Looking Under the Veneer

IMPLEMENTATION MANUAL ON EU TIMBER TRADE CONTROL: FOCUS ON CITES-LISTED TREES*

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*** Cover: CITES-listed trees** - species included in
the Appendices of CITES and in the Annexes of
the EU Wildlife Trade Regulations
(Council Regulation (EC) No. 338/97;
Commission Regulations (EC) No. 1808/2001 and
No. 1497/2003)

Cover picture: Afrormosia (*Pericopsis elata*) –
Belgium Customs, Antwerp (2003)

CONTENTS

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INTRODUCTION

The European Union (EU) is an important destination and transit market for timber shipments from all over the world. These timber imports and re-exports involve many of the trees listed on the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which are also included in annexes A, B and C of the EU Wildlife Trade Regulations (Council Regulation (EC) N°338/97 and Commission Regulation (EC) N°1808/2001).

At present, CITES and the EU Wildlife Trade Regulations are an incomparable international regulatory tool through which enforcement officers can play a key role in combating illegal logging and related trade. Other regulatory measures, such as a phyto-sanitary certificate, for the control of trade in tropical timber around the world are currently limited and not backed with significant dissuasive sanctions. These measures do not provide for a sufficiently strong legal instrument to address the increasing illegal logging and its related timber trade. Supporters of a better-managed and controlled exploitation of tropical timber look upon the system of permits and certificates, linked to a preliminary non-detriment finding, designed and enforced under CITES provisions as a useful baseline regulation that can be adjusted and expanded upon.

With regard to CITES and EU Wildlife Trade Regulations enforcement, timber and its products require a different approach compared to other listed plant and animal species. Shipments are often large and difficult to control because it is unpractical to check the accuracy of volumes declared and identify the species, especially when semi-processed or processed timber or bark less logs is imported or re-exported. Administrative procedures and data processing are complex and not always used consistently; units declared on import permits or re-export certificates vary considerably. The heterogeneous utilisation of units does not only represent an obstacle to control and enforcement efforts but also to trade data analyses and thereby the monitoring of trade trends (volumes, countries of origin and transit, etc.). Additionally, numerous timber species cannot be distinguished macroscopically from other species of the same genus or even from species of other genera.
Currently, 23 timber species and two genera are listed on the Appendices of CITES and the Annexes of the EU Wildlife Trade Regulations. All these species are not exploited to produce timber, some of them, especially *Prunus africana* and *Guaiacum* spp., are exploited also as raw material for medicinal products and other forms of use.

The world and EU markets for timber and timber products are diverse, complex and prone to rapid changes, influenced by factors such as fashion, availability as well as restrictive measures taken to protect certain species, and by the effectiveness of control mechanisms in countries of first export, transit countries and / or destination countries.

The present manual is addressed to authorities in charge of the implementation and enforcement in EU Member States of CITES timber listings. The main objective is to provide the relevant information to authorities for improving their efficacy in controlling timber trade and thereby promote the effective implementation of EU Wildlife Trade Regulations in the timber sector.

Sections 3, 4, 5 and 6 are primarily formulated for enforcement agencies in the EU – customs and police, whereas other sections of the manual are of interest to the CITES Management authorities as well because of their relevance to the implementation of EU Wildlife Trade Regulations that concern timber.

METHODS

Some sections of the manual were specifically prepared to highlight technical, administrative and legal aspects, while others required the collection and analysis of trade data. The respective approaches used and the sources consulted are presented hereunder.

Information on timber trade into and from the EU, of tree species listed under the EU Wildlife Trade Regulations and CITES, was obtained directly from Management Authorities, enforcement agencies, business and trade associations and some traders. Besides contacts made through the TRAFFIC network, Internet research was performed to complement the study and fill some gaps. Different questionnaires was developed for authorities, organisations and traders' groups in order to gather technical information and details such as:

- Main points of entry into the EU;
- Volumes and dimension of illegal imports;
- Market structure and trends;
- Relevant authorities, scientists, other experts and traders;
- Practical problems encountered while handling CITES timber; and
- Suggestions for improved implementation of EU Regulations and national legislation.

Also, a number of interviews were carried out on the phone or through personal visits. In addition to interviews, TRAFFIC Europe staff carried out site visits to get further insight into enforcement officers' everyday experience in dealing with timber trade.

In accordance with CITES and the EU Wildlife Trade Regulations provisions, each EU Member States as well as all other CITES Parties are required to submit an Annual Report on their trade in all species listed on the Appendices and Annexes. The analysis of CITES timber trade data performed to prepare the present manual was based on CITES Parties' Annual Report for the period considered, 1992-2001; these data were compiled by the World Conservation Monitoring Centre of the United Nations Environment Programme (UNEP-WCMC) on behalf of the CITES Secretariat. WCMC data were provided in the form of comparative tabulations and covered the worldwide trade in all CITES listed tree species.

Importers' reported trade data (all trade reported by the importing countries) were taken into consideration throughout the study. Considerable differences between exporters' reported data and importers' data were frequently noted. Such discrepancies limit the validity and usefulness of official trade data and are, among others, the consequence of the fact that not all Parties comply with CITES provisions and some do not submit their report to the Secretariat, or miss the deadline by several months or sometimes, years.

Note 1: Country Codes used in the document are presented in Annex 1

Note 2: In section 4, the term 'timber' may concern logs, sawn wood, veneer, timber pieces or timber carvings. In many times, it is the only information available in the UNEP-WCMC *CITES Trade Database* to describe shipments traded.

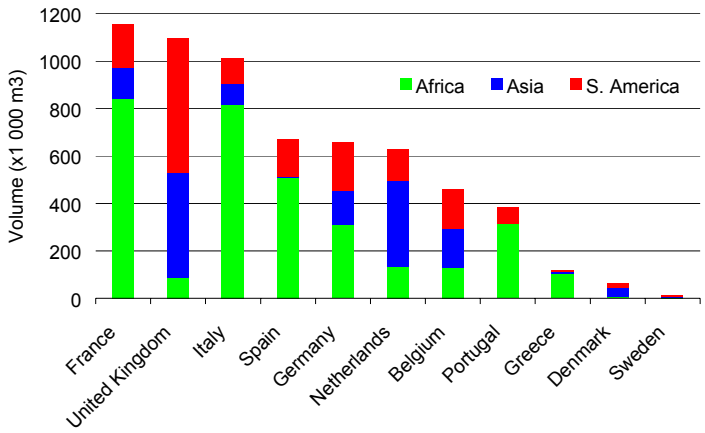
1. EU TROPICAL TIMBER TRADE OVERVIEW

In considering CITES timber trade (23 species and two genera) and the role of the EU, it is important to bear in mind that it represents just a small share of the international tropical timber trade characterized by a wide range of products derived from hundred of different species, most of which are not listed on EU Wildlife Trade Regulations. This section outlines the size and nature of import flows of timber products into the EU.

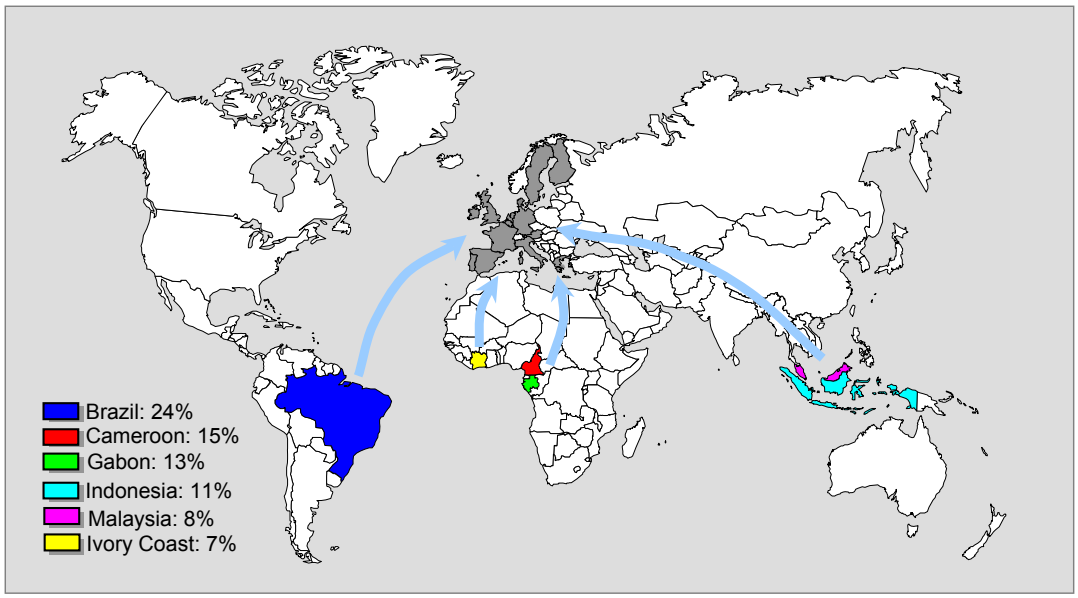
1.1. Countries of origin and main EU importers

The EU is a major recipient of tropical timber. In 2002 the EU imported more than 6 million cubic metres (m^3) of tropical timber, 51.9% from Africa, 26.0% from South America and 22.1% from Asia[1]. France, United Kingdom (UK) and Italy are the largest EU importers (Figure 1), followed by Spain, Germany and the Netherlands. Supply areas of the EU markets vary: France, Italy and Spain import mostly from Africa, whereas most UK imports comes from Asia and South America. In 2002, only six countries - Brazil, Cameroon, Gabon, Indonesia, Malaysia and Ivory Coast supplied 78% of EU tropical timber imports (Map 1).

Figure 1. EU imports of tropical timber in 2002 and supply areas (incl. logs, sawn wood, veneers and plywood)[1]



Map 1. Main suppliers of EU tropical timber imports[1]



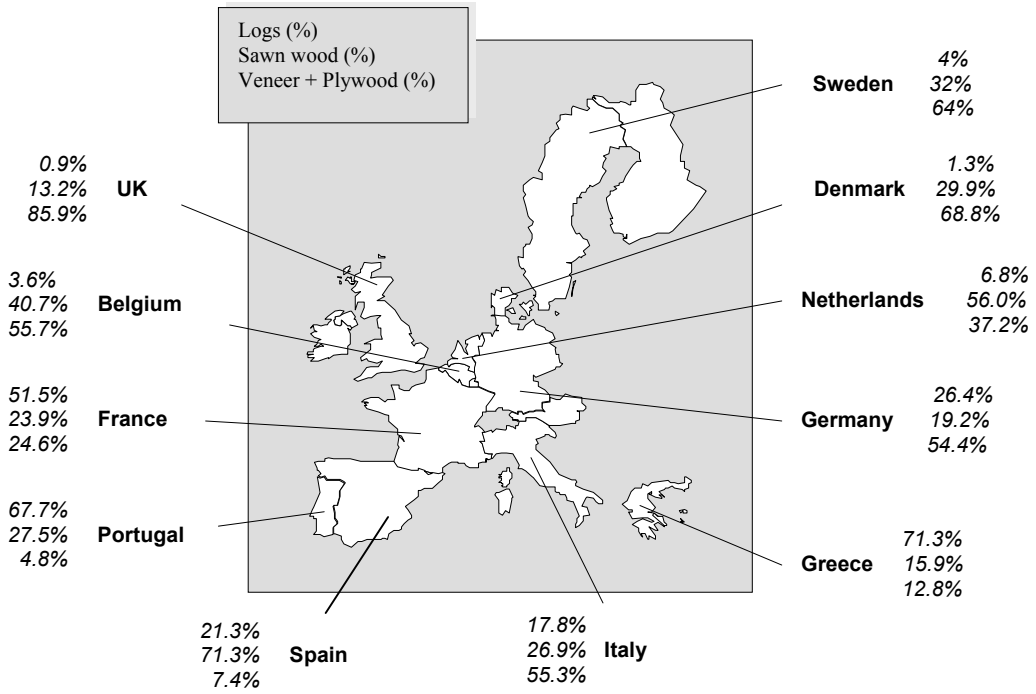
[1] *Source*: TRAFFIC Europe analysis of data from *European importation of tropical timbers*. European Hardwood Federation (UCBD) (2003) (Excl. imports into Austria, Luxembourg, Finland & Ireland)

1.2. Main products imported into the EU

Logs, sawn timber, veneers and plywood are the four main types of tropical timber products imported into the EU. In 2002, France was the main EU importer of logs, followed by Italy, Portugal and Spain. Sawn wood was principally imported by Spain, Italy, Netherlands and France, whereas veneer and plywood were shipped into the UK, followed by Germany, France and Belgium[2]. The share of different types of products imported by each EU Member States is illustrated in Figure 2, which results from the analysis of data published by *UCBD* (European Hardwood Federation).

Generally, shipments of wood products contain a wide variety of logs and processed products, species and sizes – particularly when they are transported from tropical producing countries to importing countries. Secondary processed products, such as furniture, that are often made of several species of timber and that originate from different countries, can cause additional complication.

Figure 2. Timber and wood products imported per EU country in 2002[2]



1.3. Internal EU trade

Intra-EU trade in tropical timbers is also important but difficult to estimate due to the absence of systematic border controls and customs recordings. The information on intra-EU trade in tropical timber readily available from official sources for the preparation of the present manual was inadequate to draw an accurate and reliable picture of the situation of the – volumes and routes of intra-EU tropical timber movements. However, the examples below illustrate the not insignificant share of tropical timber traded between EU Member States –inside the 'Single Market', and the diversity of routes taken.

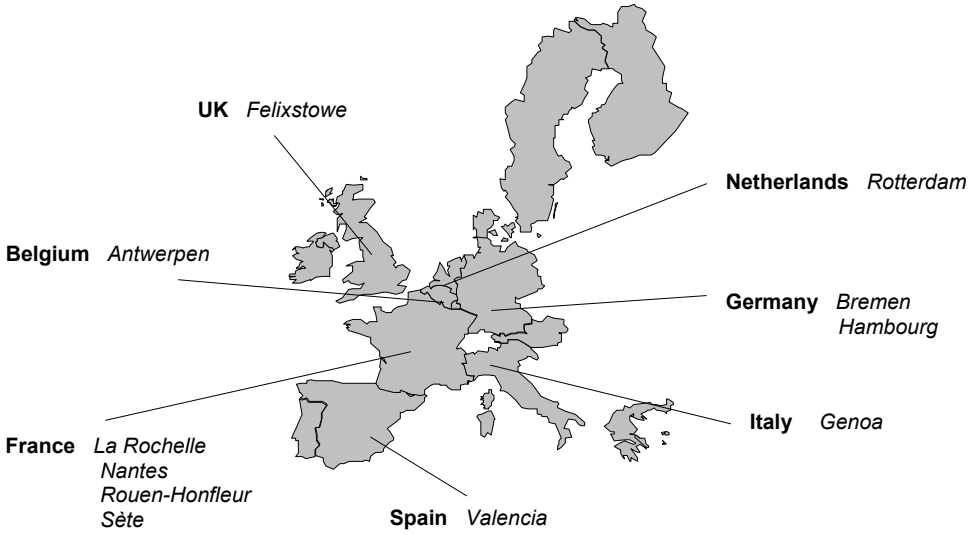
In 2001, the combined volumes of tropical timber imports into Denmark amounted approximately to 110 000 tonnes (t), of which 84 000t were imported directly from tropical countries, whilst 26 000t entered Denmark through ports of entry in other EU Member States, mainly Germany and France[3]. In February 2002, a shipment of Afrormosia wood (listed in EU Wildlife Trade Regulation Annex B and Appendix II of the CITES) seized in the Netherlands, had been imported by a German wood merchant in Hamburg and then re-exported to the Netherlands and used at a later stage by a wood processor in Belgium[4].

[2] *Source*: TRAFFIC Europe analysis of data from *European importation of tropical timbers*. European Hardwood Federation (UCBD) (2003) (Excl. imports into Austria, Luxembourg, Finland & Ireland)
[3] C.L. Jensen, Danish Ministry of Environment, *in litt.* to TRAFFIC Europe, October 2003
[4] The Dutch General Inspection Service AID. Press release 22 February 2002

1.4. Ports of entry

According to EUROSTAT[5] there are 985 seaports in the (enlarged) EU. Many of these are very small fishing or yachting ports, with the commercially relevant ones representing less than one third of the total and total about 285 ports[6]. The number of ports of entry for timbers in the EU is more limited and the number of ports of entry for tropical timbers is even more limited. The main ports of entry for tropical timbers in the EU are illustrated in Figure 3.

Figure 3. Main ports of entry for tropical timbers in the EU [7] [8]



[5] EUROSTAT is the Statistical Office of the European Communities, publishing official harmonised statistics on the European Union.
[6] P. Verhoeven, European Sea Ports Organisation, *in litt.* to TRAFFIC Europe, January 2004.
[7] S. Speed, ATIBT (Association technique internationale des bois tropicaux), *in litt.* to TRAFFIC Europe, December 2003
[8] *Source*: Saunders, J. & Brack, D. (2003). Background study of tropical timber export and import trade statistics. The Royal Institute of International Affairs (RIIA), London, UK.

2. REGULATIONS TO CONTROL EU IMPORTS OF TIMBERS

The number of EU regulations to control imports and re-exports of timber is very limited. The legal framework for the performance of customs controls is found in the existing Community legislation. For the timber trade, the following legislation applies:

2.1. Common Customs Tariff and Combined Nomenclature

- *The Common Customs Tariff*: The tariff is the name given to the combination of the Combined Nomenclature (CN), or classification of goods and commodities, and the duty rates, which apply to each class of goods. It is common to all EU Members States, but the rates of duty differ from one kind of products to another pending its economic sensitivity (value) and origin. The 'Common Customs Tariff' applies to the import of goods across the external borders of the EU.
- *The Combined Nomenclature (CN)*: When declared to customs of the European Community (EC), goods must generally be classified according to the CN. Imported and exported goods have to be declared stating under which subheading of the nomenclature they fall. This determines which rate of customs duty applies and how the goods are treated for statistical purposes. The CN is a tool for the designation of goods and merchandise, which was established to meet simultaneously, the requirements of both the Common Customs Tariff and the external trade statistics of the EC and is published annually in the Official Journal of the European Communities.

  The CN is derived from the Harmonized System (HS) –originally called Harmonized Commodity Description and Coding System, of the World Customs Organization (WCO) with additional detailed EC subdivisions referred to as "CN subheadings". Each CN subheadings has an eight-digit code. The first six digits refer to the HS headings and subheadings. The seventh and eighth digits represent the CN subheadings. The ninth and tenth digits represent Taric[9] subheadings. The HS is subject to regular reviews and amendments. The latest edition came into effect on 1 January 2002 and timber species were added to the harmonised six-digit codes. The next review cycle has already started; it will be implemented in 2007[10].

Chapter 44 of the CN relates to timber products and in particular to 'tropical wood', but timber data may also fall under Chapter 82 (for example, tools, implements and particularly cutlery which use precious woods), Chapter 92 (for example, musical instruments and their parts and accessories e.g. guitars and pianos), Chapter 94 (for example, furniture, lamps and lighting fittings, prefabricated buildings), Chapter 95 (for example, toys, games, sports requisites) and Chapter 97 (for example, works of art). The term 'tropical wood' makes reference to a list of species/genus (see subheading note 1. and additional note 2. of chapter 44), which includes the following CITES-listed species/genus: Afrormosia (*Pericopsis elata*), Cedro (*Cedrela* spp.), Mahogany (*Swietenia* spp.), Palissandre de Rio (*Dalbergia nigra*) and Ramin (*Gonystylus* spp.).

The CN gives specific codes for several tropical timber species (e.g. 4403 49 20 is the specific CN code for 'Okoumé *Aucoumea klaineana* wood in the rough, whether or not stripped of bark or sapwood, or roughly squared'). However, CITES-listed species/genus that are also included in the EU Wildlife Trade Regulations are currently always grouped together with other categories of woods, which prevents EU customs from recording their import separately i.e. per species.

2.2. Phytosanitary Regulation

The import of particular species of timber that may carry pests likely to be dangerous to EU plant health is subject to inspection by plant health officers. Plants, plant products and other derivatives the introduction of which shall be prohibited in the EU are listed in Annex III part A of Council Directive 2000/29/EC (e.g. *Castanea* spp., *Acer* spp., *Quercus* spp., *Platanus* spp., etc.). Timber species that are subject to phyto-sanitary restrictions must be accompanied with a valid phyto-sanitary certificate. None of the CITES timber species are affected by this Regulation[11].

[9] The European Commission established the Integrated Tariff of the EC (Taric) based on the CN.
[10] World Customs Organization, pers. comm. to TRAFFIC Europe, December 2003
[11] V. Huyshauwer, Federal Agency for the Safety of the Food Chain, Belgium, pers. comm. to TRAFFIC Europe, October 2003

2.3. CITES and EU Wildlife Trade Regulations

Due to the EU Single Market and the absence of systematic border controls within the EU, CITES provisions must be implemented in a uniform way in all EU Member States. This is done through the implementation of the EU Wildlife Trade Regulations, principally Council Regulation (EC) No. 338/97 and Commission Regulation (EC) No. 1808/2001.

Wood species included in the annexes of Council Regulation (EC) No. 338/97 are listed in the Commission Regulation (EC) No. 1497/2003. These species, all their specimens, including parts and derivatives, may only be introduced into or re-exported from the EU, and receive customs approved treatment or use, if they are accompanied by a valid CITES permit or certificate. These imports and re-exports are allowed exclusively through officially designated "ports of entry". According to Council Regulation (EC) No. 338/97, Member States shall designates customs offices for carrying out the checks and formalities for the introduction into and export from the EU, in order to assign to them a customs-approved treatment or use. All offices shall be provided with sufficient and adequately trained staff.

2.3.1. Overview of species listed in the EU Wildlife Trade Regulations

Currently, 23 timber species and two genera are listed under the Annexes A, B and C (no timber species listed in Annex D) of the EU Wildlife Trade Regulations. Seven species are listed in Annex A, 12 species and one genus in Annex B and four species and one genus in Annex C (Table 1, next page).

Only some parts and derivatives of the relevant tree species are regulated by CITES and EU Wildlife Trade Regulations. A list of these parts and derivatives is provided in Table 5 (see *section 3.4.)*.

2.3.2. CITES Resolutions, Decisions, Notifications and Reservations related to timber

An overview of CITES Resolutions, Decisions and Notifications to the Parties, relevant to CITES-listed trees is given in Table 2. All the documents are available on: http://www.cites.org.

Table 2. Valid CITES Resolutions, Decisions, Notifications and Reservations related to timber

Resolutions	
Conf. 10.13	Implementation of the Convention for timber species
Conf. 12.3 (*section XI*)	Permits and Certificates (*Section XI. Regarding permits and certificates for timber species included in Appendices II and III with the annotation 'Designates logs, sawn wood and veneer sheets'*)
Decisions	
12.21	Bigleaf Mahogany Working Group
12.66 to 12.71	*Aquilaria* species
11.114 (Rev.COP12)	*Guaiacum* species
Notifications	
2003/070 (12.11.03)	Implementation of the Appendix II listing of *Swietenia macrophylla*
2003/062 (10.10.03)	DEMOCRATIC REPUBLIC OF CONGO (DRC) – Conditions for trade
2003/040 (23.05.03)	DEMOCRATIC REPUBLIC OF CONGO (DRC) – Verification of export permits
2002/041 (24.06.02)	CITES Identification Guide – Tropical Woods
2001/053 (10.08.01)	INDONESIA: Trade in Ramin (*Gonystylus* spp.)
2000/039 (31.07.00)	CHILE - Pre-Convention stocks of Alerce (*Fitzroya cupressoides*)
1998/19 (27.04.98)	Vernacular Names of Timber Species
Reservations	
Chile	*Fiztroya cupressoides* *
Liechtenstein, Switzerland	*Taxus wallichiana* **
Malaysia	*Gonystylus* spp.***

* Reservation applicable only to the coastal population of Chile

** Designates all parts and derivatives, except: a) seeds and pollen b) seedling or tissue cultures obtained *in vitro*, in solid or liquid media, transported in sterile containers c) cut flowers of artificially propagated plants d) chemical derivatives and finished pharmaceutical products

*** Reservation applicable only to all recognizable parts and derivatives except sawn timber and logs; designates all parts and derivatives, except: a) seeds, spores and pollen (including pollinia) b) seedling or tissue cultures obtained *in vitro*, in solid or liquid media, transported in sterile containers c) cut flowers of artificially propagated plants

Table 1. History of all CITES-listed tree species and genera
(for Common names see Table 3; for Annotations see Table 5).

App.	Species / Genus	Date of listing	History
Appendix I / A	*Abies guatemalensis*	03.03.1973	-
	Araucaria araucana	15.11.2002	➡ 1975: inclusion in App. I of the Chilean population ➡ 2000 (CoP11*): inclusion of the Argentinean population in App. I and of all remaining populations (non-native populations) in App. II ➡ 2002 (CoP12): inclusion of all populations in App. I
	Balmea stormae	03.03.1973	-
	Dalbergia nigra	11.06.1992	-
	Fitzroya cupressoides	03.03.1973	-
	Pilgerodendron uviferum	03.03.1973	-
	Podocarpus parlatorei	03.03.1973	-
Appendix II / B	*Aquilaria malaccensis*	01.02.1995	-
	Caryocar costaricense	03.03.1973	-
	Guaiacum spp.	15.11.2002	➡ 1973 (origin of CITES): listing of *G. sanctum* in App. II ➡ 1992 (CoP8): listing of *G. officinale* in App. II ➡ 2002 (CoP12): listing of the whole genus in App. II for look-alike reasons [Art. II.2 (b)], especially *G. coulteri*
	Oreomunnea pterocarpa	11.06.1992	[Synonym: *Engelhardtia pterocarpa*] ➡ (CoP8) but originally (03.03.1973) listed in App. I
	Pericopsis elata	11.06.1992	-
	Platymiscium pleiostachyum	18.01.1990	➡ (CoP7) but originally (03.03.1973) listed in Appendix I
	Podophyllum hexandrum	18.01.1990	-
	Prunus africana	16.02.1995	-
	Pterocarpus santalinus	16.02.1995	-
	Swietenia humilis	03.03.1973	-
	Swietenia macrophylla	15.11.2002	➡ Neo-tropical populations ➡ CoP12: transfer of all populations to App. II ➡ 15 November 2003: Entry into effect of App. II listing ➡ 19 March 1998: first listing of Bolivian population in Appendix III, Brazilian population on 26 July1998 (by Brazil), Costa Rica (all populations of the species in the Americas; 16.11.1995), Colombia (population of Colombia; 29.10.2001), Mexico (population of Mexico; 29.04.1998) and Peru (population of Peru; 12.06.2001).
	Swietenia mahagoni	11.06.1992	-
	Taxus wallichiana	16.02.1995	➡ 2000 (CITES Doc. PC 10.13.3): analysis of issues related to the listing of *T. wallichiana*. Problems analysed by US Fish and Wildlife Service, the taxonomy of the genus is not well understood and species, parts and products derived from *Taxus* spp. can look very similar or be indistinguishable. Future listing of other species or the whole genus might be considered.
Appendix III / C	*Cedrela odorata*	12.06.2001 15.11.2002	➡ Entered by Peru ➡ Entered by Columbia
	Dipteryx panamensis	13.02.2003	➡ Entered by Costa Rica
	Gonystylus spp.	06.08.2001	➡ Entered by Indonesia with a 'Zero Export Quota', except for two exporting companies
	Magnolia liliifera var. obovata	16.11.1975	➡ Entered by Nepal ➡ 24.10.1977: reservation by Denmark, withdrawn on 1 Jan. 1984 ➡ Formerly included as *Talauma hodgsonii*; also referenced as *Magnolia hodgsonii* and *Magnolia candollii var. obovata*
	Podocarpus neriifolius	16.11.1975	➡ Entered by Nepal

(*) CoP11: Eleventh meeting of the Conference of the Parties to CITES

3. BACKGROUND INFORMATION ON CITES-LISTED TREE SPECIES

3.1. Common / commercial names and natural range

Imported and re-exported CITES listed species may be indicated by their common names, commercial names or by local names. A list of names in English, French and Spanish (three officials languages of CITES) is presented in table 3 below. Annex 2 gives common and/or commercial names in additional languages (e.g. Dutch, German, Portuguese, Italian, Finnish, Thai, etc.) and sometimes also in local names.

