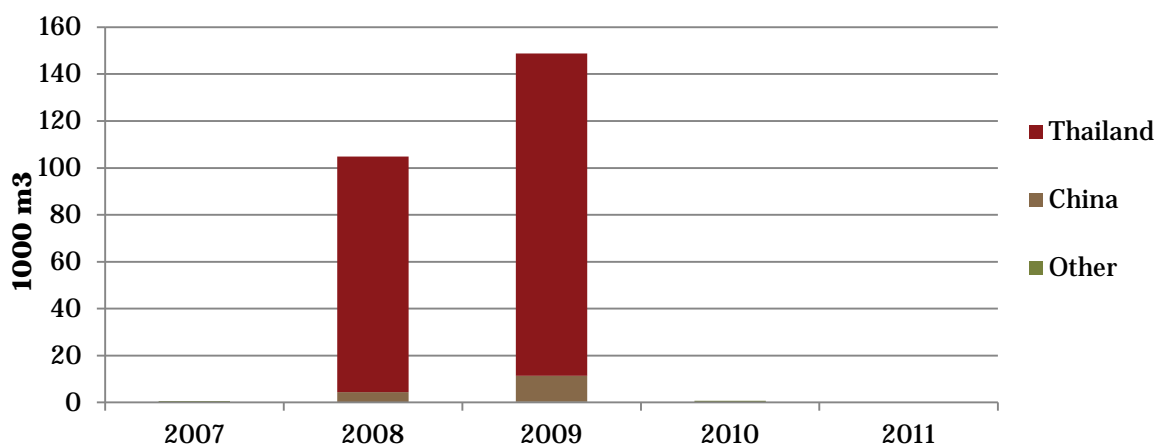
Figure 10: Imports of Appendices II- and III-listed *Dalbergia* spp. reported by EU countries, 2002–11



Source: CITES trade database.

Eurostat provides customs data on EU imports of Rosewood under the heading ‘Palissandre de Rio, Palissandre de Para and Palissandre de Rose’. Those imports totalled 255,078 m3 for the period 2007-2011 (see Figure 11) and their combined value was EUR 4,238,584. The main exporters were Thailand and mainland China, which accounted for 93% (237,874 m3) and 6% (15,231 m3) of trade, respectively.

Figure 11: Exporters of *Dalbergia to the EU, 2007–11**



* Under the heading ‘Palissandre de Rio, Palissandre de Para and Palissandre de Rose’ in Eurostat.
Source: Eurostat.

EU countries – in particular, Germany, Spain and the United Kingdom – re-exported relatively high volumes of *D. nigra* (pre-Convention timber) and *D. stevensonii* (wild-source timber).

Illegal trade

Extensive illegal trade in Rosewoods has been reported, raising concerns that it has accelerated in recent years.⁴⁶ Speculation that the wood may soon be unavailable has led to extremely high prices, which are driving illegal trade.⁴⁷ Organized smuggling and transnational illegal-logging rings have been reported in a number of countries, including Madagascar, Lao PDR, Guatemala and Brazil. Large numbers of seizures of illegally logged timber have been reported in Madagascar (see Annex 1).

Concerns have also been raised about mainland Chinese imports of timber referred to as 'Rosewood' from range states, including those that have an export moratorium in place.⁴⁸ Jenkins et al.⁴⁹ questioned whether the recent escalation in illegal rosewood extraction from Central America may be due to Madagascar's clamping down on the illegal rosewood trade from 2010 onwards, which has cut off supplies for the Chinese market.

Seizures reported include 469 guitars without import permits seized in Germany in 2009; veneer seized in The Netherlands in 2009/10; three shipping containers, each holding 58.28 m³ of *Dalbergia*, seized in Guatemala in 2011; and 178,609 pieces of wood seized in Thailand during the period 2006–12 in some 3,000 illegal logging cases.⁵⁰ Viet Nam reported 74 cases of illegal logging of Rosewood in 2010⁵¹ and exported 123,000 m³ of illegally harvested Rosewood logs (Vietnamese *Dalbergia* species) to mainland China in 2011.

Most of the illegal trade in Rosewoods is reported at the genus level. There is little information available on the illegal trade in *D. stevensonii*; however, widespread illegal logging has been reported in the range states.⁵² Illegal trade in *D. cochinchinensis* appears to be increasing⁵³, as does illegal trade in *D. retusa*.⁵⁴

Some species-specific data are available for CITES Appendix I-listed *D. nigra*. Seizures of this species reported in the CITES trade database for the period 2002–11 comprised 118 carvings and 447.6 kg of carvings, two timber pieces and 310 cm² of veneer. The bulk (446 kg of carvings, 310 cm² of veneer and 117 carvings) were imported to the United States, where they were seized. Four small seizures of *D. nigra* were reported in EU-TWIX. In 2007 illegal exports of at least 13 t of *D. nigra* from Brazil mainly to the United States over a four-year period were reported in the *TRAFFIC Bulletin*.

Further details on reported seizures are provided in Annex I .

⁴⁶ Jenkins, et al. (2012).

⁴⁷ CITES, (2013a)

⁴⁸ CITES, (2013b)

⁴⁹ Jenkins, et al. (2012).

⁵⁰ CITES, (2013a)

⁵¹ Ibid.

⁵² CITES, (2013c).

⁵³ IUCN/TRAFFIC, (2012).

⁵⁴ CITES, (2013b).

Mahogany (*Swietenia macrophylla*)

Big-leaf Mahogany (*Swietenia macrophylla*) – hereafter referred to as Mahogany – is a large deciduous tree endemic to the Neotropics. Its natural range extends from southern Mexico through southern Central America into South America, including Venezuela, Peru, Bolivia and Brazil. However, it has been planted extensively both within and outside its natural range⁵⁵. Population declines in its natural range have been reported, and unsustainable exploitation is now a key threat.⁵⁶ In 1998 the species was assessed as globally Vulnerable in the Red List of the International Union for Conservation of Nature⁵⁷, although this assessment needs updating.

Mahogany was first listed in CITES Appendix III in 1995 by Costa Rica. In 1998 it was listed in Appendix III by Bolivia, Brazil and Mexico and in 2001 by Peru and Colombia. Two years later it was uplisted to CITES Appendix II; this listing applied to logs, sawn wood, veneer sheets and plywood from populations of the Neotropics. In parallel developments, the species was listed in Annex C of the EU Wildlife Trade Regulations in 1997 and uplisted to Annex B in 2003. Mahogany has been the subject of numerous discussions in the CITES arena⁵⁸ and among EU CITES authorities. Following its inclusion in the CITES Review of Significant Trade⁵⁹, there were detailed debates (in 2011) on trade in the species from Bolivia, Belize, Colombia, Ecuador, Honduras, Nicaragua and Venezuela.

Products in trade

According to the CITES trade database, the vast majority of the Mahogany trade is in sawn wood, timber and veneer, mostly reported in m³, m², ft² and kg. The same source also reports very low levels of trade in carvings, derivatives, logs and plywood. Trade reported to ITTO was primarily in sawn wood, logs, veneer and plywood.

The HS codes used by customs to report trade in Mahogany includes one for sawn wood that is specific to Mahogany: 440721. EU customs authorities also collect data on planed, sanded and other forms of sawn wood. Other codes used by customs to report trade in Mahogany: 4403 (logs), veneer (4408), plywood (4412) and 4420, 9401 and 9403 for ornaments, furniture and so forth, however, these codes are not specific to Mahogany and include a range of other tropical species.

Trading prices

The species is very valuable and highly sought after. Available trading price data appear to be calculated in various ways and are thus variable. According to UN Comtrade, the total value of exports of Mahogany from range states during the period 2007–11 was \$75,785,101. UNEP-WCMC⁶⁰ estimated that global trade in Mahogany was worth \$168 million during the period 2006–10. The total value of third-country imports to the EU between 2007 and 2011 was EUR 24,409,672, of which EUR 7,998,718 was accounted for by range states, according to Eurostat. Trading price data for Mahogany reported to ITTO are summarized in Annex III : those prices vary from a few hundred dollars per m³ to tens of thousands of dollars per m³.

⁵⁵ UNEP-WCMC, (2012).

⁵⁶ Ibid.

⁵⁷ CITES, (2013c).

⁵⁸ For a summary of CITES actions, see <http://www.cites.org/eng/prog/mwg.php>.

⁵⁹ 'The review of the biological, trade and other relevant information on Appendix-II species subject to levels of trade that are significant in relation to the population of the species, in order to identify problems concerning the implementation of Article IV, paragraphs 2 (a), 3 and 6 (a) of the Convention, and possible solutions.' See <http://cites.org/eng/node/12378#r>

⁶⁰ UNEP-WCMC, (2012).

Jenkins et al.⁶¹ categorized Mahogany as a ‘non-precious wood (commodity)’ species, although certain grades are considered ‘semi-precious’ or even ‘precious’ and can command \$4,132/m³ (sawn wood). Semi-precious grades used as tonewood (instrument blanks) could be worth as much as \$42,067/m³.⁶² In Peru the wood can initially fetch just \$70/m³ but its value gradually increases through the supply chain to its final use as an instrument blank, where its value is up to \$40,000/m³.⁶³

Global trade patterns

There is a relatively large amount of information about international trade in Mahogany compared with that available for the other species reviewed in this paper. The CITES trade database contains species-level data collected routinely for more than a decade. Since 2007 species-specific HS customs codes have been in use for Mahogany, which has allowed UN Comtrade, Eurostat and ITTO to collect species-level trade data. Almost all countries report net weight to customs and, in some cases, the supplementary quantity as well. In the case of Mahogany, the supplementary quantity is m³.

Four datasets on global trade in Mahogany are analysed in this paper: CITES exporter and importer data (both reported in various units, including m³ and kg, and available for the years 2002–11); and UN Comtrade export data reported in kg and m³ for the years 2007–11; Customs data reported by importers are excluded owing to the errors identified (see the sub-section on EU imports below).

According to exporter data in the CITES trade database, direct trade in Mahogany from range states during the period 2002–11 totalled 419,508 m³ and 2,000 m². CITES importers reported a total of 374,658 m³, 18,277 m² and 65,680 kg during the same period.

According to UN Comtrade total direct trade from range states⁶⁴ during the period 2007–11 was between 71,000 m³ and 154,789 m³, depending on the dataset used (see Figure 12). Trade reported in m³ in UN Comtrade was higher than any of the other datasets for the period 2007–2011 and is likely to be more complete than trade in kg reported by Customs. After adjustments made to take into account data gaps, direct trade in Mahogany from range states for the period 2007–11 as reported by customs totalled 185,054 m³.⁶⁵

There are a number of differences in how trade is reported in the CITES trade database and how it is reported in UN Comtrade and Eurostat. For example, customs data do not include information on whether the trees are wild sourced or artificially propagated, nor do they specify the purpose of the trade. CITES data, on the other hand, do provide such information. Furthermore, there are differences in how the country of origin is reported:⁶⁶ certain transactions may be excluded from

⁶¹ Jenkins, et al. (2012).

⁶² Ibid.

⁶³ Ibid.

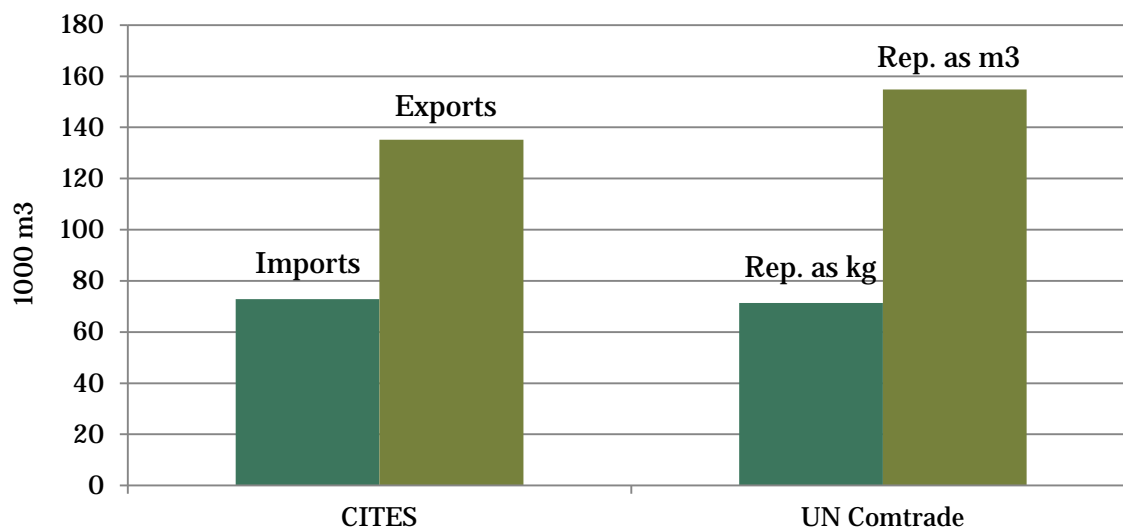
⁶⁴ Exports from range states only were included to allow a meaningful comparison of the data. Thus exports from non-CITES populations (e.g., plantation timber from Fiji) were excluded.

