



China's *Hongmu* Consumption Boom:

**Analysis of the Chinese Rosewood Trade and Links
to Illegal Activity in Tropical Forested Countries**

Naomi Basik Treanor



With support from



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December 2015



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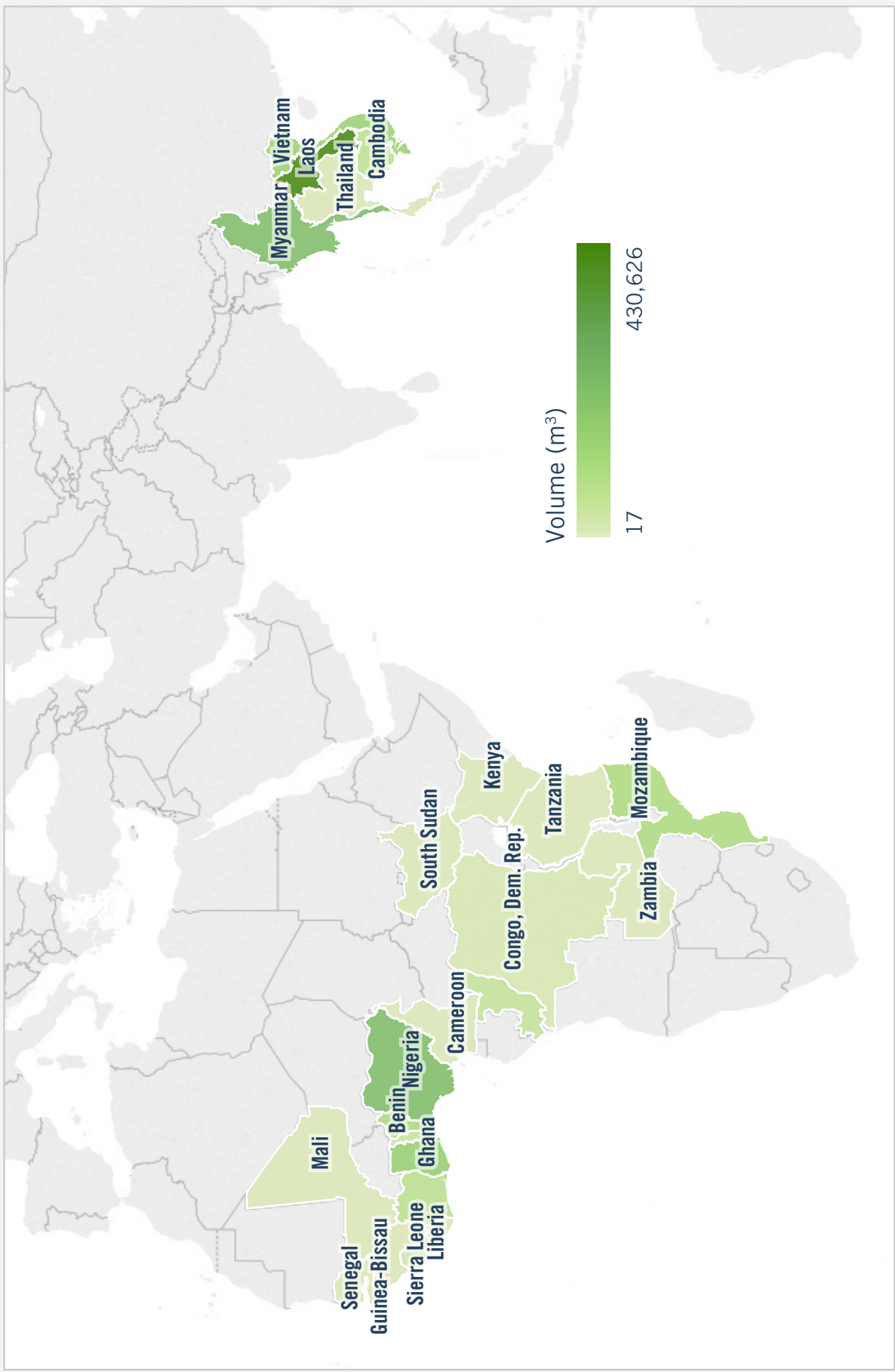
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ACRONYMS

AQSIQ	General Administration of Quality Supervision, Inspection, and Quarantine, China
ASEAN	Association of Southeast Asian Nations
BCM	EU-China Bilateral Cooperation Mechanism on Forest Law Enforcement and Governance
CAF	Chinese Academy of Forestry
CATVS	Association-guided Timber Verification Scheme, China
CGTVS	Government-guided Timber Verification Scheme, China
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
ELC	Economic Land Concession (Cambodia)
EUTR	European Union Timber Regulation
ILPA	Illegal Logging Prohibition Act, Australia
ITTO	International Tropical Timber Organization
MFDC	Movement of Democratic Forces of Casamance (Senegal)
MOECAF	Ministry of Environmental Conservation and Forestry (Myanmar)
MofCOM	Ministry of Commerce, China
MoU	Memorandum of Understanding
MTE	Myanmar Timber Enterprise
NGO	Non-Governmental Organization
NSAG	Non-State Armed Group
RWE	Roundwood Equivalent
SAQSIQ	State Administration for Quality Supervision and Inspection and Quarantine, China
SEZ	Special Economic Zone
SFA	State Forestry Administration, China
TLVS	Timber Legality Verification System
UNEP	United Nations Environment Programme
UNODC	United Nations Office on Drugs and Crime
VAT	Value-Added Tax

MAP 1

China's Rosewood Log Imports from Africa and the Mekong Region by Volume, 2014





EXECUTIVE SUMMARY

Over the past decade, Chinese demand for classic furniture made from slow-growing hardwood species collectively known as *hongmu*, encompassing rosewood species and others such as Padauk, has soared. The majority of furniture is both manufactured and consumed within China, as indicated by the trade balance reflecting high levels of log and sawnwood imports and lower levels of roundwood equivalent (RWE) furniture exports.¹ China's rosewood log and sawnwood imports, on an unprecedented rise since 2010, hit an all-time high in 2014, while exports of rosewood products have declined severely (**Figure 1**).

Unfortunately, much of the world's valuable rosewoods are being depleted at an alarming rate, with the global trade in rosewood suffering from high rates of illegal harvesting, transport, and trade. These illegal practices have exacerbated the destruction of complex ecosystems in some of the world's most biodiverse forests and in many cases have negatively impacted the livelihoods of forest-dependent people who rely on *hongmu* as a source of fuel and medicine.

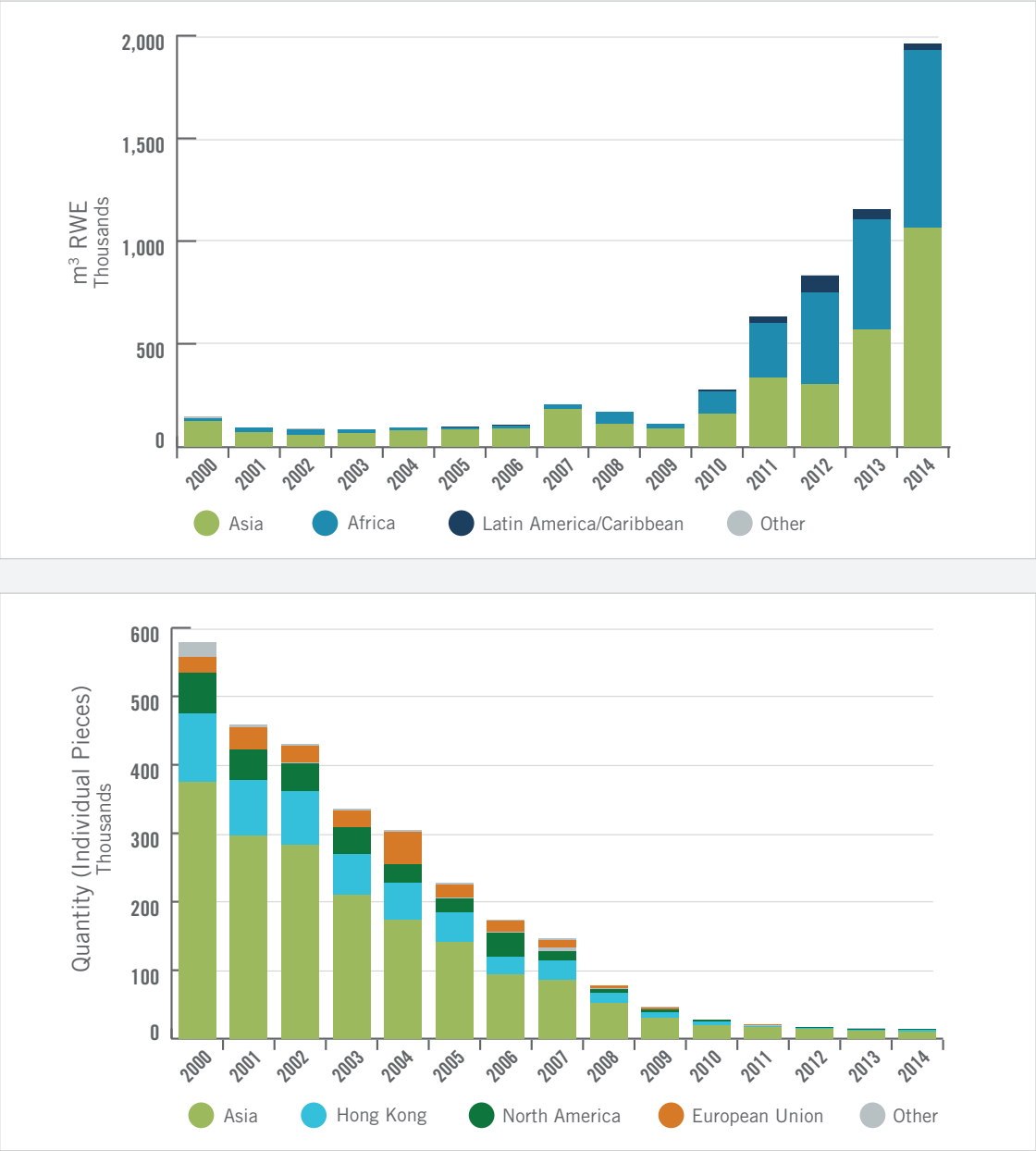
China is in a unique position to take a leadership role to ensure that only legally and sustainably sourced rosewood enters the country, given the large role that Chinese traders,² manufacturers, retailers, and consumers play in the global harvesting and trade of rosewood. The Chinese government has already put in place a system of rules and regulations for product quality assurance for the import and processing of rosewood that is enforced by a wide number of government agencies (**Box 1**), but does not address issues related to sustainable or legal harvesting, transportation, or import of *hongmu* species. This system could serve as the foundation for more direct action to ensure legality and sustainability.