The majority of CITES-listed trees have their natural range in Latin America (15 species + *Guaiacum* spp.), with one of these species –*Swietenia mahagoni* and possibly also *Guaiacum coulteri*, extending into the southern parts of North America (USA). Five species and *Gonystylus* spp. have their natural range in Asia and only two species (*Pericopsis elata* and *Prunus africana*) in Africa. None of the CITES-listed tree species grow naturally in Europe or in Oceania.

Table 3. Common / commercial names and natural range of CITES-listed tree species in January 2004

App.	Species / Genus	Common/commercial names			Natural Range
		English	French	Spanish	
Appendix I / A	*Abies guatemalensis*	Guatemalan Fir	Sapin du Guatemala	Pinabete Abeto mexicano	El Salvador Guatemala Honduras Mexico
	Araucaria araucana	Monkey Puzzle Tree Chilean Pine	Pin du Chili Désespoir du singe	Araucana Araucaria Araucaria de Neuquen Araucaria imbricada Gúillo Pino Pino araucana Pino araucaria Pino chileno Pino de Chile Pino de Neuquen Pino hachado Pino piñonero Pino solo	Argentina Chile
	Balmea stormae	Ayuque	Ayuque	Ayuque Ayugue	El Salvador Guatemala Honduras Mexico
	Dalbergia nigra	Bahia Rosewood Brazilian Rosewood Rio Rosewood Rosewood Pianowood	Palissandre du Brésil Palissandre de Rio	Acaranda preto Jacarandá de Bahía Jacarandá de Brasil Jacarandá de indios Jacarandá negro Palissandro de Brasil Palisandro del Rio Palo de rosa Saborana	Central America South America Brazil
	Fitzroya cupressoides	Chilean false larch Patagonian cypress	Bois d'Alerce Fitzroia	Alerce Ciprés de la Patagonia False alerce chileno Lahual Lahuan Lahuen	Argentina Chile
	Pilgerodendron uviferum	Chilean cedar	Cèdre du Chili Cyprès du Chili	Cedro Ciprés chileno Ciprés de las Guaitecas Ciprés de las Guayatecas Ciprés de las Islas Len Lahuán	Argentina Chile
	Podocarpus parlatorei	White pine Parlatore's podocarp	Pin blanc	Pino blanco Pino del cerro Pino montano	Argentina Bolivia Peru

App.	Species / Genus	Common/commercial names			Natural Range
		English	French	Spanish	
Appendix II / B	*Aquilaria malaccensis*	Agar Agar wood Agarreal Agilawood Aloeswood Eaglewood Gaharu Malayan eaglewood tree	Agar Bois d'aigle de Malacca	Madera de agar	South-East Asia Bangla Desh Bhutan India Iran Indonesia Malaysia Myanmar Philippines Singapore Thailand
	Caryocar costaricense	Aji	Ajo Caryocar du Costa Rica	Achiotillo Ají Ajillo Ajo Almendrillo Almendro de bajo	Colombia Costa Rica Panama Venezuela
	Guaiacum spp.	Ironwood Lignum-vitae Pockwood Sonora guaiacum Tree of life Wood of life *G. sanctum:* Bastard lignum-vitae	Bois de gaïac Bois de vie Bois saint Gaïac Gaïac blanc Gaïac femelle Gayac *G. officinale :* Bois néphrétique *G. sanctum* : Gaïac du Nicaragua	Guaiacanillo Guajacum Guayacán Guayacán prieto Leno de guayaco Madera de gaiac Palo de hierro Palo de ropa Palo de vida Palo santo Trimarindillo Vera amarilla/o Vera prieta/o *G. officinale:* Guayacán amarillo / azul / blanco / negro *G. sanctum:* Guayacán de playa	Honduras Nicaragua Panama Mexico West Indies Colombia Venezuela (More details in *Section 4.3.2.1*)
	Oreomunnea pterocarpa	Caribbean walnut Gavilán walnut		Gavilán Gavilán blanco	Costa Rica Mexico Panama
	Pericopsis elata	African satinwood African teak Afrormosia Gold teak Golden afrormosia Satinwood Yellow satinwood	Afrormosia Asamela Assamela Ghana asamela Oleo Pardo Teck d'Afrique	Afrormosia Baracara Peonio Teca africana	Ivory Coast Ghana Cameroon DRC Congo-Brazzaville CAR Nigeria
	Platymiscium pleiostachyum	Quira macawood		Cachimbo Cristóbal Ñambar	Costa Rica El Salvador Nicaragua
	Podophyllum hexandrum	Duck's foot Himilayan may-apple Indian apple Mandrake Wild lemon		Podofilo del Himalaya	Himalaya
	Prunus africana	African cherry Blackwood Kanda stick Pygeum Red Stinkwood Red ivory	Cerisier Africain Prunier d'Afrique Pygeum	Ciruelo africano	Angola Burundi Cameroon DRC Equatorial Guinea Ethiopia Kenya Madagascar Mozambique Rwanda São Tomé and Principe South Africa Sudan Swaziland Tanzania Uganda Zambia Zimbabwe
	Pterocarpus santalinus	Red sandalwood Red sanderswood Ruby wood Saunderswood	Santal rouge	Sándalo rojo Sandalo	India

App.	Species / Genus	Common/commercial names			Natural Range
		English	French	Spanish	
Appendix II / B	*Swietenia humilis*	Honduras mahogany Mexican mahogany	Acajou Acajou d'Amérique Acajou de la cote du Pacifique Acajou du Mexique	Caoba de Honduras Caoba de Pacífico Cobano	Costa Rica Belize El Salvador Guatemala Honduras
	Swietenia macrophylla	Bigleaf mahogany Big leaf mahogany Big-leaved mahogany Brazilian mahogany Honduras mahogany	Acajou Acajou à meubles Acajou à grandes feuilles Acajou d'Amérique Acajou du Honduras Acajou du Venezuela Acajou tabasco	Aguano Aguano de Tabasco Aguano venezolano Ahuano	Belize Mexico Costa Rica El Salvador Guatemala Honduras Nicaragua Panama Dominica Guyana French Guiana Suriname Bolivia Colombia Venezuela Ecuador Brazil Peru
	Swietenia mahagoni	American mahogany Cuban mahogany West Indian mahogany	Acajou Acajou de Cuba Acajou de Haiti Acajou de Saint-Domingue Acajou des Antilles Acajou mahogani Acajou ronceux Acajou San Domingo Mahogani de petites feuilles	Aguano Caoba española	Cuba Dominica Jamaica Bahamas Florida
	Taxus wallichiana	Himalayan yew	If de l'Himalaya	Tejo del Himalaya	Afghanistan Bhutan China India Nepal Pakistan Vietnam Myanmar
Appendix III / C	*Cedrela odorata*	Cedar Cedarwood Cedra Cedrela wood Central American cedar Cigarbox cedar Cigar-box wood Red cedar Spanish cedar Stinking mahogany Southern cedar South American cedar Tabasco cedar Trumpet cedar West Indian cedar	Acajou Acajou à meubles Acajou à planches Acajou amer Acajou blanc Acajou cedrel Acajou de Cayenne Acajou de la Guyane Acajou (du) pays Acajou faux Acajou femelle Acajou rouge Acajou senti Cedrat Cedre acajou Cedrela	Atoccedro Calicedro Casludra Cedro amargo Cedro blanco Cedro caoba Cedro caqueta Cedro cebollo Cedro clavel Cedro colorado Cedro crespo Cedro dulce Cedro hembra Cedro macho Cedro oloroso Cedro real Cedro rojo Cedro virgen Cobano Nogal cimarron	Central America Mexico Caribbean Tropical regions of South America
	Dipteryx panamensis			Almendro Almendro de montaña Almendro del monte	Costa Rica Nicaragua Panama
	Gonystylus spp.	Ramin	Ramin	Ramin	Malaysia Indonesia Papua New Guinea P¨hilippines Singapore Solomon Islands
	Magnolia liliifera var. obovata	Magnolia			Bhutan China India Nepal Papua New Guinea
	Podocarpus neriifolius	Black pine Brown pine Low mountain podocarp	Cyprès	Cipresillo Cipresillo loreto Pino castaneto Pino chaquiro Podo de Asia	China Nepal

3.2. Use of tree species

Whether traded internationally or used locally, the categories of use of CITES-listed tree species can be presented as follow:

- *Firewood Use*: raw material burned for energy generation. Either the entire tree or parts of the tree can be used such as branches or dried leaves. Firewood use is not necessarily detrimental to the individual tree if only renewable parts are used.
- *Timber Use*: wood is processed into goods and materials for all kinds of practical applications, usually in exterior or interior buildings design or vehicles (e.g. trains). For instance furniture, veneer, plywood, paneling, flooring, railway sleepers and others. In arts, the timber of some CITES listed species is used to produce picture frames or musical instruments – such as guitars, violins, etc.
- *Medicinal Use*: parts and derivatives are used as ingredients for medicinal purposes. Raw material from trees is used both in traditional medicines, homeopathy and modern western medicine. Those parts / derivatives frequently used for medicinal purposes are resins, leaves, bark, flowers and fruits.
- *Nutritional Use*: parts and derivatives are consumed as food, ingredients of composed nutrition or teas. Distinction between medicinal and nutritional use is not always clear. Most often, fruits, flowers, leaves, bark are used in nutritional use.
- *Ornamental Use*: whole or parts of tree's are used for decoration in exterior or interior design without any particular practical functions. Often, the wood of trees with especially attractive colors or grain is used for this purpose (e.g. wood carvings, picture frames, etc.). Occasionally, live specimens of species regarded as attractive are kept in public or private gardens for ornamental purposes, such as or *Araucaria araucana* or *Metasequoia glyptostroboides.*
- *Cosmetic Use*: several tree species produce parts that are used by the cosmetic industry, such as blossoms, which provide natural dyes.
- *Ceremonial Use*: parts or derivatives of several tree species can be used for religious purposes. Mostly leaves or resins are used for their oils and fragrances, but occasionally also branches of certain species fulfill a traditional ceremonial purpose.
- *Agricultural Use*: trees can be used in agriculture to provide shade or windbreaks for crops. An example is the plantating of *Cedrela odorata* in coffee plantations in Central America. Parts of trees can also serve as poles in cultures of special crops.

Firewood and nutritional use do not play a role in the international trade of CITES-listed tree species, and ceremonial use is of minor importance. Most frequently, CITES-listed trees are traded internationally for their timber, occasionally also for medicinal use or for ornamental purposes.

The most commonly known uses of timber species listed in the annexes of the EU Wildlife Trade Regulation are presented below:

Abies guatemalensis (Pinaceae): *timber and firewood*
A. guatemalensis is known to be used since Mayan times as lumber and for construction work. For this purpose, it was also highly appreciated and used by the Spaniards during the colonization of Central America[12]. The species has also been traditionally sold on domestic markets of range States as an inexpensive source of wood. Today it is preferred for roof-shingles, building material, charcoal and especially for firewood (domestic market)[13].

Araucaria araucana (Araucariaceae): *timber, ornamental and nutritional*
A. araucana has been used as lumber and for construction work, for furniture design and interior woodworking since at least the mid-19th century; it has also been used in aircraft construction and for producing pulp. The trunks were also used in the shipbuilding industry as masts for sailing boats. Seeds are also reported to have been used as animal fodder. With the Pehuenche Indians in Chile, *A. araucana* is said to have a strong spiritual value and has some relevance for harvest and fertility ceremonies[14]. Local communities also roast the seeds and use them as nutrition[15].

[12] UNEP – WCMC (1998). Contribution to an evaluation of tree using the new CITES listing criteria. 74pp.
[13] UNEP – WCMC (1998) *supra*
[14] University of Bonn, Germany (www.botanik.uni-bonn.de)
[15] University of Bristish Columbia, Vancouver, Canada (www.botany.ubc.ca)

Since the Victorian age, the tree has been highly appreciated as an ornamental plant throughout the world, especially in North America and Europe, where it can be found in many parks and private gardens.

Aquilaria malaccensis (Thymelaeaceae): *medicinal, ceremonial and timber*
A. malaccensis becomes regularly infected by the parasitic fungus *Phialophora parasitica* and subsequently produces an aromatic resin, which has been used since ancient times as an insect repellent. This resin is called 'agarwood', 'aloeswood' or 'oud'. Agarwood is highly appreciated in Asian medicine, and is used in Traditional Chinese medicine as well as Ayurvedic, Tibetan and Unani medicines[16]. In Japan, incense is produced from the heartwood resin of infected *A. malaccensis* trees.

Apart from the use in medicine and incense production, the wood of *A. malaccensis* is used to produce wooden boxes and paper.

Balmea stormae (Rubiaceae): *timber and ornamental*
B. stormae has been used as timber in its natural range. Due to its scarlet-red flowers, however, the species is mostly used for ornamental purposes, being cut and sold as Christmas trees and sold in local markets in the Uruapan area in Michoacán / Mexico[17].

Caryocar costaricense (Caryocaraceae): *timber and medicinal*
Amongst other purposes, it is used for producing railway sleepers and for bridge construction. The bark of *C. costaricense* is also used for medicinal applications[18].

Cedrela odorata (Meliaceae): *timber, medicinal and agricultural*
C. odorata produces a fine, valuable wood, which is easily processed and highly durable, and is therefore highly sought after in international trade. It is used for making musical instruments (mainly guitars and string instruments) or for the production of ornamental containers such as cigar boxes. In addition, it is used for the production of veneer, plywood, wooden panels, light constructions and other applications, mostly in interior design and humidor linings[19]. The wood of *C. odorata* is used for high quality furniture design and by cabinet-makers.
In traditional medicine, the bark of *C. odorata* is used as a febrifuge and tonic remedy due to its astringent potential; also the leaves are said to be used for medicinal purposes[20].
In agriculture, *C. odorata* is planted in cocoa or coffee plantations to provide shade and to serve as a windbreak.

Dalbergia nigra (Fabaceae)[21] [22]: *timber*
The wood of *D. nigra* is very valuable and highly priced. The timber is used for luxury furniture, in cabinet making, cutlery handles, tools and hilts of weapons, brush backs, billiard cue butts, parquet flooring, veneer, decorative plywood, panels and doors. The wood machines and veneers well; given the oily characteristics of its heartwood, *D. nigra* can be glued relatively easily. In arts, *D. nigra* timber is popular for making sculptures and musical instruments such as guitars, mandolins, castanets, pianos and violins.

Dipteryx panamensis (Fabaceae): *timber and firewood*
In most range countries, the species is logged for its high quality wood, being used both in construction and as firewood.

Fitzroya cupressoides (Cupressaceae): *timber and ornamental*
The wood of *F. cupressoides* is exceptionally durable and attractive and has therefore been used mainly in house construction and as roof shingles[23]. Owing to its lightweight and straight grain, it can easily be worked and was, for many centuries, used by coopers and cabinetmakers and in boat construction for masts and spars[24].

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[16] Oller, D. (2001). Aloes Wood, *Aquilaria malaccensis* Lam (www.oller.net/aloes_desc.htm)
[17] UNEP – WCMC (1998) *supra*
[18] UNEP – WCMC (1998) *supra*
[19] www.kestrelcreek.com
[20] www.arbolesornamentales.com
[21] Universidad de Cordoba, Spain: www.uco.es/organiza/servicios/jardin/cd1/Maderas%20CITES
[22] Miller, R.B. (2000) *supra*
[23] Golte, W. (1996): Exploitation and conservation of *Fitzroya cupressoides* in southern Chile - In: Hunt, D. (ed.): *Temperate trees under threat*. Internartional Dendrology Society, Great Britain.
[24] University of Bonn: www.botanik.uni-bonn.de

***Gonystylus* spp.** (Gonystylaceae): *timber*
Ramin is used and highly valued as timber both in the range countries and on the international market. According to Groves & Clarke (2002), Ramin import commodities have shifted from sawn timber to semi-processed timber products such as dowels, decorative mouldings, wood beads, wooden blinds and shutters, picture frames, wooden doors, furniture components, flooring, curtain rods, umbrella poles, futons, snooker and pool cues, tool handles, and technical drawing implements including set squares and veneer.

***Guaiacum* spp.** (Zygophyllaceae): *timber, firewood, ornamental, medicinal* and *cosmetic*
The genus *Guaiacum* is one of the most diversely used tree species in international trade, as its parts can –except for firewood, be used for various sorts of ornamental, construction, medicinal and cosmetic purposes. *G. coulteri* is harvested, marketed and used locally as firewood and as raw material for popular arts, handicraft and ornamental purposes. Throughout its range, *Guaiacum* is well known for its medicinal use, especially powerful as expectorant and blood purifying drug[25].
Internationally, *Guaiacum* is rarely used for its medicinal purposes but more as a valuable timber, because of the tree's hard wood characteristics. It is often used for mechanical tools, such as bearings, pulley sheaves, propeller shafts, bowling balls[26], handles and heaths, caster wheels and for turnery. Annually, about 20-40 tonnes of *Guaiacum* spp. wood chips and heartwood resin are used as a natural aromatic substance by the liqueur industry in Germany[27].

Magnolia liliifera var. obovata (Magnoliaceae): *ornamental*
This species (previously known as *Talauma hodgsonii* or *Magnolia hodgsonii*) is mainly traded for its beautiful flowers and ornamental character in gardens.

Oreomunnea pterocarpa (Juglandaceae): *timber*
The species is locally used for the construction of houses and for interior design.

Pericopsis elata (Fabaceae): *timber*
P. elata is quite popular for its timber, basically because its texture and other wood characteristics are similar to those of Teak (*Tectona grandis*) (hence the origin of the Spanish name 'Teca africana – African teak'). Furniture sold in the USA under the name of *Tectona grandis* has occasionally been manufactured from *P. elata* timber. The timber is mainly used in exterior and interior work (e.g. boat building, furniture, wooden boxes, ceiling panels, parquet floorings, joinery, etc.). Primex Parquet / Parcafrique (www.primexparquet.it) is one of the main Italian companies involved in the production and trade of *P. elata* from DRC to Italy.

Pilgerodendron uviferum (Cupressaceae): *timber and agricultural*
Owing to the good quality and the extraordinary resistance of its timber to humid soil, the species has been domestically used for producing poles for vineyards in the central parts of Chile[28], for wire-poles throughout the region and has been frequently used locally for the construction of houses, floors, doors, window-frames and furniture[29].

Platymiscium pleiostachyum (Fabaceae)*: timber*
The quality of the hardwood of *P. pleiostachyum* is high. Therefore, timber of this species has traditionally been used for making furniture, for high-quality cabinet making, veneers, tools and toys, musical instruments, especially the marimba, a Guatemalan xylophone, flooring, bridge building and construction work[30].

Podocarpus neriifolius (Podocarpaceae): *timber*
P. neriifolius is used locally and domestically for general construction works, for car parts, panels, furniture and interior design.

Podocarpus parlatorei (Podocarpaceae): *timber*
P. parlatorei is used locally and domestically for structural work and parquet flooring.

[25] Grow, S. & Schwartzman, E (2001) *supra*
[26] Grow, S. & Schwartzman, E (2001) *supra*
[27] Barsch, F., Honnef, S. & Melisch, R. (2002). Handel mit *Guaiacum coulteri* in Deutschland. TRAFFIC Europe-Germany im Auftrag des Bundesamtes fuer Natuschutz, 5 pp and annex.
[28] www.theconservationlandtrust.org
[29] Universidad de Cordoba, Spain (www.uco.es/organiza/servicios/jardin/cd1/Maderas%20CITES)
[30] Universidad de Cordoba *supra*

Podophyllum hexandrum (Berberidaceae): *medicinal*
P. hexandrum is mainly used for medicinal purposes. From its roots and the rhizome, a number of active substances (such as podophilotoxin) have been isolated that display cytotoxical and antitumoral effects[31]. These substances have been applied to treat certain forms of cancer.

Prunus africana (Rosaceae): *medicinal, timber, firewood, agricultural and ornamental*
It is widely used throughout its range for a variety of different purposes, which makes the species – both locally and in international trade – an economically very valuable tree. It is collected for firewood, its hard timber provides raw material for furniture, tools and interior design in local dwellings and construction work. *P. africana* is also a popular, shady, ornamental tree planted in gardens and parks both in and outside the range countries[32]. In agriculture, the flowers are used as bee forage and the leaves produce good mulch and green manure[33]. In international trade, *P. africana* bark or powder / extracts produced from bark are most commonly used for medicinal purposes. It treats genitourinary complaints (such as prostate gland hypertrophy and Benign Prostatic Hyperplasia – BPH), kidney disease, inflammation, malaria, allergies, fever and others. The use of bark' extracts to produce capsules for BPH began in the 1970s[34]. The main pharmaceutical company using *P. africana* bark / extracts in France is Fournier (producer of 'Tadenan'), with an estimated annual demand of about 600 000kg[35].

Pterocarpus santalinus (Zygophyllaceae): *medicinal, ornamental, ceremonial, cosmetics and firewood*
P. santalinus is one of the most renown tree species in South Asia. It is mainly used to produce a deep red - pinkish natural dye, which is used both to color food, cosmetics, fabrics and clothes of all kinds and for ceremonial purposes throughout the Hindu world. In order to produce dye, *P. santalinus* material is processed into powder or paste.
For ceremonial purposes, incense or magical sticks of *P. santalinus* are produced.
In cosmetics, the bark is used in skin creams or face packs.
Active substances in the wood, the bark and exudates of *P. santalinus* are also used in medicine as astringent and against diarrhoea.

Swietenia humilis (Meliaceae): *timber and firewood*
As other mahogany species, *S. humilis* produces high-value timber, which is usually exported as logs, sawn wood or veneer. Timber of *S. humilis* is used to create delicate furniture, cabinets, pianos and other musical instruments, scientific instruments, woodcuts, sculptures, tool-handles and others.

Swietenia macrophylla (Meliaceae): *timber, firewood and agricultural*
Sawn wood and timber of *S. macrophylla* is the most commonly traded mahogany for the production of high-value furniture, due to the timber's good technical characteristics and its attractive shades[36]. Besides furniture production, it is used to make panels and musical instruments. Trade in *S. macrophylla* veneer is increasing.

The species is included in planting programmes and silviculture care for many years and is used in reforestation programmes. In addition, *S. macrophylla* is traditionally used as firewood / fuel wood and as shadow tree in local agro-forestry[37].

Swietenia mahagoni (Meliaceae): *timber, firewood, ornamental and agricultural*
Similar to other *Swietenia* species, it has been mostly used for the production of high-value timber. Its potential in agro-forestry is considered significant, because it can be cultivated in plantations, especially in dry zones – and provides excellent timber[38]. Besides the traditional local use as firewood, *S. mahagoni* is appreciated as an ornamental tree and is used for soil improvement in agro-forestry[39].

Taxus wallichiana (Taxaceae): *medicinal, timber, agricultural and nutritional*
The bark of *T. wallichiana* is most often used, as are the leaves and young twigs for medicinal purposes. It is known as a chemical precursor of taxol, which is naturally found in *T. brevifolia* and

[31] Bhadula, S. K., Singh, A., Lata, H., Kuniyal, C. P. & Purohit, A. N. (2000): Recursos geneticos de Podophyllum hexandrum Royle, une especie medicinal amenazada de extincion del Himalaya de Garhwal, en la India.- IPGRI Publications. (www.ipgri.cigar.org)
[32] Jøker, D. (2003) *supra*
[33] Jøker, D. (2003) *supra*
[34] Hall, J.B., O'Brien, E.M., Sinclair, F.L. (2000). *Prunus africana*: a monograph. Scholl of Agricultural and Forest Sciences Publication Number 18, University of Wales, Bangor. 104pp.
[35] WWF Germany (2002): Factsheet: *Prunus africana* – Afrikanisches Stinkholz. 6 pp., Frankfurt am Main.
[36] Schmidt, L. & Jøker, D. (2000a) *supra*
[37] Schmidt, L. & Jøker, D. (2000a) *supra*
[38] Schmidt, L. & Jøker, D. (2000a) *Swietenia mahagoni* (L.) Jacq.- Danida Forest Seed Centre Seed Leaflet, 18, 2 pp.
[39] Schmidt, L. & Jøker, D. (2000a) *supra*

shows high success rates in the treatment of breast and ovarian cancer. *T. wallichiana* is not only used in western medicine but also in Ayurvedic and Tibetan traditional medicines to treat fever and relieve muscular pain. Besides the medicinal use, the berries (i.e. seeds covered by arils) are used as food (excl. seeds which are toxic as are the leaves); young branches are used in agriculture as fodder in Pakistan, where also timber of *T. wallichiana* is used, particularly for coffin construction to its slow decay [40].

3.3. Types of products traded internationally

Due to the diversity of use of CITES-listed trees, not only timber is internationally traded, but also other parts and derivatives of the tree, such as leaves, roots, seeds, carvings, live specimens and others. The most common types of CITES tree products traded internationally are presented below (Table 4).