⁶⁵ In cases where an m³ value is not provided by a reporting or partner country (see Footnote 66 for a definition of ‘partner country’) the kg equivalent can be used as a proxy and converted to m³. Of the total 185,054 m³, 154,789 m³ was reported in m³ and 30,265 m³ in kg converted to m³ to take into account reporting gaps.

⁶⁶ In UN Comtrade, in the case of imports, almost every country reports the country of origin as ‘partner country’. It determines the country of origin in accordance with the rules of origin established by each country. Hence, the term ‘partner country’ in the case of imports does not necessarily imply any direct trading relationship; see <http://comtrade.un.org/db/help/uReadMeFirst.aspx>.

customs data and others from CITES data. Factors such as these may account for some of the above-noted discrepancies.

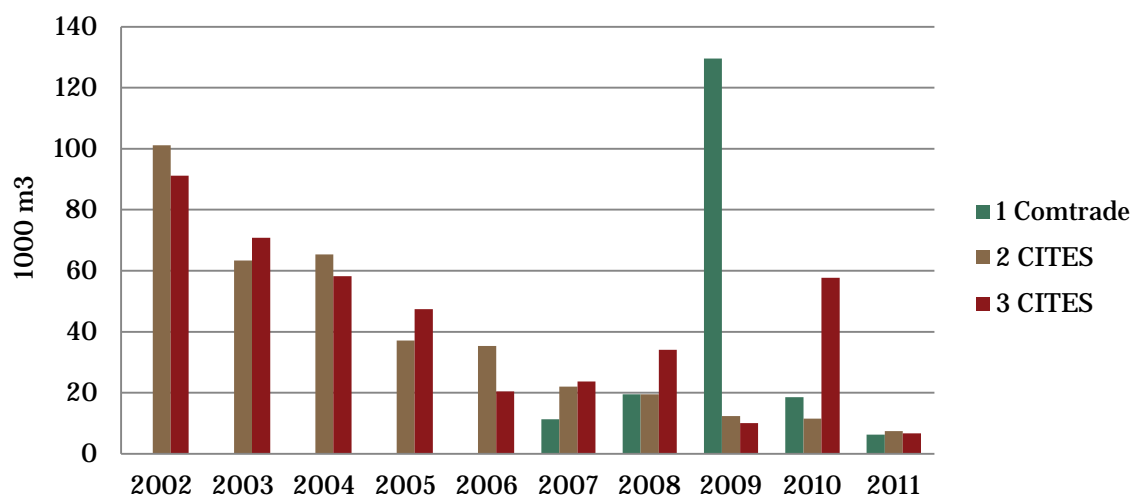
Figure 12: Direct trade in *S. macrophylla* from range states according to various datasets,* 2007–11



* Those datasets are: CITES importer and exporter data; exporter data reported to UN Comtrade in kg and in m3.
 Note: Where appropriate, data reported in kg have been converted into m3.
 Sources: CITES trade database and UN Comtrade.

Global trade in Mahogany appears to have gradually decreased during the period 2002–11, although a spike in trade in 2010 is evident from CITES data (see Figure 13) and can be accounted for, above all, by exports from Bolivia to the United States. It should be noted that Bolivia did not submit a CITES annual report in 2008 or 2009; therefore, exporter data for this country are likely to be artificially low for those two years. The large spike in trade in 2009 evident from customs data can most likely be accounted for by exports from Peru to the United States.

Figure 13: Direct trade in *S. macrophylla* from range states reported in three ways*, 2002–11

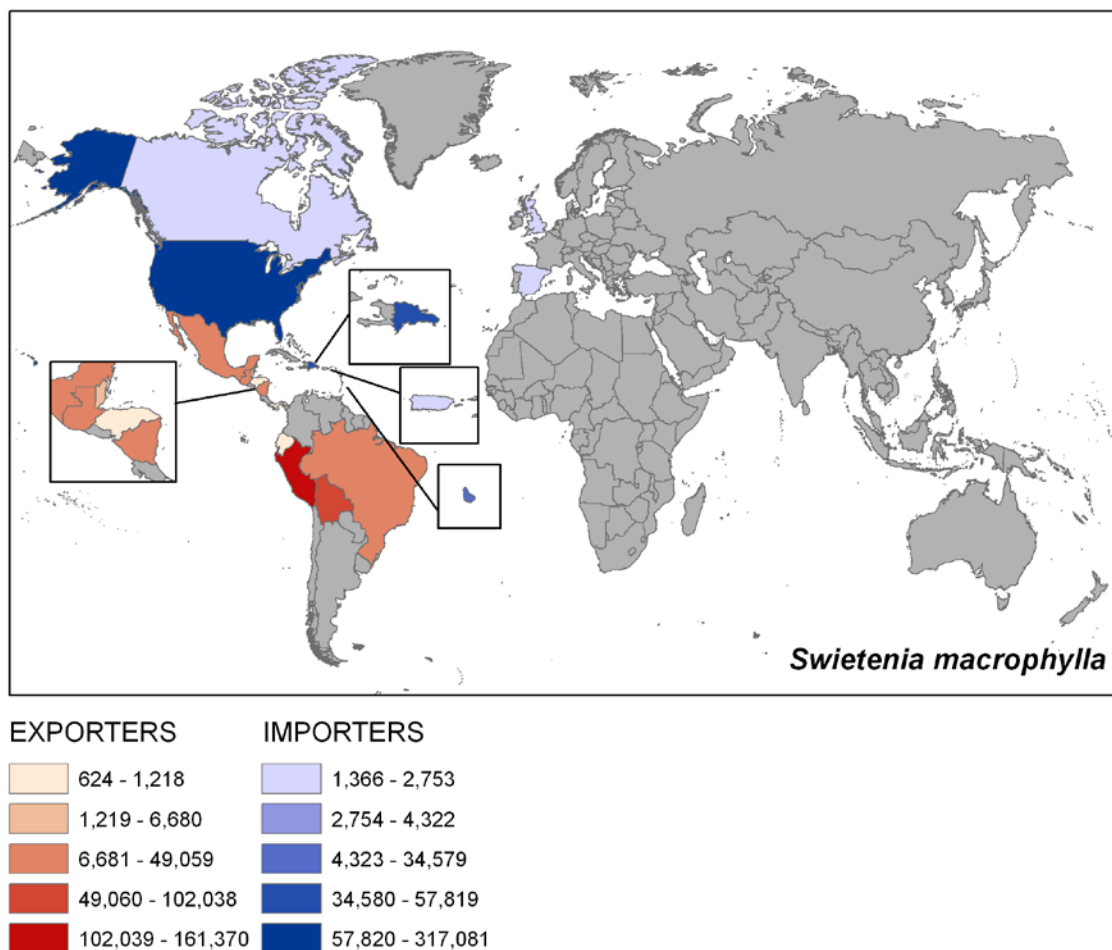


* UN Comtrade data reported in m3; and CITES importer and exporter data reported in m3 and kg (and converted into m3)
Sources: UN Comtrade and CITES trade database.

According to CITES trade data, Peru was the main exporter of Mahogany for the period 2002–11, accounting for 38–44% of total direct trade reported by exporters and importers (see Figure 14). In terms of annual exports, Peru was the main exporter until around 2006, when it was overtaken by Bolivia and Guatemala.

For the period 2007–11, data are available from both UN Comtrade and CITES. During this period exports reported by range states indicate that Bolivia, Guatemala, Mexico and Peru were the main exporters of Mahogany: Bolivia was the main exporter according to the CITES database and Peru the main exporter according to UN Comtrade. Exports were also reported by Belize, Brazil, Colombia, Ecuador, Guyana, Honduras and Nicaragua. Zero export quotas were established by Bolivia, Ecuador and Nicaragua for 2013, while Belize set an export quota of 1,981.8 m3 of sawn wood last year.

Figure 14: The main exporters and importers of *S. macrophylla* (m3), 2002–11



Source: CITES trade database.

During the period 2002–11 the United States was the main importer of Mahogany, accounting for 75–77% of total direct imports according to the CITES trade database (see Figure 14). It accounted for a similar share of direct imports during the period 2007–11, according to UN Comtrade. The Dominican Republic was also a major importer during the period 2002–11.

Besides range states, countries such as Fiji and the Philippines have been involved in high levels of direct trade in plantation timber. Those populations are not covered by the CITES Appendix II listing of Mahogany and thus have not been included in the above analysis.

Imports into EU member states

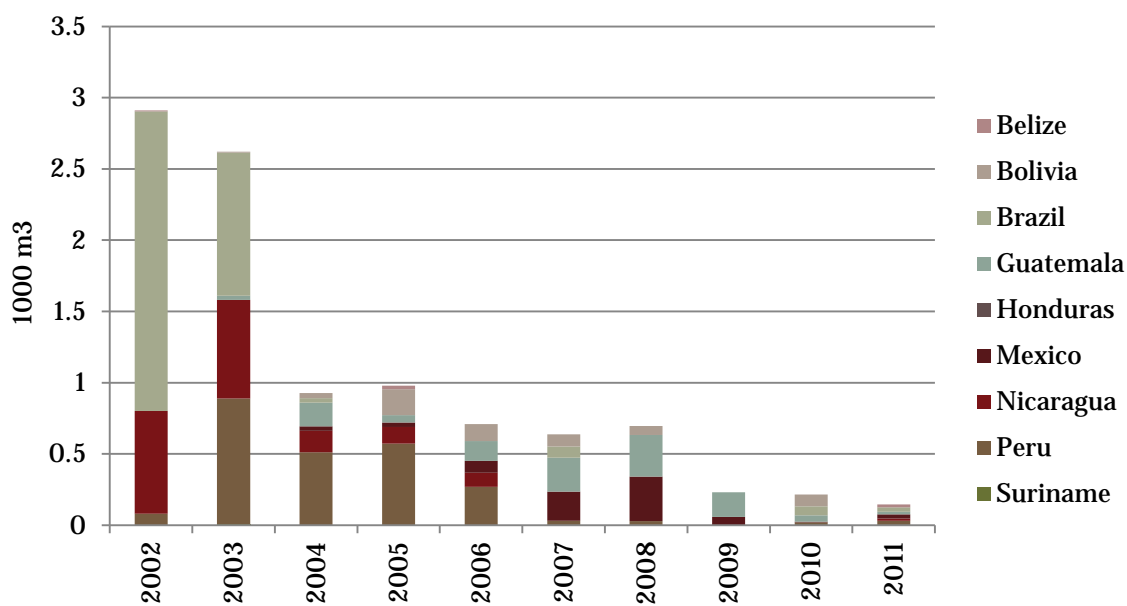
In global terms, the EU is not a major importer of Mahogany. It accounts for just 3% of direct trade from range states reported in the CITES trade database and UN Comtrade.

When comparing Mahogany data from the different data sources available, it appears that importer and exporter CITES data are broadly comparable, as are customs data reported in UN Comtrade and Eurostat. However, there are substantial differences between CITES and customs data.

For the period 2007–11 the CITES trade database shows a significantly lower level of Mahogany imports into the EU (<2,000 m3) than do UN Comtrade and Eurostat, both of which suggest that the level exceeded 200,000 m3 during that period. The very high volumes reported by customs can be accounted for, above all, by imports from Ecuador reported by Spain: 133,838 m3 in 2007 and 79,469 m3 in 2008, according to Eurostat. However, a closer examination of the Eurostat data shows that the wrong unit was used: the declarant country (Spain) provided data on supplementary quantity in m2 rather than (as is required) in m3. Therefore, the volume of trade recorded in UN Comtrade and Eurostat should be 213,307 m2 instead of 231,307 m3. While the volume of Spanish imports in m3 is not known, it is clear that a major discrepancy remains between the CITES data and those provided by customs. Indeed, Spain did not report to CITES any imports from Ecuador during the period 2007–11.

According to CITES trade data, the main range states exporting to the EU during the period 2002–11 were Brazil, Peru and Nicaragua (see Figure 15). Eurostat and UN Comtrade data indicate that during the period 2007–11 Ecuador was the main exporter.