This paper analyzes recent trends in Chinese rosewood trade, using import data from China Customs from 2000 to 2014. It then synthesizes existing literature highlighting widespread violations of national laws and regulations in source countries that are occurring in the harvesting and trade of rosewood, particularly in key countries in Africa and Asia. It concludes with policy recommendations for Chinese policy-makers and other actors, which would foster the trade in legal *hongmu* species, mainly through use of existing mechanisms and guidelines, but also by increasing coordination with Hong Kong and ensuring better enforcement of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

¹ All trade data analyzed in this report, unless otherwise indicated, is sourced from the General Administration of Customs of the People's Republic of China (China Customs). This report primarily analyzes *hongmu* log import data (HS 44039930) and rosewood furniture export data (HS 94035010 and 94036010), as rosewood is typically imported by China in the form of raw logs and exported in the form of finished furniture; see Box 2 for a discussion of imports in the form of sawnwood (HS 44079910). Chinese import statistics have been used to assess the exports of *hongmu*-producing countries and cannot be effectively triangulated with producer countries' export data, as China is the only country with specific customs codes for rosewood. However, China Customs does not distinguish between specific *hongmu* species, nor if goods are CITES-listed.

² Numerous case studies have shown that it is often Chinese traders who, with local cooperation, hold sway over harvesting and transport of *hongmu* logs in their country of origin.

FIGURE 1
Comparison of China's Rosewood Log and Sawnwood Imports (Roundwood Equivalent [RWE], by Volume) and Rosewood Furniture Exports (Quantity/Individual Pieces)



Key Findings

- **Chinese rosewood imports reached an all-time high in 2014.** Continuing an upward trajectory beginning in 2010, China imported 1.96 million m³ of rosewood logs and sawnwood in 2014 — an increase of 70 percent over the previous year and 1,250 percent since 2000. These imports were valued at US\$2.6 billion, nearly doubling from US\$1.4 billion in 2013.
- **An increasing proportion of China's overall hardwood log imports are now rosewood species.** In 2014, of the 15 million m³ of all hardwood logs imported by China, nearly 2 million m³ were classified as rosewood species; this proportion has risen significantly since 2009. In terms of value, more than one third (35.1 percent) of China's hardwood log imports in 2014 were rosewood. These figures are likely an underestimate, as they do not capture any imports arriving via Hong Kong.
- **China relies on Southeast Asia for *high-value* rosewood, but African countries are increasingly supplying China.** This is particularly the case for China's imports of rosewood logs, 50 percent of which are harvested in Southeast Asia by *volume*, but account for 70 percent by *value* (US\$1.54 billion). However, these species (particularly Siamese Rosewood) are of increasing small diameter and quantity, reflecting the decline in the species across Southeast Asia's forests due to decades of over-harvesting. To meet their overwhelming demand, Chinese traders are looking for additional sources in Africa and Latin America, even if it means lower quality and smaller-sized rosewood, or other species that can reasonably pass as rosewood. The increasing rarity of the high-quality rosewood materials has led to stockpiling of logs even by individual Chinese households, creating highly speculative markets which are nonetheless deemed more safe or profitable than bank savings accounts or the often-volatile stock market.
- **China registered a 700 percent increase in the import of African rosewood logs and sawnwood since 2010.** As Asian rosewood resources diminish, African rosewood imports now comprise nearly half of this burgeoning market — up from only 12 percent a decade earlier. The African species are of lesser quality, but due to their lower cost are in high demand from China's burgeoning middle class. The average price of Asian rosewood logs on the Chinese market, from January – October 2014, for example, was US\$1,804/m³, as opposed to US\$707/m³ for African rosewood logs (Chinese Redwood Committee 2014).
- **Despite a surge in imports in 2013 and 2014, data for the first half of 2015 reveal a marked drop in imports as compared to the first half of 2014.** Industry officials note that demand has been partly met by existing stockpiles, tempered by government anti-corruption campaigns, and indicative of younger consumers' preference toward lighter, less expensive softwood furniture. Additional analysis will be conducted for the latter half of 2015 onward to reveal whether this is a lasting trend.
- **The vast majority of *hongmu* furniture remains in China.** While imports of rosewood (mainly logs) have increased by 1,700 percent since 2000, Chinese exports of rosewood products have declined 98 percent — down to only 15,000 pieces of furniture in 2014. From 2000 to 2014, China's rosewood log import to furniture export ratios declined from 30 percent to just .04 percent — indicating that over 99 percent of raw rosewood material imported into China remains within the country in some form. China mainly exports rosewood furniture to Asian markets such as Taiwan and Japan.

- **Despite increased recognition of illegalities endemic to the rosewood trade, there is evidence of continued illegal harvesting and trade of *hongmu* species.** This is particularly the case in developing countries in Southeast Asia and Africa with poor forest governance and enforcement capacities, exacerbated by legal frameworks which are inadequate, complex, overlapping, and consistently undermined by corruption and bribery. In some countries, log export bans in place are easily identified as being violated.
- **In Asia, transnational organized crime syndicates have emerged to exploit this highly profitable commodity, challenging efforts to preserve remaining rosewood stocks; in Africa, revenues from rosewood trade have financed armed conflict.** Organized crime networks, prevalent in the Mekong, are comprised mainly of Chinese and Vietnamese traders sourcing illegal rosewood in Cambodia, Laos, and Myanmar, where its export is prohibited (EIA 2014a). And evidence from Senegal and Gambia in West Africa shows that 95 percent of rosewood can be classified as “conflict timber,” benefitting the main separatist movement in southern Senegal (Salif Gueye 2015).
- **Rosewood shipments appear to be routed through Hong Kong in greater quantities.** After increased enforcement of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) on listed rosewood species in mainland China,³ imports of high-value species from high-risk countries (i.e., those with high reported rates of illegal logging and poor forest governance in general) increased through the less monitored ports of Hong Kong, with imports being registered there before being shipped onward to China’s Special Economic Zones (SEZ) or port cities in the Pearl River Delta of Guangdong province. This also allowed importers to avoid the value-added tax (VAT) imposed by SEZs and mainland Chinese ports. Now one year since the enactment of Hong Kong’s CITES legislation, investigation is needed, to ascertain whether volumes and value of rosewood shipped through Hong Kong to China have changed and whether transparency of trans-shipments has improved.
- **China has several existing mechanisms aimed at supporting legal timber trade which could serve as a foundation for more comprehensive policy or regulation prohibiting the import of illegal timber, such as in the US, Europe, or Australia:** Since 2000, China has entered into several agreements designed to encourage the trade in legal and sustainable timber (CITES, Memoranda of Understanding [MoUs] with producer countries and other trading partners committing to combat the trade in illegal wood products, and various guidelines for Chinese enterprises operating overseas whose actions affect forest areas). Globally, other consumer countries are moving toward stronger legislative measures which not only encourage legal trade, but prohibit illegal imports (the 2008 US Lacey Act amendments, the 2013 EU Timber Regulation [EUTR], or the 2012 Australian Illegal Logging Prohibition Act [ILPA]). There is evidence to suggest that these laws have already played a role in reducing imports of illegal timber (Prestemon 2015; Pepke et al. 2015), and that pressure from the US and EU has already catalyzed political will to respond to illegal logging and trade (Lawson and MacFaul 2010). China should continue this momentum to establish similar measures.