Table 4. Types of products of CITES-listed tree species and genera traded internationally

Species / Genus	Logs	Sawn Wood	Veneer	Plywood	Leaves	Live Specimens	Seeds	Fruits	Derivatives **	Carvings	Furniture
Abies guatemalensis											
Araucaria araucana					■	■	■	■			
Aquilaria malaccensis (*)					■	■			■		
Balmea stormae						■					
Caryocar costaricense									■		
Cedrela odorata (*)			■	■							
Dalbergia nigra		■	■			■			■	■	■
Dipteryx panamensis											
Fitzroya cupressoides		■				■	■	■		■	
Gonystylus spp.	■	■	■	■						■	■
Guaiacum spp.	■	■				■				■	
Magnolia liliifera v. obovata											
Oreomunnea pterocarpa											
Pericopsis elata	■	■	■	■		■				■	■
Pilgerodendron uviferum	■					■		■			■
Platymiscium pleiostachyum			■	■							
Podocarpus neriifolius											
Podocarpus parlatorei											
Podophyllum hexandrum (*)					■	■	■				
Prunus africana (*)	■	■			■	■			■	■	
Pterocarpus santalinus (*)					■				■		
Swietenia humilis		■	■	■					■	■	
Swietenia macrophylla	■	■	■	■		■				■	■
Swietenia mahagoni	■	■	■	■		■				■	■
Taxus wallichiana (*)					■	■			■		

(*) Species basically used as medicinal plants. Therefore, used parts or traded commodities include roots, extracts, powder, and – in the case of *Prunus africana* – bark.

(**) Deriv.: derivatives (e.g. extract)

[40] WWF-UK File Library (www.wwf.org.uk/filelibrary)

3.4. Parts and derivatives of tree species controlled by CITES and under export quotas

Following CITES annotations, selected specimens, as well as parts or products of species listed in Annexes B and C of EU Regulations, may be included in or excluded from their provisions (Table 5).

CITES set definitions for 'logs', 'sawn wood' and 'veneer sheets' based on the tariff classifications in the Harmonized System (HS) of the World Customs Organization (Resolution Conf. 10.13). The term 'plywood' has not yet been defined, but it is expected that, at its meeting in February 2004, the CITES Plants Committee will provide final recommendations on a definition for 'plywood' based on the HS. This definition is especially for Big-leafed Mahogany (*Swietenia macrophylla*).

Table 5. Parts and derivatives controlled by CITES as well as EU Wildlife Trade Regulations and 2003 export quotas

Parts and derivatives controlled by CITES	Species / Genus	2003 Export Quotas
All parts and derivatives	*Abies guatemalensis*	-
	Araucaria araucana	-
	Balmea stormae	-
	Dalbergia nigra	-
	Dipteryx panamensis	-
	Fitzroya cupressoides	-
	Pilgerodendron uviferum	-
	Podocarpus parlatorei	-
All parts and derivatives, except: i. Seeds, spores and pollen (including pollinia); ii. Seedling or tissue cultures obtained *in vitro*, in solid or liquid media; transported in sterile containers; and iii. Cut flowers of artificially propagated plants.	*Aquilaria malaccensis*	Indonesia: 50 000 kg
	Caryocar costaricense	-
	Cedrela odorata	-
	Gonystylus spp.	Indonesia: 8 000 m^3 (1)
	Magnolia liliifera var. obovata	-
	Oreomunnea pterocarpa	-
	Platymiscium pleiostachyum	-
	Podocarpus neriifolius	-
	Prunus africana	DRC: 400 000Kg (barks)
	Swietenia humilis	-
All parts and derivatives, except: i. Seeds and pollen; ii. Seedling or tissue cultures obtained *in vitro*, in solid or liquid media, transported in sterile containers; iii. Cut flowers of artificially propagated plants; and iv. Chemical derivatives and finished pharmaceutical products.	*Guaiacum* spp.	-
	Podophyllum hexandrum	-
	Taxus wallichiana(2)	-
Logs, sawn wood and veneer sheets	*Pericopsis elata*	DRC: 50 000 m^3 (logs, sawn wood, veneer sheets)
	Swietenia mahagoni	-
Logs, sawn wood, veneer sheets and plywood	*Swietenia macrophylla*	-
Logs, wood-chips and unprocessed broken material	*Pterocarpus santalinus*	-

(1) Finished products: mouldings, dowels, door, leaf, etc. (see www.cites.org/common/quotas/2003latest.pdf).

(2) The main *T. wallichiana* commodity in international trade is extracts, which fall under the 'chemical derivatives' denomination of the annotation of *T. wallichiana*[41]. As a consequence, the main commodity in trade is exempt from CITES provisions, which makes the listing of *T. wallichiana* almost irrelevant

3.5. Information on prices of timber or products

The prices of timber and other parts and derivatives originating from timber species vary considerably depending on the quality of the raw material, the commodity traded, the intended use, the country of origin, the country of import, fashion trends and other parameters. For this reason it is very difficult to clearly determine the retail value of CITES-listed trees. However, in order to provide a rough estimate of the range of their value a selection of offers for certain commodities is provided below.

[41] U. Shippmann, Bundesamt für Naturschutz (BfN), Germany, pers. comm. to TRAFFIC Europe, 2003

Table 6. Indicative prices for commodities of CITES-listed tree species in trade

App.	Species / Genus	Prices
Appendix I / A	*Abies guatemalensis*	-
	Araucaria araucana	In New Zealand, 10-30 cm high **seedlings** = 1.77€ each (for 10 seedlings) or 9.82€ for a 30 x 30 cm seedling
	Balmea stormae	-
	Dalbergia nigra	2.54 cm thick and 20.32 cm wide **lumber** is offered for 77.75€ per board foot. (www.eisenbran.com). **Raw timber plates** for a full guitar set are offered for 353.42€ in 'Tropical Exotic Hardwoods of Latin America L.L.C.' (www.anexotichardwood.com).
	Fitzroya cupressoides	-
	Pilgerodendron uviferum	-
	Podocarpus parlatorei	-
Appendix II / B	*Aquilaria malaccensis*	Agarwood **incense sticks** are offered for 7.07 – 10.99€ per package (www.makeincense.com).
	Caryocar costaricense	-
	Guaiacum spp.	Air dried *G. officinale* **bowl blanks** from Nicaragua are offered for 30.63€ (price per board foot) (www.eisenbran.com).
	Oreomunnea pterocarpa	-
	Pericopsis elata	**Sawn wood** ≈ 950€/m^3 (FOB price) and **logs** ≈ 500 - 600 €/m^3 (FOB price)[42]
	Platymiscium pleiostachyum	In 2001, the national market price in Nicaragua was 193.20€ per m^3 and the international market price was 276.45€ per m^3 [43]
	Podophyllum hexandrum	Herbal Healer offers as **mandrake wild crafted** *Podophyllum peltatum* for 3.73€ per ounce, 14.92€ per ½ pound and 20.62€ per pound (cut / sifted) raw material (www.herbalhealer.com).
	Prunus africana	It has become the most economically viable African tree species in international trade with an 'Over the Counter' value of 220 Mi US-$ per year[44]. In France, a 'Tadenan' box (see *section 4.2.3.*) with 60 soft capsules (50 mg of *P. africana* **extract** per capsules) is sold for 30€.
	Pterocarpus santalinus	One ounce of **powder** for incense is offered for 2.06€. Incense sticks are offered for 7.07€ per package (www.makeincense.com). One ounce of **bark** (cut / sifted) is offered for 3.14€ and one pound for 19.24€ (www.herbalhealer.com).
	Swietenia humilis	In 2001, the national market price in Nicaragua was 282.73€ per m^3 and the international market price was 432.74€ per m^3 [45].
	Swietenia macrophylla	One cubic metre can fetch some 1 021€ on the international market and one tree alone can produce more than 78 536€ worth of high-quality furniture[46].
	Swietenia mahagoni	-
	Taxus wallichiana	In New Zealand, the price for **a specimen** of 35 cm height is about 10.21€
Appendix III / C	*Cedrela odorata*	Brazil Hardwoods Inc. offers **logs** of 4/4'', 6/4'', 8/4'', 10/4'' and 12/4'' at 314.15€, and at 486.93€ for a category called ' better 6/4'' logs[47]. One pound of **bark** is offered for 10.21€ (www.tropilab.com)
	Dipteryx panamensis	In 2001, the national market price in Nicaragua was 199.48€ per m^3 and the international market price was 282.73€ per m^3 [48]
	Gonystylus spp.	An exporter of **sawn** ramin in Singapore charges 628.29€ per m^3 and a buyer of **moulded** ramin in US pays 785.37€ per m^3 [49]
	Magnolia liliifera var. obovata	-
	Podocarpus neriifolius	-

[42] A. Stockmans, SOMEX Belgium, pers. comm. to TRAFFIC Europe, December 2003
[43] FAO (2001). Coleccion, analysis y presentacion de informacion socioeconomica Nicaragua.- Proyecto informacion y analysis para el manejo forestall sostenible: integrando esfuerzos nacionales e internacionales en 13 paises tropicales en America Latina, 27 pp., Santiago de Chile.
[44] Jøker, D. (2003): *Prunus africana* (Hook f.) Kalkman. Danida Forest Seed Centre Seed Leaflet, 74, 2 pp.
[45] FAO (2001) *supra*
[46] CITES (2003). CITES trade controls to take effect for mahogany. Press release (www.cites.org).
[47] Brazil Hardwoods Inc. (2003). pers. comm. to TRAFFIC Europe, 2003
[48] FAO (2001) *supra*
[49] Environmental Investigation Agency and Telepak Indonesia (2001). Timber Trafficking: Illegal Logging in Indonesia, South East Asia and International Consumption of Illegally Sourced Timber.

4. RELEVANT CITES-LISTED TREE SPECIES TO CONTROL AT EU LEVEL

Not all CITES-listed trees are of relevance to EU controls because, for many of them, levels of EU import and re-export are nil or negligible (Table 7). Species imported in the EU in sizeable quantities are Assamela (*Pericopsis elata*), Big-leafed mahogany (*Swietenia macrophylla*), Ramin (*Gonystylus* spp.), Lignum vitae (*Guaiacum* spp.) and African Cherry (*Prunus africana*), but the latter two are not only imported as timber, they also supply EU medicinal markets.

Furthermore, the analysis of EU trade in Brazilian Rosewood (*Dalbergia nigra*) and Alerce (*Fitzroya cupressoides*), revealed that, although they are both listed in Annex A (and Appendix I), significant volumes of Brazilian Rosewood entered international trade from 1992 to 2001 and that the EU became the main importer of Alerce in 2000 and 2001.

Therefore, EU trade in the seven species or genera above, listed on Annex A, B and C, is looked at in detail in this manual. The information provided for each one is structured as follows,

- Legal trade: Analysis of CITES trade data (CITES Parties Annual Reports): *EU imports trends, imports per EU Member State, countries of origin, type of products imported in the EU, etc.*
- Wood characteristics;
- Similar species (possible false declaration);
- Information on illegal trade.

Table 7. Quantities imported into the EU between 1992 and 2001 for some CITES listed timber species[50]

Species	Quantity
Abies guatemalensis	0
*Aquilaria malaccensis**	-
Araucaria araucana	▪ 26 930 live specimens ▪ 519 kg of seeds ▪ 13m^3 of 'timber' ▪ 10 timber pieces ▪ 3kg of leaves
Balmea stormae	0
Caryocar costaricense	0
Cedrela odorata	124 m^3 of sawn wood
Dipteryx panamensis	0
Magnolia liliifera var. obovata	0
Oreomunnea pterocarpa	0
Pilgerodendron uviferum	▪ 80 fruits ▪ 12 live specimens ▪ 3 timber pieces
Platymiscium pleiostachyum	0
Podocarpus neriifolius	0
Podocarpus parlatorei	0
Podophyllum hexandrum	▪ 16 000 kg of roots ▪ 9 live specimens
Pterocarpus santalinus	▪ 22 141 kg of extracts ▪ 200 g of dried plants
Swietenia humilis	0
Swietenia mahagoni	▪ 138 pieces of furniture ▪ 73 timber pieces ▪ 30 carvings
Taxus wallichiana	100 kg of leaves

(*) Top 10 destinations for export / re-export of *Aquilaria malaccensis* chips, powder and timber from 1995 to 1997, were: Singapore, Taiwan, Hong Kong, Saudi Arabia, United Arab Emirates, India, Japan, Oman, China and Qatar[51].

[50] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)
[51] Barden, A., Awang Anak, N., Mulliken, T., and Song, M. (2000). *Heart of the matter: Agarwood use and trade and CITES implementation for Aquilaria malaccensis*. TRAFFIC International.

4.1. Annex A-listed tree species included in the EU Wildlife Trade Regulations

4.1.1. *Dalbergia nigra*

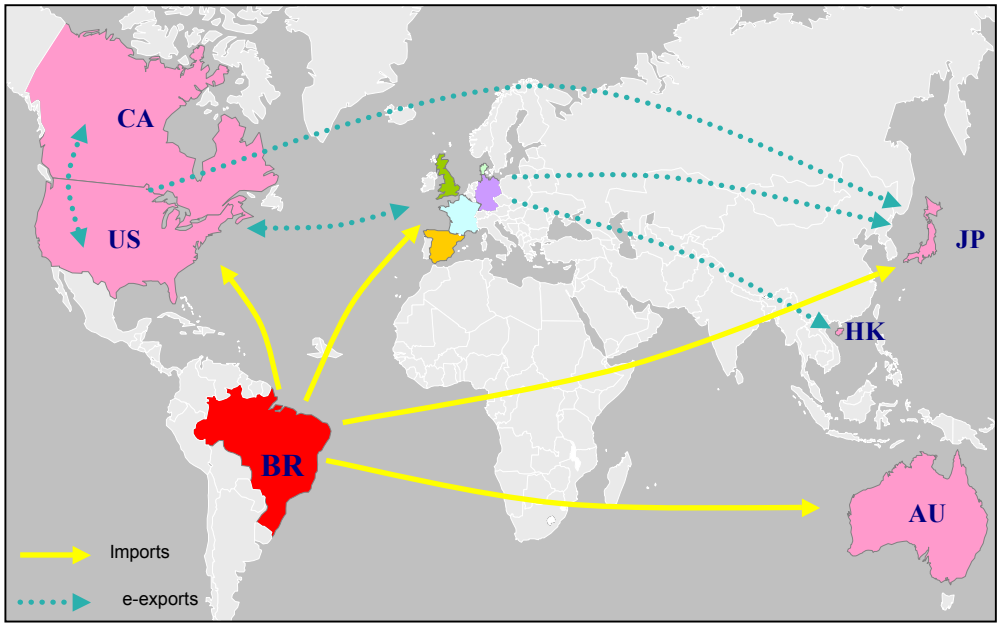
Brazilian Rosewood (see Table 3) is one of the species of a genus comprising more than 100 species. *Dalbergia* is wide spread in tropical Latin America and Asia, but it is only native to the eastern parts of Brazil (states of Rio de Janeiro and Espirito Santo, parts of Minas Gerais and the eastern parts of Bahia)[52] [53]. Since its listing in CITES Appendix I in 1992, trade has declined. However, a considerable (legal and illegal) trade remains in *D. nigra* 'timber', veneer or timber carvings, a large part of which refers to or is declared as 'pre-Convention' specimen (i.e. specimens acquired before the Convention applied to them).

Trade data on *D. nigra* are difficult to analyse, because about 80 % of all official trade records either do not include any unit or come in range of units, such as m, m^2, m^3 or kg, which do not allow easy totalling of the trade. For this reason, a realistic quantification of trade in *D. nigra* commodities is not possible. However, the information provided allows identifying the most important countries of import and of re-export and revealing general trends.

The international trade in *D. nigra* 'timber', veneer and carvings follows rather labyrinthine paths (Map 2). From Brazil, the material is mainly exported to the USA, Japan, Spain, UK, Germany and France and – to a lesser degree – Australia and Canada. Nearly all countries of first import also re-export *D. nigra* material, especially the USA and some EU nations, namely Spain, the UK and Germany. Trade links between the USA and the EU go in both directions, which means that re-exports from the USA to the EU and from the EU to the USA are occasionally recorded in the same year. Japan is the most important final consumer of *D. nigra*.

Over the years since the listing of *D. nigra* in Appendix I of CITES, the legal trade has shifted from timber to processed or pre-processed commodities such as veneer, furniture and – above all – carvings. The reason for this shift is that the stocks of pre-Convention raw material have become scarce and the trade has to concentrate on available pre-processed *D. nigra* units.

Map 2. Most important trade routes for *D. nigra* during the period 1992 – 2001



[52] Vales, M.A., Clemente, M. & Esteban, L.G. (1999). Fichas de identificación de Especies Maderables CITES. Universidad de Córdoba.
[53] Miller, R. B. (2000). Characteristics and availability of commercially important woods. 35 pp., USDA Forest Servcise (www.fpl.fs.fed.us/documnts/FPLGTR/fplgtr113/CH01.pdf)
[54] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)

Additional relevant information

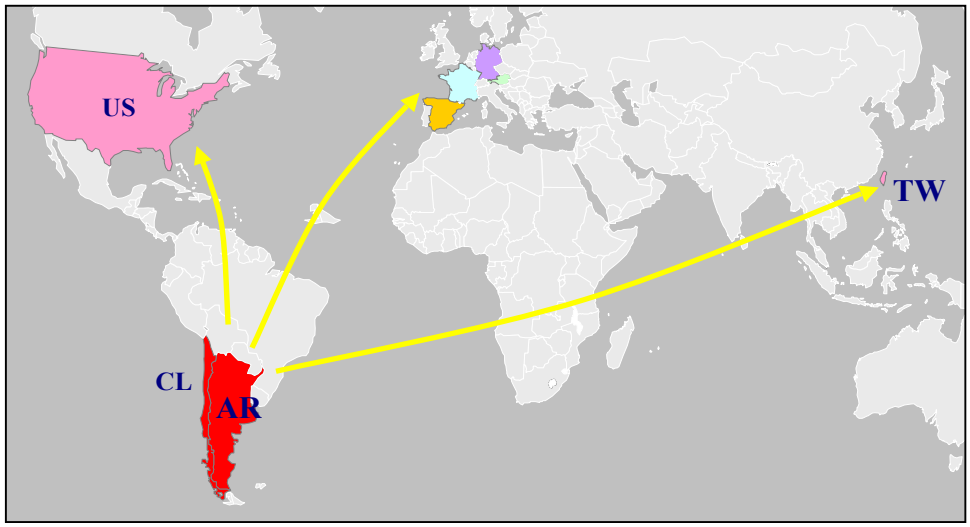
- *Wood characteristics* (see Annex 7): *Dalbergia nigra* is one of the hardest and heaviest high quality wood species in use. The weight of air-dried wood is between 750 and 900 kg/m^3 [55]. *D. nigra* heartwood is oily or waxy in appearance and rather variable in colour, ranging from shades of brown or chocolate to red and violet and is irregularly streaked with black. The demarcation line between heartwood and white sapwood is sharp. The grain is usually straight and the texture medium to coarse. *D. nigra* heartwood has a distinct rose-like fragrance. Old stems yield the most attractive wood.
- *Similar species*[56] [57]: *D. nigra* wood, timber and other parts can be confused with quite a number of other species, especially within the same genus and of the genera *Machaerium* and *Pterocarpus*,
  - Jacaranda Rosa *D. frutescens* (South America), *D. guianensis* (Guyana, French Guiana and Suriname), Indian Rosewood *D. latifolia* (Indian subcontinent) and African Blackwood *D. melanoxylon* (tropical Africa). A number of other rosewood species, none of them listed under CITES so far, are used for similar purposes as *D. nigra* and are heavily traded. Amongst them are Bahia Rosewood *D. variabilis*, Honduran Rosewood *D. stevensonii*, Cocobolo *D. retusa*, Amazon Rosewood *D. spruceana* from Latin America, and Madagascar Rosewood *D. baroni* from Africa.
  - Santos Palisander *M. scleroxylon* and Jacaranda Pardo *M. villosum*;
  - Amboina *P. indicus* (tropical Asia), *P. macrocarpus* (Laos, Myanmar, Thailand, Vietnam) and Padouk *P. soyauxii* (tropical West Africa);
  - Other similar species comprise Brown Ebony *Swartzia leiocalycina* (Guyana, French Guiana, Suriname), Ferreol *Swartzia benthamiana* (Brazil, Colombia, Guyana, Honduras, Panama, Mexico, Peru, Suriname and Venezuela) and *Caesalpinia corymbosa*.
- *Illegal trade*: Illegal trade in *D. nigra* is not well documented. The international trade in the species – mostly pre-Convention specimens – is still considerable and the question remains if all material traded and declared as 'pre-Convention' is correctly declared. In 1994, the CITES Plants Committee mentioned this problem and urged Parties to report to the Secretariat all data available on pre-Convention stocks[58]. To date, the extent of illegal trade in *D. nigra* is unknown. The wood is highly valuable and sought after, especially in the construction of musical instruments; very high prices are paid for *D. nigra* timber and other material. For this reasons, companies are said to send people to old forest cuttings to dig out the stumps and taproots of *D. nigra* trees, which had been cut long ago, to provide the market with 'fresh' material[59].

[55] Miller, R. B. (2000) *supra*
[56] Environment Canada (2002) *CITES Identification Guide – Tropical Woods: Guide to the identification of tropical woods controlled under the CITES*. Canadian Ministry of Environment, Ottawa. 210 pp.
[57] www.espen.de
[58] CITES (1994): Trade in timber species. CITES Txt. 787, 2 pp., Geneva.
[59] Paul Jacobson Guitars website (www.pjguitar.com)

4.1.3. *Fitzroya cupressoides*

Known as Alerce in Chile (see Table 3) where it is a national emblem, the Cypress of Patagonia is a unique tree species that lives mostly in scattered stands - in the temperate forests of Chile and Argentina (Chubut, Neuquen, Rio Negro) in altitudes up to 1200 m above sea level[60]. Although listed in Annex A, legal trade is still possible through special routes, such as via Taiwan, which is not a CITES Party, and declared as 'pre-Convention'. The main commodities in trade are timber and sawn wood. Officially, almost none of *F. cupressoides*' timber gets re-exported.

Map 3. Main international trade routes for *F. cupressoides* during the period 1992 – 2001



(Range States are coloured in red. Most important non-EU importing states are coloured in pink[61].)

EU Member States do not play a central role in legal international timber trade in *F. cupressoides*. The main importing countries worldwide are Taiwan and USA. For many years, Argentina was also one of the leading importing countries of *F. cupressoides* (Table 8). Within the EU and apart from occasional legal imports, most *F. cupressoides* was imported into French Polynesia and is considered as French imports (Table 9). Besides 'timber' and sawn wood, most other *F. cupressoides*' commodities traded internationally were live specimens, carvings, and seeds. Some of these imports were destined to the EU. Since *F. cupressoides* was listed in Appendix I, legal trade in all commodities declined considerably. Not much pre-Convention material seems to be available and official exports to Taiwan, have decreased.

Table 8. Total reported Chilean exports and imports of *F. cupressoides* sawn wood and 'timber' into the main importing countries and the EU (m^3), 1993 - 2001[62]

Trading country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
Chilean Exports	3 148	1 183	1 693	799	1 045	387	171	271	227	28	8 952
Argentina Imports	2 740	960	1 089	257	0	1	0	0	5	0	5 052
US Imports	245	168	447	454	692	0	0	51	0	0	2 057
Taiwan Imports	0	0	0	0	353	386	166	220	84	0	1 209
EU Imports*	130	55	90	28	0	0	5	0	138	28	474
% [EU] Imports*	4.1	4.7	5.3	3.5	0	0	2.9	0	60.8	100	5.3

(*) EU import data include French Polynesia, where – contrary to the rest of the EU – relative large amounts (100% of 2001 Chilean reported exports) of *F. cupressoides* timber were imported

[60] UNEP – WCMC (1998) *supra*
[61] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)
[62] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)

Table 9. EU-import trends of *F. cupressoides* sawn wood and 'timber' (m^3), 1992 – 2001[63]

Note: No imports were reported for the period studied by Belgium, Denmark, Finland, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Sweden and UK.

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
Austria	0	0	64	0	0	0	0	0	0	0	64
France*[1]	130	52	26	28	0	0	0	0	138	28*[9]	402
Germany	0	3	0	0	0*[4]	0*[5]	0	0	0	0*[9]	3
Netherlands	0	0	0*[3]	0	0	0	0*[6]	0	0	0*[9]	0
Spain	0*[2]	0	0	0	0	0	5*[7]	0	0	0	5
UK	0	0	0	0	0*[4]	0	0*[8]	0	0	0	0
Total EU	130	55	90	28	0	0	5	0	138	28	474

*[1] Timber imports into France were first landed in French Polynesia.

*[2] A small amount of timber was imported into Spain in 1992, but the amount was below 0.5 m^3, and official trade data therefore reported '0 m^3'.

*[3] The Netherlands reported a re-export of 4000 kg of *F. cupressoides* timber to Switzerland in 1994.

*[4] Import of 2 live specimens from Australia to Germany and 35 live specimens from Chile to the UK.

*[5] Import of 1 live specimen from Australia and Chile to Germany.

*[6] Import of 3 live specimens from Australia to the Netherlands.

*[7] Import 2 (from Chile) and 3 (from Argentina) timber without units. As most of the other units in *F. cupressoides* timber trade are m^3, it is supposed to be m^3. However, it could also be 'timber pieces', as declared in some Argentinean exports.

*[8] Import of 200 timber pieces (no unit) from Chile to the UK.

*[9] Additional imports of live specimens: 4 from Chile to FR, 2 from Australia to DE, and 10 from Australia to the NL.

Additional relevant information

- *Wood characteristics*: Heartwood brownish red and sharply demarcated from the narrow light-coloured sapwood. Texture fine and uniform; straight grained; growth rings usually narrow; without distinctive odour or taste.
- *Similar species*:
  - California Redwood *Sequioa sempervirens*: wood, timber and other parts are difficult to distinguish.
  - European Larch *Larix decidua* (Europe), Western Larch *Larix occidentalis* (North America) and Siberian Larch *Larix sibirica* (North Asia)[64].
  - The wood characteristics of the Western Red Cedar *Thuja plicata* (North America) are also similar to *F. cupressoides*.
- *Illegal trade*: Since the species was listed in CITES, trade in timber of *F. cupressoides* declined. However, its wood is still exported from Chile[65]. It is still traded for ornamental purposes (Europe, USA, Asia) and for its timber due to illegal logging in remote areas and to smuggling. It is reported to be occasionally exported via the USA and declared California Redwood *S. sempervirens* on its way from the USA to other countries, including EU Member States, such as Germany.

[63] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)
[64] Vales *et al.* (1999) *supra*
[65] Lara, A., Gardner, M.F. and Vergara, R. (2003). The use and conservation of *Fitzroya cupressoides* (Alerce) forests in Chile. *Acta Hort*. (ISHS) 615:381-385 www.actahort.org/books/615/615_41.htm

4.2. Annex B-listed tree species included in the EU Wildlife Trade Regulations

4.2.1. *Guaicum* spp.