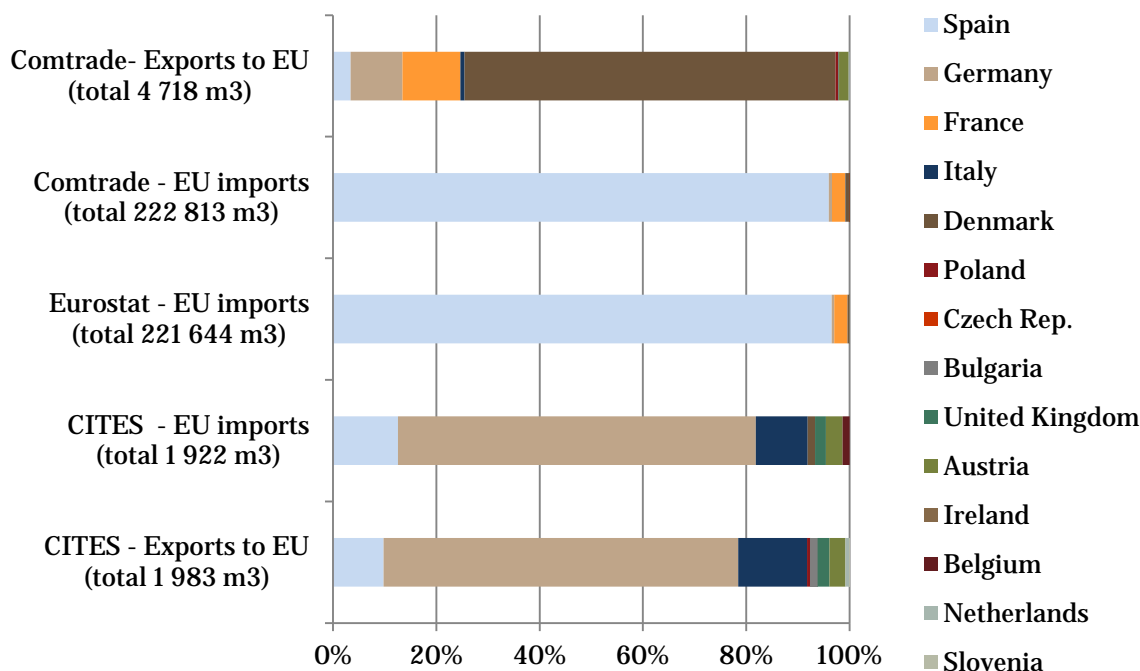
Figure 15: Exports of *S. macrophylla* from range states to the EU, 2002–11, according to importer data



Source: CITES trade database.

The CITES trade database, on the one hand, and UN Comtrade and Eurostat, on the other, differ over which are the main EU importers of Mahogany from range states (see Figure 16). According to data submitted to CITES by importers and exporters, Germany was the main EU importer of Mahogany for the period 2007–11. Customs data submitted to UN Comtrade and Eurostat by EU countries indicate that Spain was the main EU importer, although, as noted above, there is an error in the Spanish data. However, data submitted by exporters (trade partners) to UN Comtrade indicate Denmark was the main importer.

Figure 16: EU importers of *S. macrophylla* from range states according to various datasets*



* Importer and exporter data in the CITES trade database and UN COMTRADE; and importer data in Eurostat. All data for the years 2007–11. Note: See text above for discussion on errors in EU import data in UN Comtrade and Eurostat. Sources: CITES trade database, UN Comtrade and Eurostat.

In addition, the EU re-exported Mahogany. According to the CITES trade database, during the period 2002–11 Germany re-exported a total of 89,874 kg, 51,889 m² and 24,144 m³, Italy 76,523 m² and Spain 20,541 m². According to CITES importer data, the volume of Mahogany re-exported from the EU was higher than the volume of (direct and indirect) imports (see Table 6). Customs data in UN Comtrade and Eurostat, on the other hand, suggest the volume of EU imports was higher than that of exports in the same period.

There are various possible reasons for such discrepancies in the CITES trade database. First, reported EU re-exports may be based on permits issued (but not necessarily used) rather than levels of trade. Second, different units may have been used at the point of import or export as well as different ways of measuring weight and/or volume; and errors may have occurred in calculating appropriate unit conversion factors. Third, there may be different reporting practices from country to country. For example, the CITES listing applies only to Mahogany sourced in the Neotropics and traded as logs, sawn wood, veneer sheets and plywood. However, many (but not all) countries report trade from populations outside the Neotropics and trade in wood from non-CITES populations as well as in other products. Finally, the discrepancies may result from trade entering the EU without being reported through CITES mechanisms and therefore without the necessary permits.

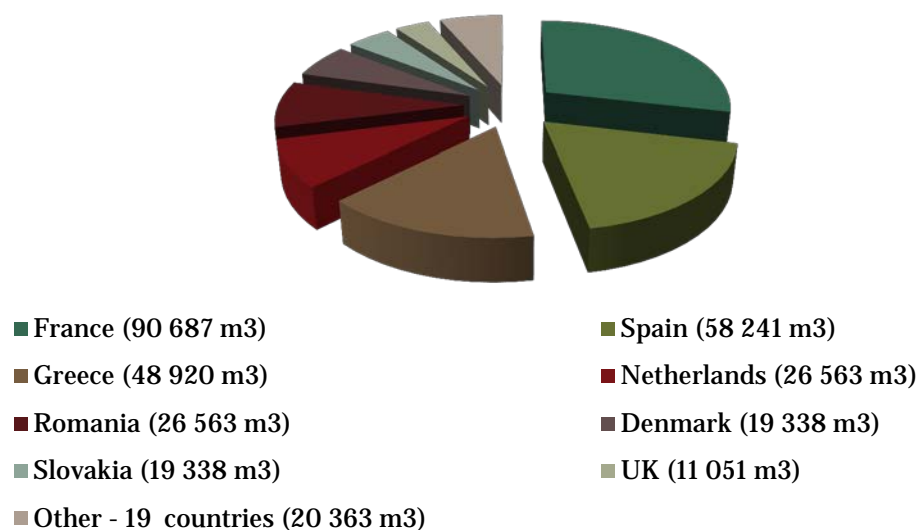
Table 6: Main trade in *S. macrophylla* to and from the EU (including re-exports), 2002–11, according to importer data

Units	Term	EU imports	EU re-exports
kg	Sawn wood		38,886
	Veneer		50,989
m2	Sawn wood	23,594	2,566
	Veneer	19,866	150,277
m3	Logs	376	8
	Sawn wood	8,807	21,844
	Timber	1,148	6
	Veneer	99	2,439

Source: CITES trade database.

Data on intra-EU trade of Mahogany are available from Eurostat. Those data suggest large-scale movement of Mahogany within the EU, involving almost all member countries. France, Spain and Greece are important suppliers within the EU, accounting for 62% of intra-EU ‘departures’⁶⁷ (see Figure 17).

Figure 17: Intra-EU movement* of Mahogany, 2007–11



*Also referred to as ‘departures’ (see Footnote 67).
Source: Eurostat.

Illegal trade

Seizures of Mahogany have been regularly reported throughout the last decade. In more recent years (from 2008 onwards) seizures reported in EU-TWIX have declined both in number and volume compared with previous years. Nonetheless, 3,500 pieces were seized in Peru in 2009 (*TRAFFIC Bulletin*) while the United States reported the seizure of 283m3 in 2011 (CITES trade database).

⁶⁷ ‘Departures’ refer to the movement of goods from one EU member state to another.

Further details on reported seizures are provided in Annex I.

Afrormosia (*Pericopsis elata*)

Afrormosia (*Pericopsis elata*) is a timber-producing species that occurs in West and Central Africa – namely, Cameroon, the Central African Republic (CAR), the Congo Republic, Côte d’Ivoire, the Democratic Republic of the Congo (DRC), Ghana and Nigeria. Stocks of Afrormosia are reported to be reduced in Ghana, Côte d’Ivoire, Nigeria and CAR (Bourland, 2012). In 1998 the species was assessed as globally Endangered in the IUCN Red List although this assessment needs updating.⁶⁸

Afrormosia was listed in CITES Appendix II in 1992. The CITES listing applies only to trade in logs, sawn wood and veneer sheets. In a parallel development, the species was listed in Annex B of the EU Wildlife Trade Regulations in 1992. It has been the subject of various actions in the CITES arena, including a Review of Significant Trade, CITES trade suspensions as well as ‘negative opinions’ and ‘positive opinions’ by the EU SRG on wildlife trade. Trade from Côte d’Ivoire is currently suspended under a CITES recommendation.

Products in trade

Afrormosia is valued for the high quality of its wood. It is used in boat building as well as for flooring, furniture, window and door frames, decorative veneer, boards (coffins and furniture), tool handles and so forth.⁶⁹

Because the CITES listing of Afrormosia applies to logs, sawn wood and veneer sheets only, the main trade reported in the species was in logs and sawn wood, primarily reported in m³. Some trade in timber and veneer was reported (in m² and m³), while there were very low levels of trade in carvings, seeds, live plants and timber pieces.

The terms and units reported by both importers and exporters vary from country to country. Exporting countries reported all their trade in m³, whereas importing countries reported some trade in kg (Denmark) and m² (France and the United States).

The HS codes used by customs to report trade in Afrormosia are 4407 (sawn wood), 4403 (logs) and veneer (4408). Other codes are used for ornaments, furniture and so forth (4420, 9401 and 9403). These codes are not specific to Afrormosia and include a range of other tropical species.

Trading prices

Afrormosia was classified as one of the ‘most economically valuable’ tree logs in Cameroon.⁷⁰ It has the third-highest FOB value of any species harvested in and exported from the Congo Republic.⁷¹

Average prices for sawn wood exported from the Congo Republic were reported to be \$200/m³ and \$371/m³ in 2003 and \$324/m³ in 2004.⁷² In 2005 the FOB price in the Congo Republic was

⁶⁸ IUCN (2013a).

⁶⁹ Bourland, N., Lambert Kouadio, Y., Fétéké, F., Lejeune, P. and Doucet, J.-L. (2012), ‘Ecology and Management of *Pericopsis elata* (Harms) Meeuwen (Fabaceae) Populations: A review’ in *Biotechnologie, Agronomie, Société et Environnement*, 16 (4), pp. 486–98.

⁷⁰ Betti, J. L. (2007), ‘Exploitation and Exportation of *Pericopsis elata* (Fabaceae) in Cameroon’

⁷¹ Dickson, B., Mathew, P., Mickleburgh, S., Oldfield, S., Pouakouyou, D. and Suter, J. (2005), *An assessment of the conservation status, management and regulation of the trade in *Pericopsis elata**, (Fauna & Flora International; Cambridge, UK).

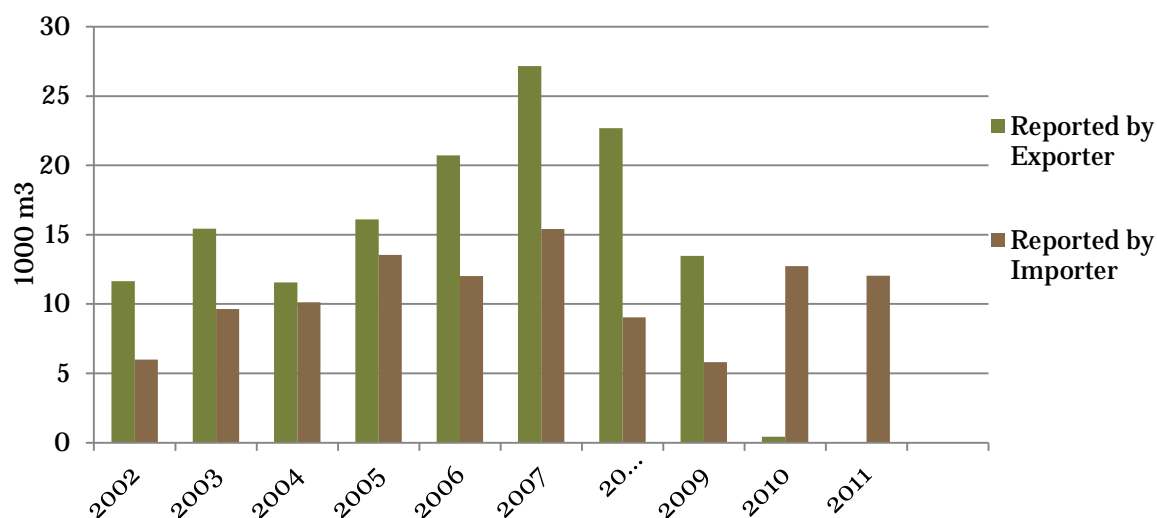
reported to be XAF 192,780 m3 (EUR 293.89/m3) for grade A logs.⁷³ More recently, the average price of sawn logs and veneer face from Ghana was EUR 855–955/m3 and EUR 1.32/m2, respectively.⁷⁴

Global trade patterns

Data collected at the species/genus level are available for Afrormosia in the CITES trade database. However, other species-level trade data are not readily available. Customs data in UN Comtrade and Eurostat group the genus with other taxa. Some countries have submitted data to ITTO in the past; however, none has done so since 2003.