³ Examples of enforcement actions include:

- The 2013 Huangpu Customs arrest of 48 individuals in 20 cases associated with smuggling Malagasy rosewood, Siamese rosewood, and Padauk valued at US\$3.6 billion in 2013 (informally known as “project axe” (EIA 2014a);
- The 2013 arrest in Guangzhou of 23 individuals smuggling over 14,000 tons (valued at CNY 1.05 billion [US\$ 163 million]) of rosewood listed as *Pterocarpus angolensis*, but containing unreported *P. santalinus*, *D. cochinchinensis*, *D. retusa*, and others (Guangzhou Customs District 2014);
- The February and May 2014 arrest in Qingdao of 10 individuals smuggling over 1,700 tons (valued at CNY 2.2 billion [US\$ 341 million]) of *P. santalinus* mislabeled as *Dalbergia atifolia* and *Pterocarpus sayauxii* (China Customs 2014a);
- Three cases (July 2012, May 2013, September 2013) in Xiamen, in which 55.5 tons (valued at CNY 28.52 million [US\$ 4.4 million]) was seized (Xiamen Daily 2014);
- The largest maritime seizure of smuggled rosewood, in which 56 tons (valued at CNY 29 million [US\$ 4.5 million]) of rosewood was confiscated in Fuzhou (China Customs 2014b).



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BACKGROUND

The label “rosewood,” or *hongmu*,⁴ refers to a wide array of hardwood tree species native to the tropical areas of South and Southeast Asia, Africa, and to a lesser extent, parts of Latin America (of the genii *Dalbergia*, *Pterocarpus*, and others). They command a range of prices, with the most sought-after species earning high value on the current market for logs, furniture, and other products. All *hongmu* species are characterized by dark red hues, oily texture, and durability, and many are used by local or indigenous forest-dependent communities in their country of origin for their medicinal properties⁵ and livelihood activities such as handicrafts.

Recently, rosewood furniture has become a symbol of cultural identity and economic status in China, driven by both a newfound appreciation for China’s rich history, driving a resurgence of Ming and Qing dynastic aesthetic for household decoration, and the explosive growth in income for both China’s upper and middle classes. The majority of furniture is both manufactured and consumed within China, as indicated by an unprecedented rise in log imports while exports of rosewood products have declined (**Figure 1**).

China is most likely the leading importer of rosewood from tropical forested countries, as evidenced by numerous reports and interviews with traders and industry leaders within China. However, global data is difficult to capture as few countries’ customs agencies specifically document the trade in logs or other products of rosewood species; it is widely recognized that China is the *only* country with a customs code for precious wood, the majority of which is rosewood logs. With China’s own forests of native rosewood species depleted, buyers and traders are seeking alternative sources in neighboring Mekong countries and further abroad, including lower-quality or -sized rosewood species or other trees that can reasonably pass as *hongmu*.

Both rosewood species and their passable alternatives are rapidly declining. The high-value, large-diameter rosewood trees are increasingly rare, and now only found in old-growth forests — the world’s most biodiverse tropical forested ecosystems. Six of the 33 *hongmu* species identified by the Chinese government and codified in the 2000 National Rosewood Standard⁶ are now listed in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), an international treaty to prevent over-exploitation of plant and animal wildlife to which countries enter voluntarily. In addition, rosewood is now considered by

⁴ *Hongmu* refers to a wide range of species, including but not limited to rosewood species. However, for the purposes of this paper, the two terms are used interchangeably.

⁵ See for example, the following two articles addressing the pharmacological uses of African rosewood (*P. erinaceus*), and several *Dalbergia* spp., including Siamese rosewood, respectively: Karou et al. 2003. “Antimalarial activity of *Sida acuta* Burm. f. (Malvaceae) and *Pterocarpus erinaceus* Poir. (Fabaceae).” *Journal of Ethnopharmacology* 89(2-3): 291-94; Delang. 2007. “The Role of Medicinal Plants in the Provision of Health Care in Lao PDR.” *Journal of Medicinal Plants Research* 1(3): 50-59.

⁶ These six species include: *Dalbergia caerensis* (native to Brazil, also known as jacaranda), Appendix I; *Pterocarpus santalinus* (native to India, also known as red sandalwood), Appendix II; *Dalbergia cochinchinensis* (native to the Mekong region, also known as Siamese Rosewood), Appendix II; *Dalbergia retusa* (native to Central and South America, also known as cocobolo), Appendix III; *Dalbergia stevensonii* (native to Belize, also known as Honduran Rosewood), Appendix III; and, *Dalbergia louvelii* (native to Madagascar, also known as violet rosewood), Appendix III.



Photo credit: Eve Richer

the international community to be at a “high risk” for being illegally logged and traded. The rapid increase in demand for rosewood has led to unsustainable levels of harvesting and, in many places, violation of domestic laws and regulations (further detailed in **Section 2**). The majority of countries in which rosewood species can be found suffer from low levels of forest governance, often with low enforcement capacity. Illegalities can be classified as violations of producer country laws (e.g., logging without a license or permit or in violation of environmental and social regulations and policies such as logging and export bans), smuggling, and other illegalities in transport (e.g., misclassification of shipment origin), corruption and fraud (i.e., document falsification, bribery, tax evasion, or money laundering), or violation of demand-side country laws or other international frameworks such as CITES (**Box 4**).

BOX 1*Hongmu* Terminology, Classification, and Value

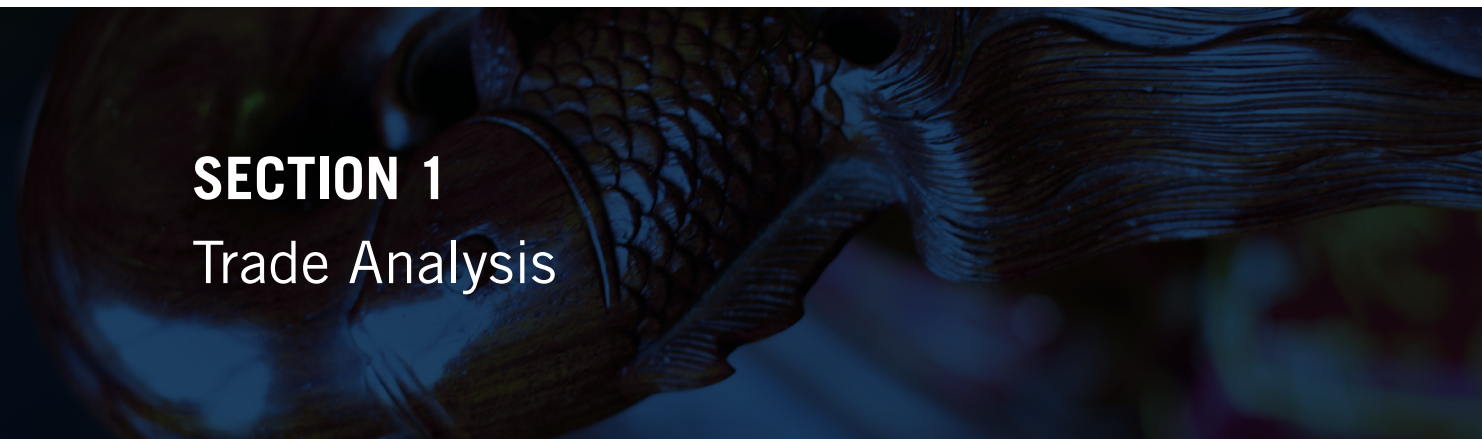
The rosewood industry in China is bound by five national standards:

- National *Hongmu* Standard issued in 2000 by the State Administration for Quality Supervision and Inspection and Quarantine (SAQSIQ) in order to regulate quality,
- SAQSIQ regulation specifying label requirements in manufacturing processes (2011),
- National Development and Reform Commission directive identifying appropriate species for industry use, and
- Two sectoral standards issued by the Ministry of Commerce (MofCOM).

The National *Hongmu* Standard lists 33 species: 5 from Africa, 7 from South America, and 21 from Asia, from 5 key genera: *Pterocarpus*, *Dalbergia*, *Diospyros*, *Millettia*, and *Cassia*. Rosewood species can be further classified (though not officially) by market value, with industry experts suggesting 16 most common species categorized into “collectible” (high-end) or “ordinary” (mid- to low-end), as follows. This report makes reference to six of these species, namely: *P. santalinus*, *D. louvelii*, *D. cochinchinensis*, *P. macrocarpus*, *D. oliveri*, and *P. erinaceus*.