Lignum-vitae (see Table 3) is native to Central America and the Caribbean and adjacent areas in North America (Mexico, Southern USA) and South America (Venezuela, Colombia) and consists of 4-6 distinct species and several sub-species. The taxonomy is still not agreed; the following species are described: *Guaiacum officinale, G. sanctum, G. coulteri, G. unijugum, G. angustifolium, G. guatemalense* (this species may not be valid and could be a synonym of *G. sanctum* or a hybrid of *G. sanctum* and *G. coulteri*[66]). Each species has a distinct range, with some overlaps, especially between *G. officinale* and *G. sanctum*. Natural range areas are,

⇨ *Guaiacum officinale*: Anguilla, Antigua and Barbuda, Antilles, Bahamas, Barbados, Colombia, Cuba, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Montserrat, Puerto Rico, Turks & Caicos Islands, US Virgin Islands, British Virgin Islands, Saint Vincent and Grenadines Islands, Venezuela[67]

⇨ *Guaiacum sanctum*: Southern USA, Mexico, Belize, Costa Rica, Cuba, Dominican Republic, Guatemala, Haiti, Bahamas, Honduras, Nicaragua, Panama, Puerto Rico, El Salvador[68]

⇨ *Guaiacum coulteri*: Mexico (Oaxaca, Sonora[69]), possibly also Yucatan[70]. The subspecies *G. c. coulteri* may also be native to the north of Guatemala. Extension into Arizona (USA) is possible[71]

⇨ *Guaiacum unijugum*: Mexico (Southeast Baja California)

⇨ *Guaiacum angustifolium*: USA (Texas, Southern Plains and Edwards Plateau), Northern Mexico (taxonomy still unclear; some scientists regard it as a synonym of *G. coulteri*, which seems, however, unlikely due to distinct medicinal characteristics of *G. angustifolium*)

⇨ *Guaiacum guatemalense*: Southern parts of Mexico and the north of Guatemala

Legal international trade in *Guaiacum* spp. is not a large-scale business. Trade data often do not distinguish between the different *Guaiacum* species and may also include species from other genera. According to the Maryland Report (2000), TRANSFORESTA is the largest *Guaiacum* spp. exporter from Mexico, accounting for about 60% of all legal *Guaiacum* spp. exports from Mexico between 1993 and 1998. The main markets for these exports (including *G. coulteri* before the listing of the entire genus under CITES) are Europe and Asia. The US market is relatively small[72].

Official WCMC data on the international trade in *Guaiacum* spp. are available for the period 1992–2001. The trade targeted *G. sanctum* from Mexico. Due to the fact that *G. coulteri* and *G. sanctum* cannot be readily distinguished once processed into 'timber', sawn wood or other commodities, one may suspect that an unknown number of exports / imports declared *G. sanctum* were in fact *G. coulteri* and, even more likely, an unknown number of *G. coulteri* exports (not listed in WCMC trade data until 2003) were in fact *G. sanctum*.

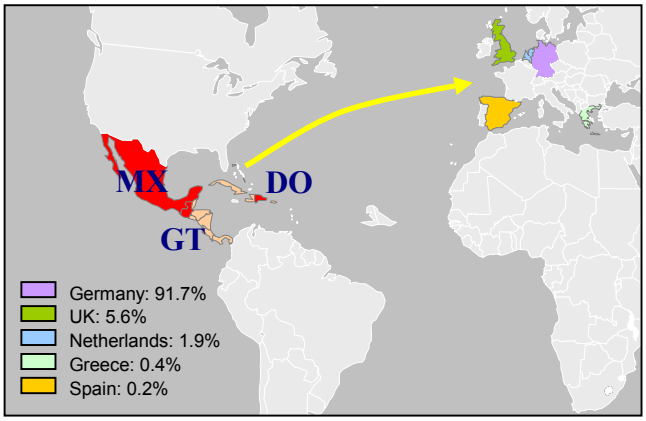
From 1992 to 2001, Mexico reported a total volume of *G. sanctum* export of 1757m^3 'timber' and 69m^3 sawn wood (Table 10). Exports from all other exporting countries (Dominican Republic, Honduras, Colombia, Costa Rica) were negligible because they either only reported unspecified exports of *Guaiacum* spp. commodities, very small amounts (such as '454g stems'), with no specified unit for the exported material, or from unidentified countries. One reported export of 18m^3 of *Guaiacum sanctum* timber from Germany to Mexico is most likely a misprint and has not been included in the trade data.

[66] Grow, S. & Schwartzman, E (2001). The status of *Guaiacum* species in trade. Medicinal Plant Conservation, 7: 19-21, IUCN Medicinal Plant Specialist Group.
[67] Environment Canada (2002) *supra*
[68] Environment Canada (2002) *supra*
[69] Grow, S. & Schwartzman, E (2001) *supra*
[70] A. Reuter, TRAFFIC North America – Mexico, *in litt.* to TRAFFIC Europe, 2003
[71] Maryland Report (2000): *Guaiacum sanctum*: Population status and trade in Mexico with CITES recommendations. Graduate Program in Sustainable Development and Conservation Biology, University of Maryland, College Park. Prepared for the Scientific Authority, United States Fish and Wildlife Service: 51 pp.
[72] Maryland Report (2000) *supra*

Table 10. Total reported Mexican exports and EU-imports of *Guaiacum sanctum* sawn wood and 'timber' (m^3), 1992 - 2001[73]

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
Mexican Exports	52	83	299	261	234	128	154	170	296	149	1 826
EU Imports	1	26	57	40	75	30	63	72	66	51	481
% [EU] Imports	1.9	31.3	19.1	15.3	32.1	23.4	40.9	42.4	22.3	34.2	26.3
EU Re-exports	0	0	0	0	0	0	0	0	0	0	0

The EU is a major importer of *Guaiacum sanctum* from Mexico, accounting for an average of 26.3% of all imports (Table 11). There is no clear trend over the period in exports from Mexico or imports into the EU. The re-export rate is generally low, and no re-exports of *G. sanctum* timber / sawn wood has been recorded from any EU Member State. Germany is by far the largest EU importer: 441m^3 (92%) of a total of 481m^3 that entered the EU from 1992 to 2001. Only 5 other EU Member States - the UK (27m^3), the Netherlands (9m^3), Greece (2m^3), Spain (1m^3), and France (1m^3) - reported imports of *Guaiacum sanctum* from Mexico during those years.



Map 4. Main trade routes of *Guaiacum sanctum* into EU Member States from 1992 to 2001. Exporting range states are coloured in red and other range states without recorded exports to EU countries are coloured in pink.

Guaiacum officinale is far less common in international trade and often non-timber commodities are traded in this species, including extract, live specimens, woodcarvings and unspecified 'timber pieces'. The Dominican Republic is the main exporter of *G. officinale*, USA (including Puerto Rico) is the main importer. Other exporting countries include Mexico, Cuba and Thailand (non-range state). Thailand re-exported only live specimens (to China and Japan). Imports of *G. officinale* into EU Member States are rare. From 1992 to 2001, imports of *G. officinale* were reported only by Spain (wood carvings and live specimens from the Dominican Republic and USA (unknown origin)), Germany (50kg sawn wood from Switzerland (unknown origin) in 1999) and the UK (615kg timber from Mexico in 1993).

Table 11. EU-import trends of *Guaiacum sanctum**1 sawn wood and 'timber' (m^3)*2, 1992 – 2001[74]

Note: No imports were reported for the period studied by Austria, Belgium, Denmark, Finland, Ireland, Italy, Luxembourg, Portugal and Sweden

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
France	0	0	0	0	0	1	0	0	0	0	1
Germany	0	25	57	40	49	28*4	63	70	58	51	441
Greece	0	0	0	0	0	0	0	2	0	0	2
Netherlands	0	0	0	0	9	0	0	0	0	0	9
Spain	1	0*3	0	0	0	0*5	0	0	0	0	1
UK	0	1	0	0	17	1	0	0	8	0	27
Total EU	1	26	57	40	75	30	63	72	66	51	481

*1 As the listing of the whole genus *Guaiacum* entered in effect in 2002, all trade data in this table refer to *G. officinale* and *G. sanctum* only.
*2 Units include [m^3] and [kg]. For this table all [kg] units were converted to [m^3] and converted using 1000kg = 1m^3 as factor.
*3 Spain reported the import 36 carvings of *G. officinale* from the Dominican Republic in 1993.
*4 For 1997, trade statistics list an additional export of 200g dried *Guaiacum* plants (species not specified) from Chile to Germany and an import of 200g derivatives into Germany from Chile. Most likely, the same shipment is referred to. (Note: this trade has not been declared a re-export, although Chile is not a range state of any *Guaiacum* species.)
*5 Spain reports the import of two live specimens of *G. officinale* from the Dominican Republic in 1997.

[73] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)
[74] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)

Additional relevant information

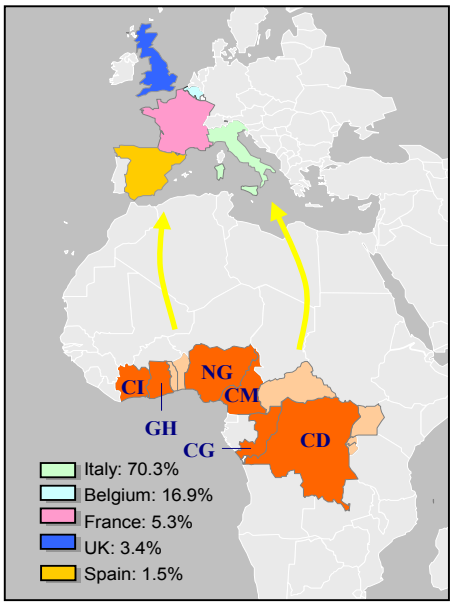
- *Wood characteristics* (see Annex 7): *Guaiacum* spp. is one of the heaviest and hardest commercial hard woods in trade. The heartwood of *G. sanctum* and *G. officinale* is dark greenish, dark brown or black: the heartwood of *G. coulteri* may be brighter and can have yellow colouring. The vessels are very small, mostly solitary and can only be clearly seen with a microscope. Very little parenchyma is visible with a hand lens. The wood characteristics of all *Guaiacum* species are very similar; Dr Richter, one of the leading wood identification specialists in Europe, doubts that it is possible to identify *Guaiacum* spp. wood samples down to the species level only using microscopic analysis of the wood anatomy (structural and physical parameters) and expresses his conviction that only chemical or molecular biological analysis allow an unambiguous species identification of *Guaiacum* spp.[75].
- *Similar species*: When in trade, the *Guaiacum* timber may be confused with several other (non CITES-listed) timber species in trade, mainly
  - *Bulnesia* spp. (Zygpphyllaceae) from Venezuela and Colombia;
  - *Tabebuia* spp. (Bignoniaceae) is found throughout the northern part of South America; and
  - *Ocotea rodiaei* (Lauracae) is found in the Caribbean and the northeast corner of South America[76].

  These and other species are occasionally marketed under the trade name 'gaiac oil', 'oil of guaiac wood' or 'lignum-vitae'.
- *Illegal trade*: Illegal trade in *Guaiacum* species has been known for years but it is difficult to detect. Prior to the listing of the whole genus under CITES, both commonly traded Mexican species – *G. sanctum* and *G. coulteri* – were already protected by national law. It is reported that the required authorization for export of these species was not always asked for before export[77]. A striking mismatch in exports and imports data shows that the importing country, especially Germany, did not record most recorded exports of *G. sanctum* from Mexico. Trade control through import documentation seems to be highly ineffective in this case. Very often, *Guaiacum* spp. is not traded under its scientific name but under a variety of Spanish and local names (see Table 3 and Annex 2), many of which are unfamiliar to both traders and customs officers and can therefore easily slip past CITES inspection.

[75] H.G. Richter, Holzinstitute, Germany, pers.comm. to TRAFFIC Europe, 2003
[76] Environment Canada (2002) *supra*
[77] Maryland Report (2000) *supra*

4.2.2. *Pericopsis elata*

Afrormosia (see Table 3) is one of the most important and valuable CITES-listed tropical wood species used for its timber. It is native to West and Central Africa (Map 5). Its range states are: Cameroon, Central African Republic, Congo (Brazzaville), Democratic Republic of Congo (DRC), Ghana, Ivory Coast, Nigeria[78] and perhaps Uganda[79], Rwanda, Burundi, Togo and Benin. In most range states, *P. elata* is legally protected in one way or another (be it through national laws regulating logging, or through national parks or complete protection). However, the implementation of the law seems to be a major problem in many West and Central African countries.



Map 5. Main EU importing countries of *P. elata* and exporting countries during the period 1993 – 2001. Exporting range states are coloured in red. Additional range states without recorded exports to EU countries are coloured in terracotta[80].

From 1993 to 2001 the EU was the world's main importing region for *P. elata* 'timber' and sawn wood. On average, for the period considered, 68.6% of annual imports worldwide entered the EU.

Table 12. Total reported exports and EU-imports of *P. elata* sawn wood and 'timber' (m^3), 1992 - 2001[81]

	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total**
World Exports	46 737	52 278	60 649	52 536	56 878	34 129	33 507	15 087	14 458	366 259
EU Imports	36 640	42 430	38 572	24 291	33 106	27 936	26 952	10 441	10 902	251 271
% [EU] Imports	78.4	81.2	63.6	46.2	58.2	81.9	80.4	69.2	75.4	68.6
World Re-Exports	21	70	8 415	976	44	50	0	162	177	9 915
EU Re-Exports	21	53	8 415	52	11	50	0	162	177	8 941
% [EU] Re-Exports	100	75.7	100	5.4	25.0	100	0	100	100	90.2

Italy is by far the largest EU importer of *P. elata*, followed by Belgium, France, UK, Spain, Portugal and Germany (Table 13). Compared to the volume imported, re-exports of *P. elata* are minor. Only about 2.7% (9 915m^3) of *P. elata* 'timber' and sawn wood imports were re-exported again. EU Member States accounted for about 90% of all re-exports, namely Belgium, France, Italy, Spain and Germany, of which Belgium –with 8526m^3 from 1993 to 2001, has the lions share of EU' *P. elata* re-exports. The main destination of these re-exports was the United Arab Emirates, Cyprus, Egypt, Croatia, the Republic of Korea, Lebanon, Switzerland, the USA and the Republic of South Africa.

[78] Oldfield, S. (2003). CITES significant trade review of *Pericopsis elata* (draft). Unpublished analysis for the CITES Secretariat.
[79] UNEP – WCMC (2001). Tree Conservation Information Service (www.unep-wcmc.org/trees).
[80] *Source*: WCMC data (2003) and Oldfield, S. (2003) *supra*
[81] *Source*: WCMC data (2003). Data from 1992 are not included because they are incomplete as the CITES-listing became effective during that year.

Table 13. EU-import trends for *P. elata* sawn wood and 'timber' (m^3), 1993 – 2001[82]

Country	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
Austria	0	0	0	0	0	0	0	0	0	0
Belgium	5 134	3 674	3 314	4 784	3 572	6 918	4 871	3 636	5 390	42 346
Denmark	243	0	99	299	0	0	0	97	0	829
Finland	0	0	0	17	0	0	0	0	0	17
France	937	1 207	1 128	2 909	2 225	717	3 208	673	1 020	13 239
Germany*	89	343	378	176	103	281	202	150	526	2 012
Greece	0	67	0	0	15	26	21	0	0	62
Ireland	887	0	114	60	0	0	0	0	0	1 061
Italy**	26 535	35 838	33 654	14 134	25 853	17 089	17 159	5 198	4 380	176 741
Luxembourg	0	0	0	0	0	0	0	0	0	0
Netherlands	0	0	33	222	0	73	0	57	173	278
Portugal	0	19	299	39	232	328	1 330	0	0	2 186
Spain	0	179	0	249	1 130	2 239	85	85	0	3 788
Sweden	0	0	52	17	0	0	0	0	0	69
UK***	2 815	195	1 879	446	277	350	158	33	102	8 643
Total EU	36 640	42 430	38 572	24 291	33 106	27 936	26 952	10 441	10 902	251 271

(*) Several reported imports into Germany could not be considered because they were reported without any values e.g. 'timber pieces'?
(**) Italian imports from Nigeria are certainly considerably higher, but a large proportion of reported records have no value.
(***) In addition to import figures mentioned above, the UK imported several times via a third country, e.g. Belgium (BE). These imports are therefore reported under BE and not UK. Re-exports from UK were destined to UK. As this happened several times, misprints seem to be ruled out. Perhaps UK overseas territories are the destination countries of these 'domestic' re-exports.

Cameroon was the most important exporter of *P. elata* over the period 1993-2001 followed by DRC and then Congo Brazzaville. The average annual volume for the three countries was as follows: Cameroon 17 896m^3, DRC 12 661m^3 and Congo Brazzaville 3 953 m^3. Both Congo's were subject to civil wars over the period, which explains why trade dropped off severe in these countries. A Negative Opinion has been given on the importation into the EU of *P. elata* from the Congo Brazzaville. This means that the species cannot be imported into the EU from the Congo Brazzaville. DRC contains the largest stocks of *P. elata* in the region, but they are for the large part very inaccessible[83]. The other source countries, Ghana, Ivory Coast and Nigeria, exported relatively small volumes of *P. elata* over the years. The Central African Republic has not exported *P. elata* to the EU but exported *P. elata* timber in moderate amounts to Japan and Taiwan. No legal exports were reported from 1993 to 2001 from other range states of *P. elata*.

Additional relevant information:

- *Wood Characteristics*[84] [85] [86] (see Annex 7): *P. elata* produces semi-hard and semi-heavy timber (specific gravity of 0.7–0.8g/cm^3); its heartwood is medium to dark brown in colour, occasionally with a yellowish or greenish shade with large and numerous vessels. The heartwood is mostly without streaks; growth increments are macroscopically visible. If it exists the sapwood of *P. elata* is white – yellow and clearly distinct from the heartwood. The wood has no distinct odour.
- *Similar species*: *P. elata* timber in trade can be confused with:
  - East African Afrormosia *P. angolensis, P. laxiflora* and Mukusi *Baikiaea plurijuga* (found in Angola, Botswana, Namibia, Zimbabwe and Zambia)[87].

[82] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)
[83] S. Speed, ATIBT (Association technique internationale des bois tropicaux), *in litt.* to TRAFFIC Europe, 2004
[84] Environment Canada (2002) *supra*
[85] Richter, H.G. & Dallwitz, M.J. (2000). Commercial timbers: descriptions, illustrations, identification and information retrieval. In English, French, German and Spanish.
[86] Vales *et al.* (1999) *supra*
[87] Environment Canada (2002) *supra*

- Timbauda *Enterolobium schomburgkii* (occurring in Mexico, Guatemala and from Costa Rica down to Brazil) and Guatinba *Clarisia racemosa* (natural range tropical Central and South America)[88].
- Specifically for sawn woods, Teak *Tectona grandis*, Iroko *Milicia excelsa* and Bete *Mansonia altissima*[89].

• *Illegal trade*: The status of *P. elata* is threatened by illegal trade, which is a potential obstacle to the species conservation in many of the range states. Figure 4 is a press clipping (in French) from the *Cameroon Tribune* describing violations of national law by several timber companies with regard to the exploitation of *P. elata*.

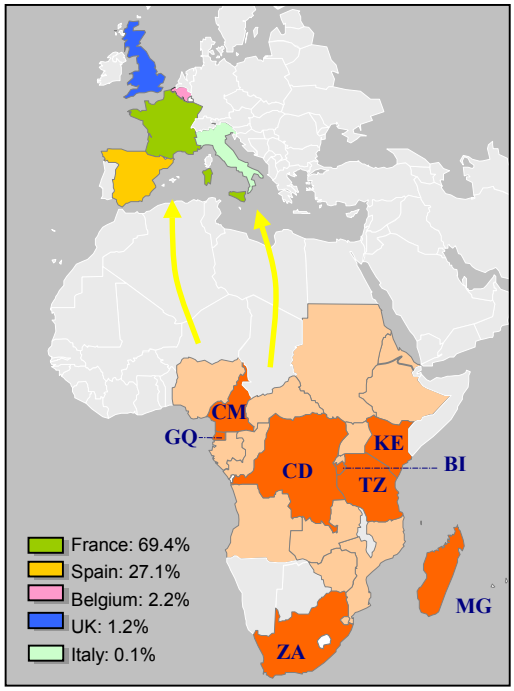
The DRC is also a country of special concern where political instability and the repeatedly occurring upheavals in recent years, in addition to the lack of infrastructure, civil administration and the political vacuum in many regions of the country have threatened DRC' valuable natural resources. Fraudulent trade in wood, including *P. elata*, has been reported not only going to the West but also to Uganda, Rwanda and Burundi, along DRC' eastern borders[90].

Figure 4. Examples of infractions and penalties related to *P. elata* trade in Cameroon in 2002

[88] Vales *et al.* (1999) *supra*
[89] ATIBT (2003). Identification leaflet on *Pericopsis elata.*
[90] Oldfield, S. (2003) *supra*

4.2.3. *Prunus africana*

Prunus africana is one of the most heavily exploited tree species in Africa. In international trade it is less sought after for its timber but it is highly valued for its medicinal properties. The main commodities of *P. africana* encountered in trade are depending on the level of local processing capacity, bark, powder or extracts. The natural range of *P. africana* is typically mountain rainforests in tropical Africa (afromontane). Consequently, the species' distribution is rather patchy. It is known from Nigeria, Cameroon, Democratic Republic of Congo (DRC), Equatorial Guinea, Central African Republic, Congo Brazzaville, Angola, Burundi, Rwanda, Uganda, Tanzania, Kenya, Sudan, Ethiopia, Mozambique, Zambia, Zimbabwe, Swaziland, Republic of South Africa and the islands of Madagascar, the Comoros and Sao Tome and Principe[91, 92, 93].



Map 6. Main EU importing countries of *P. africana* and exporting countries during the period 1995–2001. Exporting range states are coloured in red. Additional range states without recorded exports to EU countries are coloured in terracotta[94].

From 1995 to 2001, almost all exports (about 95%) of *P. africana* were destined to the EU market (Table 14).

Table14. Total reported exports and EU-imports of *P. africana* bark, extract and powder (Kg), 1992 - 2001[95]

	1995*	1996	1997	1998	1999	2000	2001	Total**
Bark								
World Exports	151 252	562 000	941 446	739 013	783 055	529 961	639 581	4 195 066
EU Imports	151 252	562 000	841 446	739 003	767 484	514 260	634 165	4 058 388
% [EU] Imports	100	100	89.4	≈ 100	98.0	97.0	99.2	96.9
World Re-Exports	0	60 000	0	0	6	200	196	60 402
EU Re-Exports	0	60 000	0	0	0	200	196	60 396
% [EU] Re-Exports	0	100	0	0	0	100	100	≈ 100
Extract								
World Exports	2 469	8 249	7 784	605 273	223 273	341 704	2 200	1 188 483
EU Imports	1 654	8 249	7 784	602 273	223 273	336 503	2 200	1 180 283
% [EU] Imports	67.0	100	100	99.5	100	98.5	100	99.3
World Re-Exports	0	2 133	4 868	3 545	5 608	4 650	5 230	26 034
EU Re-Exports	0	2 133	4 043	3 545	5 453	4 270	5 215	24 659
% [EU] Re-Exports	0	100	83.1	100	97.2	91.8	99.7	94.7
Powder* **								
World Exports	809 672	576	284 708	884 057	461 024	536 670	115 000	2 282 035
EU Imports	659 672	576	284 708	884 057	331 024	512 660	110 000	2 123 025
% [EU] Imports	81.5	100	100	100	71.8	95.5	95.7	93.0

(*) Data from 1995 are incomplete as the CITES-listing of *P. africana* became effective during that year.
(**) Data excluding 1995, because trade data from that year are incomplete
(***) No re-exports of 'Powder' were reported

[91] Cunningham, A. B. & Mbenkum, F. T. (1993): Sustainability of harvesting *Prunus africana* bark in Cameroon. People and Plants Working Paper, 2. UNESCO Paris.
[92] UNEP-WCMC (2001) *supra*
[93] Environment Canada (2002) *supra*
[94] *Source*: WCMC data (2003) and Oldfield, S. (2003) *supra*
[95] *Source*: WCMC data (2003). 1992 data are not included because the CITES-listing entered into effect that year.

In terms of volumes imported, bark is the main commodity in international trade (over 50%), showing that most *P. africana* raw material is not processed in the countries of origin. Main exporters are Cameroon (about 62%), Madagascar, the DRC, Kenya and Equatorial Guinea. Small amounts were also legally exported from Burundi and Tanzania.

Compared to the volume imported, re-exports of *P. africana* commodities are of minor significance. Only about 2.1% (ca. 25 000kg) of *P. africana* extracts and about 1.4% (ca. 60 000kg) of *P. africana* bark imported into the EU from 1995 to 2001 were re-exported, mainly by France and Spain. However, these re-exports were destined to a large number of different countries all over the world, mostly, North America, Europe and Asia. Main destination countries of these re-export were the USA, Switzerland, Poland, Canada, Egypt, Korea, Malaysia, Russia, Argentina, Slovenia and others.

The main EU importers were France and Spain (tables 15, 16 and 17). Almost all bark exports are destined for France. Powder is the easiest stage of processing, but is exported only from Cameroon and Equatorial Guinea. Spain is the main EU importer of this commodity. *P. africana* extracts are exported by all main range states active in international trade (except for Equatorial Guinea) as raw material for the pharmaceutical industry; the majority (over 99%) is imported by France.

No clear trends appeared from 1995 to 2001. Import volumes are extremely variable for all *P. africana* commodities in trade, including years without any reported import into any of the importing countries. As with many medicinals, the unpredictable trends is caused by the highly fluctuating demand for raw material in consuming countries: companies tend to stock the material and order only when their stock becomes insufficient to cover the demand.

Except for the three main commodities traded in *P. africana* –bark, powder and extract, other commodities, such as timber, sawn wood, wood carvings, chips, leaves, derivatives, live plants and dried plants appear in international trade. Their volumes, however, are very low. The highest volume of *P. africana* wood legally traded from 1995 to 2001 was 75m^3 of sawn wood from Cameroon imported into Belgium in 1997.

Table 15. EU imports of *P. africana* bark (kg) from 1995 to 2001[96]

Note: No imports of bark were reported for the period studied by Denmark, Finland, Germany, Greece, Ireland, Luxemburg, Portugal and the UK.

Country	1995*[1]	1996	1997	1998	1999	2000	2001	Total	Imported from
Austria	0	0	0	0	0	0	0	0	-
Belgium	460	60 000		100 000	0*[2]	0	20 000	180 460	CD, CM
France	150 792	502 000	774 446	639 003*[3]	767 484	508 260	614 165	3 956 150	BI, CD, CM, KE, MG
Italy	0	0	0	0	0	6 000	0	6 000	MG
Netherlands	0	0	0	0*[4]	0	0	0	0	-
Spain	0	0	67 000	0*[5]	0	0	0	67 000	CM
Sweden	0	0	0	0	0	0*[6]	0	0	-
Total EU	151 252	562 000	841 446	739 003	767 484	514 260	634 165	4 209 610	BI, CD, CM, KE, MG

(*[1]) Data from 1995 may be incomplete as the CITES-listing of *P. africana* became effective during that year.
(*[2]) Import of 1 kg of 'dried plants' by Belgium in 1999
(*[3]) Additional import of 2 kg 'dried plants' from Tanzania by France in 1999
(*[4]) Timber import from the Republic of South Africa, volume 1, no unit.
(*[5]) Timber import from Cameroon, volume 1, no unit.
(*[6]) Import of carvings, 2 no units, 1 as set.