According to the CITES trade database, trade reported by exporters increased from 2002 onwards and peaked in 2007 with total exports of 27,153 m3 (see Figure 18); thereafter, the level decreased. The sharp drop in trade reported by exporters for 2010 and 2011 (compared with 2009) reflects the failure of Cameroon and the DRC – the two main exporters – to submit a CITES annual report in 2010 and 2011 and the Congo Republic, another major exporter, in 2011. Importer data for 2010 and 2011 indicate an annual trade volume of about 12,000 m3.

Figure 18: Direct trade in *P. elata*, 2002–11



Source: CITES trade database.

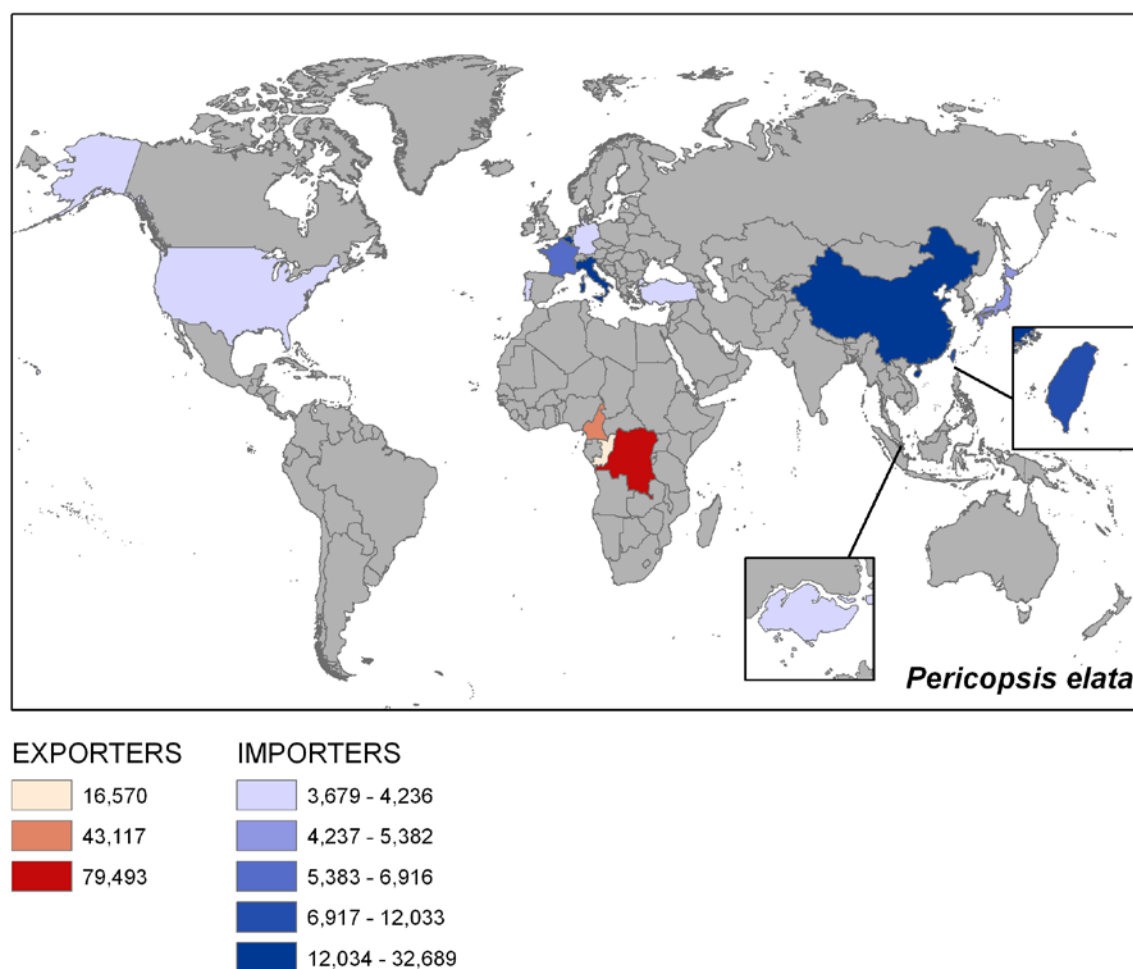
As noted above, the main exporters are Cameroon and the DRC (see Figure 19). Together, they accounted for 88–90% of total trade (reported in m3) between 2002 and 2011, according to data reported by both importers and exporters. The Congo Republic and Ghana accounted for almost all of the remainder. The DRC set an export quota of 25,000 m3 of logs, sawn wood and veneer sheets for 2013. No other country set an export quota last year, although Cameroon and the Congo Republic had such quotas in previous years.

⁷² International Tropical Timber Organization (ITTO) (2004), Annual Review and Assessment of the World Timber Situation 2004 and ITTO (2005), Annual Review and Assessment of the World Timber Situation 2005, (Division of Economic Information and Market Intelligence, ITTO; Yokohama, Japan)

⁷³ Dickson, et al. (2005) An assessment of the conservation status, management and regulation of the trade in *Pericopsis elata*.

⁷⁴ ITTO (2013), 'Report from Peru', in Tropical Timber Market Report, Vol. 17, No. 20, 16–31 October.

Figure 19: The main exporters and importers of *P. elata* (m3), 2002–11

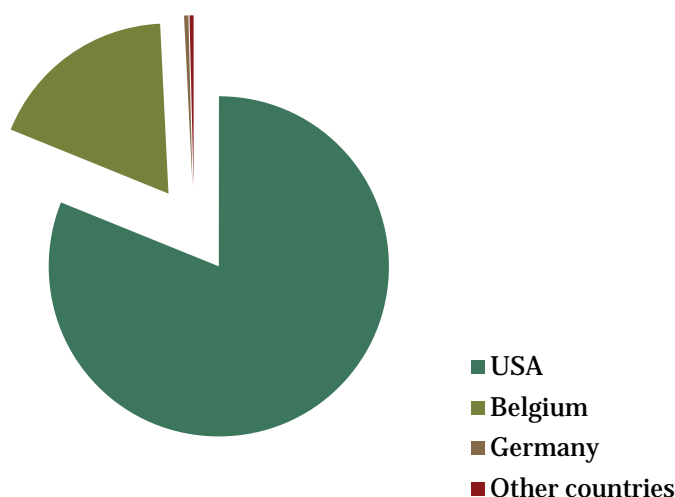


Source: CITES trade database.

According to data reported by both importers and exporters, the two main importers during the period 2002–11 were Belgium and Italy (see Figure 19). Mainland China, Taiwan, Portugal, Japan, Germany and France all imported relatively high volumes of the species during the same period.

In addition, re-exports of the species have been reported (see Figure 20). The main re-exporter was the United States, while Belgium, Germany, Turkey, France and Spain re-exported relatively high volumes. The original sources of the re-exported wood were Cameroon, the DRC and the Congo Republic.

Figure 20: Main re-exporters of *P. elata* (m3), 2002–11



Source: CITES trade database.

Imports into EU member states

According to CITES trade data, the EU is a major importer of Afrormosia, although data reported by importers give it more relative importance than do data reported by exporters. Data reported by importing countries suggest the EU accounted for 90–100% of total direct global imports during the period 2002–11, whereas data reported by exporters indicate it accounted for 54% of direct global imports. Overall, the EU reported higher volumes of Afrormosia imports than did the exporting countries (see Table 7).

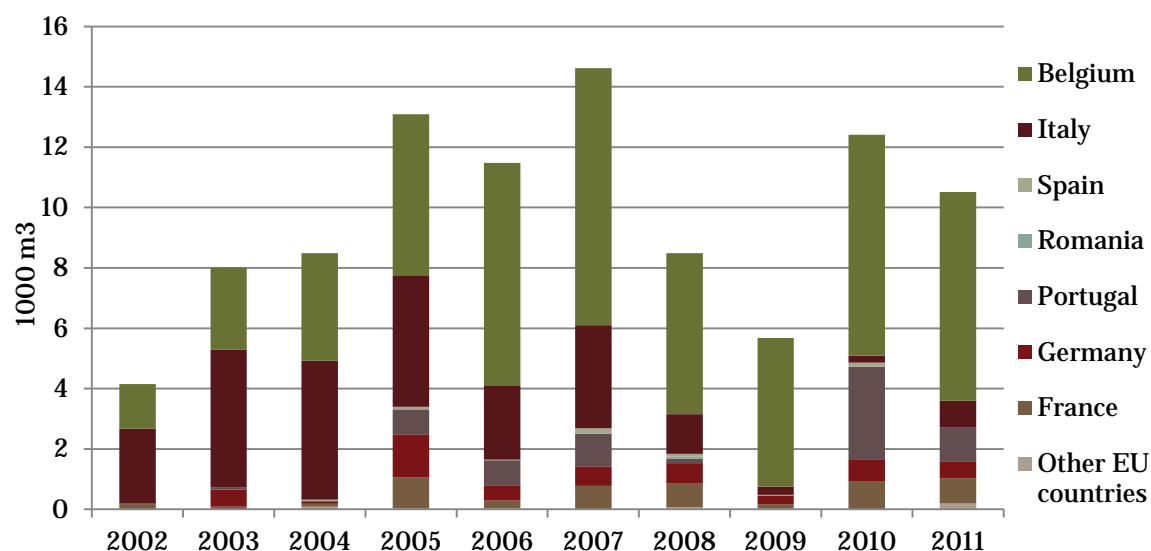
Table 7: Direct imports of *P. elata* to the EU, 2002–11

Units	Term	Reported by exporter	Reported by EU importer
kg	Sawn wood		24,269
m2	Veneer		8,052
m3	Logs	24,087	21,763
	Sawn wood	49,367	73,520
	Timber	2,147	1,597
	Veneer		21

Source: CITES trade database.

Sixteen EU member states were involved in the trade in Afrormosia during the period 2002–11. Belgium and Italy were the main EU importers, while France, Portugal and Germany imported high volumes (see Figure 21). Exporters reported trade to four EU member states that themselves did not report any imports: Ireland (a total of 554 m3), Greece (488 m3), Cyprus (159 m3) and The Netherlands (22 m3). The main exporters to the EU were Cameroon and the DRC.

Figure 21: Imports of *P. elata* to the EU, 2002–11



Source: CITES trade database.

Besides the direct trade summarized above, imports entered the EU via third countries during the period 2002-11. They included 44,296 m² of veneer imported from Turkey and originated in the DRC as well as smaller volumes from Malaysia, Monaco and Switzerland that originated in Cameroon and the DRC.

The CITES trade database does not generally contain data on the movement of goods between EU countries. However, it does record that 74.38 m³ of sawn wood originating in the DRC moved from Spain to Portugal in 2005.

Illegal trade

Seizures of Afrormosia are recorded in the CITES trade database and EU-TWIX. The biggest seizures involve veneer, timber and logs. Large seizures were reported in 2004 and 2008 by The Netherlands and Germany – 2,736 [no unit] of timber and 3,247 m², respectively – and several smaller seizures in 2009 and 2010. No seizures were reported in 2011.

Further details on these and other reported seizures are provided in Annex I .

Red Cedar (Cedrela odorata)

Red Cedar (*Cedrela odorata*) naturally occurs in seasonally dry forests of Central and South America and on most Caribbean islands. It has been introduced into numerous countries around the world. Though widespread, the species is not common and is threatened by habitat loss and

selective logging.⁷⁵ In 1998 the species was assessed as globally Vulnerable in the IUCN Red List although this assessment needs updating.⁷⁶

Red Cedar was listed in CITES Appendix III by Colombia and Peru in 2001, by Guatemala in 2008 and by Brazil and Bolivia in 2011. The CITES listing applies only to logs, sawn wood and veneer sheets. Colombian and Peruvian populations of the species were listed in Annex C of the EU Wildlife Trade Regulations in 2001. The remaining populations were listed in Annex D in 2008 and uplisted to Annex C for all range states in December 2012.

A 2007 proposal to list the species in CITES Appendix II was not supported by the CITES Conference of the Parties and subsequently withdrawn. However, an action plan was adopted to collect trade and conservation status data on the species. In 2012 the CITES Plants Committee decided that the species met the trade criterion for listing in CITES Appendix II but noted that data are lacking.⁷⁷

Products in trade

Highly regarded for its durability, excellent working qualities and pleasing appearance, Red Cedar is traded internationally and used in joinery, quality furniture and musical instruments.⁷⁸

According to CITES trade data for the period 2002–11, the majority of international trade in Red Cedar involved sawn wood. The remainder of the trade was in carvings, timber, timber pieces and veneer.