Value	Scientific Name (Common Name if Standard)	Main Origin
Collectible (high-value)	<i>Dalbergia odorifera</i>	Hainan Province, China
	<i>Dalbertia tonkinensis praion</i>	Vietnam
	<i>Pterocarpus santalinus</i> (red sandalwood)	India
	<i>Dalbergia louvelii</i> (violet rosewood)	Madagascar
	<i>Dalbergia cochinchinensis</i> (Siamese rosewood)	Mekong region
	<i>Dalbergia retusa</i>	South America
	<i>Pterocarpus cambodianus</i>	Mekong region
	<i>Dalbergia cearensis</i>	Mekong region
Ordinary (mid- to low-value)	<i>Dalbergia oliveri</i> (Tamalan)	Mekong region
	<i>Pterocarpus macrocarpus</i> (Burmese padauk)	Myanmar
	<i>Pterocarpus pedatus</i> (Cocobolo)	Mekong region
	<i>Dalbergia stevensonii</i> (Honduran rosewood)	South America
	<i>Millettia laurentii</i> (Wenge/African rosewood)	Central Africa
	<i>Millettia leucantha</i> (Sathon)	Mekong region
	<i>Dalbergia melanoxylon</i> (Grenadilla)	Africa (Sahel region)
	<i>Pterocarpus erinaceus</i> (African rosewood)	Africa

Source: Forest Trends 2013a (author's observations from various rosewood markets)



SECTION 1

Trade Analysis

Exponential Growth in *Hongmu* Imports through 2014

As a processor and consumer of raw materials, China's timber imports primarily take the form of logs, increasing from just over 13 million m³ in 2000 to nearly 474 million m³, valued at US\$75.2 trillion in 2014. China now accounts for approximately two thirds of the world's total tropical hardwood log imports; India, the second-largest importer of logs, has a share of less than 20 percent (as of 2013).⁷ In 2014, of the 15 million m³ of hardwoods imported by China, nearly 2 million m³ were classified as *hongmu* species, and this proportion has risen significantly since 2009. In terms of value, more than one third (35.1 percent) of China's hardwood imports in 2014 were rosewood, compared to 29 percent in 2013 and a massive jump from 3 percent in 2000. This contributed in part to a 50 percent jump in value of China's overall log imports for 2014, compared to a 23 percent increase by volume (the larger increase by value indicating an increase in high-value species).

A negligible portion of sawnwood imported by China is identified as rosewood species — less than 230,000 m³, valued at US\$410 million, of 37 million m³ total sawnwood imported in 2014, valued at US\$8.1 billion. Since 2000, only 0.4 percent by volume, and 2 percent by value, of China's sawnwood imports were rosewood (**Figure 2**).

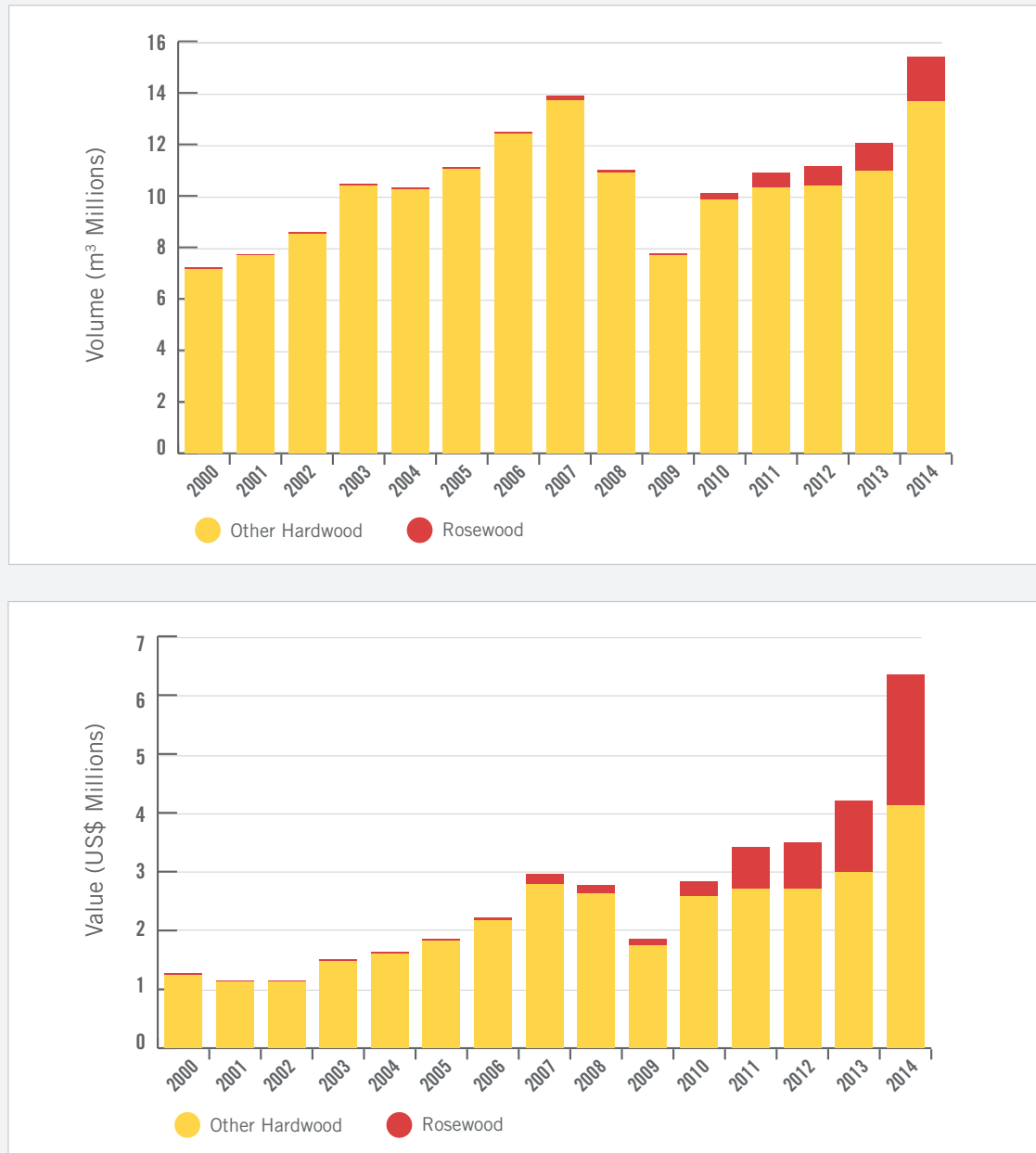
The rapid increase in *hongmu* imports (by both volume and value, and predominately in the form of logs) can be attributed to both a burgeoning middle class, now able for the first time to buy rosewood furniture as a status symbol to emulate the rich (and therefore also driving demand for lower-value, less expensive species), and an elite upper class driving the demand for the highest-value, most expensive species for furniture and décor. It can also be linked in part to an economic stimulus package put in place by the government in 2008 with an aim to mitigate the impacts of the global financial crisis, which included measures to boost the real estate sector and therefore spurred demand for wooden furniture and decorative materials for new homes (rosewood itself is not used in building construction).

The booming rosewood market in recent years has attracted a large number of new entrants to the business including new traders and furniture makers and, interestingly, appears to have given rise to rampant speculation. As the price of Siamese Rosewood logs originating from Laos, Cambodia, Thailand, Vietnam, and Myanmar has risen 15 times since 2005 (European Forestry Institute 2014), the stockpiling of rosewood logs appears to have occurred as households with increased disposable income — particularly those wary of more classical financial investments such as the savings accounts, stock, or real estate markets in China — sought a safer vehicle for their investments (Huang 2014). The channeling of savings into “stores” of valuable commodities in China is not new; the rising price of jade (increasing tenfold between 2000 and 2010) led to similar patterns of stockpiling (Chovanec 2010).

⁷ Compiled from official statistics of importing countries, China Customs, Eurostat, and UN COMTRADE, by James Hewitt for Forest Trends. Sufficient data for 2014 is not yet available; these figures are estimates based on best available data.

FIGURE 2

Rosewood Logs as a Proportion of China's Total Hardwood Log Imports, by Volume (m³ Millions) and Value (US\$ Millions)



Regional Breakdown

Southeast Asian countries, particularly the Mekong sub-region, have traditionally supplied the majority of rosewood logs to China, accounting for 70 to 90 percent of imports per year until 2009. China still profoundly relies on Southeast Asia for *high-value* rosewood, with 70 percent of the US\$2.2 billion in 2014 log imports coming from the region. However, now only half of total imports by volume are imported from Southeast Asian countries. For rosewood *sawnwood* imports, however, Southeast Asia is still the dominant supplier, accounting for 91 percent of China's imports by value and 88 percent by volume. However, the species in question are being over-harvested and progressively limited in quantity (or in some countries, on the brink of extinction).

As demand continues to grow, traders have begun to look for additional sources. A noticeable upswing in rosewood log imports from Africa has occurred from 2010 onward. In each year since 2012, import volumes of African rosewood logs surpassed those of Asia, contributing much of the rapid growth in overall imports during those years. In 2014, 48.6 percent of China's rosewood log imports were from Africa (with small quantities from Latin America — namely Panama, Mexico, Belize, and Nicaragua — and the rest still sourced from Asia). The lower quality African rosewood is largely consumed by China's large middle class, rather than its elite, and welcomed by those who seek rosewood furniture as a status symbol but at a much lower price point. The declining popularity of Southeast Asian rosewood varieties is also being influenced by the recent crackdown on excessive consumption (often associated with corruption and bribery), dubbed “anti-extravagance” measures, among Party officials who now want to avoid scrutiny surrounding the monetary threshold of gifts by choosing less expensive rosewood furniture and décor (**Figure 3**).