[96] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)

Table 16. EU imports of *P. africana* extract (kg) from 1995 to 2001[97]

Note: No imports of *extract* were reported for the period studied by Austria, Belgium, Denmark, Finland, Germany, Greece, Ireland, Luxemburg, Netherlands, Portugal, Sweden and the UK.

Country	1995*	1996	1997	1998	1999	2000	2001	Total	Imported from
France	628	8 249	7 352	602 057	223 273	336 503	2 200	1 180 262	CD, CM, KE, MG, TZ
Italy	1 026	0	0	0	0	0	0	1 026	CM, MG
Spain	0	0	432	216	0	0	0	648	CM
Total EU	1 654	8 249	7 784	602 273	223 273	336 503	2 200	1 181 936	CD, CM, KE, MG, TZ

(*) Data from 1995 may be incomplete as the CITES-listing of *P. africana* became effective during that year.

Table 17. EU imports of *P. africana* powder (kg) from 1995 to 2001[98]

Note: No imports of *powder* were reported for the period studied by Austria, Belgium, Denmark, Finland, Germany, Greece, Ireland, Luxemburg, Netherlands, Portugal and Sweden.

Country	1995*	1996	1997	1998	1999	2000	2001	Total	Imported from
France	312 672	576	51 888	576	0	150 000	50 000	565 712	CM
Italy	500	0	0	0	2	0	0	502	CM
Spain	246 500	0	232 820	883 481	331 022	362 660	60 000	2 157 483	CM, GQ
Sweden	0	0	0	0	0	0	0	0	-
UK	100 000	0	0	0	0	0	0	100 000	CM
Total EU	659 672	576	284 708	884 057	331 024	512 660	110 000	2 823 697	CM, GQ

(*) Data from 1995 may be incomplete as the CITES-listing of *P. africana* became effective during that year.

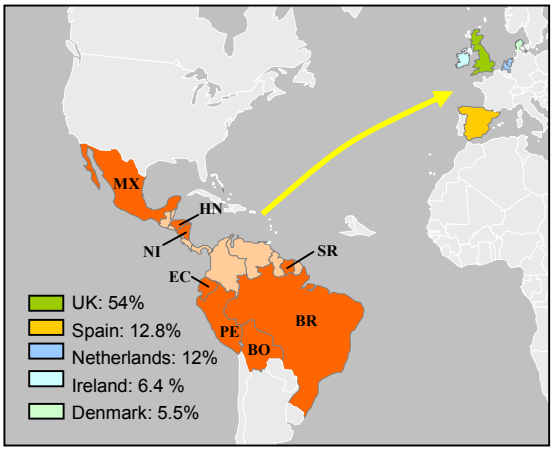
Additional relevant information:

- *Tree characteristics*: *P. africana* is a tall tree, measuring 30 metres or more. Its bark is dark brown to black with a rough, blocky texture and smells of bitter almonds when freshly harvested[99, 100].
- *Similar species*: Bark and extracts or other processed material found in trade are mostly produced from *P. africana*. It is therefore less relevant to list species that have similar wood / timber characteristics as *P. africana* in order to control and monitor its imports than for the other CITES trees selected and described in this manual in trade. However, *Prunus crassifolia*, an endemic species found in Kivu (DRC), can be easily mistaken for *P. africana* and one may suppose that *P. crassifolia* is also in trade. The taxonomic status of *P. crassifolia*, however, is not fully determined[101].
- *Illegal trade*: In 1996 and 1997, official trade data could cover only about 20-40% of the volumes traded: Schippmann (2001) estimated the annual global demand for *P. africana* bark and extract at 2.78 million kg in 1996 and 3.09 million kg in 1997. Official trade data recorded volumes of 0.57 million kg (bark, powder and extract taken together) in 1996 and 1.23 million kg in 1997. Illegal trade is not easy to detect, because it is easy to sell powder or extract under a different trade name, and the true identity of the material can only be discovered through laboratory testing.

[97] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)
[98] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)
[99] WWF-UK (2002): Factsheet: *Prunus africana*. 3 pp. Godalming.
[100] Schippmann, U. (2001). Medicinal plants significant trade study. CITES project S-109. Plants Committee Document PC9 9.1.3 (rev.). 97 pp. Bundesamt für Naturschutz, Bonn (BfN-Skripten, 39).
[101] Jøker, D. (2003) *supra*

4.2.4. *Swietenia macrophylla*

In the early 2000s, Bigleaf Mahogany *S. macrophylla* was the only species of the genus *Swietenia* commercially available, and its trade still represented the largest share of the global market of tropical timbers. Heavy exploitation of its natural stands and of its habitats resulted in a considerable decline in populations. Therefore, and although some experts estimate that the actual volume of mahogany in international trade is less than 1% of the estimated stocks[102], the up-listing of the species from Appendix III to Appendix II of CITES was adopted in 2002 and entered in effect in November 2003. Its native range extends across 235 million hectares in Latin America, primarily in Brazil (Parà), Bolivia and Peru.



Map 7. Main EU Member States importing *S. macrophylla* and exporting countries during the period 1995–2001. Exporting range states are coloured in orange. Additional range states without recorded exports to EU countries are coloured in terracotta[103].

The USA is by far the world's leading importer of timber and sawn wood of *S. macrophylla*, follow by the Dominican Republic and, in third position, EU Member States. From 1995 to 2001, 8.6 % of the average total annual imports world-wide entered the EU (Table 18), of which more than half entered the UK, followed by Spain and the Netherlands representing each about 12% of EU imports. Except for Greece, Luxembourg and Portugal, all EU Member States reported imports of *S. macrophylla* sawn wood or timber during the period considered (Table 19).

The worldwide legal trade in *S. macrophylla* sawn wood and 'timber' shows no significant trend in time. For the period studied, 1995–2001, EU reported imports started to decrease in 1999. The volumes introduced in the EU were almost entirely destined to the EU market; only 3.2% were re-exported. The USA reported the largest proportion of all re-exports (CITES Parties' Annual Reports). EU Member States, namely Denmark, which supplies other Scandinavian countries, account for about 2% of re-exports reported, and some, such as Denmark and the UK, occasionally import *S. macrophylla* material re-exported from the USA.

Table 18. Total reported exports and EU-imports of *S. macrophylla* sawn wood and 'timber' (m^3)[104]

	1995*[1]	1996	1997	1998	1999	2000	2001	*Total*[*7]
World Exports	4 493	157 347*[2]	156 402*[2]	93 730	124 952	93 433	104 518	*730 382*
EU Imports	1 760	22 932	5 979	10 185	12 510	5 768	5 763	*63 169*
% [EU] Imports	39.2	14.6	3.8	10.5	10.0	6.2	5.5	*8.6*
World Re-Exports	57	778	1 129	8 303	4 142*[3]	6 625	2 577	*23 554*
EU Re-Exports	0	191	91	77	18	5	77	*459*
% [EU] Re-Exports	0	24.6	8.1	0.9	0.4	0.1	3.0	*2.0*

(*[1]) CITES-listing entered into effect in 1995; data for the year are therefore incomplete and were not included in the Total.
(*[2]) Data include about 60 000m^3 exported from Brazil to an undisclosed country in 1996 and 1997. This country may be the USA, which would reduce the total world exports of 1996 and 1997 to each about 120 000m^3.
(*[3]) Owing to an incompatible unit, data exclude Canadian declared re-exports: 5820 'm' (?) timber.

[102] Baer, W., IWPA, (2003) In: Tropical Forest Update. ITTO Newsletter 13(2): 20-21
[103] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)
[104] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)

Table 19. EU imports trends of sawn wood and 'timber' of *S. macrophylla* (m^3)[105]

Country	1995*	1996	1997	1998	1999	2000	2001	Total*	Imported from
Austria	0	0	0	0	54	0	0	54	BR
Belgium	0	132	582	0	39	168	156	1 077	BO, BR, PE
Denmark	59	1 560	529	68	448	299	613	3 517	BO, BR, PE
Finland	0	29	0	34	182	0	0	245	BR, MX
France	550	403	201	32	32	0	0	668	BR, NI
Germany	0	0	254	857	522	289	499	2 421	BO, BR, PE
Greece	0	0	0	0	0	0	0	0	--
Ireland	163	2 303	1 146	310	145	84	17	4 005	BR, PE
Italy	0	32	0	0	220	83	47	382	BO, BR, PE
Luxembourg	0	0	0	0	0	0	0	0	--
Netherlands	90	880	537	1 685	2 797	1 143	600	7 642	BR, SR
Portugal	0	0	0	315	0	0	0	315	BR
Spain	130	792	794	2 717	2 161	890	766	8 120	BO, BR, EC, NI, PE
Sweden	0	0	115	0	247	71	144	577	BO, BR, HN, PE
UK	768	16 833	1 821	4 167	5 663	2 741	2 921	34 146	BO, BR, PE
Total EU	1 760	22 932	5 979	10 185	12 510	5 768	5 763	63 169	BO, BR, EC, HN, MX, NI, PE, SR

(*) CITES-listing entered into effect in 1995; data for the year are therefore incomplete and were not included in the Total.

From 1995 to 2001, most *S. macrophylla* imports into the EU originated from Brazil. However, in recent years, probably influenced by the fact that *S. macrophylla* was listed under the provisions of CITES in 1995[106], volumes of raw material exported from Brazil, as well as from Nicaragua and Bolivia, declined by at least 30%. Only Peru, which included its population in Appendix III at a later stage (12 June 2001, see Table 3), reported considerably increased exports. Other source countries, such as Mexico, Honduras, Ecuador and Suriname, reported small volumes of exports to the EU. No other range states of *S. macrophylla* were recorded as supplier to the EU between 1995 and 2001.

Besides sawn wood and timber, several other *S. macrophylla* commodities were traded internationally: woodcarvings, live plants, furniture, timber pieces and veneer. Quantities of EU imports of veneer increased significantly throughout the period 1995–2001; the entire volume (279m^3 + 13 420m^2 + 22 805kg) originated from Brazil and was destined to Denmark, Belgium, Spain and Portugal[107].

Additional relevant information:

- *Wood characteristics* (see Annex 7): The heartwood of *S. macrophylla* is variable in colour, ranging from yellow, reddish, pinkish or salmon coloured when freshly cut and turning into a deep red or brown when aging. The heartwood is highly durable and rot-resistant towards fungi, but less to dry-wood termites and pinhole borers. Its weathering qualities are excellent, which makes the wood valuable for boat building. The wood can usually be easily worked on. The sapwood is whitish or yellowish-white. The grain is often irregular, producing highly appreciated patterns, forms and figures. The wood is lustrous and golden and without any distinct odour.
- *Similar species*: *S. macrophylla* timber and sawn wood in trade can be confused with other CITES-listed species of the same genus, *S. humilis* and *S. mahagoni*. The natural range of *S. macrophylla* overlaps especially with *S. humilis* in Central America.

  In addition, and especially due to *S. macrophylla*'s variability in colour, there are quite a number of look-alike species[108]:
  - *Carapa* spp. (in particular Andiroba *Carapa guianensis*)
  - Cedro *Cedrela* spp.
  - Bossé *Guarea* spp.
  - Jatobá *Hymenaea* spp.

[105] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)
[106] TRAFFIC (2002): A CITES priority: Big-leaf mahogany and the twelfth meeting of the conference of the parties to CITES, Santiago, Chile 2002. TRAFFIC and WWF briefing document, 4 pp.
[107] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)
[108] Environment Canada (2002) *supra*

- *Khaya* spp. (in particular African mahogany *Khaya nyasica*[109])
- Balsamo *Myroxylon balsamum*

It is also similar to Sapelli *Entadzophragma utile* and Sipo *Entrandrophragna cylindrium*[110].

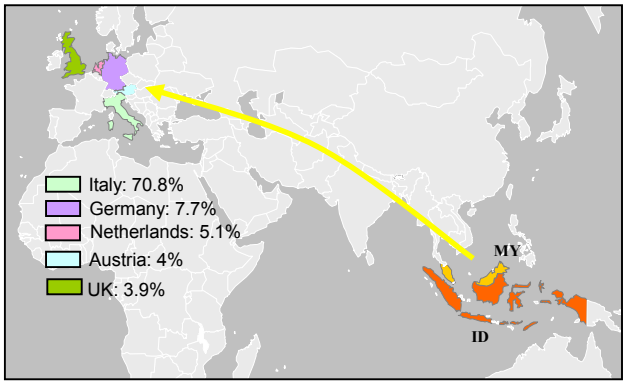
- *Illegal trade*: Illegal trade in *S. macrophylla* is often reported as a serious problem in many range states. The high value of the species results in high financial returns for companies involved in mahogany trade. It pays so well that road construction into so far inaccessible regions are often economically feasible for the only purpose to log mahogany. Illegal logging in and outside forest concession areas, in parks and indigenous people's reserves is not uncommon. Although in most range countries national laws for the protection of *S. macrophylla* exist, these are often difficult to enforce. Colombia and Costa Rica have relatively effectively banned mahogany from logging and trade. Other countries, such as Brazil and Peru, have voluntarily established export quotas and restricted cutting to ensure the sustainability of *S. macrophylla* logging, even in places where no forest management plan exists. However, and especially in these two countries, illegal and environmentally highly detrimental logging of *S. macrophylla* in 'reserved zones' (e.g. tribal rights) occurs frequently. A court case in Brazil in 1993 lead to the condemnation of three large logging companies (Perrachi, Maginco and Impar); the companies had to remove their logging equipment from tribal reserves in Pará and pay compensation to the tribes.

[109] S. Speed, ATIBT, *in litt.* to TRAFFIC Europe, December 2003
[110] S. Speed, ATIBT, *in litt.* to TRAFFIC Europe, December 2003

4.3. Annex C-listed tree species included in the EU Wildlife Trade Regulations

4.3.1. *Gonystylus* spp.

The genus *Gonystylus* spp. (Ramin) is native to rain and swamp forest in the Indo-Malayan region. At least 31 different species (probably more, but the taxonomy needs to be clarified) are in this diverse genus. In terms of timber sourcing and trade, the most important species are *Gonystylus aerolatus* (range: Borneo (Indonesia (Kalimantan), Malaysia (Sabah, Sarawak)), *Gonystylus bancanus* (range: Brunei, Indonesia (Kalimantan, Sumatra), Malaysia (Malaysian Peninsula, Sabah, Sarawak)), *Gonystylus forbesii* (range: Indonesia (Kalimantan, Sumatra), Malaysia (Sabah and Sarawak)) and *Gonystylus macrophyllus* (range: Indonesia (Bali, West Papua –former Irian Jaya, Kalimantan, Moluccas, Sulawesi, Sumatra), Malaysia (Malaysian Peninsula), Papua New Guinea (North of Solomon Islands), Philippines, Solomon Islands (South)).



Map 8. Main EU importing countries of *Gonystylus* spp. and exporting countries in 2001 (August–December)[111].

Ramin enters international trade, from both Indonesia and Malaysia. Main importers are the USA, Japan, Taiwan, Hong Kong, and the EU. According to UNEP-WCMC data, about 10 000m^3 of Ramin were imported into the EU from August to December 2001, which equalled roughly 17% of the world Ramin trade. The main commodities in trade are timber and sawn wood. Commodities other than timber and sawn wood have rarely been reported for Ramin. In 2001, 820kg woodcarvings were officially re-exported from Spain to Russia, and 30m^3 veneer exported from Indonesia to Spain.

The largest quantities of Ramin trade in the EU are imported by Italy, where it is made into picture frames[112] (Table 20). The Netherlands, Austria and UK appeared as other significant importers in the EU. Not all 'timber' was imported directly from countries of origin; large volumes passed through Taiwan and Singapore, and were re-exported from these countries to EU countries. Within the EU, Italy and Spain were the only re-exporters of Ramin 'timber' in 2001. 300m^3 (about 4.4% of Italian Ramin imports) were officially re-exported. USA emerged as the primary destination for Italian re-exports outside the EU.

Table 20. EU imports of *Gonystylus* spp. 'timber' (m^3), 2001 (August–December)[113]

EU importer	Quantity (m^3)	Country of origin	Country of export
Italy	6 805	MY, ID, CN	MY, SG, ID; TW, CN
Netherlands	889	MY, ID	MY, ID
Austria	704	ID	ID
UK	688	MY, ID	MY, ID
Belgium	441	MY	MY
Denmark	329	ID, MY	ID, MY
France	224	ID, MY	ID, MY
Greece	131	ID	ID
Spain	121	ID, MY	ID, MY
Germany	37	MY	MY
Total	10 369	MY, ID, CN	MY, SG, ID; TW, CN

[111] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003)
[112] Groves, M. & Clarke, G. (2002). UK Guidelines for the implementation of the EU regulations for Ramin (*Gonystylus* species). First Edition. London.
[113] *Source*: CITES annual report in the form of comparative tabulations data compiled by UNEP –WCMC (2003). For Italy and Germany, the Management Authority has directly provided data to TRAFFIC-Europe.

Additional relevant information:

- *Wood characteristics* (see Annex 7): Ramin is a light tropical hardwood. The wood is moderately heavy and hard with high crushing strength, relatively high bending strength and stiffness, low shock resistance and poor decay resistance. Steam-bend qualities are poor. Heartwood and sapwood are white to pale straw colour and difficult to differentiate from each other. The grain is straight to mildly inter-lock and the texture is relatively fine. The wood is quite easily workable with machines and hand tools but tends to chip out on quartered surfaces.

- *Similar species*: Several Asian tree species, some of them also popular for their timber, frequently found in international trade and bearing similar wood characteristics[114], could be mistaken with ramin,
  - Pulai *Alstonia* spp.
  - Kelempayan *Athrocephalus* spp.
  - Meranti / Seraya *Shorea* spp.
  - Jeluntong *Dyera* spp.
  - Merbau *Intsia* spp.

  Other similar species, but native to Latin America[115], are Capomo *Brosimum alicastrum*, Sandé *Brosimum utile*, Copaia *Jacaranda copaia* and Simaruba *Simarouba amara*.

- *Illegal trade*: Ramin is a valuable timber in international trade and the populations of most Ramin species have suffered from wide, often illegal, logging activities, especially in Indonesia. Indonesia felt unable to effectively control the logging and trade in Ramin. In 2001, the government decided to establish a 'Zero Export Quota' (April) and to include its populations of all species of *Gonystylus* in CITES Appendix III (May). The listing became effective on 6 August 2001. CITES implementation is difficult, one major problem is illegal Ramin exports from Malaysia, which are declared native, but were allegedly illegally logged in Indonesia and transported across the border into Malaysia before further 'entering legal' trade.

  As happens frequently with economically valuable timber species, the official trade in *Gonystylus* spp. seems to reveal only the tip of the iceberg. Although Italy is well known for its traditional timber processing industry, Ramin is frequently already processed or even worked into final products before imports reach the EU. These products, mostly wooden items of any sort from curtain rods to dowels or picture frames, are popular due to their low weight, bright colour and the ease with which they can be carved. Processed Ramin material can easily be hidden under other goods in containers and is difficult to detect when entering the EU. The volume of such processed Ramin goods cannot be realistically estimated but it is said to be considerable[116].

  The 'Zero Export Quota' of Indonesia equals a limited export ban. In principle, the export of Ramin from Indonesia is prohibited, with two exemptions,

  - Stockpiles to be exported from Indonesia without CITES documents was extended to 31 December 2001. After this date export permits must be issued for specimens remaining in stockpiles.
  - Indonesia will still issue export permits for Ramin timber and products if these are proven to originate from the firm PT Diamond Raya Timber and the associated processing company PT Uniseraya, which have been granted a certificate of Sustainable Forest Management Both companies are exempted from the 'Zero Export Quota'

  On 17 August 2001 Malaysia entered a Reservation against the Indonesian Appendix III listing of *Gonystylus* spp., only for recognisable parts and derivatives (Notification 2001/068, 10 October 2001). This reservation is not applicable to sawn wood and logs, for which an export certificate is required. For other parts and derivatives, Malaysia can however issue an equivalent certificate of origin if requested by importers[117].

[114] Groves, M. & Clarke, G. (2002) *supra*
[115] Environment Canada (2002) *supra*
[116] Environmental Investigation Agency and Telapak Indonesia. (2001) Timber Trafficking: Illegal Logging in Indonesia, South East Asia and International Consumption of Illegally Sourced Timber.
[117] Chen Hin Keong, TRAFFIC Southeast Asia, *in litt.* to TRAFFIC Europe, March 2004

5. GUIDELINES FOR CONTROLLING THE IMPORT AND RE-EXPORT OF CITES-LISTED TREE SPECIES

5.1. Timber trade and 'risk assessment'

According to A. Berends[118], the approach of the custom service to controls has changed in recent years. In the past, control was basically focussed on physical controls and concentrated at the border, which was costly and time consuming. Today, due to the enormous increase of movements of goods, physical interventions are less feasible. In the EU for instance, only 3% of all goods that are introduced into the single market are examined at the time of customs clearance[119]. Control strategies and procedures needed therefore to be modernised and adapted.

New methodologies were designed and started to be applied in order to simplify, better focus and optimise customs control activities, e.g. targeted investigation on carefully selected goods, on special sites and at particular times. Computerised, post-import and audit controls using risk analyses are techniques that became widely used and increasingly sophisticated. The development of an appropriate risk management encounters several difficulties because a number of parameters that are required for such risk management remain to be defined or quantified.

The following section provides elements to be taken into consideration in the context of a risk analysis for timber trade controls and more specifically for trade in CITES-listed timber species.

Suggested directions that could be explored are the improvement of enforcers' knowledge on,

i) Statistical sources on timber trade;
ii) Commercial practices of timber traders;
iii) Illegal activities associated with timber trade;
iv) Precise information at a species level; and
v) Possibilities of co-operation with other authorities at national and international levels.

5.1.1. Statistical sources on timber trade

Reliable official data on timber trade are of primary importance to understand global information on the size and nature of timber product movements. The EU tropical timber trade overview presented in this document (see *section 1.2*) is based on an analysis of trade data published by the commercial timber sector the *UCBD* (European Hardwood Federation). National timber trade federations/associations should be able to provide specific statistics (volumes, origin, type of products imported, values, etc.) for each EU Member State. A list of national timber trade federations/associations in Europe is in Annex 3.

Timber trade statistics are also collected and/or compiled by different agencies at the national level, e.g. by designated offices for statistics or the board of customs often under the jurisdiction of the ministry of finance, and subsequently at international level, e.g. by EUROSTAT, the Food and Agricultural Organization (FAO) of the United Nations and the International Tropical Timber Organization (ITTO).

Five international organizations provide timber (and tropical timber) trade statistics. These sources provide data on the **volume** as well as on the value of timber imports. **Trends of the value** of a commodity are a parameter that should also be considered in the risk assessment.

- EUROSTAT and the COMEXT database on trade
  http://www.europa.eu.int/comm/eurostat/
- United Nations Statistics Divisions (UNSD) and its COMTRADE database on trade
  http://unstats.un.org/unsd/comtrade/
- United Nations Economic Commission for Europe (UNECE) timber database on production and trade http://www.unece.org/trade/timber/Welcome.html
- FAOSTAT database on production and trade
  http://apps.fao.org/page/collections?subset=forestry
- ITTO tropical timber database on production and trade
  http://www.itto.or.jp/inside/review2002/download/E2-Annual%20Review.pdf

[118] Berends, A., European Commission DG TAXUD. EU Customs Controls. Paper presented at the Forest Law Enforcement, Governance and Trade Workshop (Brussels, 22-24 April 2002).
[119] D. Rabosée, Belgium Customs Administration, pers. comm. to TRAFFIC Europe, November 2003

UN COMTRADE and COMEXT compile information on all products, including forest products. FAO, UNECE and ITTO are all specialised in forest products production and trade. The aim of all these organizations is to provide information to serve a wide range of users, including governments, commercial enterprises, national and international organizations, scientists and the public at large. Data are made available through access to databases, statistical publications and analytical studies.

UN COMTRADE database provides data according to the Harmonized System (HS) of the World Customs Organizations (WCO) (see *section 2.1*.) and the Standard International Trade Classification (SITC and revisions 1, 2, 3). COMEXT collects trade statistics following the Combined Nomenclature (CN) (see *section 2.1.*). The UN COMTRADE and COMEXT provide coding, which identifies tropical wood in trade. Identification as 'tropical' is based on a list of tropical species[120].

FAOSTAT, UNECE and ITTO introduced the Joint Forest Sector Questionnaire (JQ) transmitted to competent national authorities and supported by a common framework of classifications and definitions. JQ uses the HS coding for tropical products in trade, including round wood, sawn wood, veneer and plywood. It also requests separate data on production of sawn wood, veneer, plywood made from tropical woods. Secondary sources of data are also used, e.g. trade associations, both national and international, specialized trade press and the industry's annual reports[121].

All these sources of statistics are useful tools to gather global trade data (not at a species level though) that permit analyses on countries of origin, countries of destination, trends of imports and/re-exports, types of timber products in trade, etc. However, it is important to keep in mind that these data do not give an accurate picture of volumes in trade, due to numerous potential sources of error (unintentional and/or intentional), ranging from the transmission of timber data by customs offices to the creation of databases at international organizations. Examples of sources of error are, differences in classification and definitions, standards for the value and units used to report on quantities, including conversion factors (e.g. from volumes to weight of timber), and illegal trade.

In this context, the ITTO initiated in November 2001, case studies in eleven countries to assess the reasons for discrepancies between imports and export statistics for tropical timber trading partners. Twelve countries that are member of ITTO participated in the case studies: Bolivia, Brazil, Cameroon, China, Republic of Congo (Brazzaville), Indonesia, Japan, Malaysia, Papua New Guinea, Thailand, UK and USA. Four of the twelve participants, China, Indonesia, UK and USA, had completed their case study reports by early 2003 (copies of the reports are available on request from the ITTO Secretariat, in English only). Some of the sources of discrepancies identified at present include: incorrect specification of origin or destination of shipment; confusion in the classification of tropical and temperate non-coniferous timber; differences in standards for measurements and scaling methods; and smuggling,

The Organisation for Economic Co-operation and Development (OECD)[122] may be another source of statistics on timber trade. Studies on international trade, including analysis of its trends in the world's economical context, are published by the organisation.

5.1.2. Commercial practices of timber traders

Some common commercial practices adopted by trading companies can be used by EU enforcement agencies in order to monitor and control importation of tropical timber, examples are given below.