The HS code mainly used by customs to report trade in Red Cedar is 4407 (sawn wood). Other codes used include 4403 (logs) and veneer (4408) as well as those for ornaments, furniture and so forth (4420, 9401 and 9403). These codes are not specific to Red Cedar and include a range of other tropical species.

Trading prices

Red Cedar is considered an 'economically' valuable species and an important commodity on both the local and export market.⁷⁹ Information on the value of the species in trade is patchy and reported only at some stages in the supply chain. Data submitted by the Peruvian authorities indicated prices ranging from \$592/m³ to \$658/m³ during the period 2000–05. Average prices for sawn wood in Ecuador in 1995 were reported to be \$584/m³.⁸⁰ Prices for logs and sawn wood reported to ITTO during the period 2002–06 vary considerably (see Table 8). Prices for sawn wood reported by ITTO⁸¹ for the first eight months of 2013 were in the range of \$958–77/m³ in the North American market and \$46–65/m³ in the Mexican market.

⁷⁵ CITES, (2007): 'Consideration of Proposals for Amendment of Appendices I and II' (CoP14 Prop. 33), <http://www.cites.org/sites/default/files/eng/cop/14/prop/E14-P33.pdf>.

⁷⁶ IUCN (2013b), 'Cedrela odorata', in the IUCN Red List of Threatened Species, Version 2013.1; assessor: Americas Regional Workshop (Conservation & Sustainable Management of Trees, Costa Rica, November 1996); date assessed: 1998; iucnredlist.org

⁷⁷ CITES PC20 WG7 Doc. 1 and CoP16 Doc. 69

⁷⁸ CITES, (2007).

⁷⁹ Ibid.

⁸⁰ Ibid.

⁸¹ ITTO (2013), 'Report from Peru', in *Tropical Timber Market Report*, Vol. 17, No. 20, 16–31 October.

Jenkins et al.⁸² categorized Red Cedar as a ‘non-precious wood (commodity)’ species but noted that certain grades are considered ‘semi-precious’ or even ‘precious’. They quoted the price of \$15,748/m³ for instrument blanks and \$2,119/m³ for sawn timber.

Table 8: Trading prices for *C. odorata* reported to ITTO for the period 2002–06

	2002	2003	2004	2005	2006
Exports					
Mexico	\$197/m ³ (log)	\$76/m ³ (log)	\$204/m ³ (log)	\$248–50/m ³ (log)	\$381/m ³ (log)
Guyana					\$89/m ³ (log) \$750/m ³ (sawn wood)
Imports					
Mexico	\$317/m ³ (log)	\$346/ m ³ (log)	\$373/m ³ (log)	\$59–140/m ³ (log)	\$153/m ³ (log)
Colombia		\$31/m ³ (log) \$48/m ³ (sawn wood)			

Source: ITTO Annual Review and Assessment of the World Timber Situation, 2003, 2004, 2005, 2006 and 2007.

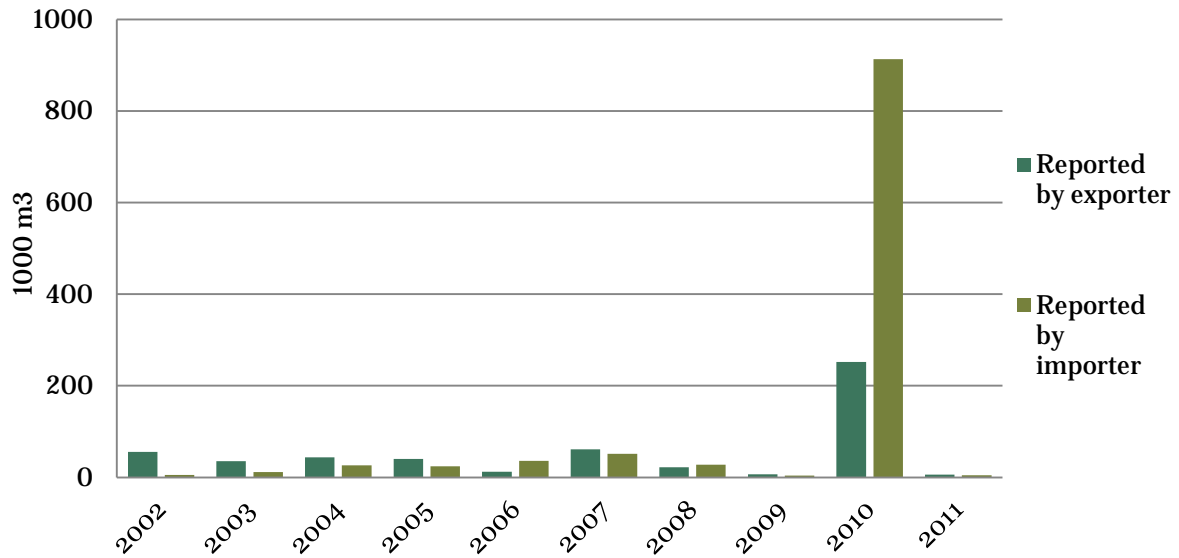
Global trade patterns

Data collected at the species and genus level are available for Red Cedar in the CITES trade database. However, other species-level trade data are not readily available. Customs data reported in UN Comtrade and Eurostat group the genus with other taxa. Some genus- and species-level data have been submitted to ITTO in the past; however, since 2006 ITTO has grouped *Cedrela* with other taxa.

According to CITES trade data, between 2002 and 2011 the annual level of exports of Red Cedar fluctuated but was consistently below around 60,000 m³ of sawn wood – with the exception of 2010, which witnessed a large spike in trade (see Figure 22). While the data reported by both exporters and importers for that year show an increase in trade, the volume, source and destination reported by the former differ from the information reported by the latter. Importer data suggest that almost all the trade in 2010 was from Brazil to Argentina, while exporter data indicates that most of the trade in that year was from Bolivia to several countries. The magnitude of the difference between the volumes of trade reported by exporters and importers suggest at least some under- and/or misreporting. However, the discrepancy may be due in part to inconsistencies in how trade in CITES Appendix III-listed species is reported. While there is no requirement to report imports of those species, in practice a number of countries do, including the EU member states and the United States. Furthermore, some countries report trade in Appendix III-listed populations and others in all specimens of the species.

⁸² Jenkins, et al. (2012).

Figure 22: Direct trade in *C. odorata*, 2002–11

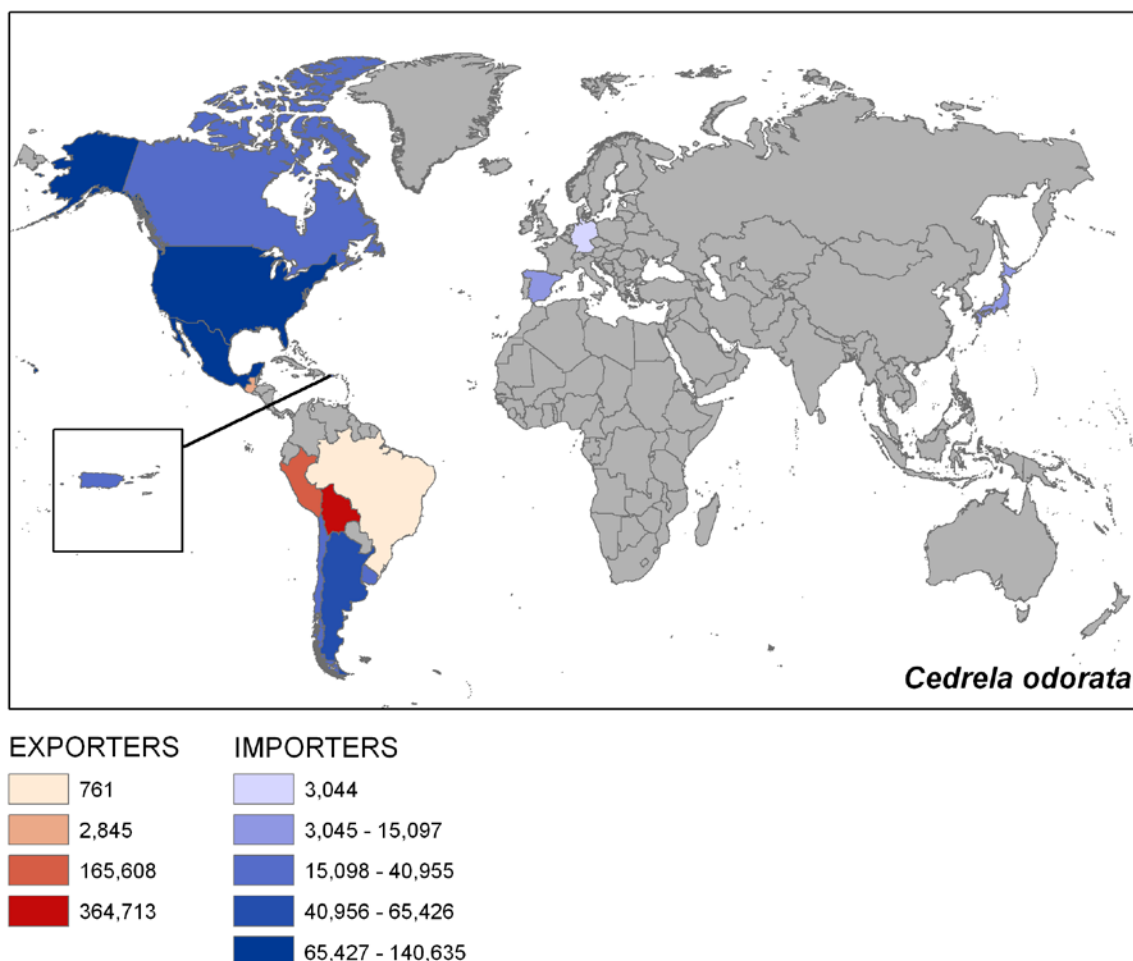


Source: CITES trade database.

During the period 2002–11 Bolivia, Brazil and Peru were the main exporters of Red Cedar (see Figure 23). The United States, Mexico and Argentina were the main importers, while Chile, Puerto Rico, Canada, Uruguay, Peru, Japan, and Spain imported significant volumes.

Some exports in artificially propagated Red Cedar were reported, primarily from Ghana and Côte d’Ivoire.

Figure 23: The main exporters and importers of *C. odorata* (m3), 2002–11



Source: CITES trade database.

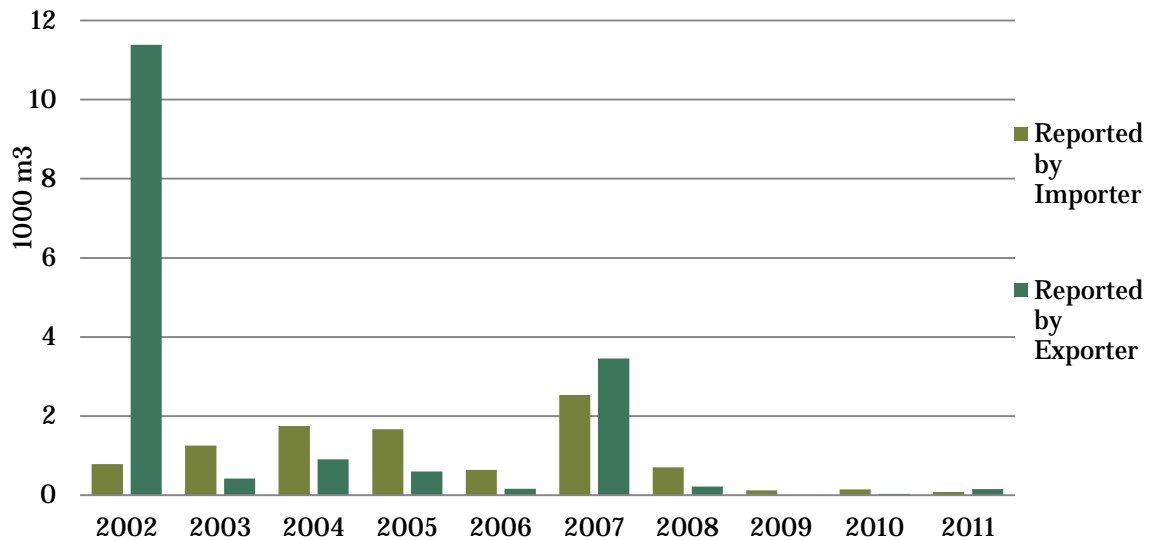
Imports into EU member states

The EU accounted for a relatively small proportion of trade in Red Cedar (1% of direct trade from range States reported in m3) during the period 2002–11. It reported total imports of 38,012 m2 of veneer and 9,658 m3 of sawn wood, timber and veneer. Imports were lower in the years 2009–11 than in previous years (see Figure 24).