Laos, Nigeria, and Myanmar now rank as the top three supplier countries of rosewood logs into China. By value, these three countries make up nearly two-thirds of rosewood log imports. Several African countries are exporting rosewood logs for the first time, and Nigeria, Ghana, Benin, and Mozambique are now amongst the top ten suppliers to China by volume. Imports from Nigeria, barely noticeable until 2012, jumped from 671 m³ in 2012, to 221,995 m³ — and the fourth-largest source of imports by value — in 2014; roughly one-third of Nigeria's log exports are now comprised of rosewood species (Globaltimber.org.uk).

Rosewood log imports from Southeast Asian countries continue to grow, albeit not as fast as those from African countries. Myanmar and Laos have become new entrants into the market with incredible increases in exports since 2013 alone. While in 2013, the volume of rosewood sourced from Myanmar led many to believe that Myanmar would permanently surpass other supplier countries in the region, in 2014 imports from Laos more than doubled and continue to grow at an unprecedented rate. Yet, the relevant data may be understating the situation (**Box 3**). Volumes from Myanmar fell slightly (by 8 percent) last year, but are still significant especially in light of the April 2014 Myanmar log export ban; analysts had predicted that this decrease would be met by a jump in sawnwood imports, but data point to a near-identical (9 percent) drop in sawnwood imports as well. However, Vietnam is a major conduit of rosewood from Laos and Cambodia (and to some extent Myanmar); as such, exports from Vietnam may be labeled as Cambodian, Lao, or Vietnamese. It is therefore difficult to decipher the true origin of Southeast Asian rosewoods from Chinese import data alone (**Figure 4**).

FIGURE 3

China's Rosewood Sawnwood Imports (top) and Log Imports (bottom)
by Region of Origin (by Value)

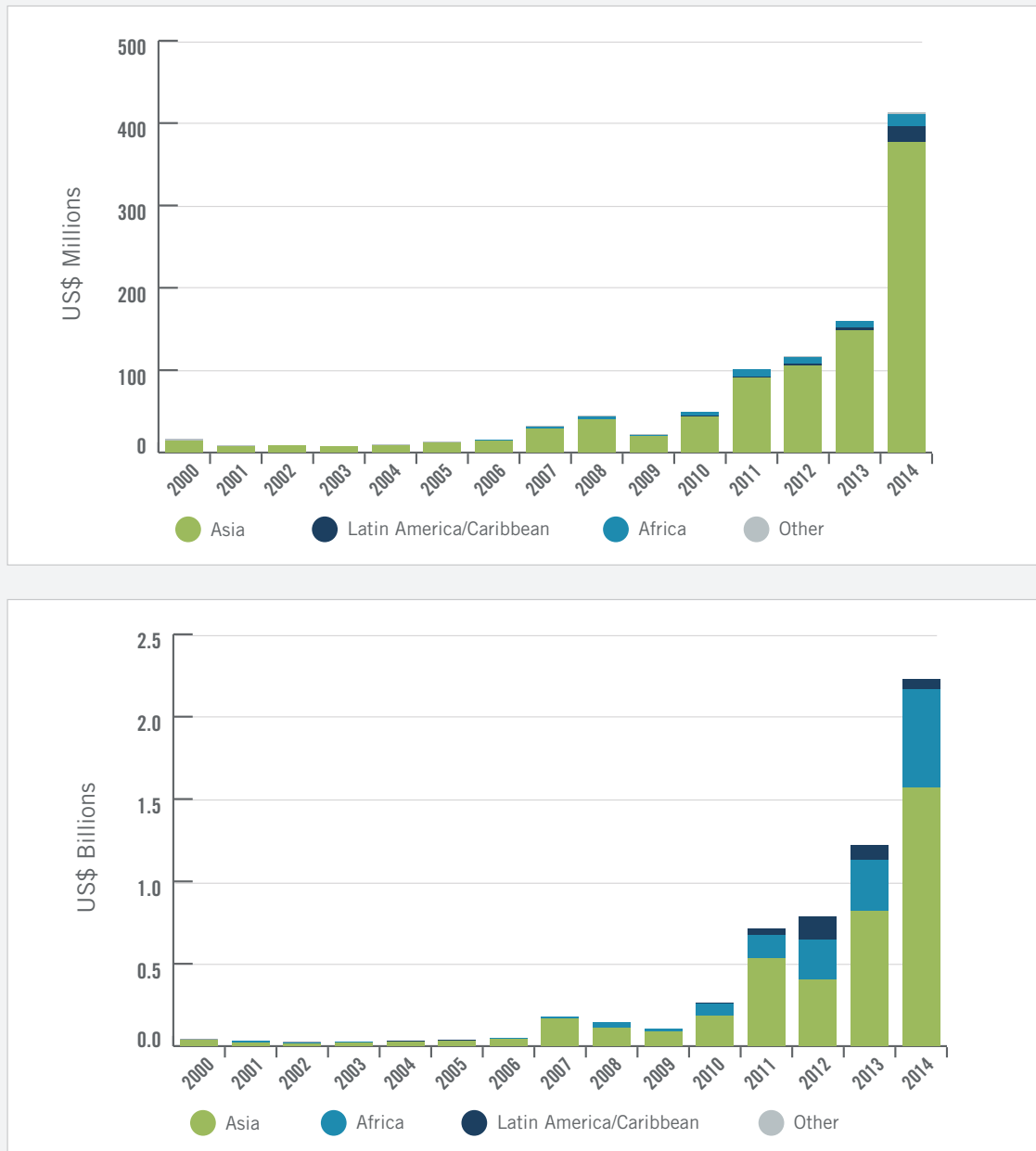


FIGURE 4

China's Rosewood Log Imports by Country of Origin (by Volume [m³ Millions] and Value [US\$ Millions])