5.1.2.1. Marking of wood

Usually forestry companies of all countries around the world put their logos on logs and sawn products that will be shipped. The logo is to easily recognize plots of cut timbers and often information on the geographic origin of the forestry concessions and date of cut is added (Figure 5).

This information might be useful to gather clues on whether or not a shipment can be considered 'illegal'. For example, to check a possible mismatch of origin declared on accompanying documents and appearing on the product, i.e. certificate of origin; to verify if logs come from an authorised logging area; to calculate a suspected excess in annual logging quota for a specific timber on the company's concession. However, interpretation requires experience and good knowledge in this field. Exchange of information (e.g. electronic pictures of logos sent by email) between national authorities and independent experts and/or NGOs (e.g. Global Witness, Greenpeace, WWF, etc.) active on the ground, could be envisaged.

[120] European Forestry Institute (2001). Improvement of Statistical Information System for Forest Products Production and Trade Statistics of EU and EFTA. 160 pp.
[121] European Forestry Institute (2001) *supra*
[122] http://www.oecd.org

Figure 5. Example of codes identifying imported logs

5.1.2.2. Professional newspaper announcement

Importing companies used to announce to their customers the arrival of timber and wood products (logs, sawn wood, veneer or plywood). Often they use professional newspapers that have a special section to make these announcements. *L'Echo des Bois*[120] (see below), a Belgian newspaper provides this type of service and information. Equivalent newspapers can be found in other EU countries.

Figure 6. Example of importation information on timber in a professional newspaper[123]

[123] *Source*: « L'Echo des Bois », N°43 – 24 October 2003, Brussels (Belgium).

5.1.2.3. Companies websites

A lot of EU timber trade companies have their own website, where it is possible to find relevant information, particularly on stock lists. Even information at a species level is generally provided, which is extremely rare and of high relevance to CITES. When a company announces a stock of CITES-listed timber species on its website and, if there are doubts about the company, customs could contact the appropriate CITES Management Authority to inquire if CITES import permits have been applied for by, and eventually issued for this company.

This type of information could be interesting for controls / investigations that take place after the shipment received customs clearance at the point of entry (see *section 6*.).

Figure 7. Part of a company's advertised stock, available on Internet

Asia	Further names	Weight m³	General characteristics	Uses
Padouk, Indian	Mai-Dou	1000	reddish with dark stripes, hard, very durable, easy to work, maser-burls are highly estimated	outdoor veneer, sculptures, handicraft articles, carvings
Ramin		800	yellowish white, straight-grain, even texture, easy to work, prone to fungi decay, weather-proof	mouldings, interior construction, furniture parts
Rosewood-Andaman	Amboina-Maserburls	850	see Amboina-Maserburls	

5.1.3. Illegal activities associated with timber trade

Illegal logging and illegal acquisition of timber in trade, takes place when timber is harvested, transported, bought or sold in violation of national or international laws. The harvesting procedure itself may be illegal, including

- corrupt means to gain access to forests,
- extraction without permission or from protected areas,
- cutting of protected species or extraction of timber in excess of agreed limits.

Illegalities may also occur during transport, including

- illegal processing and export,
- mis-declaration to customs, and
- avoidance of taxes and other charges[124].

A list of potential illegal practices associated with timber trade is provided in Annex 4.

Illegal logging is considered widespread in many of the world's major timber producing and exporting countries. In some cases illegal logging represents more than 50% of the national annual production, and large quantities of illegally sourced wood find their way to official markets in Japan, the US and the EU in the form of raw timber, furniture or other products[125]. Table 21 provides a summary of estimates (where they exist) of the extent of illegal logging in some of the main suppliers of timber to the EU.

Table 21. Estimates of country percentages of illegal logging for tropical timber exporters[126]

Origin	Estimated percentage of illegal logging	Source of estimate
Brazil	80%	Internal report, Secretariat for Strategic Affairs (May 1997)
Indonesia	73%	Indonesia-UK Tropical Forest Management Programme (1999)
Gabon	70%	Based on 'A first cut of logging in Gabon', Global Forest Watch (2000)
Cameroon	50%	Based on 'An overview of logging in Cameroon', Global Forest Watch (2000)
Malaysia	35%	WWF (1995/2000)

[124] Brack, D. *et al.* (2002) *Controlling the International Trade in Illegally Logged Timber and Wood Products*. The Royal Institute of International Affairs (RIIA), UK.
[125] Environmental Investigation Agency and Telapak Indonesia. (2001) Timber Trafficking: Illegal Logging in Indonesia, South East Asia and International Consumption of Illegally Sourced Timber.
[126] *Source*: Matthew, E. (2001) *European League Table of Imports of Illegal Tropical Timber*. Friends of the Earth.

Under the CITES and EU Wildlife Trade Regulations, international trade in CITES specimens is legal only if specimens are accompanied by permits or certificates authorizing their trade. Types of fraudulent activities vary in space and time –they may change from one year to the next.

With regard to the international trade in CITES-listed timber species, there are well-known categories of infractions / violations (ref. Article 16 of Regulation (EC) 338/97) commonly encountered / reported by customs or police forces,

- Absence of CITES documents.
- Using legal documents to cover illegal goods. Some examples are given below.
  - The species found in the shipment may not match the one stated on the documents. In many cases, if the designated expert is not available, it is difficult (sometimes impossible) for the customs officer to determine the exact species of timber found in a shipment.
    Example: In Belgium, Afrormosia (Pericopsis elata) wood is sometimes imported under the name 'debitou' or 'dibétou' in order to avoid control[127].
  - The name of the species / genus is not mentioned on the custom documents in order to avoid CITES restrictions.
    Example: Following the listing of Ramin (Gonystylus spp*.) in Annex C in 2001, it was suspected that Ramin would be simply declared as 'Indonesian hardwood' or 'Indonesian wood'*[128] *on the customs declaration.*
  - The volume may be difficult to assess or the volume indicated may be false. This technique is used when the quantities are large.
  - The declared origin may be untrue. Some countries prohibit the export of certain species. A trafficker will therefore declare that specimens originate from another country.
- Using false documents. Some examples are given below:
  - Genuine documents may be fraudulently obtained: permits or certificates may be obtained by corruption, or on the basis of false documents or declarations.
  - Genuine documents may be fraudulently altered: the country they have come from, the quantity, the date, etc. can all be modified.
  - False documents may be drawn up on genuine forms or imitations; the signatures and stamps can be copied.

5.1.4. Information at species level

A good knowledge of trade characteristics at species level (e.g. trade statistics, commercial uses, similar species, illegal trade) is necessary for an efficient control of CITES-listed timber species. The information provided in *sections 3.* and *4.*, is therefore relevant but additional information might be needed, e.g. list of companies in the EU that import timber of CITES-listed tree species, list of companies that have officially been reported to be involved in illegal activities linked to CITES-listed timber species, statistics on illegal trade per species, etc.

5.1.5. Co-operation between authorities – exchange of information

Enforcement agencies – customs, inspectors and police – active in CITES timber trade control may find assistance by contacting relevant national authorities or also through expertise and information / material provided by international organizations.

5.1.5.1. National level

Where custom services detect irregularities in a shipment, their CITES Management Authority can be contacted. The expertise in the designated CITES agency can be of great support to the enforcement officer when assessing the compliance and authenticity of documents submitted. Furthermore, CITES Management Authorities are in contact with importers, dealers, and other countries, which provides them with key and sometimes updated information on specific smuggling channels, dubious trade, etc.

[127] Anon. (1999)
[128] Anon. (2001)

Communication with other observers (experts, scientific institutes), particularly in the context of progress made in advanced information technology, is also a cheap and efficient way of receiving intelligence about shipments and stakeholders active in this field.

5.1.5.2. International level

The World Customs Organization (WCO) and Interpol are sources of information and expertise in the field of illegal trade in flora and fauna.

- The WCO, which is composed of representatives of 162 member national customs authorities, may be of assistance in controlling trade in CITES-listed timber species. A Memorandum of Understanding (MoU) between WCO and the CITES Secretariat covers information exchange, joint technical meetings, cooperation between CITES and customs officials at the national level, and training and awareness-raising exercises.

  The WCO has established a Customs Enforcement Network (CEN) using a modern database and means of communication to facilitate cooperation in the field of enforcement and the dissemination of information and intelligence. The CEN is based on an Internet structure with an access limited to approved users. All information collected by regional offices (Regional Intelligence Liaison Offices) around the world is collated in this database. Information on CITES-listed species is provided through the CEN (e.g. via the Alert messages), but the pool of data collected/available to date is limited, particularly on timber.

  The WCO is also planning to launch an on-line training course on 'Customs, wild fauna and flora' in December 2004. This course, part of the WCO's "e-learning programme"[129], will be made widely available among Customs administrations.

- ICPO-Interpol[130] facilitates information exchange between national police authorities. Following the adoption of a resolution by the Interpol General Assembly in 1992, a Working Party on environmental crime was established. The Wildlife Crime sub-group (now: Interpol Working Group on Wildlife Crime), which was created as part of this initiative, is asked to look into the possibilities of information exchange on:
  - persons and/or companies involved in the illegal trade in flora and fauna;
  - organizations that are involved in this trade;
  - methods and trends of this illegal wildlife trade including the use of false CITES documents, forgery, means of transport, organized crime and the relation with other forms of international organized crime.

In the mid 1990s, Interpol introduced an *Eco-message* system for the collection and analysis of information in cases concerning international environmental crime. However, besides the limited information received on timber from national agencies, the lack of resources (e.g. staff assigned to the compilation and analysis of data) is an obstacle to the full utilisation of this intelligence tool.

Each Interpol Member State must have a National Central Bureau (NCB), which acts as the focal point for international co-operation. One of the activities of the NCBs is to receive requests for information from police administrations, from other NCBs and reply to such requests.

A practical guide on collaboration between CITES Management Authorities and Interpol NCBs was published by Interpol in 1988 and has been distributed to all members. It was updated and re-distributed in 1997.

Similarly to the WCO, Interpol works through a MoU with the CITES Secretariat.

[129] http://www.wcoomd.org
[130] http://www.interpol.int

5.2. Best practices for controls during customs supervision

Procedures that precede, accompany and follow the import or re-export into or from any EU Member State of a shipment that contains CITES-listed timber species should follow a clear path with standard principles and steps. These steps are either determined by the law or suggested in terms of procedural practicability. All enforcement agencies in the EU, which are in charge of CITES implementation with regard to CITES-listed timber species should follow these steps, whenever possible, in order to guarantee the effective implementation of CITES with regard to timber species.

In principal, 10 steps can be distinguished:

1. Determination of CITES import / re-export regulation
2. Validation of Shipment
3. Determination of required CITES documents
4. Collection of required documents
5. Verification of CITES documents
6. Comparison of shipping documents with accompanying CITES documents
7. Inspection of shipments
8. Species Identification
9. Endorsement of CITES documents if appropriate
10. Distribution of endorsed CITES documents

These 10 steps will be described in detail below. Although each step has its importance and it is recommended that none of them is omitted, one should also acknowledge the considerable problems that CITES implementation poses to enforcement agencies, especially with regard to timber species. These problems include species identification, mixed and / or large-volume shipments, and other aspects. Consequently, it is not always possible or practical to closely follow the steps.

It is also important to keep in mind that, within the EU Single Market, a shipment destined for one EU Member States can be presented for import at any EU port of entry. All shipments must go through official Customs procedures at the first point of entry into the EU, after which they can continue their journey to their final destination. However, in two cases controls can be deferred. According to Art. 23(1) of Regulation (EC) No. 1808/2001, "*where a shipment to be introduced into the Community arrives at a border customs office by sea, air, or rail for dispatch by the same mode of transport and without intermediate storage to another customs office in the Community designated in accordance with Article 12(1) of Regulation (EC) No. 338/97, the completion of checks and the presentation of import documents shall take place at the latter*".

Furthermore, according to Art. 23(2) of Regulation (EC) No. 1808/2001, "*where a shipment was, in accordance with Article 4 of Regulation (EC) No. 338/97, checked at a customs office designated in accordance with Article 12(1) of Regulation (EC) No. 338/97 and is dispatched to another customs office for any subsequent customs procedure, the latter shall require presentation of the 'copy for the holder (form 2) of an import permit, completed in accordance with Article 12 of this Regulation, or the 'copy for the importer (form 2) of an import notification, completed in accordance with Article 14, and may carry out any checks it deems necessary in order to establish compliance with the provisions of Regulation (EC) No 338/97 and of this Regulation*".

5.2.1. Determination of CITES import / re-export regulation

During this first step, the shipment should be generally inspected to find out if timber or wood-products present in the shipment need CITES permit(s), certificate or notification and, if it is the case, that their accompanying CITES document match the content of the shipment. Care should be taken that not only the correct species is indicated on the documents, but that also the form of the imported material is correctly noted in the documents (i.e. logs, veneer, bark etc.). Not all forms of trade in a CITES-listed timber species are regulated by EU Wildlife Trade Regulations (see *section 3.4*.). For some species, manufactured plywood, seeds or live specimens may be excluded from EU Wildlife Trade Regulations.

Please also make sure, that the timber species in question or the form that is traded is not subject to a **national legislation** other than EU Wildlife Trade Regulations.

5.2.2. Validation of shipment

For the purpose of ensuring that you have the authority to validate the shipment in question, check if your point of entry / exit (most likely a port) has been designated for control of timber specimens listed in the EU Wildlife Trade Regulations. If it is not, you are not authorised to process the shipment. Please make sure that the shipment is – under customs bond – transferred to a designated point of entry, at the owner's expense. Until further definition, all authorized points of entry of CITES-listed timber species are also authorized points of exit for re-export.

5.2.3 Determination of required CITES documents

Determine which CITES documents are required for the shipment concerned. The nature of the documents required depends basically on the form of trade (import or re-export) and on the Annex the respective species is listed. For some species, the country of origin determines if a CITES permit / certificate is required or not. Circumstances under which documents are required for import or re-export of CITES-listed timber species are outlined in Table 22. Consultation of Table 1 ill help you verify in which Annex/Appendix the relevant tree species is listed. Also, further checking of the annotation(s) adopted for the species will be needed to verify if all specimens, including parts (e.g. leaves, roots) and derivatives (e.g. extracts) are covered (see Table 5).

Table 22. Documents, which must be shown to the European customs authorities for trade to and from the EU and intra-EU trade, in CITES-listed timber species

Transaction	Ann.	Required documents	Reg. EC 338/97	Reg. EC 1808/2001
Import	A	Import permit and, if it is specified in the import permit, any document of the exporting or re-exporting country	Art. 4(1)	Art. 11
Import	B	Import permit and, if it is specified in the import permit, any document of the exporting or re-exporting country	Art. 4(2)	Art. 11
Import	C	Import notification and export documents of the exporting or re-exporting country	Art. 4(3)	Art. 13
Import	D	Import notification	Art. 4(4)	
Re-export	A	Re-export certificate	Art. 5(1)	Art. 16
Re-export	B	Re-export certificate	Art. 5(4)	Art. 16
Re-export	C	Re-export certificate	Art. 5(4)	Art. 16
Intra-EU trade	A	Certificate an exemption from the prohibitions of commercial activities	Art. 8(3) Art.10	Art. 20(3)
Intra-EU trade	B	Proof of legal possession or legal import	Art. 8(5)	

5.2.4. Collection of required documents

Having verified the existence of all necessary documents, the enforcement agency must collect the following CITES documents (only original documents can be accepted):

- *Import procedure*: the original of the CITES import permit issued by the EU Member State + the original CITES permit/certificate/notification issued by the exporting or re-exporting country (all CITES documents must be updated and then transferred to the national CITES Management Authority –see *section 5.2.10*) + shipment papers (such as loading papers)
- *Re-export procedure*: the original and copy no. 1 of the CITES re-export certificate should be handed to the exporter + copy no. 2 should be collected (to be updated and transferred to the national CITES Management Authority –see *section 5.2.10*) + shipment papers (e.g. loading papers).

5.2.5. Verification of CITES documents

CITES documents accompanying shipments may be falsified or intentionally forged (see *section 5.1.3.*). Such practices are not uncommon because some CITES-listed timber species are biological resources with high economical values. For this reason it is important to carefully verify the authenticity of CITES documents that accompany a shipment. In case of doubts, compare the documents with model documents issued by the country(ies) of origin and/or export, or contact the respective CITES Management authorities/CITES Secretariat to kindly request that a facsimile is sent to you for comparison. The CITES documents accompanying the shipment must perfectly match the original model and be issued by the legitimate CITES Management Authority.

If one or more of the following documents are detected, or if modifications to original CITES documents are discovered (ref. Article 16 of Regulation (EC) No. 338/97), the shipment must not be allowed through the customs control of the importing country and procedures described further in this manual should followed (see *section 6.*),

- A photocopy of the required CITES permit(s) is produced by the importer or its agency without being accompanied by the original CITES permit(s) requested
- The original CITES permit(s) produced by the importer or its agency is clearly falsified
- The original CITES permit(s) have been modified after its issuance (e.g. the name of the species, the net mass, the country they have come from, etc.)
- The original CITES permit(s) contain errors or omissions
- The validation period of the original CITES permit(s) has expired (see box 2 of the permit)
- The original CITES permit(s) have not been signed by the official CITES authority (see box 25 of the permit)
- The original CITES permit(s) are not authentically stamped (see box 25 of the permit)
- The content and / or volume of the actual shipment are not in compliance with the declared content and / or volume (see box 9 of the permit). The quantities traded must exactly match the quantities permitted in the permits or certificates. However, it is allowed to trade smaller quantities than permitted, but it is prohibited to trade larger amounts than permitted.

5.2.6. Comparison of shipping documents with accompanying CITES documents

The general documents, which accompany a shipment (such as certificate of origin, phyto-sanitary certificate, loading documents, invoices and customs import document) should be checked if they match the respective CITES documents presented to the customs. Documents in Annex 5 illustrate documents accompanying an Assamela (*Pericopsis elata*) shipment and the coherence between them.

The **quantities of timber authorized** in the CITES documents should always be compared with the quantities indicated in the cargo entry papers.

Concerning estimated or weighed quantities of timber imported or re-exported, they must match those indicated on the accompanying CITES permits or certificates. According to the Regulation (EC) No. 1808/2001, the following units of quantity and net mass shall be used in CITES permits and certificates:

- Bark: kg
- Extract: kg (alternative units: l)
- Logs: m^3
- Sawn wood: m^3
- Timber: m^3
- Veneer sheets: m^3, m^2 (alternative unit: kg)

If an incorrect unit is used, a person representing the importer must convert the figure(s) of the quantity provided into the required unit; the calculation should be justified and accompanied by a statement, signed by the representative of the importer, explaining the conversion method used. The customs officer must include the converted figure(s) at the bottom of the CITES permit/certificate/notification (box 27 see *section 5.2.9*). This quantity becomes the volume officially imported and will be the official record reported in the CITES Annual Report as well as to the national office of statistics.

Some common conversion formulas are:

- [kg] to [m^3]: [kg] lumber/600 [kg] = [m^3] of lumber
- [m^2] to [m^3]: [m^2] of lumber x thickness of lumber [m] = [m^3] of lumber
- [ft^2] to [m^2]: [ft^2] x 0.0929 = [m^2]

5.2.7. Inspection of shipments

Besides the necessary inspection of all documents accompanying shipments of CITES-listed timber species, frequent inspections of the actual shipments are inevitable in order to help improving CITES implementation on the ground. These inspections should especially consider:

- The species and trade forms being shipped
- The actual quantities of material being imported / re-exported
- The hygiene of the material being shipped (e. g. pests)

The assessment of the volume of shipments can be very difficult due to a variety of reasons:

- The pallets of lumber may consist of various sizes
- Mixed shipments may be difficult to detect, especially when wood of a different species is hidden under logs of another species
- Cargo shipped in containers is difficult to access
- The identity of pallets may not be unequivocally be traceable
- Some shipments are so large that volumes can hardly be estimated without a major effort

The quantities imported / re-exported must exactly match the quantities recorded in the CITES certificate of origin or the CITES export permit. If the quantities present in the shipment exceed the ones stated in the CITES documents, the shipment violates CITES provisions and is subject to forfeiture procedures, which are described below (see *section 6.*). If the quantity imported / re-exported is lower than the one stated on the CITES documents: see *section 5.2.9.*).

5.2.8. Species identification

This is one of the most difficult steps with regard to timber species. The import or re-export of live specimens of CITES-listed timber species is – in most species – relatively rare. In many cases, wood is imported in the form of logs or timber stripped of its bark and without additional characteristics such as branches or leaves, which would make identification easier. Often, semi-processed material is traded, such as veneer, wood-carvings, or chips, or only parts of wood species or processed material are imported such as leaves, roots, bark, seeds, extracts, oils, furniture, and others. These peculiarities of international trade in timber and timber products make CITES' enforcement often difficult.

Nevertheless, species identification can be a very important security measure, because traders may use commercial names of other timber species by mistake or to intentionally disguise the import of CITES-listed tree species without the required permit(s).

On documents accompanying a shipment (invoices, loading documents), timber species are indicated by their commercial names or by local names; scientific names are never given[131]. In order to check if the declared trade items of a shipment include CITES-listed timber species, try to identify the scientific name of the species with the given local or commercial name. A list of synonyms of common and commercial names in English, French and Spanish is found in *section 3.1 (Table 3)* and in additional languages in Annex 2.

Identifying by eye timber, derivatives or products from wood species is often difficult and unreliable. In case of doubts, call an expert (have a list of experts or contact the Management Authority in your country) who have been approached beforehand and is willing to assist for identification. If the expert cannot come on site, it should be envisaged to take wood samples and send it to a specialized laboratory for identification using anatomical features (see Annex 6).

The Document in Annex 7, prepared by Dr. Hans Beeckman (Laboratory for Wood Biology and Xylarium, Africamuseum, Tervuren, Belgium – Expert for CITES-listed timber identification in Belgium), provides an overview on identification method using wood anatomy.

Environment Canada (federal ministry) has – in collaboration with the CITES Secretariat, the Animal and Plant Health Inspection Service (USDA) and the Forest Service (USDA), published in 2002 the trilingual (English, French and Spanish) *CITES Identification Guide – Tropical Woods*. The PDF file can be downloaded from the ministry's website http://www.cws-scf.ec.gc.ca/enforce/species_e.cfm.

[131] Anon. *in litt.* to TRAFFIC Europe, February 2004

5.2.9. Endorsement of CITES documents if appropriate

If the trade transaction fulfils all legal requirements, the import permits, export permits or re-export certificates shall be endorsed by the customs agency. The documents (**box 27: 'For customs use only'**) are endorsed by the agency's stamp (including location), the officers signature, his / her badge name and the date of endorsement. However, if any **adjustment** must be made, e.g. if the quantity of specimens imported is lower than the one stated on the CITES document (see *section 5.2.3*), it should be accurately indicated in the appropriate box at the bottom of the document (box 27).

5.2.10. Distribution of endorsed CITES documents

- In case of import, all original forms of import permits and documents of the exporting or re-exporting countries must be **transferred to the CITES Management Authority** of the respective country of import. The importer of the shipment must receive an endorsed, good quality photocopy of the original CITES documents. The CITES enforcement agencies must keep one photocopy of the CITES documents in their files at the point of entry / exit of the shipment.
- In case of export or re-export, the original and copy No. 1 of the CITES certificate of origin or export permit are returned to the exporter or re-exporter (to accompany traded specimens). Copy No. 2 must be **sent to the CITES Management Authority** and copy No.3 must remain in the files of the enforcement agency.

Copies of CITES documents must be kept on file for at least 5 years.

6. CONTROLS AFTER CUSTOMS CLEARANCE

Timber controls (CITES and non-CITES species) are not only needed at ports of entry and exit. Competent enforcement agencies (e.g. customs and police officers) within the territory are entitled to carry out further controls after the release of goods. These controls can be performed up to three years after the date of the customs clearance[132] and aim for instance at checking the accuracy of particular goods contained in the custom declaration. When the goods are still available, the examination can consist of the physical examination of the goods, but generally these controls are focussed on verification of commercial documents and accounts.

Relevant enforcement agencies should use the following methodology to investigate within a national territory[133]:

- Get to know the commercial timber sector at different commercial levels (importers/exporter, wholesalers, retailers, users, etc.); and professionals, which are usually specialised e.g. per species, geographical area (Africa, Asia, South America), product (logs, sawn wood, veneer, etc.); etc.
- Assemble as much information/documents as possible on trader(s) investigated, in particular:
  - Copy of import files from third country (customs documents IM 4 and attached documents: invoices, bills of lading, specifications (packing list), certificates of origin, phyto-sanitary certificates, CITES documents, etc.).
  - Copy of supplier invoices concerning purchases in the European Community.
  - Copy of stock lists.
- Scrutiny of all documents.
- Verify that there are no discrepancies between documents.
- Verify that information on the documents is coherent with scientific and geographic information (distribution of species in particular) or statistics (comparison of export country declaration to import country declaration). For this point use available databases (see *section 5.1.2*.).
- If necessary, take wood samples to identify the species (with the assistance of an expert).

In order to illustrate types of fraud uncovered after the specimens had received customs clearance, two cases of investigations by an enforcement agency in one EU Member State, including irregularities in internal EU trade, are presented below[134]:

- One EU company, specialized in wood import and business, has illegally kept during an undefined period, 28.7m^3 (value: 30 657€) of sawn Ramin (*Gonystylus* spp.), which has been sold on the internal market. An examination of the company's accounts revealed that, for Ramin imported from Malaysia, in order to match the quantity appearing on the CITES certificate, the supplier systematically declared a volume 20% lower than the one truly delivered. However, on the invoice the supplier charged the importer for the full value. This was done by simply increasing the unit price e.g. USD120/m³ instead of USD100/m³. The volume declared on the CITES certificate and the one appearing on the invoice matched, but in fact a larger quantity was fraudulently traded.
- One EU company, specialized in sawn wood business, illegally exported to a third country three sets (1423m^2, value: 7772€) of Big-leafed Mahogany (*Swietenia macrophylla*) veneer during an undefined period. Two suppliers based in another EU Member State have sold the wood. At the port of exit of the EU, these identical plots had been declared at the tariff positions (CN code) 4408 10 and 4408 90, under the general designations 'veneer', 'veneer wood' and 'wood veneer'. According to the 'subheading note' in chapter 44 of the Common Customs Tariff (also called Combined Nomenclature –CN), mahogany veneer should be recorded under sub-positions 4408 31 to 4408 39 and the latter include particularly 'mahogany (*Swietenia* spp.)'. Therefore, the three mahogany plots should have been declared under sub-position 4408 39 and not 4408 10 ('coniferous wood') or 4408 90 ('other woods'). The false declaration (i.e. use of wrong customs code) made at the time of exportation of the plots from the EU, allowed the exporter to avoid applying for the CITES re-export certificate required under the regulation.