Several reporting discrepancies are evident, including differences in the volume of trade reported by the EU and that reported by its trading partners as well as in the terms and units used. The total volume of exports of sawn wood reported by trading partners to the EU was nearly double that of imports reported by EU members states (Figure 24). That discrepancy is evident, in particular, for exports from Bolivia and Peru into Spain, the United Kingdom and France – above all, in 2007 or earlier. This may be because exporters reported on the basis of permits issued rather than trade levels; or it may be because the trading partners used different units. For example, the EU reported the import of a combined 38,012 m2 of veneer in 2007 and 2009; this was not reported by any of the exporters (Bolivia, Brazil and Peru), despite the species being listed in Appendix III by a

number of countries at the time of trade (Peru, Colombia and Guatemala). Brazil did not report any trade in the species until it listed its own populations in Appendix III in 2011.

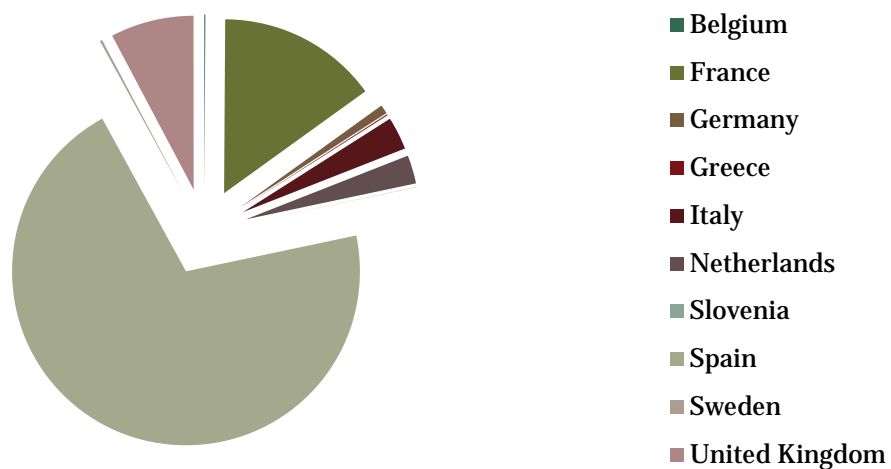
Figure 24: Direct imports to the EU of *C. odorata*, 2002–11



Source: CITES trade database.

Spain was the main EU importer of Red Cedar during the period 2002–11; in all, 10 EU countries reported some imports (see Figure 25). The main exporters to the EU were Brazil (72% of total trade during that period) and Peru (17%), according to EU importer data.

Figure 25: EU importers of *C. odorata* (trade reported in m3), 2002–11, according to importer data



Source: CITES trade database.

Illegal trade

Illegal logging of Red Cedar, including in protected areas, has been reported in many range states. However, it is difficult to quantify that practice globally.⁸³ The level of illegal trade reported in the CITES trade database is low, with the exception of the 25,800 kg of sawn wood imported to Spain from Brazil in 2003. Other seizures include 3,035 bf of Red Cedar on the Inter-Oceanic Highway in southern Peru in 2006, for which fake documents were available.⁸⁴

Further details on these and other reported seizures are provided in Annex I.

Discussion

Trade patterns

Four of the five taxa included in this review are commodity timbers traded in high volumes (Ramin, Afrormosia, Mahogany and Red Cedar); the other comprises semi-precious or precious woods (Rosewoods) traded in smaller quantities. Trade in Afrormosia has declined during the last decade; however, volumes remain high. Trade in Ramin, Mahogany and Red Cedar has declined too, but there have been large spikes in trade in recent years, as evidenced by Ramin trade volumes reported in kg in 2007 and in m³ in 2008–09, Mahogany in m³ in 2009–10 and Red Cedar in m³ in 2010. Data on trade in CITES Appendices II- and III-listed Rosewoods are patchy, and there is little information available about the patterns and volumes of trade in many of these species. However, trade in the Appendix I-listed Brazilian Rosewood is relatively well documented; according to the data available, it appears to have declined.

The EU imports all five taxa. In global terms, it is a major importer of Ramin, Afrormosia and, to a lesser extent, Rosewood and a relatively minor importer of Mahogany and Red Cedar.

Most of the trade in CITES Appendix I-listed Brazilian Rosewood was in pre-Convention specimens, including as recently as 2010–11. It is unclear how countries trading in the species are verifying the origin of the specimens, particularly as the provisions of the Convention have applied since 1992. Commercial trade in Appendix I-listed species is prohibited under the EU Wildlife Trade Regulations (although there are a few exemptions). However, commercial trade in wild-sourced timber has been reported. (Further information about and analysis of the trade of Brazilian Rosewood can be found in Taylor et al.)⁸⁵

There are significant discrepancies between data reported to CITES by importing countries and those reported by exporting countries and, in the case of Mahogany, between customs and CITES data. In the case of some species, including Red Cedar and Afrormosia, exporters reported much higher levels of trade to the EU than the EU countries reported importing. In the case of others, including Ramin, the EU reported higher levels of imports than their trade partners reported exporting.

⁸³ CITES, (2007).

⁸⁴ ITTO (2006b), 'INRENA Seizes Illegal Timber in Southern Peru.', *Tropical Timber Market Report*, Vol. 11, No. 5, 1–15 March, www.itto.int/mis_detail/id=11420000

⁸⁵ Taylor, V., Kecse-Nagy, K. and Osborn, T. (2012), 'Trade in *Dalbergia nigra* and the European Union' (report prepared for the EC).

In the case of Mahogany, (re-)exports from the EU reported to CITES were higher than the volumes imported to the EU over the same period. This discrepancy was not seen in data collected by customs, which suggests that some trade entering the EU has slipped through CITES controls; however, this cannot be confirmed.

While there are several possible reasons for the inconsistencies (discussed below), the scale and nature of the discrepancies for several of the species suggest that it is likely that unreported (intentionally or unintentionally) – and therefore illegal – trade accounted for some of the discrepancies.

Data quality

Assessing trade patterns is frequently challenging owing to the gaps and/or inconsistencies in trade data on the species. Discrepancies may be caused by various factors: export permits may not be fully utilized so trade levels may be lower than reported; time lags may occur – for example, specimens may be exported in one year and imported (that is, reach their destination) in another; there may be differences in the unit and terms used and sources identified by the importing country and those used/identified by the exporting country; and there may also be differences in how trade in CITES Appendix III-listed species is reported as well as data errors.

Some countries have not regularly submitted CITES annual reports, as a result of which there are gaps in the trade data. For example, Bolivia – a major exporter of Mahogany – did not submit such a report in 2009, while the DRC and Cameroon – major exporters of Afrormosia – failed to do so in both 2010 and 2011 (as of November 2013). In Resolution Conf.11.17 (Rev. CoP14),⁸⁶ CITES stipulated measures for addressing persistent non-compliance with the obligation to submit an annual report. Failure to submit such a report by 31 October of the year that follows the year covered by the report is considered to pose a major problem for the implementation of the convention; in such cases, the Secretariat is to refer the issue to the Standing Committee, which will seek to find a solution. Furthermore, it is recommended that Parties do not authorize trade in specimens of CITES-listed species with any Party that the Standing Committee rules has failed to submit an annual report for three consecutive years and without having provided adequate justification.

Of the five species reviewed in this paper, it is only Mahogany for which global customs data are available at the species level. There are large differences between the volumes of trade reported by CITES and those reported by customs.

The CITES listings include annotations that identify which products come under the Convention. However, the annotations may not include all products that are traded (e.g., finished products made of Dalbergia species).

⁸⁶ See <http://www.cites.org/eng/res/11/11-17R14C15.php>

Illegal trade

Illegal trade has been reported for all species, but it is difficult to assess its scale. In some cases, such trade results from lack of awareness of the provisions of CITES; for example, there are a number of cases of products made of Ramin having been seized in which the trader and/or retailer was unaware of CITES requirements. In other cases, smuggling and the intentional circumvention of CITES controls have been reported. Some illegal trade involves illegally logged timber, including Ramin and Rosewood. In particular, illegal trade in Rosewood appears to be increasing, while high-volume seizures of Ramin are recorded in the CITES trade database.

Discrepancies in trade data such as those outlined above do not provide conclusive evidence that illegal trade is taking place. However, they do raise major concerns. Many of the imports reported to be entering the EU are not reported by the exporting countries. It would be beneficial to explore in more depth the potential causes of discrepancies in trade data to assess whether those inconsistencies indicate serious infringements of CITES regulations.

Annex 1: illegal trade

Ramin (*Gonystylus* spp.)

CITES biennial reports

In its CITES biennial report for 2009–10, the United Kingdom reported the seizure in 2009 of two wine-bottle puzzles made of Ramin from Thailand, chopsticks and a carved Ramin cat from mainland China and one ‘unit’ of Ramin from Hong Kong. In 2010 six seizures were made, four of which involved Ramin from Thailand (one jenga game, one ornamental elephant, two games [jenga/jackpot] and one fruit bowl), while the other two involved Ramin from Malaysia (three bowls) and Taiwan (16,000g of tee squares [tools]).

In its CITES biennial report for 2009–10, Germany reported that paint brushes made from Ramin had been on sale in retail shops on its territory. The German company that had imported the brushes had been unaware of the requirements for CITES export documents and an EC import permit. It transpired that for several years until May 2009, the company had imported Ramin paint brushes from India without any CITES documents. The brushes had been processed in India from timber that had been legally exported from Malaysia and which Malaysia had been reporting as legal exports of ‘timber pieces’ since 2005. The remaining stockpiles (about four million brushes in all) were seized and confiscated and the German company fined. A similar incident involved another German company dealing in cosmetic brushes made from Ramin. Those brushes had been processed in Japan, re-exported without any CITES documents to Canada and from there distributed worldwide, again without any documents, including to the EU. Originally, that timber had been legally exported from Malaysia to Japan. Around 6,700 brushes were removed from the German market and fines issued for the illegal import of around 500 brushes directly to Germany and the sale of around 95,000 brushes during the period 2006–09.

CITES trade database

The majority of seizures recorded in the CITES trade database involve carvings (reported as ‘carvings’ or ‘timber carvings’) and timber pieces. Most were reported by the United Kingdom and the United States. Seized carvings were mainly from Malaysia, although large numbers came from mainland China and Taiwan. Seized timber pieces were mainly from Malaysia and Indonesia. Most of goods seized were reported as *Gonystylus* spp., although 25,075 carvings were reported as *G. bancanus*.

Table 9: Main seizures/confiscations of *Gonystylus* spp. as reported by importers during the period 2002–10

	2002	2003	2004	2007	2008	2009	2010
Carvings	154,577	50,337	613	22,113	17,447	75	1
Derivatives	-	-	-	-	-	4,251	-
Timber carvings	7,840,000	-	-	-	-	-	-
Timber pieces (kg)	-	-	34,510	-	-	-	-
Timber pieces (no unit)	2,424,395	48,800	280,268	-	-	-	-

Source: CITES trade database.

EU-TWIX

Table 10: Seizures of *Gonystylus* spp. recorded in EU-TWIX for the period 2003–09

Year	Country of seizure	Country of export	Intermediate country	Country of destination	Description	Amount	Species
2003	Italy	Italy	Italy	Croatia	Sawn wood	120 kg	<i>Gonystylus</i>
2003	Italy	Malaysia	Unknown	Unknown	Sawn wood	36 m3	<i>Gonystylus</i>
2003	Italy	Malaysia	Unknown	Unknown	Sawn wood	36 m3	<i>Gonystylus</i>
2003	Italy	Malaysia	Unknown	Italy	Sawn wood	18,700 kg	<i>Gonystylus</i>
2006	Netherlands	Unknown	Unknown	Netherlands	Timber	720 (no unit)	<i>G. bancanus</i>
2007	Netherlands	Malaysia	Netherlands	Belgium	Timber	281,355 (no unit)	<i>G. bancanus</i>
2008	Netherlands	Unknown	Unknown	Netherlands	Timber	3,000 (no unit)	<i>G. bancanus</i>
2009	Spain	China	Unknown	Unknown	Carvings	75 (no unit)	<i>G. bancanus</i>

Note: Unknown = information unknown by, or not reported by, agencies.
Source: EU-TWIX.