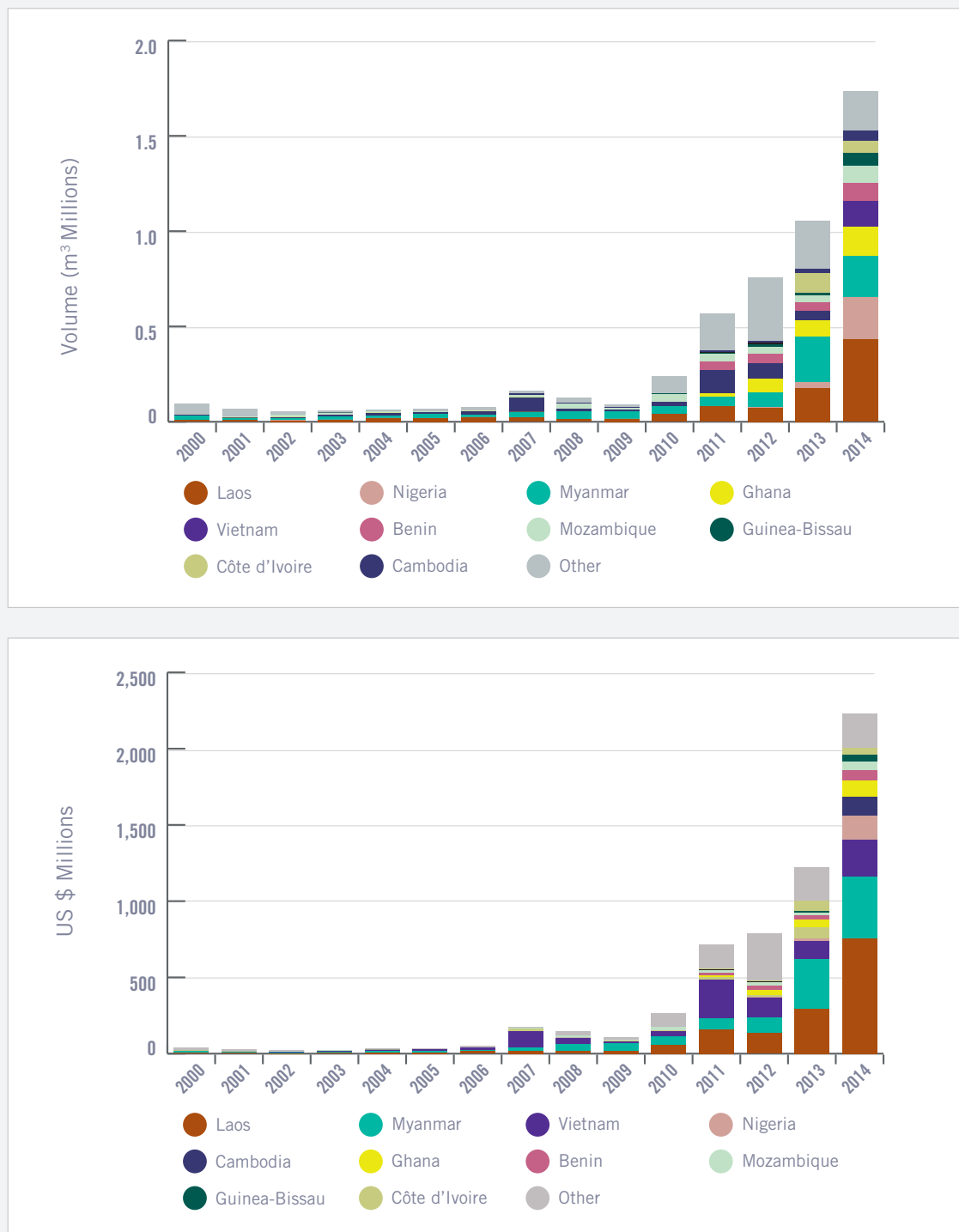


TABLE 1

Top Suppliers of Rosewood Logs and Sawnwood to China, 2014

County	Logs				Sawnwood				Export ban?*
	Rank	Volume (m³)	Rank	Value (US\$ Mill.)	Rank	Volume (m³)	Rank	Value (US\$ Mill.)	
Laos	1	430,626	1	756.4	1	133,831	1	237.6	Log and sawnwood
Nigeria	2	221,995	4	157.6	15	472	19	0.3	Log and sawnwood
Myanmar	3	218,986	2	402.7	13	1,018	10	2.0	Log
Ghana	4	151,037	6	108.8	14	937	17	0.7	Log
Vietnam	5	136,449	3	243.7	4	5,641	4	10.6	Log and sawnwood
Benin	6	92,065	7	64.2	3	11,923	5	8.7	Log
Mozambique	7	91,412	8	56.6	9	1,704	14	1.0	Log
Guinea-Bissau	8	67,647	9	44.6	33	18	33	0.02	Log
Côte d'Ivoire	9	61,845	10	44.6	20	242	21	0.2	Log
Cambodia	10	57,128	5	123.2	8	2,477	7	4.1	Log
Indonesia	18	9,351	16	16.6	2	50,459	2	109.9	Log
Panama	16	10,827	11	38.3	5	4,731	3	17.2	Log and sawnwood
Malaysia	15	12,179	15	22.7	6	4,266	6	5.4	Log
Tanzania	29	282	29	0.4	7	3,068	9	2.2	Log
Thailand	25	1,233	23	2.0	10	1,497	8	2.7	Log

***Note:** “Export bans” may refer to any national law, ordinance, or regulation prohibiting the export (or harvesting and export) of logs, sawnwood, and/or other forms of timber harvested from natural forests with some exemptions (e.g., log exports from Peninsular Malaysia are banned, while logs from Sabah and Sarawak are permitted up to a quota). Although Section Two of this analysis focuses primarily on illegalities in rosewood logs supply chains bound for China, the legality of China’s highest-value rosewood sawnwood imports — from Laos, Indonesia, and Panama — has also been called into question. Both log and sawnwood exports are banned in Laos, although several loopholes exist (see below). Indonesia temporarily imposed a ban on sawnwood exports in 2004 (ITTO 2004), which appeared to have very little impact on Chinese imports. And in 2014, a 200 m³, US\$4 million shipment of *Dalbergia retusa* from Panama to Hong Kong, labeled as scrap metal, was seized at the Port of Balboa on the Panama canal (Panamá América 2014). Rosewood logging, and ensuing violent conflict, was also blamed for the death of an indigenous Panamanian leader in 2012 (Rainforest Foundation US, undated).

BOX 2

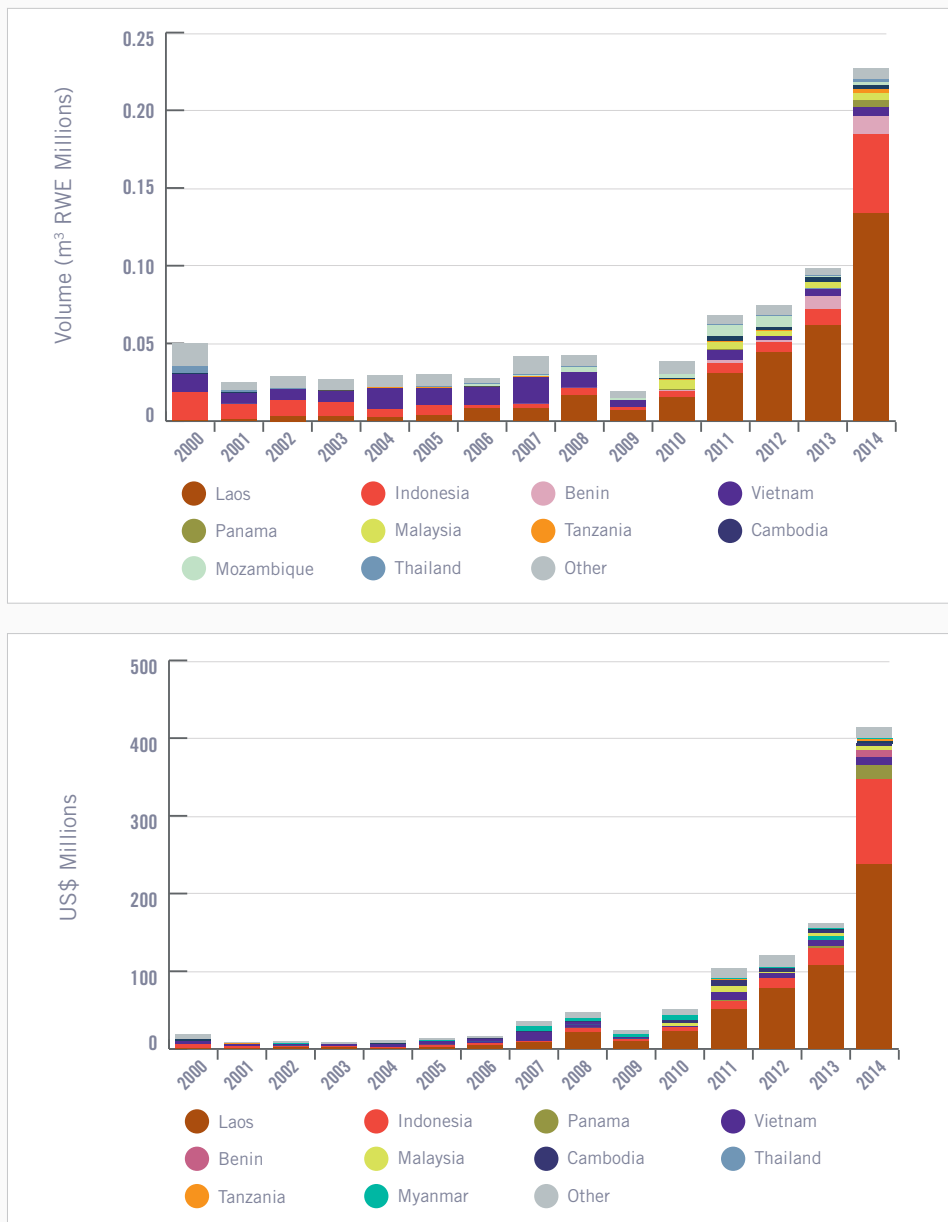
Rosewood Sawnwood Imports

Although China's total rosewood sawnwood imports pale in comparison to rosewood log imports and are therefore rarely analyzed, they are not insignificant. China maintained steady levels of imports from 2001 to 2008 at between 25,000 and 30,000 m³, and after a slight dip in 2009 they have increased on an annual basis since. Rosewood sawnwood imports surged in 2014, more than doubling by both volume and value.

Over 80 percent of rosewood sawnwood imports (by both volume and value) originate either from Laos or Indonesia — China's 16th and 11th-largest suppliers of total sawnwood, respectively. While Laos is also China's top supplier of rosewood logs, it is interesting to note that imports of Indonesian rosewood sawnwood (at 50,500 m³) dwarf imports of Indonesian rosewood logs (at 8,700 m³). Benin, now the third-largest rosewood supplier to China, only began exporting rosewood logs and sawnwood in 2010, following a similar pattern of other West African countries; exports have grown more than 20-fold for sawnwood by volume. Imports from Panama, non-existent or negligible until 2013, surged by 500 percent by both volume and value, and in both sawnwood and log form, in 2014.

FIGURE 5

China's Rosewood Sawnwood Imports by Country of Origin (by Volume [m³ RWE Millions] and Value [US\$ Millions])



Imports of Logs Drop Sharply in 2015, while Sawnwood Imports Show More Gradual Decline

January to September 2015 data reveal a marked drop in rosewood log imports, by 59 percent (volume) and 64 percent (value) in total as compared with the same period in 2014. Industry association officials note that demand has been met in part by existing stockpiles after investment speculation peaked in 2013 and 2014, and tempered by the government anti-corruption campaign and a trend among young Chinese consumers toward lighter, less expensive softwood furniture (which can be supplied by plantations). Disaggregated data, however, reveal Southeast Asian countries are largely responsible for this decrease by volume: imports from Vietnam have declined by 96 percent; from Cambodia, by 95 percent; from Thailand, by 77 percent; from Myanmar, by 77 percent; from Indonesia, by 76 percent; and from Laos, by 65 percent. African countries, in contrast, experienced significant leaps in rosewood log exports to China during this period, most notably Mali, by 200 percent; Gambia, by 108 percent; and Cameroon, by 152 percent. Value data show a similar trend; altogether, China had imported US\$705 million worth of rosewood logs as of the end of September 2015; in comparison, imports had nearly reached \$2 billion year-to-date for 2014, and nearly \$900 billion for 2013.⁸

As for rosewood sawnwood, quarterly data indicates a more gradual drop. While 2015 imports will likely not come near those of the previous year, imports by value have surpassed US\$160 million by the end of September 2015 — equal to almost all (99 percent) of 2013 imports (**Box 3**).