[132] Berends, A. (2002) *supra*
[133] Anon, *in litt.* to TRAFFIC Europe, November 2003
[134] Anon, *in litt.* to TRAFFIC Europe, November 2003

7. CITES TIMBER TRADE: EXPERIENCES OF IMPLEMENTATION IN EU MEMBER STATES

The information below reports on national experiences regarding CITES-listed timber trade control. It aims at giving an overview of each Member State's experience and suggested solutions.

The following eight EU Member States provided the information compiled below, Austria

- Belgium
- Denmark
- Germany
- Netherlands
- Italy
- Spain
- Sweden
- United Kingdom

Austria

The Austrian Management Authority (MA) and enforcement agencies mostly deal with well-known timber species and they have their own documentations, which have been compiled by the customs officers (Federal Ministry of Finance; the document is over 300 pages long). In addition, enforcement officers work with scientific experts and get additional information from the Internet[135].

According to the Austrian CITES Management Authority, Austria has no general implementation and enforcement problems. The only problem is occasionally the incomplete documentary evidence of imports, especially from the countries of origin China and the Russian Federation[136]. However, from 1995 to 2001, Austria emerged as one of the EU Member States that least imports CITES timber.

Belgium

According to the Belgium CITES MA, the problem with the implementation of CITES timber listings in Belgium is the difficulty to identify species and the insufficient number of controls[137]. The Belgium MA suggests that controls should be more systematic.

Denmark

Danish customs and the CITES MA use the identification guide for tropical woods published by Environment Canada. Nevertheless, implementation is a problem, basically because of the lack of experts at the points of entry / exit. Therefore, imports are as a rule only checked by looking at the accompanying documents, but the actual shipment and specimens contained are not inspected, verified or identified[138].

Germany

According to the German MA, the problem with the implementation of CITES timber listings in Germany is related to the difficulty to identify processed timber and therefore the establishment of an identification manual seems very useful[139]. The German authorities are working on such manual with Mr. Richter from the *Holzinstitute* in Hamburg. The document shall be interactive and made available in an electronic format as a database, which can be readily used by customs and other institutions involved in law enforcement and timber import. The first version will be in German language only, but it is envisaged to translate it into other EU languages when funds are available at EU level[140].

Netherlands

In the Netherlands, the Inspection agency of the ministry of environment (AID) and customs are the two enforcement agencies in charge of controlling trade in CITES-listed timber species. The AID assists customs officers in determining CITES timber[141]. Dutch Customs do not physically inspect shipments as long as all accompanying documentation looks correct[142].

The main implementation problem in the Netherlands is Appendix III species with regard to documents issued by the exporting countries, especially the Certificates of Origin. Sometimes non-official

[135] A. Jakab, Austrian Management Authority, *in litt.* to TRAFFIC Europe, 2003
[136] A. Jakab, Austrian Management Authority, *in litt.* to TRAFFIC Europe, 2003
[137] G. Evrard, Belgium Management Authority, *in litt.* to TRAFFIC Europe, 2003
[138] M. Munk, Danish Management Authority, *in litt.* to TRAFFIC Europe, 2003
[139] K. Hornig, German Management Authority, *in litt.* to TRAFFIC Europe, December 2003
[140] H.G. Richter, pers. comm. to TRAFFIC Europe, 2003
[141] P. Verheij, Environmental Crime Unit – Dutch Politie*, in litt.* to TRAFFIC Europe, December 2003
[142] M. Kloppenburg, Dutch Customs, pers. comm. to TRAFFIC Europe, September 2001

documents or documents which are not recognized by the Dutch customs are used by exporting countries. According to the Dutch MA, a listing of these species on Appendix II would be much easier to handle by the enforcement agencies, because then an export permit would be required instead of a Certificate of Origin[143]. Law enforcement is better regulated for Appendix II species and, in case of infraction; the conservation value of such shipments is easier to explain to the public prosecutor.

Italy

According to the Italian MA, the non-compliance of most timber shipments result from systematic excess in quantities shipped compared to those declared in the export or import permits[144]. Seizures and judiciary procedures have been applied in each of the irregular case encountered. Nevertheless, the traders and the associations (represented in Italy by *Federlegno-Arredo*) support the theory that some of the irregularities brought to court, derive from the fact that wood is, by nature, an hygroscopic material and its weight and volume can therefore change with pending air hygrometry. To this purpose the Italian authorities refer to the existence of the international standard rules regarding trade measures for tropical timber (developed by the *Association Technique Internationale des Bois Tropicaux – ATIBT*) that establish measurement methods and permitted tolerance for internationally traded tropical sawn timber. The Italian government would like to adopt this set of measures as national legislation, but is aware that a better way forward would be to adopt such standards at EU level.

Since 1992, eight of Italy's designated ports of entry with exclusive qualification to CITES trade are specific for timber. Each of these customs offices have specialised enforcement CITES Operative Units of the State's Forest Corps (CFS) to collaborate with customs officers on the inspections of CITES specimens[145].

In Italy, the CITES Management and Scientific authorities together with the Enforcement Agency (CFS), 'Ministry of Productive Activities', customs agency and commercial associations represented by their federation, *Federlegno*, are working on a timber trade manual at national level[146]. This manual will contain all relevant information for enforcement and customs officers in order to apply the correct procedures when import or re-export of CITES-listed timber species occur. It will also contain a practical guide for species identification and a tool kit of samples of wood in their commercially traded forms.

Spain

The Spanish CITES MA has inspectors in ports of entry that are in charge to inspect both documents and the imported items[147]. According to the Spanish MA, identification problems are the main difficulty in CITES implementation with regard to timber species[148]. Usually, timber imports come in large quantities and are stored in huge piles; therefore, it is very difficult to identify the different species imported in one shipment and calculates species-specific volumes. According to the Spanish MA, the establishment of a better identification system should be the number one priority in CITES implementation with regard to timber species[149].

For the identification of CITES timber species, the Spanish CITES enforcement agency and the MA use a CD-ROM with identification sheets for timber species developed in Spanish language[150], which is also available under: http://www.uco.es/jardin-botanico/cd1/Maderas%20CITES/principal.htm.

Sweden

In Sweden, the implementation of CITES with regard to tree species seems to face no serious problem, except concerning precise identification of timber specimens. However, there is no implementation manual available or felt necessary in Sweden.

[143] A.A. Helmens, Dutch Management Authority, *in litt.* to TRAFFIC Europe, 2003
[144] Italian CITES Management Authority, *in litt.* to TRAFFIC Europe, December 2003
[145] Italian CITES Management Authority, *in litt.* to TRAFFIC Europe, December 2003
[146] Italian CITES Management Authority, *in litt.* to TRAFFIC Europe, December 2003
[147] (2002) Appendix III Implementation for Big-leafed Mahognay *Swietenia macrophylla*. TRAFFIC International
[148] M. Nunez, Spanish Management Authority, *in litt.* to TRAFFIC Europe, 2003
[149] M. Nunez, Spanish Management Authority, *in litt.* to TRAFFIC Europe, 2003
[150] Miguel A. Vales, Margarita Clemente & Luis Garcia Esteban (1999): *Fichas de identificación de especies maderables CITES*. E. Martin-Consuegra, Cordoba. The CD was developed together with the University of Cordoba, the Environmental Ministry (Ministerio de Medioambiente), the Botanical Garden of Cordoba and the CITES Secretariat.

According to the Swedish CITES MA, there is a serious lack of experts who are capable of identifying tropical timber species at national level. Therefore, the Swedish MA suggests the creation of a EU timber identification service. Agencies could send digital photos by e-mail to this service in order to accelerate the process. However, this method may be difficult to practise, because correct species identification can normally not be performed without scientific analysis, for which a real wood sample is indispensable.

United Kingdom

In the UK, the CITES team of HM Customs & Excise at London Heathrow Airport started to work on the applied implementation of CITES timber listings. This has been done in conjunction with both Madeleine Groves and Noel McGough of the UK CITES Scientific Authority (the Conventions & Policy Section of the Royal Botanic Gardens at Kew). In addition to organising awareness seminars for enforcement officers, they have developed the "Guidelines for the implementation of the EU regulations for ramin (*Gonystylus* species)". This is a comprehensive and step-by-step manual that explains how to deal with imports of this Appendix III timber species. An additional two manuals that explain the control on importation of *Swietenia macrophylla* and *Pericopsis elata* have also been published on CD=R[151].

UK Customs do no routinely inspect timber shipments, prioritising inspection based on the risk assessment of illegal trade, and focusing primarily on trade involving Annex A (and then Annex B) species [152].

Experiences in the UK indicate that only the first steps of the correct procedures are followed in that shipments are infrequently physically checked. This is likely to be the same elsewhere in the Community. Imports of CITES-listed timber species from countries outside of the EU are usually handled at the larger UK ports such as Felixstowe, Tilbury and Southampton, which are ports with a permanent Customs presence. Imports from other EU Member States can be discharged at the smaller UK ports. These ports may not have a permanent Customs presence[153].

According to Guy Clarke, training and collaboration are crucial factors in influencing the effectiveness of law implementation with regard to CITES-listed timber species. Training not only includes the enforcement officers but also the "education" of the timber importers and their representatives in order to raise awareness and draw their attention to the legal requirements they have to fulfil[154].

[151] G. Clarke, HM Customs and Excise, *in litt.* to TRAFFIC Europe, 2004
[152] C. Miller, HM Customs and Excise, *in litt.* to TRAFFIC International, August 2001
[153] G. Clarke, HM Customs and Excise, *in litt.* to TRAFFIC Europe, 2004
[154] G. Clarke, HM Customs and Excise, *in litt.* to TRAFFIC Europe, 2004

8. MAIN PROBLEMS IDENTIFIED

The input received from the CITES Management authorities (MAs) via the questionnaire and the findings made through interviews to the traders' industry, customs officers and independent experts, including scientists and members of non-government organisation, did not always reflect the same priorities, needs and views toward potential improvements. The order of points presented hereunder generally follows the hierarchy found in the answers received from the MAs.

a. Species identification

Within the EU, one significant problem identified in trying to efficiently implement CITES timber listings is the identification of tree species from wood products and other parts and derivatives. In many cases, wood is imported in the form of logs or timber stripped of its bark and without additional characteristics such as branches or leaves, which would make identification easier. Often, semi-processed material is traded, such as veneer, wood-carvings, parts made of wood, or chips, but processed material is also imported such as bark, leaves, roots, seeds, extracts, oil, furniture and others.

There are several identification guides, fact sheets and other information material, but most of them present obstacles when consulting them in the field during a standard custom control. At EU borders shipments are composed for instance, of logs that cannot be identified with the picture of a slice of wood, which is usually what is represented in the guides. Environment Canada's *CITES Identification Guide – Tropical Woods* (2002) is a comprehensive document that provides information in English, French and Spanish. For EU purposes the document could be translated into other EU languages. However, the document is rather complicated to read for many enforcement officers, but one must recognise that identification is a complicated issue that cannot be simplified too much without losing its usefulness.

Furthermore, due to the difficulty to identify a tree species by eye from a wood product (even for experts), in most cases correct identification can only be obtained through an expert laboratory analysis. It is particularly appropriate in the context of seizure and legal procedures. This creates financial and logistical problems, for example if there is only one CITES timber expert in the country and she/he does not live close to the point of entry. Therefore, it can take several days until the laboratory analysis provides the species identification, while the shipment must be held in the port where storage is costly.

b. Verification of the load

- Upon the arrival of a relevant shipment at the point of entry, mostly only CITES documents are checked but the load is not inspected;
- Even if inspection takes place, it is difficult to verify if the correct volumes/weights are indicated in the accompanying documents. The equipment necessary to weigh large shipments is not always available in ports of entry or difficult to systematically use; and
- In the absence of a CITES permit or certificate and when no CITES-listed species appears on customs documents, it is virtually impossible to check every timber shipment to verify if specimens of CITES-listed species are mixed or hidden below logs or other parts of non-CITES species.

c. Lack of data for an appropriate risk assessment

Due to the enormous increase of movements of goods through EU borders, the classic random checking by customs officers became unfeasible and less efficient. Customs services and their administration realised that they should focus their controls where the probability of offence is the highest. Quantitative and qualitative data on legal and illegal international trade in both CITES-listed trees as well as non-CITES timber species are necessary to perform such a risk assessment, but are currently not sufficiently and/or accurately documented. Studies such as the one included in this manual provide an overview of the (legal) trade, but additional research, particularly on illegal trade, would be useful.

> ⇨ *Passive control*: The difficulty to perform such risk assessment leads customs officers to continue and control shipments randomly only when a CITES permit, certificate or notification is presented spontaneously among customs documents that accompany the shipment.

d. Lack of EU Regulation

CITES and the EU Wildlife Trade Regulations can be considered as the only international trade measures for the control of tropical timber in the EU. The right of customs officers to thoroughly control and eventually seize loads of timber imported in the EU is therefore limited to the 23 species annexes and two genera listed in the Regulations', whereas hundreds of timber species are being imported.

In the context of the EU Action Plan for Forest Law Enforcement, Governance and Trade (FLEGT), which intends to support efforts to tackle problems derived from illegal logging and its related trade, EU Regulations aiming at controlling the imports of illegally produced timber into the EU is envisaged. Such regulations would allow for intensifying customs' boarder controls of timber trade and give officers the power to seize and eventually confiscate shipments in case a violation has been detected.

e. Lack of co-operation

Within the EU one of the areas that needs to be continually improved is the level of co-operation between the enforcement teams enforcing the EU regulations. Over the years personal contacts at meetings and conference have led to teams informally exchanging information concerning concealments and smuggling trends. The UK has assisted in a number of training events in the EU accessionary states and has started to export their implementation experiences to other non-EU countries [155].

f. Low priority of CITES for enforcement agencies

Wildlife Trade (i.e. CITES) – at least in the EU – is not a priority law enforcement issue for governments. Weapons (especially since "11 September" –2001), drugs, cigarettes, counterfeiting and other commodities that may represent either a danger for human security (terrorism, disease) or a relatively high level of financial fraud are on top of the governments' list of priorities. The administration in charge gives clear instructions to its customs and other enforcement agencies about the subject that should be paid attention to, and wildlife smuggling rarely meets their selection criteria. Therefore, a common and general problem to most EU Member States is that customs do not have sufficient staff to equally deal with all enforcement issues they are entrusted.

g. Turnover of enforcement staff

Rather often, customs officers in charge of wildlife trade controls, or CITES (timber) implementation, do not stay in this field very long and are frequently replaced by other officers. Shifts and rotations of duties are an obstacle to the creation of an adequately trained pool of enforcement officers. Often the expertise leaves with the officer himself and the new one must start from scratch without benefiting from the previous staff member's training because little or no overlap is planned.

[155] G. Clarke, HM Customs and Excise, *in litt.* to TRAFFIC Europe, 2004

9. RECOMMENDATIONS

In studying the approaches taken by enforcement agencies to tropical timber trade control in the EU, two trends seem to emerge, one complementary to the other one,

- Random checking: classic control strategy that consists of selecting shipments on the spot, based on a set of criteria, but without further knowledge on the history of its contents (goods).

and

- Targeted investigations resulting from risk assessments: a strategy that takes into account the necessity to select with more accuracy the shipments that should be controlled and undertake upstream investigation to inspect the shipments that will allow either seizure of a large amount of goods, and more often to dismantle organised crime, such as tropical timber traders connected to illegal loggers (from the forest concession to the port of entry in the EU), or a network of wildlife trade smugglers throughout its chain of custody.

Although the latter is more innovative and seeks to adapt customs workload to its resources and the increase in global trade, both approaches should be considered to tackle the variety of illegal trade practices, including organised criminal networks as well as occasional smuggling.

In order to intensify custom tropical timber trade controls and optimise their efficiency in the EU, the necessary legal and administrative framework must be established.

- EU Regulations: One of the causes of the low priority given to the control of tropical timber import into and movements within the EU (see *section 8. f.*), is the lack of specific legislation. The adoption of innovative, targeted and stronger legal and administrative measures at EU level is necessary to empower customs and police forces in the field of EU tropical timber trade control. These forces would thereby become efficient contributors to the struggle against illegal tropical timber trade and subsequently to the increasingly alarming illegal logging of the tropical forests around the world that also supplies an expanding EU market.
  - FLEGT – Forest Law Enforcement, Governance and Trade (see *section 8. d.*): this initiative should progress and create the necessary legal framework to build the link between illegally sourced tropical timber in the countries of origin and/or export, and EU imports. One of the ultimate aims of the initiative launched and supported by the European Commission, is for the EU to fully contribute to the reduction of illegal logging in exploited as well as protected rain forests. In order to prevent loopholes, the range of measures explored should be comprehensive and include for instance standard references on the technicalities of timber commodities, such as its volumetric variations (see *section 7. Italy*). Partners involved are: EU institutions, governments, private companies as well as independent experts working for a range of partners, from scientific institutes to NGOs. Among others, this diverse partnership helps to establish objective bases and to gain understanding of timber exploitation at producers' and consumers' ends.
  - Tariffs (ref. Common Customs Tariffs –or CN)(see *section 2.1.*): timber is currently not subject to a great deal of EU tariffs. However, it constitutes a good with high commercial income for traders that use the biological resource for their company's profit. The financial profit made and the increased scarcity of this resource are factors, one of which arose recently, that should be taken into account during the revision of the EU tariffs. A justified increase should be recommended for relevant woods and processed products with a added value (e.g. sawn wood, plywood and veneer), particularly in the context of the integration of ecological costs, including the loss of primary tropical forest. Special attention should be given to CITES-listed tree species since their survival has already been recognised by more than 160 countries to be most threaten by global trade.

- EU Combined Nomenclature (CN)(see *section 2.1.*): directly related to new and/or increased tariffs are the codes that designate the commodities most traded into and from the EU,

  ⇨ volumes and VALUES: the advantage of the CN is that it provides information on the value of goods, the trends of which can be used as a indicator in the risk assessment of international trade.

- Use of existing codes: customs officers should be required and trained to systematically apply the most accurate code available for all commodities significantly traded in the EU.
- New or species-specific codes should be adopted for timber highly relevant to EU imports with priority given to CITES-listed species (ref. CITES Secretariat's past collaboration with WCO). This should happen in the context of the on-going review process of HS codes coordinated by WCO (see *section 2.1.*), which is used as the basis for the EU Combined Nomenclature (CN) (a revised HS list of codes will be adopted in 2007, but any input at this stage will only be integrated in the next review to be adopted in 2012).

❖ Information exchange between EU Member States' Customs (see *section 8. c.*), not exclusively on timber and particularly on illegal trade, should be formalised and catalysed. This need could be supported by the existence of a common tool that provides for the recording and compilation of baseline intelligence data from all EU Member States. A comprehensive database (e.g. seizures and confiscations; consignments) would offer the opportunity to and facilitate the work of enforcement agencies that decide to carry out risk assessments on selected issues, such as illegal timber trade. The access to such a database should be restricted to designated agencies, officers and experts. The collection of seizures data in one place will thereby facilitate the work of each EU Member State that wishes to analyse them and get an overview of characteristics of illegal trade in a particular species included in the annexes of EU Wildlife Trade Regulations. Information exchange on intelligence between producer countries and consumer countries is also needed. This could be done through mechanisms already established e.g. 'eco-message' and Interpol intelligence reports. More interaction and flow of information from NGOs who have valuable information to provide to enforcement agencies should also be encouraged.

❖ Training sessions on the identification of timber and wood products: at least one custom officer at each relevant EU ports of entry should have received special training on the identification of CITES-listed timber species. This officer would thereby become the 'focal point' when identification is required. However, without additional measure, e.g. the long term establishment of a special unit in charge of wildlife trade control (including timber), the designation of such 'focal point' could be undermined by the current rapid turnover of enforcement staff that commonly occurs in most EU Member States (see *section 8. g.*).

❖ Tool kit of wood samples of CITES-listed tree species in their commercial form (see *section 7.*): Training sessions should also include practical exercises with a special tool kit that presents the different commercial forms under which the various CITES-listed timber species occur in internationally trade.

❖ EU Reference Centre for the identification of tropical wood specimens (see *section 7.*): the establishment or designation of an existing renowned institute in the EU, would allow all Member States to deal with the identification of tropical wood samples in the same legal manner and with the same reference samples. All Member States should contribute in a defined proportion to the creation and maintenance of such centre, which would not only reduce each Member States' investment in such facility, and probably the cost of identification analyses. It could also permit that smaller Member States dispose of such facilities, without excessive cost and investment.

More recommendations should probably be made concerning incentives that would increase the will of EU Member States to lift tropical timber as well as other wildlife trade commodities to a higher rank in the list of custom control priorities. Wildlife and its related biological resources, such as timber, generate significant social and economical profits. The ecological cost of their exploitation should be taken into account and integrated in exporting and importing nations' economical and legal strategies. The illegal exploitation of wildlife, including illegal logging, which also supplies 'black markets' in the EU, undermines the efforts to manage plant and animal stocks in a sustainable manner as well as progress made towards the prevention of global biodiversity loss.

ANNEX 1: Country Codes used

AR	Argentina
AU	Australia
BE	Belgium
BI	Burundi
BO	Bolivia
BR	Brazil
CA	Canada
CAR	Central African Republic
CD	Congo, Democratic Republic of
CG	Congo
CI	Côte d'Ivoire
CL	Chile
CM	Cameroon
DO	Dominican Republic
EC	Ecuador
GH	Ghana
GQ	Equatorial Guinea
GT	Guatemala
HK	Hong Kong
HN	Honduras
ID	Indonesia
JP	Japan
KE	Kenya
MG	Madagascar
MY	Malaysia
MX	Mexico
NI	Nicaragua
NG	Nigeria
PE	Peru
SR	Suriname
TW	Taiwan, Province of China
TZ	Tanzania
US	United States of America
ZA	South Africa

ANNEX 2: Common/Commercial names of CITES-listed tree species in languages other than English, French and Spanish

App.	Species / Genus	Common/Commercial Names
Appendix I / A	*Abies guatemalensis*	German:Guatemala-Tanne Italian: Abete del Guatemala *Local Names: Guayami*
	Araucaria araucana	Dutch: Apenverdriet Finnish: Chilenaraukaria German: Andentanne Italian: Pino fel Cile Mapuche: Pehuén
	Balmea stormae	-
	Dalbergia nigra	German: Rio Palisander Portuguese: Palissandro do Brasil, Cabeuna, Cabiuna, Cabiuna do mato, Cabiuna rajada, Camboriuna, Caviuva, Gabiuna, Grauna, Jacaranda, Jacaranda-caviuna, Jacaranda preto, Jacarandazinho, Pau preto, Pau rosa, Urauna, We-We
	Fitzroya cupressoides	German: Alerchholz
	Pilgerodendron uviferum	Dutch: Chileense cypress Italian: Larice del Cile, Larice uvifero, Cipresso del Cile
	Podocarpus parlatorei	Dutch: Argentijn's podo
Appendix II / B	*Aquilaria malaccensis*	Bengali: Agar, Agaru, Ugar Burmese: Akyaw Chinese: Chen xiang German: Adlerholz, Paradiesholz Gujarati and Hindi: Agar, Tagara, Kalaguru Indonesian: Alim; Halim; Kareh Japanese: Jin-ko, Kyara Portuguese: Lignaloes Tamil: Aggalichandanam Thai: Kritsanaa; Mai hom
	Caryocar costaricense	*Local Names: Almendron cagui, Caballokup, Chawari, Genene, Mani*
	Guaiacum spp.	Aztec: Matlalquauitl Dutch: Pokhout, Maatsjoe, Echt pokhout (*G. officinale*), Bastaard pokhout (*G. sanctum*) German: Guaiacum, Pockholz, Lebensbaum Italian: Legno benedetto, Legno santo, Legno di guaiaco (*G. officinale*), Portuguese: Guaiaco, Pau santo, Lenha di guaiaco *Local Names: Bera, Gudstrad, Hoaxacan, Oaxacan, Wayaca, Zon*
	Oreomunnea pterocarpa	-
	Pericopsis elata	Dutch: Afrormosia, Krokodua, Mohole German: Afrormosia Italian: Afrormosia Portuguese: Jatobaly do Igapo, Tento (also used for the South American timber species *Ormosia coarctata*) *Local Names: Afri, Afrormosia, Assamela (Ivory Coast), Bohala (Central African Republic), Bohele (Congo), Anyeran (Nigeria), Anyesan (Nigeria), Awawai (Ghana), Ayin (Nigeria), Bonsamdua (may erroneously be used for P. elata; usually used for Distemonanthus benthamianus, another West African timber species), Duabay, Duakobin, (ayin) Egbi (Nigeria), Ejen (Cameroon), Elo (Nigeria), Elouta (Nigeria), Kirkodua (Ghana), Kokriki (Ghana), Kokrodua (Ghana, Ivory Coast), Mekoe (also used for the South American timber species Ormosia monosperma), Mohole (Ghana), Obang (Cameroon, Central African Republic), Ole (Congo, Zimbabwe), Oleo pardo (Congo), Wahala (Central African Republic)*
	Platymiscium pleiostachyum	-
	Podophyllum hexandrum	Chinese: Toerqi Finnish: Himalajanjalkalehti Italian: Podofillo indiano
	Prunus africana	Dutch: Rood stinkhout *Local Names: Vla, Vern m'weri, Tukur inchet, Tenduet, Ntasesa, Mwizi, Mueri, Muchati, Muchambati, Mseneo, Mkondekonde, Mkomahoyo, Mgambo, Iluo, Kirah, Gwame, Chati, Alumty, Wotangue*
	Pterocarpus santalinus	Danish: Sandeltrae Dutch: Sadelboom Finnish: Satelipuu German: Sandelholz, Santelholz, Rotes Sandelholz, Caliaturholz Hindi: Agaru, Agarugandhamu, Lal chan, Lalchandan, Raktachandan