TRAFFIC Bulletin

Following are extracts from the report 'TRAFFIC Bulletin Seizures and Prosecutions, March 1997–October 2013'.⁸⁷

United Kingdom

In February 2003, Arqadia Ltd., one of the biggest firms in the United Kingdom picture framing industry, was fined GBP80 000 (\$127 000) after pleading guilty to illegally importing 700 cubic metres of picture frame mouldings constructed from Ramin *Gonystylus* spp. The goods, from Indonesia, had been seized by Customs officials at Felixstowe port and from the premises of Arqadia Ltd in Bedford, in March 2002. Samples of the wood were passed to the Royal Botanic Gardens, Kew, for identification, which confirmed that the majority of the samples were of Ramin.

⁸⁷ http://www.traffic.org/traffic-bulletin/traffic_bulletin_seizures_1997-onwards.pdf

The genus is listed by Indonesia in CITES Appendix III, which means that the export of Ramin or related products is banned without an export permit. When arrested and interviewed, staff at the company claimed to be unaware of the CITES restrictions on Ramin imports. However, documents found during the search of Arqadia's offices suggested that the company had actively colluded with their Indonesian suppliers to evade restrictions. Customs officers are currently working with the Indonesian CITES Management Authority to help them prosecute the Indonesian supply company. The information, initially supplied to Customs by the Environmental Investigation Agency (EIA), was acted on by the Customs Wildlife and Endangered Species Officer in Felixstowe, the Customs National Investigation Services and the Heathrow CITES teams.

In August 2008, at the port of Felixstowe, examination of a container of wooden items from Taiwan by the United Kingdom Border Agency officers revealed 39998 wooden tassels thought to be Ramin *Gonystylus* spp. (CITES II). Scientific comparisons were undertaken in the laboratory of the United Kingdom CITES Scientific Authority for flora at the Royal Botanic Gardens, Kew, which confirmed the initial identification. No valid CITES export permit accompanied the shipment and the items were seized.

United States

On 1 May 2009, at the US District Court, Camden, New Jersey, Style Craft Furniture Co. Ltd, pleaded guilty to one count of smuggling cribs made from material which contained tropical hardwood Ramin *Gonystylus bancanus* (CITES II). The company was sentenced, according to the terms of a plea agreement, to pay \$40 000 and serve three years of probation. In addition, the corporation must pay for an advertisement in a publication in China, and a second in a publication in the United States, advising other members of the industry of its actions and the consequences. The company is a manufacturer of wooden furniture for infants, based primarily in China. According to documents filed with the court, the company shipped a container of furniture, including cribs and changing tables, from China to the United States at Port Elizabeth, New Jersey. The invoice that Style Craft Furniture Co. Ltd initially submitted to federal authorities when the shipment arrived stated that the wood was Brazilian Marupa Simarouba and New Zealand pine, species which are not protected by international or US law. After the shipment was detained for further examination, Style Craft Furniture Co. Ltd provided a CITES re-export certificate for the shipment, which authorized the re-export of 1.083 of Ramin from China on 25 May 2005. Sampling of the shipment indicated that the volume of Ramin contained in the shipment was approximately 6.12. The president of Style Craft Furniture Co. Ltd was also charged for the smuggling violation. He has agreed to participate in the District of New Jersey's pretrial diversion programme. Under this agreement, he accepts responsibility for his conduct and agrees to comply with conditions for a period of six months; if he successfully completes the programme, the charge against him will be dismissed.

Malaysia

On 25 July 2004, a syndicate tried to smuggle 33 t of Ramin *Gonystylus* logs via Sungai Batu Pahat after unloading them from Indonesian vessels at a well-guarded and isolated spot. With the co-operation of the Customs Department and the Malaysian Timber Industry Board (MTIB), the timber was seized from two lorries at a sawn log processing factory in Pontian. The factory owners have been fined RM35000 (\$9000) under the Customs Act 1967 for keeping smuggled timber. In May 2004, MTIB and Selangor Customs seized 32m² of Ramin from a private jetty in Port Klang.

At the time of the seizure, Ramin was listed in CITES Appendix III and imports had to be accompanied by an Indonesian CITES permit. At CoP13, the genus *Gonystylus* was transferred to Appendix II. MTIB is reported to have offered to return the logs to the Indonesian CITES authorities but would destroy them if no response is received by an agreed date. The Malaysian Government banned the importation of logs from Indonesia in 2002.

Rosewood (*Dalbergia* spp.)

CITES biennial reports

In its CITES biennial report for 2011–12, Germany reported that it had investigated the trade in musical instruments made from *Dalbergia nigra*. In one shop, the relevant authorities had found 26 CITES re-export certificates issued by the CITES management authority of the United States for re-exporting such instruments to Europe; but no corresponding import permits could be presented. In total, 469 guitars had been imported without the required import permits; most of those instruments were sold to other shops or private owners in the EU or other third countries without the required CITES documents.

The Netherlands reported in its CITES biennial report for 2009–10 that the Dutch CITES authorities had seized 246 sheets of *D. nigra* veneer in 2009 and 12 kg of *D. nigra* in 2010.

Meanwhile, in its CITES biennial report for 2009–10, Spain reported the seizure of ‘684 Palo Rosa’ (*D. nigra*) but provided no unit or other details.

CITES trade database

Seizures of *D. nigra* recorded in the CITES trade database for the period 2002–12 comprise 118 carvings and 447.6 kg of carvings, two timber pieces and 310 cm² of veneer. Most of those products were imported into the United States, where they were seized.

EU-TWIX

Four seizures of *D. nigra* are recorded in EU-TWIX for the period 2001–11: one stem in Denmark in 2001, 18 sheets of veneer in The Netherlands in 2009, one timber piece (sawn wood) in The Netherlands in 2010 and one derivative in Portugal in 2011.

Published literature

In 2013 it was reported that 1,014 Rosewood containers with an estimated value of \$217.8 million had been made from wood illegally logged in the northeastern region of Madagascar.⁸⁸ In 2009 52,000 tonnes of precious wood had been obtained from about 100,000 stems of Rosewood and Ebony, of which 60,000 had been cut in protected areas.⁸⁹

Seizures in February 2012 of illegally trafficked timber (*Dalbergia*) in Guatemala suggest that there is an organized smuggling ring sophisticated enough to transport the wood in large quantities. The Guatemalan authorities reportedly seized three shipping containers that each contained 58.28 m³

⁸⁸ CITES (2013d), ‘Consideration of Proposals for Amendment of Appendices I and II: Inclusion of the Genus *Dalbergia* (Populations of Madagascar) in CITES Appendix II’ (CoP16 Prop. 63), <http://www.cites.org/eng/cop/16/prop/E-CoP16-Prop-63.pdf>.

⁸⁹ Ibid. citing Randriamalala and Liu, (2010).

of *Dalbergia* spp.⁹⁰ The previous year several shipments totalling 202.28 m3 destined for China were seized in Guatemala.⁹¹

During the period 2007–13 no fewer than 178,609 pieces of Rosewood were confiscated in more than 3,000 illegal logging cases in Thailand – and 6,780 logs from 786 cases in the first nine months of fiscal year 2012 alone.⁹² Rosewood seizures reported in Thailand include: 1,222 logs in 134 cases in 2009; 2,739 logs in 223 cases in 2010; and 4,850 logs in 560 cases in 2011.⁹³ In Lao PDR 1,664 high-grade logs identified as *D. cochinchinensis* were seized in 2006; it is likely that the seized timber had been illegally felled in a Thai forest and then smuggled into the country.⁹⁴ In Viet Nam there were 74 cases of illegal logging of Rosewood in 2010.⁹⁵ The following year Viet Nam exported 123 000 m3 of Rosewood (Vietnamese *Dalbergia* species) logs to China that had been illegally felled in protected areas.⁹⁶ However, the majority of Vietnamese Rosewood exports originate from Lao PDR, Thailand and Cambodia.

Illegal logging and trade is a major problem in Cambodia, including in protected areas. There have been many confiscations, and it is likely that even larger volumes than that seized make it across the border⁹⁷. According to a 2012 article in *The Cambodia Daily*, official Chinese import documents show that 36 000 m3 of Rosewood (species unknown) logs were recorded entering China from Cambodia between January 2007 and August 2012.⁹⁸ In 2011 some 9 800 m3 of rosewood logs were imported into China and 4,300 m3 in 2012. Another 10 000 m3 of logs and 15 000 m3 of sawn wood of various timber types entered China from Cambodia during the period 2005–11.⁹⁹

TRAFFIC Bulletin

Following are extracts from the report ‘*TRAFFIC Bulletin* Seizures and Prosecutions, March 1997–October 2013’.

Lao PDR

On 29 August 2006, the Lao embassy and forestry police confiscated 1664 high-grade logs believed to belong to a transnational illegal logging network preparing to export the timber to China. The wood, which was kept in 11 containers at a Lat Krabang warehouse, was identified as the rare Payoong or Thailand Rosewood *Dalbergia cochinchinensis* timber, which is one of the most expensive hardwoods. In Southeast Asia, it is found in Cambodia, Laos, Thailand and Viet Nam. The Customs invoice showed that the logs had been transported to the depot by a Thai freight company and destined for export to China by a Lao firm but no export permit had been issued. It is possible that the seized timber had been smuggled in from a neighbouring country and may have been illegally felled from a Thai forest. Police were to summon the companies’ operators for questioning. They could be charged with smuggling timber into the country and being in possession of a protected species.

⁹⁰ Jenkins, et al. (2012).

⁹¹ CITES, (2013b).

⁹² CITES, (2013a).

⁹³ IUCN/Traffic, (2012) citing EIA (2012).

⁹⁴ IUCN/TRAFFIC, (2012) citing TRAFFIC (2012)

⁹⁵ CITES, (2013a).

⁹⁶ IUCN/TRAFFIC, (2012).

⁹⁷ Ibid.

⁹⁸ Lewis, (2012).

⁹⁹ Ibid.

Brazil

In October 2007, police launched an operation in six states to dismantle a gang alleged to have illegally cut down Brazilian Rosewood *Dalbergia nigra* (CITES I and legally protected under Brazilian law) and exported at least 13 t of the wood over the past four years, principally to the United States. Some 350 federal officers, backed by state police and government environmental agents, reportedly arrested 23 people and were searching for two others. Police also began serving 67 search and seizure warrants for the illegal extraction of the wood. The rosewood was concealed amid cheaper wood, and false export licences had been used. The suspects will be charged with using false documents, criminal association and smuggling contraband. The US Fish and Wildlife Service is reported to be working with Brazilian police to investigate the alleged illegal trade. The species is native to eastern Brazil and found only in that country (where it is known as jacaranda da bahia). Its wood is hard and dense and prized for use in making fine guitars and other instruments, as well as, for example, for flooring, furniture and chess sets.

Netherlands

In January 2009, police officers, acting on information received from TRAFFIC, seized 249 veneer sheets of Brazilian Rosewood *Dalbergia nigra* (CITES I) from two companies based in Rotterdam and 's-Gravendeel. Neither company was able to provide documentation to prove the wood had been legally imported or that it had been legally obtained. 'The Rotterdam police are to be congratulated for their vigilance and decisive action against illegal timber imports,' commented Rob Parry-Jones, Director of TRAFFIC Europe.

Guatemala

Between November and December 2011, authorities seized three shipping containers, each holding 58.28 m³ of rosewood *Dalbergia* (CITES I/II) which were due to leave from the port of Santo Tomas de Castilla. A further 3.5 m³ of illegally logged wood was seized in national parks across the country.

Mahogany (*Swietenia macrophylla*)

CITES biennial reports

In its CITES biennial report for 2011–12, Poland reported the seizure of 2 m³ of *Swietenia* spp. wood in 2011. Germany reported in its CITES biennial report for 2009–10 that it had made seizures of *S. macrophylla* in 2010 but gave no further details. According to its CITES biennial report for 2009–10, the United Kingdom seized two 'units' of Mahogany wood from Belize in 2009. Meanwhile, the Netherlands reported in its CITES biennial report for 2009–10 that it had made seizures of *S. mahagoni* and *S. humilis* in 2010 but not of *S. macrophylla*.

CITES trade database

The main seizure recorded in the CITES trade database for the period 2002–11 was of 20,541 kg of sawn wood from Peru, which was reported by the United Kingdom for the year 2004 (see Table 11). Meanwhile, the United States reported the seizure in 2011 of 283 m³ sawn wood from Belize and the seizure in 2006 of 1,826 m³ of plywood that had been exported by Belgium but had originated in Honduras.

Table 11: Main seizures of *S. macrophylla* recorded in the CITES trade database for the period 2002–11

	Reported by	2002	2003	2004	2005	2006	2007	2008	2010	2011
Plywood (m3)	Importer	-	-	-	-	1,826	-	-	-	-
Sawn wood (g)	Importer	100	-	-	-	-	-	-	-	-
Sawn wood (kg)	Importer	-	-	20,541	-	-	-	-	-	-
	Exporter	-	-	-	700	-	-	-	-	-
Sawn wood (m3)	Importer	28.302	1	2	-	-	32	6	31	283
Timber pieces	Importer	-	20	-	-	-	-	-	-	-
	Exporter	-	20	-	-	-	-	-	-	-
Veneer	Importer	28	-	-	-	-	-	-	160	-

Source: CITES trade database.