Product Flows

Rosewood logs are imported into China by either regular trade (ocean-going and direct cross-border with neighboring countries) and “express” import: in 2014 Hong Kong imported over 108,000 m³ of tropical hardwoods, valued at US\$152 million and up from less than 62,000 m³ in 2014. While the overall volumes are not large, nearly half of this wood was imported from countries with well-documented low levels of forest governance or an inability to control imports of high-risk timber: 92 percent was sourced from Laos, Vietnam, Thailand, or Cambodia. Nearly half came from Laos alone. By one 2010 estimate, as much as 30 percent of Hong Kong’s timber imports could be illegal (WWF-Hong Kong and Global Footprint Network 2011). Yet it remains a challenge to quantify the volumes or values of rosewood that are shipped through Hong Kong which, unlike the rest of China, has no customs code (HS code) requirement for rosewood (and therefore imports rosewood under various other codes, making it difficult to detect them) and little independent monitoring.

Rerouting through Hong Kong: Until 2008, importers benefitted from value-added tax (VAT) exemptions for wood products.⁹ After this exemption was abolished, importers and their consumers felt additional cost pressure, resulting in a decrease in direct cross-border imports and an industry-wide shift to other trade routes. One popular alternative has been to import rosewood through Hong Kong, which does not levy import taxes and offers comparatively simple customs procedures in comparison to mainland China. Shipments are then sent onward from Hong Kong to the Shenzhen Special Economic Zone (SEZ), and there are reportedly many ways for traders to avoid paying import taxes and undergoing customs inspections upon entry to Shenzhen. This route, which has become popular for importers of high-value hardwood logs and sawnwood, is known as the “express trade.” (*ibid.*)

⁸ Additional analysis will be conducted when quarterly data for the rest of 2015 is released to determine if this drop indicates a lasting trend or merely an anomaly, particularly given the slowdown in China’s economy since June and its inevitable impact on the timber trade.

⁹ A preferential trade policy benefitting neighboring Southeast Asian countries, in which 50 percent of value-added tax was exempted for wood products imported through direct cross-border trade (VAT rates were 13 percent for logs and 17 percent for sawn timber, levied on the value of each shipment). VAT exemption benefitted the import of high-value *hongmu* from Southeast Asia and gave rise to a booming border trade between China and major neighboring supply countries, such as Myanmar, Vietnam, and Laos.

There is evidence (particularly from investigative reports cited below) that high-risk, high-value *hongmu* shipments are frequently routed through Hong Kong, though further analysis is needed as to whether this has continued since Hong Kong enacted CITES legislation in November 2014, with a three-month grace period (ending in February 2015) for full compliance.¹⁰ Numerous sources allege that shipments of high-value *hongmu* species, particularly from countries such as Laos and Madagascar with high reported levels of illegal harvesting and export, are registered through Hong Kong customs before being shipped onward to Shenzhen or port cities in the Pearl River Delta (EIA 2014a; EIA 2014c). While it is impossible, using customs data alone, to quantify exactly how much of China's total rosewood imports go through Hong Kong, the lack of a rosewood-specific customs code¹¹ and reportedly less stringent border monitoring may make it easier for shipments of high-value *hongmu* species to cross into Hong Kong, and onwards to China, undetected, at least in comparison to shipments that enter China directly. In February 2015, however, just before the three-month CITES grace period came to a close and in a promising signal of increased enforcement, Hong Kong Customs officers seized 92 metric tons of illegal Honduran rosewood worth nearly US\$400,000 that had arrived via Mexico and was bound for China, comprising the city's largest illegal wood seizure in a decade (Customs Today 2015). Continued monitoring will assess the extent to which high-risk timber shipments are still being routed through Hong Kong after the full enactment of CITES legislation.

Direct to Mainland China: Of rosewood log imports to mainland cities, 75 percent are registered in either Huangpu (near Guangzhou) or Shanghai, with Kunming, Nanjing, and Nanning accounting for much of the remainder. In the past two years, four new *inland* districts — Hefei (in Anhui province), Jinan (in Shandong province), Urumqi (in Xinjiang province), and Zhengzhou (in Henan province) — registered rosewood imports for the first time. This trend may be indicative of the shift in China's middle class from the large coastal population centers, to smaller, growing metro areas that are further north and west, or of new trade routes from Africa, as rosewood products reaching Urumqi, Zhengzhou, and Jinan were declared as having been exported from Zambia or Republic of Congo, presumably by plane. *Hongmu* from Myanmar, Laos, and Vietnam also enters China by way of three main land-border ports in Yunnan province (Ruili, Yinjiang, and Tengchong). Semi-furnished rosewood furniture imports processed in Vietnam also enter through Guangxi Province (European Forestry Institute 2014).¹² More than 90 percent of rosewood sawnwood imports are registered either in Shanghai, Kunming, or Huangpu (**Figure 6**).

The ten largest rosewood log importers which file for official customs declarations are listed below for January-December 2009 and 2014 (representing 36 percent of the market in 2009 and 26 percent in 2014). Six years ago, 50 percent of these companies were headquartered in Yunnan. Today, none are based in Yunnan despite the booming trade and development along the border due to the widening of transportation routes from Mekong countries to mainland China.

Unfortunately, once rosewood has arrived at Chinese entry points, its onward flow to sawmills and transformation into final, processed products (and their destinations) is difficult to trace -- with the exception of rosewood products made of CITES-listed species, which are traceable in theory through their certificates. For the rest of the rosewood, the supply chain from raw log to finished furniture product is often complex, with larger importers selling to many diverse, smaller enterprises that produce artisanal rosewood furniture. Further investigation is needed to trace both import routes and processing supply chains after the initial import (**Table 2**).

¹⁰ By enacting CITES, Hong Kong is attempting to end the trade in species of endangered fauna and flora listed on Appendix 1 (representing species that are deemed to be threatened with extinction and are consequently forbidden in international trade), and Appendix 2 (representing species that are at risk, but not threatened with extinction, and therefore not as restricted as those in Appendix 1) of CITES. For more on the CITES listing system, see <https://www.cites.org/eng/disc/how.php>.

¹¹ China is the only country that utilizes an 8-digit Customs code specifically for rosewood logs. The closest equivalent in Hong Kong covers "other" tropical wood. Therefore further investigation is required, using shipment data, to better estimate the volumes of rosewood officially passing through Hong Kong.

¹² Forest Trends estimates that 20-30 percent of Vietnam's domestic timber is manufactured into wooden furniture and laminate products for both domestic and export markets. China customs registers furniture imports from Vietnam starting in 2008 at just under 1,500 m³ RWE and skyrocketing to over 84,000 m³ RWE in 2014, valued at US\$192 million.

FIGURE 6

Rosewood Log Imports to China by Customs District (by Volume [m³ RWE Millions] and Value [US\$ Millions])