App.	Species / Genus	Common/Commercial Names
Appendix II / B	*Swietenia humilis*	Italian: Mogano messicano *Local Names: Acajou, Mabu*
	Swietenia macrophylla	Italian: Mogano Dutch: Mahonie Spain: Caoba *Local Names: Acaju, Macchochuc-quiui, Majaine; Mara (Bolivia), Aguano, Araputanga (Brazil), Chacalte (Guatemala), Zopilote, Baywwod (Mexico), Orura (Venezuela).*
	Swietenia mahagoni	Dutch: Kleinbladige mahonie *Local Names: Acaju*
	Taxus wallichiana	Chinese: Ximalaya hongdoushan *Local Names: Amugauen, Cheongbu*
Appendix III / C	*Cedrela odorata*	Dutch: Akkojaarie, akkojallie, Kurama (Surinam), Ceder, Samariehout, Sigarenkisten-hout, Ceder cedoe, Zuidamerikaanse ceder, Zwamp ceder German: Cedrela, Andenzeder, Westindische Zeder, Zedernholz, Zuckerkistenholz Indonesian: Suren; Surian Portuguese: Acaju, Acaju catinga, Cedro batata, Cedro rosa, Cedro vermelho, Cedro amarelle, Cedro roxo Thai: Yom-hom *Local Names: Acuy, Kuche, Cuche (all Mexico), Yalam (Nicaragua), Aluk, Runkra, Tali, Uruk (all Costa Rica), Igary (Paraguay), Tseek, Simariapo*
	Dipteryx panamensis	-
	Gonystylus spp.	Indonesia: Ahmin, Ai nunura, Akenia, Kaya garu, Garu buaja, Medang Keram Malaysia: Melawis, Ramin Telur, Ramin Batu, Ahmin Philippines: Ianutanbagio, Bagio Salomón Islands: Ainunura, Latareko, Petata, Fungunigalo Switzerland: Akenia *Local Names: Ramin*
	Magnolia liliifera var. obovata	*Local Names: Giogi, Harre, Safan, Siffo, Taungme, Balakhat, Baranthuri, Boramthuri, Champak*
	Podocarpus neriifolius	Indonesian: Ambai ayam, Hating, Kayu taji, Minangkas, Naru dotan, Sitobu hotang Portuguese: Pinho bravo *Local Names: Amanu, Amunu, Banuas, Bukiti, Cachar, Dakua, Dilang, Dionai, Djamudju, Gunsi, Igem, Jamuju, Jati, Jiniari, Kuasi, Ianding, Iant, Iampias, Iohansung, Malaalmaciga, Manio, Maniu, Matai, Melu, Merak, Miro, Mse, Musenene, Mushunga, Pasnig, Paya, Payarmei, Podoc, Podo Iant, Rempayan, Sampinur, Sentada, Setada, Slusalu, Thitmin, Thitmin-po*

ANNEX 3: National Timber Trade Federations/Associations in Europe[156]

Country	Contact Information
Austria	-
Belgium	Fédération belge du commerce d'importation de bois Galerie du Centre, Bloc, 5ème Etage B-1000 Bruxelles - Fax : +32 2 229 32 67 E-mail : info@boisimport.be
Denmark	Dansk Traeforening P.O. Box 69 DK-2800 Lyngby - Fax: +45 45-87 13 32 E-mail: dktimber@inet.uni2.dk
Finland	-
France	Le Commerce du bois Avenue de Saint-Mandé 6 F-75012 Paris - Fax : +33 1 44 75 54 00 E-mail : lecommercedubois@wanadoo.fr
Germany	Gesamtverband Deutscher Holzhandel e.V. Am Weidendamm 1A D-10117 Berlin-Mitte - Fax: +49 30 72625888 E-mail: goebel@gd-holz.de
Greece	Timber Importers Association of Greece C/O Xylemboria Atene 14 th. KLM National Road Athens-Lamia GR-145.64 Kifissa - Fax: +30 2 108074174 E-mail : info@xylemboria.gr
Ireland	-
Italy	Federazione Nazionale del Commercianti del Legno Via Toscana 10 I-00187 Roma - Fax: +39 06 42817391 E-mail: fedecomlegno@federlegno.it
Luxembourg	-
Netherlands	Vereniging van Nederlandse Houtondernemingen Westeinde 6, 1334 BK Almere-Buiten Postbus 1380 – 1300 BJ Almere - Fax: +31 36-532 10 29 E-mail: vvnh@wxs.nl
Portugal	Madei Porto – Madeiras e Derivados SA Via Jose Regio 256 – 4480 Villado Conde – Portugal - Fax : +351 229271676 E-mail : mail@madeiport.pt
Spain	Asociacion Española de Importadores de Maderas Flora 3-2 E-Madrid 13 - Fax: +34 9 1 543980 E-mail: aeim@aeim.org
Sweden	Svensk Traimport Forening c/o AB Skanditra Vastergatan 22 – S-21121 Malmo - Fax: +46 40 120 382 E-mail: elisabet.esbensen@skanditra.com
UK	Timber Trade Federation Clareville House, 26/27 Oxendon Street GB-London SW1Y4EL - Fax: +44 207 930 0094 E-mail: pcmarting@ttf.co.uk

[156] *Source*: Union pour le commerce des bois durs dans l'UE - UCBD (2003)

ANNEX 4: Illegal activities associated with the timber trade[157]

Illegal logging
- Logging in breach of contractual obligations (e.g. without an environmental impact assessment)
- Illegally obtaining concessions through, for example, corrupt means
- Logging nationally-protected species without explicit permission
- Logging outside concession boundaries
- Logging in prohibited or protected areas such as steep slopes or river catchments
- Removing under-sized or over-sized trees
- Laundering illegal timber through a concession
- Use of old lop permits or licences to collect illegally felled timber to 'sanitise' illegal timber

Timber smuggling
- Log import/export in defiance of trade restrictions and/or national control measures
- Unauthorised or unreported movements across state boundaries
- Avoidance of CITES restrictions

Misclassification
- Under-grading and misreporting harvest
- Under-valuing exports
- Misclassification of species to avoid trade restrictions (e.g. mahogany) or higher taxes

Transfer pricing
- Nil profit accounting and manipulating revenue flows for services to avoid revenue

Illegal processing
- i.e. at unlicensed facilities

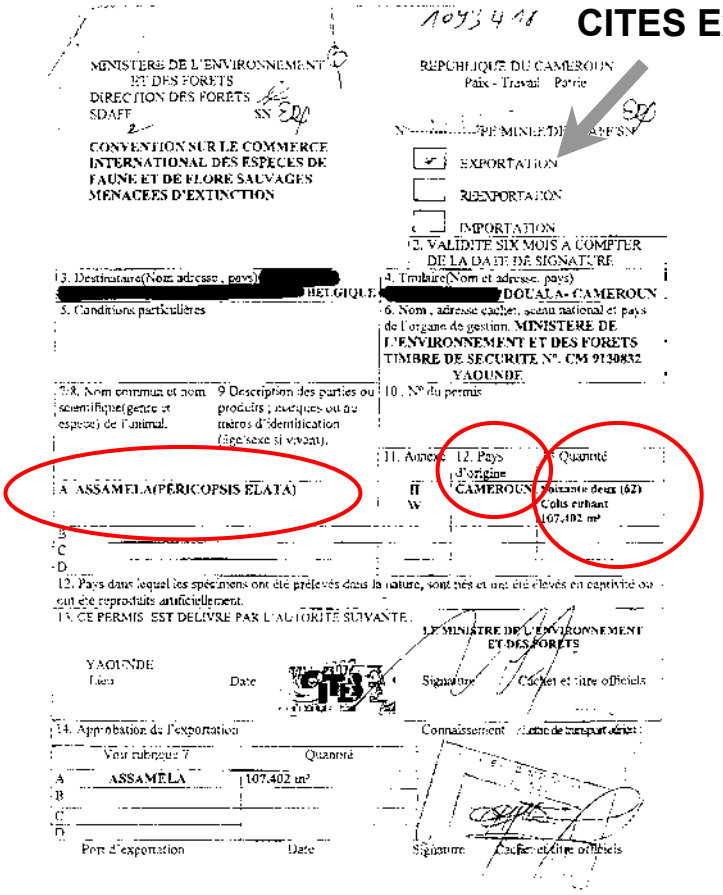
Grand corruption
Characterised by long-term, strategic alliances with high level of mutual trust. For example, companies providing support to senior politicians, political parties or major components of the state's apparatus to:
- obtain or extend a concession or processing licences;
- avoid prosecution or administrative intervention for non-compliance with national legislation;
- negotiate favourable terms of investment, i.e. tax holidays or non-collection of statutory duties etc.

Petty corruption
Shorter-term, more tactical, employer-employee relationship, facilitated by and may develop into grand corruption. Most obvious as graft given to or solicited by junior officials to:
- falsify harvest declarations;
- avoid reporting restrictions;
- overlook petty infringements;
- ignore logging or laundering of logs from outside proscribed boundaries.

[157] *Source*: Brack, D. *et al.* (2002) Controlling the International Trade in Illegally Logged Timber and Wood Products. The Royal Institute of International Affairs, UK.

ANNEX 5: Example of import documentation accompanying an Assamela (*Pericopsis elata*) shipment imported in Belgium from Cameroon (*Note: the CITES import permit is not presented in this section but is compulsory for import in the European Community*)

CITES Export Permit *



MINISTERE DE L'ENVIRONNEMENT ET DES FORETS
DIRECTION DES FORETS
SDAFF

CONVENTION SUR LE COMMERCE INTERNATIONAL DES ESPECES DE FAUNE ET DE FLORE SAUVAGES MENACEES D'EXTINCTION

REPUBLIQUE DU CAMEROUN
Paix - Travail - Patrie

EXPORTATION
REEXPORTATION
IMPORTATION

2. VALIDITE SIX MOIS A COMPTER DE LA DATE DE SIGNATURE

3. Destinataire(Nom adresse , pays) [redacted] BELGIQUE

4. Umitaire(Nom et adresse, pays) [redacted] DOUALA- CAMEROUN

5. Conditions particulières

6. Nom , adresse cachet, sceau national et pays de l'organe de gestion. MINISTERE DE L'ENVIRONNEMENT ET DES FORETS TIMBRE DE SECURITE N°. CM 9130832 YAOUNDE

8. Nom commun et nom scientifique(genre et espece) de l'animal.

9 Description des parties ou produits ; marques ou numéros d'identification (âge/sexe si vivant).

10 . N° du permis

11. Annexe

12. Pays d'origine

13. Quantité

A ASSAMELA(PERICOPSIS ELATA) — CAMEROUN — Soixante deux (62) Colis cubant 107,402 m³

B
C
D

12. Pays dans lequel les spécimens ont été prélevés dans la nature, sont nés et ont été élevés en captivité ou ont été reproduits artificiellement.

15. CE PERMIS EST DELIVRE PAR L'AUTORITE SUIVANTE.

LE MINISTRE DE L'ENVIRONNEMENT ET DES FORETS

YAOUNDE — Lieu — Date — Signature — Cachet et titre officiels

14. Approbation de l'exportation — Connaissement

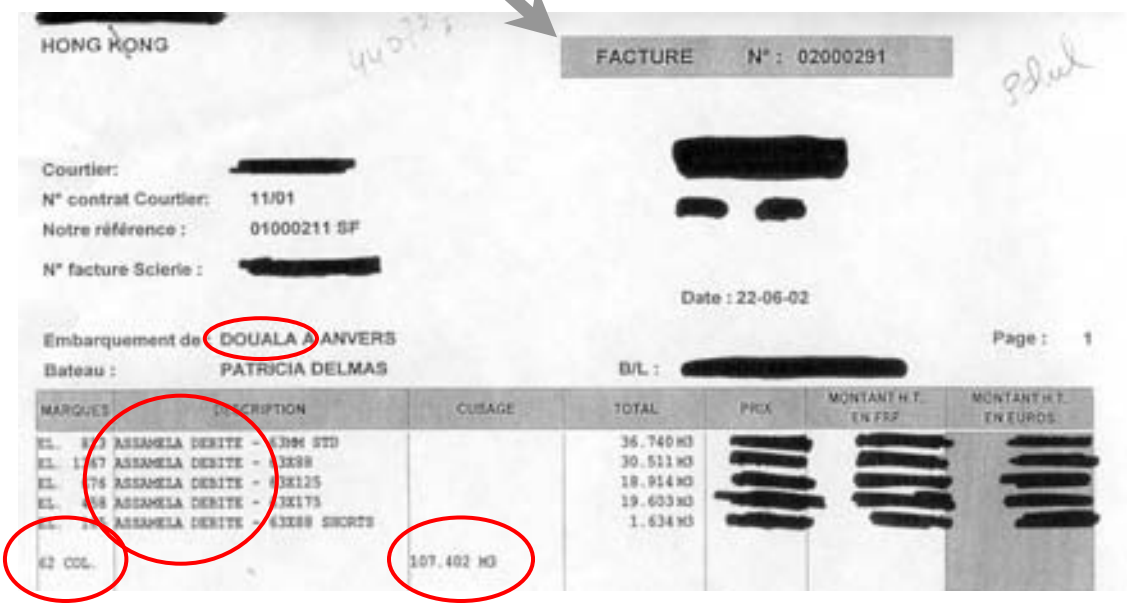
Voir rubrique 7 — Quantité

A ASSAMELA — 107,402 m³
B
C
D

Pays d'exportation — Date — Signature — Cachet et titre officiels

* The export permit must be presented at EU Member State custom office only if it is specified in the import permit

Invoice



HONG KONG

FACTURE N° : 02000291

Courtier:
N° contrat Courtier: 11/01
Notre référence : 01000211 SF
N° facture Scierie :

Date : 22-06-02

Embarquement de : DOUALA A ANVERS
Bateau : PATRICIA DELMAS
B/L :

Page : 1

MARQUES	DESCRIPTION	CUBAGE	TOTAL	PRIX	MONTANT H.T. EN FRF	MONTANT H.T. EN EUROS
EL.	ASSAMELA DEBITE -		36.740 M3			
EL.	ASSAMELA DEBITE -		30.511 M3			
EL.	ASSAMELA DEBITE -		18.914 M3			
EL.	ASSAMELA DEBITE -		19.603 M3			
EL.	ASSAMELA DEBITE - 63X88 SHORTS		1.634 M3			
62 COL.		107.402 M3				

Specification (only p. 3)

DOUALA : 25/05/2001

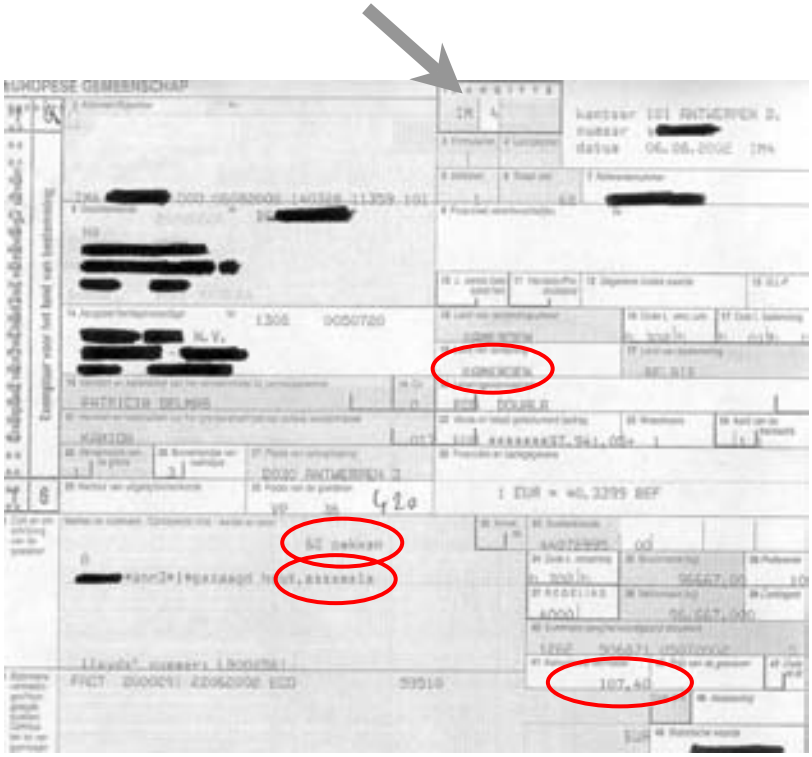
Page : 3

SPECIFICATION DEBITES

PORT DESTINATION: ANVERS
PAYS DESTINATION: BELGIQUE
NAVIRE : M/S PATRICIA DELMAS DU 17/06/2002
CONTRAT CLIENT : [redacted]
DOSSIER No : [redacted] FOB DE

No COLIS ou C.T	EPAIS.	LONG.	LARG.	N Pces	DEV.	CUBAGE
060-01	66.00	1.85	9.10	77	701.00	.856
061-01	66.00	1.65	9.10	35	319.00	.347
062-01	66.00	1.25	9.10	26	237.00	.196
062-02	66.00	1.45	9.10	27	246.00	.235
62				3479	96.667T	107.402
62				3479	96.667T	107.402

Customs Declaration (IM 4)



ANNEX 6: Scientific Institutes for wood identification in the EU

Note: The list is not exhaustive and needs to be completed

Country	Contact Information
Belgium	**Royal Museum for Central Africa** Leuvensesteenweg 13 B - 3080 Tervuren – http://www.africamuseum.be/ E-mail: hans.beeckman@africamuseum.be Note: possibility of identification of botanical taxon of wooden objects of all kinds. Price of an identification: 170€ (+ postage); price of expert assessment carried out on site: 250€per day. The wood samples (preferably with dimensions of 1 cm x 7 cm x 15 cm) can be sent to the RMCA – Laboratory of Wood Biology, Leuvensesteenweg 13, B – 3080 Tervuren (Belgium).
France	**Agricultural Research Center for International Development (CIRAD)** TA 10/16 Avenue Agropolis F – 34398 Montpellier Cédex 5 – Fax : +33 4 67 61 65 60 E-mail : pierre.detienne@cirad.fr Note: Price of an identification: 69€ (+ postage)
Germany	**Institute for Wood Biology and Wood Protection** Leuschnerstr. 91 D-21031 Hamburg – Fax: +49 40 42891 2835 http://www.bfafh.de/indexe.htm
UK	**Royal Botanic Gardens Kew** Richmond, Surrey TW9 3AB, UK Fax: +44 8332 5197 http://www.rbgkew.org.uk/scihort/anatomy.html

ANNEX 7:

Wood anatomy as an identification method

by Dr. Hans Beeckman[158] to TRAFFIC Europe (January 2004)

Wood lives

Wood is from living beings. Two fundamental features therefore characterize it. First it is highly compartmentalized: it consists of cells, the smallest autonomous units of life. Secondly, like all biodiversity items and unlike man-made products, wood shows a strong variability: features may be very different not only between two species, but also from one individual to another, or even from one sample to another. The outer wood at the bark side of old grown trees has for instance very different qualities than the wood around the pith that is formed by the young cambium.

Awareness of both fundamental features is necessary to understand the material wood and to identify it: wood identification is based on the observation of cells and tissues, but it is always important to put the observation in a context of variability and diversity. Questions always to be asked are "Is the studied sample representative?", "How far is the reference collection complete to address a particular identification problem?"

Wood is heterogeneous

The different cell types that compose wood (botanical term "secondary xylem") make it to a very heterogeneous material. The typical arrangement of the cells characterizes the botanical taxon, which could be the species, the genus or an even larger entity. Three main tissue types exist. First there is the conductive tissue to transport water from the soil to the leaves. Secondly, a support tissue assures the strength of trees and timber. At last there is the parenchyma tissue that is liable to a series of biochemical processes like heartwood formation and storing of reserve substance (starch). The conductive tissue of hardwoods[159] (angiosperms) consists mainly of vessels or pores: big perforated cells that are placed one above the other to form tube like structures. Their support tissue consists predominantly of fibres: long cells with a small diameter and thick cell walls. Softwoods[160] (conifers, gymnosperms) have cells that combine the functions of conduction and support: the tracheids. In both hardwoods and softwoods there are two types of parenchyma tissue: axial parenchyma and radial parenchyma. The latter forms the wood rays (Fig. 1).

[158] Royal Museum for Central Africa, Laboratory for Wood Biology and Xylarium, Tervuren, Belgium

[159] Concern the following CITES-listed timber species: *Balmea stormae, Dalbergia nigra, Aquilaria malaccensis, Caryocar csotaricense, Guaiacum* spp.*, Oreomunnea pterocarpa, Pericopsis elata, Platymiscium pleiostachyum, Podophyllum hexandrum, Prunus africana, Pterocarpus santalinus, Swietenia macrophylla, S. mahagoni, S. humilis, Cedrela odorata, Dipteryx panamensis, Gonystylu*s spp. and *Magnolia liliifera var. obovata.*

[160] Concern the following CITES-listed timber species: *Abies guatemalensis, Araucaria araucana, Fitzroya cupressoides, Pilgerodendron uviferum, Podocarpus parlatorei, Podocarpus neriifolius* and *Taxus wallichiana*

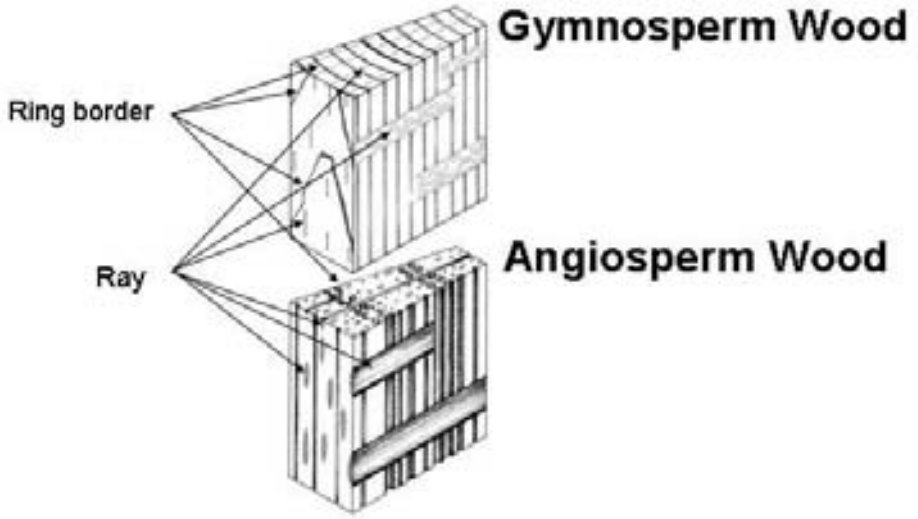


Fig. 1: Small wood fragments of a gymnosperm and an angiosperm. The angiosperm is characterized by pores or vessels, here grouping together at the ring border.

Wood is anisotropic (Fig. 2)

Wood is not only heterogeneous; it shows also a very distinct anisotropy: cells and tissues are arranged either in the radial or in the longitudinal direction. The scientific approach of wood anatomy studies the three-dimensional structure by establishing a system of three particular microscopic images.

The first image is obtained by viewing a plane that cuts perpendicularly through the longitudinal axis of the tree stem or branch. This is called the transversal section. The section is particularly useful to judge the vessel arrangement, the growth ring border, the axial parenchyma pattern and at a larger magnification the cell wall thickness.

The second section is the tangential section and is acquired by a plane that is parallel to the main axis but doesn't cut through this axis: it is tangentially to the growth rings. This section is used in the first place to observe the rays. They appear on a tangential section as fusiform shapes.

The third image is taken from a radial section through the longitudinal axis: it follows the wood rays from the pith to the bark. This section is needed to evaluate for instance the composition of the rays. Both longitudinal sections are used to watch a series of fine and ultra fine structures, like there are the pits that connect different cells. They are all of relevance for identification purposes.

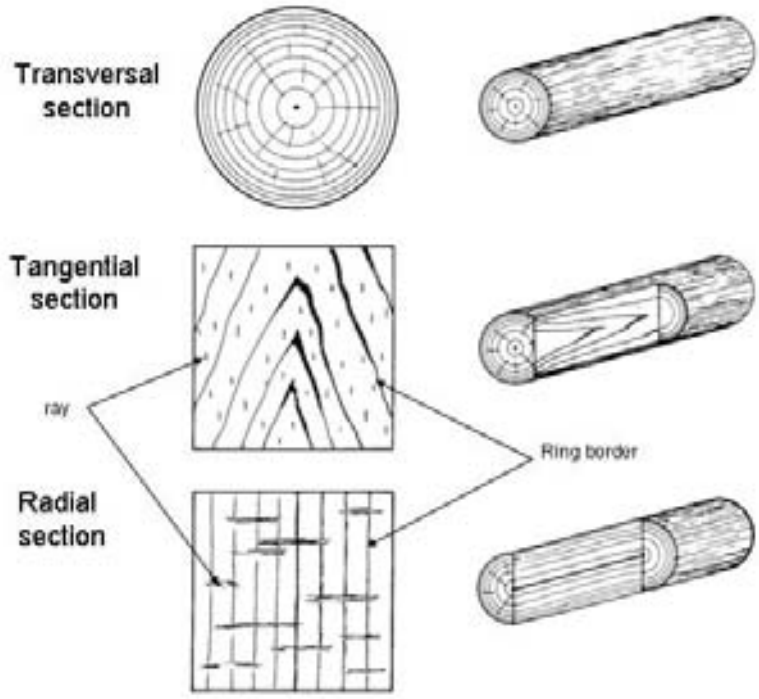


Fig. 2: The three main sections for wood anatomical observations.

The three sections could microscopically be observed with incident and transmitted light or with electronic bundles. Some of the features could be seen with a hand lens or even with the naked eye. Magnifications up to 6000x may be needed (only possible with electron microscopes), but for most of the cases optic microscopes with a maximum magnification of 400 times is sufficient.

Wood collections

Scientific reference collections have been established with wood samples that are possibly accompanied by the three perpendicular thin sections and a set of photographs. The specimens should preferentially be botanically identified by certified herbarium material. It is important to keep in mind that most of the wood collections are far from being complete not only because some wood species are lacking, but also because they do not cover the complete picture of the natural variability of certain woods.

The identification process

The identification process of a wood sample from unknown origin involves three steps.

In a first step the material is prepared for observation. A first question deals unavoidably with the location of the wood in the original tree. A sound orientation is of uttermost importance. Therefore it is in most of the cases necessary to start with a macroscopic observation of a clean transverse surface. Most easily this is being obtained by clean cutting a small surface with a sharp knife. Observations of ring borders and wood rays are sufficient for an orientation. Most frequently this is being done with a

hand lens with a magnification factor of 10 times. After this first inspection, the thin sections could be made. This could be done either by a microtome, a scalpel or a razor blade. The former is especially interesting for reference samples that need to be of high quality and that should be kept for a very long time. Microtome sectioning is accompanied by a series of material processing steps like there are softening, dehydrating, staining and imbedding in resin. These handlings need to be done in a specialised laboratory. For sections that don't need to be stored for a long time and where the quality is less important, hand sections could be made with a scalpel. When thin sections are difficult to realize small pieces of solid wood can be analysed by incident light microscopy.

A second step involves the observation of the features. An attempt to standardize the wood anatomical observation for identification purposes is made by the International Association of Wood Anatomists. They elaborated a list of not less than 163 different descriptors to analyse a wood specimen.
Most formally a wood anatomical observation involves scoring the standardized IAWA characters on a checklist.

A third step involves comparing the observations with those of scientific reference collections, possibly using published identification keys, picture atlases or tables with listed characters.
Experienced wood anatomists often don't work formally, but dynamically combine literature, software and human expertise.

Identification of precious objects

The procedure of wood identification of precious objects does not differ from the identification of objects without much value. It is of course seriously hampered by the possibilities to make the necessary observations. However in by far most of the cases very small fragments could be taken. This sampling is hardly noticeable and is absolutely not destructive for the objects. In some cases it is preferred that the sampling is being done by recognized art restorers. Because the wood anatomical observation needs high-resolution information from different magnification levels, there are no operational automatic tomographical techniques that replace the standard technique of sectioning. The resolution of a medical scanner for instance does not allow observations on a cellular or sub cellular level.