*EU-TWIX***Table 12: Seizures of *S. macrophylla* recorded in EU-TWIX for the period 2002–10**

Year	Country of seizure	Point of seizure	Country of export	Country of destination	Mode of transport	Origin of timber	Description	Amount
2002	Spain	Unknown	Brazil	Unknown	Unknown	Brazil	Veneer	28 m3
2002	Spain	Unknown	Colombia	Unknown	Unknown	Unknown	Sawn wood	0.10 kg
2005	Germany	Mail centre	US	Germany	Unknown	Unknown	Sawn wood	1 (no unit)
2005	Germany	Mail centre	US	Germany	Unknown	Unknown	Sawn wood	2 (no unit)
2005	Belgium	Unknown	Unknown	Unknown	Unknown	Peru	Sawn wood	113 m3
2006	Germany	Mail centre	US	Germany	Unknown	Unknown	Timber	1 (no unit)
2007	Belgium	Maritime port	Belgium	US	Unknown	Unknown	Sawn wood	9700 kg
2010	Germany	Unknown	US	Germany	Air	Unknown	Timber	2

Note: Unknown = information unknown by, or not reported by, agencies.

Source: EU-TWIX.

Published literature

Peru's National Institute for Natural Resources (INRENA) seized Mahogany (20,312 bf) and Spanish Cedar (3,035 bf) in 2006. The wood was accompanied by fake documents describing all the seized species as 'copaiba' (*Copaifera officinalis*) (ITTO, 2006b).

TRAFFIC Bulletin

Following is an extract from the report 'TRAFFIC Bulletin Seizures and Prosecutions, March 1997–October 2013'.

Peru

On 11 February 2009, ecology police officials undertaking a routine search of a national police aircraft in the province of Purus uncovered more than 3500 pieces of Big-leaf Mahogany *Swietenia macrophylla* (CITES II). The police were initially refused entry to the aircraft and had to get a search warrant. Following seizure of the timber, it was transported to a warehouse belonging to INRENA (National Institute of Natural Resources); the plane was grounded until the investigation is concluded.

Afrormosia (Pericopsis elata)

CITES biennial reports

No seizures were reported in the EU member states' CITES biennial reports for 2009–10 and 2011–12.

*CITES trade database***Table 13: Illegal trade* in *P. elata* recorded in the CITES trade database for the period 2002–11**

Exporter	Importer	Country of origin	Description	Unit	2005	2008	2009	2010
Congo	US	-	Veneer	m2	-	-	-	6
DRC	US	-	Veneer	m3	-	-	30	-
Gambia	Hungary	-	Timber pieces	-	4	-	-	-
Germany	US	-	Veneer	m2	-	3,247	-	-
Spain	US	DRC	Veneer	m2	-	-	114	-

*All seizures reported by importers.
Source: CITES trade database.

*EU-TWIX***Table 14: Seizures of *P. elata* recorded in EU-TWIX, 2001–10**

Year	Country of seizure	Country of departure	Country of destination	Description of seizure	Amount
2001	Italy	Cameroon	Italy	Derivative	3.6 (m3)
2001	Italy	Cameroon	Italy	Derivative	0.26 (m3)
2001	Italy	Cameroon	Italy	Derivative	31 (m3)
2001	Italy	Cameroon	Italy	Derivative	72 (m3)
2001	Italy	Cameroon	Italy	Derivative	64 (m3)
2002	Italy	Cameroon	Italy	Sawn wood	24 (m3)
2003	Belgium	Cameroon	Belgium	Unknown	14.4 (m3)
2004	Netherlands	Unknown	Netherlands	Timber	2736 (no unit)
2010	Netherlands	Unknown	Netherlands	Timber	37 (no unit)

Note: Unknown = information unknown by, or not reported by, agencies.
Source: EU-TWIX.

TRAFFIC Bulletin

Following is an extract from the report ‘*TRAFFIC Bulletin* Seizures and Prosecutions, March 1997–October 2013’.

Belgium

In August 2005, Customs officers at Zaventem Airport seized a cargo shipment containing more than 1000 kg of African Teak *Pericopsis elata* (CITES II). The items, arriving from Kinshasa, Democratic Republic of Congo, were in the form of wooden steps and doors and declared as personal effects. The consignee, a private individual, was not in possession of a CITES permit.

Red Cedar (*Cedrela odorata*)

CITES biennial reports

No seizures were reported in the EU member states' CITES biennial reports for 2009–10 and 2011–12.

CITES trade database

Table 15: Illegal trade in *C. odorata* recorded in the CITES trade database, 2002–12

Year	Exporter	Importer	Country of origin	Description	Purpose	Amount reported by importer
2002	Colombia	Spain	-	Sawn wood (g)	Commercial trade	100 g
	Nicaragua	Spain	-	Sawn wood (m3)	-	3 m3
2003	Brazil	Spain	-	Sawn wood (kg)	Commercial trade	25,800 kg

Source: CITES trade database.

EU-TWIX

Three seizures of *Cedrela* are recorded in EU-TWIX database for the period 1998 – 2011. These are the same seizures recorded in the CITES trade database (see Table 15). The only difference between the two sources is the following: CITES lists the exporting countries as Colombia, Nicaragua and Brazil and states that the country of origin is unknown in two of the cases; EU-TWIX states that the countries of origin were the same three countries.

TRAFFIC Bulletin

No seizures were reported in 'TRAFFIC Bulletin Seizures and Prosecutions, March 1997– October 2013'.

Annex II: CITES definitions of timber products and corresponding customs codes

The timber species listed in the CITES appendices are annotated to identify to which products the listing applies. The following (slightly amended) extract from CITES Resolution Conf. 10.13 (Rev. CoP15) on the 'Implementation of the Convention for timber species'¹⁰⁰ defines timber products listed in the appendices as follows:

Logs: All wood in the rough, whether or not stripped of bark or sapwood, or roughly squared, for processing, notably into sawn wood, pulpwood or veneer sheets (HS code 4403);

Sawn wood: Wood simply sawn lengthwise or produced by a profile-chipping process. Sawn wood normally exceeds 6 mm in thickness (HS code 4406 [railway or tramway sleepers], HS code 4407);

Veneer sheets: Thin layers or sheets of wood of uniform thickness, usually 6 mm or less, usually peeled or sliced, for use in making plywood, for veneering furniture, veneer containers, etc. (HS code 44.081); and

Plywood: 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 (HS code 4412131, HS code 4412141, and HS code 4412221).

[F]or the purpose of annotations in the Appendices for parts and derivatives of species traded as timber, definitions to be used should, to the extent possible, be based on the tariff classifications of the Harmonized System of the World Customs Organization

¹⁰⁰ <http://www.cites.org/eng/res/10/10-13R15.php>

Annex III: mahogany trading price data

Table 16: Average export prices, * 2000–11

Year	Country of export	Type	Average price (\$/m3)		
			Price 1	Price 2	Price 3
2000	Bolivia	Sawn wood	745		
2001	Bolivia	Sawn wood	887		
2002	Bolivia	Sawn wood	898		
	Mexico	Plywood	687	1,945	
	Mexico	Sawn wood	164	1,061	
	Suriname	Log	121		
2003	Bolivia	Log	943		
	Bolivia	Plywood	525		
	Bolivia	Sawn wood	527	918	
	Bolivia	Veneer	506		
	Mexico	Log	206		
	Mexico	Plywood	378	691	1,834
	Mexico	Sawn wood	562	728	986
2004	Bolivia	Plywood	583		
	Bolivia	Sawn wood	985	1,110	
	Bolivia	Veneer	1,613		
	Mexico	Log	794		
	Mexico	Plywood	473		
	Mexico	Sawn wood	187	189	567
2005	Bolivia	Sawn wood	1,110		
	Brazil	Sawn wood	758		
	Mexico	Log	754	761	
	Mexico	Plywood	502	1,084	
	Mexico	Sawn wood	98	1,173	
2006	Brazil	Sawn wood	207	572	
	Mexico	Log	1,117		
	Mexico	Plywood	723		
	Mexico	Sawn wood	271	1,361	
2007	Brazil	Sawn wood	1,619		
2009	Brazil	Sawn wood	970,563		
	Guatemala	Sawn wood	1,037		
2010	Guatemala	Sawn wood	239		
2011	Guatemala	Sawn wood	1,394		

Table 17: Average import prices,* 2000–11

Year	Country of import	Type	Average price (\$/m3)			
			Price 1	Price 2	Price 3	Price 4
2000	Canada	Plywood	478			
	Trinidad & Tobago	Sawn wood	2,762			
2001	Canada	Plywood	500			
	Trinidad & Tobago	Sawn wood	986	424	436	
	US	Sawn wood	751			
2002	Egypt	Log	278			
	Mexico	Plywood	687			
	Mexico	Sawn wood	164			
	Trinidad & Tobago	Sawn wood	440			
	US	Sawn wood	811			
	Venezuela	Sawn wood	258			
2003	Canada	Sawn wood	458			
	Mexico	Plywood	691	378		
	Mexico	Sawn wood	728	562		
	Trinidad & Tobago	Sawn wood	401	395		
	US	Sawn wood	848			
	Venezuela	Sawn wood	827			
2004	Canada	Sawn wood	91			
	Mexico	Plywood	473			
	Mexico	Sawn wood	187	189		
	Trinidad & Tobago	Sawn wood	202	283		
	US	Sawn wood	951			
2005	Canada	Sawn wood	71			
	Mexico	Plywood	502	1,084		
	Mexico	Sawn wood	98			
	Trinidad & Tobago	Sawn wood	413			
	Venezuela	Sawn wood	105			
2006	Brazil	Sawn wood	207			
	Canada	Sawn wood	113			
	Mexico	Plywood	723	714		
	Mexico	Sawn wood	271			
	New Zealand	Sawn wood	67			
	Rep. of Korea	Veneer	266			
	US	Sawn wood	1,132			
	Venezuela	Sawn wood	875			
2007	Canada	Sawn wood	313	289		
	Germany	Sawn wood	1,447			
	Indonesia	Sawn wood	2,317			
	Mexico	Plywood	526			
	Mexico	Sawn wood	237			
	Netherlands	Sawn wood	1,023	1,063		
	New Zealand	Sawn wood	8	761	14	1,210
	Portugal	Sawn wood	510			
	Rep. of Korea	Sawn wood	787			
2008	Canada	Sawn wood	768	723		
	Malaysia	Sawn wood	722			
	Netherlands	Sawn wood	1,072			
	New Zealand	Sawn wood	798	5012		
	Norway	Sawn wood	1,159			

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	Portugal	Sawn wood	28,020			
	Rep. of Korea	Sawn wood	907	544		
	Rep. of Korea	Veneer	3,585			
2009	Brazil	Sawn wood	970,563			
	Canada	Sawn wood	600	531		
	France	Sawn wood	820			
	Malaysia	Sawn wood	683			
	Netherlands	Sawn wood	1,033	1,035		
	New Zealand	Sawn wood	323	875	3,285	
	Norway	Sawn wood	2,377	2,387		
	Portugal	Sawn wood	6,468			
	Rep. of Korea	Sawn wood	277			
2010	Canada	Sawn wood	1,018	842		
	Estonia	Sawn wood	1,650			
	France	Sawn wood	813	812		
	Indonesia	Sawn wood	466			
	Malaysia	Sawn wood	619			
	Netherlands	Sawn wood	1,280			
	New Zealand	Sawn wood	726	788	792	725
	Norway	Sawn wood	473			
	Rep. of Korea	Sawn wood	257			
	Slovenia	Sawn wood	1,129			
2011	Canada	Sawn wood	798			
	Estonia	Sawn wood	240	921		
	Finland	Sawn wood	1,662	473		
	Lithuania	Sawn wood	912			
	Malaysia	Sawn wood	982			
	Malta	Sawn wood	1,014			
	New Zealand	Sawn wood	788	885	1,781	
	Norway	Sawn wood	270			
	Rep. of Korea	Sawn wood	415			
	Slovenia	Sawn wood	2,276	568	894	

*The ITTO *Annual review and assessment of the world timber situation* includes data on major species in trade, together with volumes and average prices when these were reported. Several prices are provided for some species/country combinations however, further details are not available on the reasons for the different prices provided. Price differences may reflect various factors such as the grade or thickness of the wood, market fluctuations, shipment size, etc.

Source: ITTO, 2002–12.

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