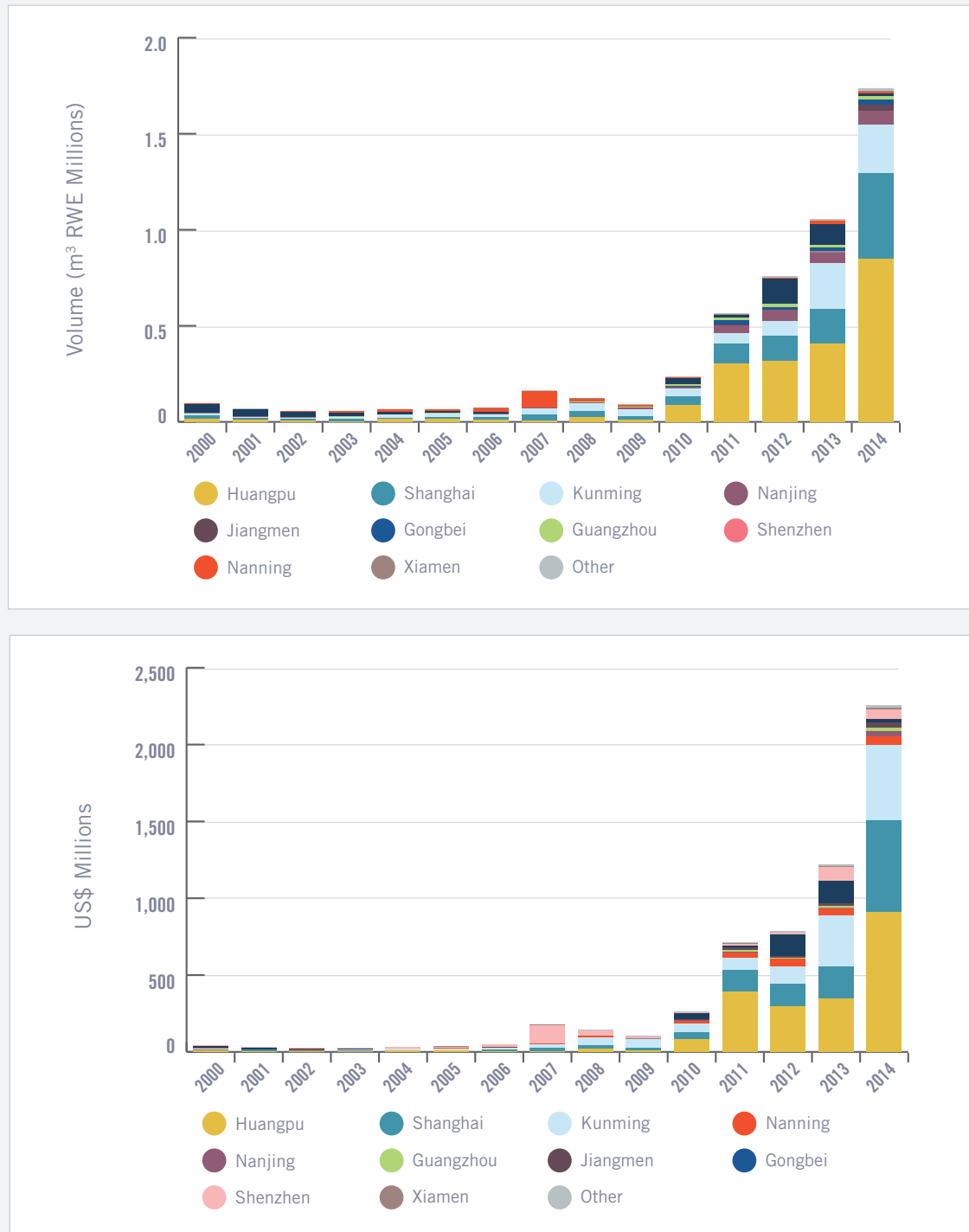


TABLE 2

China's Top Rosewood Log-Importing Companies, 2009 and 2014

2009			2014		
Importer	Location (province)	Volume (m³)	Importer	Location (province)	Volume (m³)
Menglian Foreign Trade Company 孟连县对外贸易公司	Yunnan	7,293	Guangzhou Highest Industrial Co., Ltd. www.gz-highest.com/en/index.aspx 广州海斯达国际贸易有限公司	Guangzhou	83,965
Dongguan Silver Dragon Commercial Co., Ltd. 东莞市银龙商业有限公司	Guangdong	3,350	Zhejiang Dongyuan Import & Export Co., Ltd. 浙江东园进出口有限公司	Zhejiang	64,628
Shanghai Resource Trading Development Co., Ltd. 上海瑞索资经贸发展有限公司	Shanghai	3,265	Guangzhou Homeland Shine Trading Co., Ltd. 广州市泓琳盛贸易有限公司	Guangzhou	43,487
Lancan Quanyan Import & Export Co., Ltd. 澜沧权燕进出口有限责任公司	Yunnan	3,092	Guangzhou Top Ideal SCM www.topideal.com.cn 广州市卓志物流服务有限公司	Guangzhou	40,857
Ruilu City Yasen Wood Industry Co., Ltd. 瑞丽市亚森木业有限公司	Yunnan	3,011	Ningbo Jiurong Trading Co., Ltd. www.jiurongtrading.com 宁波玖融贸易有限公司	Zhejiang	40,376
Jinghong Jinchen Commerce and Trade Co., Ltd. 景洪金晨商贸有限公司	Yunnan	2,991	Shenzhen Tesu Financial Services Co., Ltd. www.sztesu.com 深圳市特速金融服务有限公司	Shenzhen (SEZ)	39,329
Wenzhou Timber Group www.wzmcjt.com 温州木材集团公司	Zhejiang	2,680	Guangdong Fuqiang Import and Export Trading Co., Ltd. 广东富强进出口贸易有限公司	Guangdong	39,090
Lanchang Pengcheng Trading Co., Ltd. 澜沧鹏程贸易有限责任公司	Yunnan	2,654	Shanghai Jingwei International Trading Co., Ltd. 上海晶威国际贸易有限公司	Shanghai	39,040
Dongguan Zhongyan Import & Export Co., Ltd. www.zhongyancn.com 东莞市中彦进出口有限公司	Guangdong	2,642	China Light Resources Import and Export Corp. www.cnbxfc.net/web/about.php?id=chemclr 中轻资源进出口公司	Beijing	31,203
Shanghai Lusua International Trading Co., Ltd. 上海露茜雅实业有限公司	Shanghai	2,637	Shenzhen Heyingshun Trading Co., Ltd. 深圳市和盈顺贸易有限公司	Shenzhen (SEZ)	30,791

BOX 3**The Shifting Role of Vietnam's Timber Trade and Implications for Rosewood**

Beginning in the 1980s, Vietnam has transformed into an export-driven timber manufacturing hub, following a similar trajectory to China. Trade analyses reveal that Vietnam now produces little raw material from its own forests, but is nonetheless ranks second in Asia (behind China) in export revenues from timber products, posting US\$6.23 billion in 2014 and a projected US\$7 billion in 2015. This shift from producer to manufacturer/exporter has been due in no small part to a decline in available forests and resulting sustainable forest management policies, and subsequent investment in value-added processing industries, which have been essential to boosting local livelihoods in rural Vietnam. To satisfy burgeoning industry demands, Vietnam now imports 60 to 70 percent of raw wood material used by processing industries, equal to at least 4 million m³.

Vietnam's rosewood imports are considered particularly high-risk, as they are generally sourced from neighboring Mekong countries where harvesting, trade, and export is of questionable legality. Most of the time, rosewood imports are bound for subsequent re-export to China in manufactured forms, namely furniture, as only 5 percent of rosewood imports stay in Vietnam. This complicates analysis of Chinese import data, since import/export data from Mekong countries is often negligible, incomplete, and/or controversial, making it difficult to develop a solid evidence base and identify loopholes that facilitate illegal trade and further raising concerns about illegal timber, associated corruption, biodiversity loss, and negative livelihood impacts.

All Vietnamese sawnwood imports are allegedly made up of rosewood species, as are at least 40 percent of log imports from Laos (much of which may actually be from Thailand). In total for 2014, Vietnam imported 4.2 million m³ of logs and sawnwood, valued at over US\$1.7 billion, of which sawnwood accounted for nearly 60 percent by volume. The scale of Vietnam's rosewood log and sawnwood imports is further illustrated by the following findings:

- **Laos is the top supplier of both logs and sawnwood to Vietnam, despite a ban on export of both products from 1999 to 2002 and a log export ban in place since 2007.** Twenty-two percent of Vietnam's total log imports were from Laos, amounting to 309,000 m³ (an increase from just under 200,000 m³ in 2012) and valued at US\$150 million. An unidentified portion of these logs may have originated in Thailand. But sawnwood imports were even more prevalent, amounting to nearly 500,000 m³ and valued at US\$410 million. Vietnam imported nearly 25,000 m³ of *Dalbergia spp.*, and nearly 192,000 m³ of *Pterocarpus pedatus* Pierre (padauk).
- **All of Vietnam's timber imports from Cambodia were registered as sawnwood.** Cambodia is the fourth-largest supplier of sawnwood to Vietnam, exporting 154 million m³ in 2014 (valued at US\$257 million — three times as much as in 2013 and garnering the highest price per cubic meter of all Vietnamese imports). This includes over 74 million m³ of padauk and nearly 6,000 m³ of *Dalbergia cochinchinensis* (Siamese rosewood).
- **Vietnam imported nearly US\$45 million worth of roundwood logs (nearly 85,000 m³) from Myanmar in January to July 2014 alone, i.e.,** continuing for four months after the promulgation of Myanmar's log export ban. Myanmar does not export sawnwood to Vietnam.
- **94 percent of log imports, and 77 percent of sawnwood, remains in Vietnam** to be manufactured for domestic or export markets. Of the material that is re-exported in unprocessed forms, China is Vietnam's fourth-largest market for logs (of which 58 percent is either Siamese rosewood or padauk) and largest market for sawnwood, though the majority of this is rubberwood. Hong Kong is Vietnam's fifth- and fourth-largest market for logs and sawnwood, respectively.

(Source: Forest Trends, forthcoming)

Markets for China's Rosewood Products: Domestic and Export Demand

China's rosewood furniture exports have declined steeply and in 2014, totaled only 2 percent of 2000 levels. While rosewood remains popular in Japan, Taiwan, Singapore, and other developed countries in Asia in which the material carries similar cultural connotations, overall exports dropped rapidly from 2000 to 2009 and have remained below 20,000 units per year, valued at US\$4.6 million on average each year since 2010. The vast majority of furniture exports, amounting to 86 percent by value and 89 percent by volume, remain in Asia. Western countries do not have the historic, cultural ties to rosewood that Chinese and other East Asian countries do, and exports to the US, EU, and Australia — purchased largely by the Asian diaspora communities there — have been declining and only represented 12 percent of China's outward rosewood furniture shipments by value and 7 percent by volume in 2014. Major importing countries in the EU include Malta, France, the United Kingdom, Poland, Belgium, and Austria (**Figure 7**).

Exports Down, Indicating Higher Domestic Consumption

The *Hongmu* Consumption Boom: Basic supply — demand analysis depicts how the vast majority of China's rosewood imports are purchased to supply domestic demand (**Figure 1**). Imports are rising quickly, and exports have fallen to very low levels. The demand from Chinese buyers are clearly outstripping the decline in demand from overseas markets. The most valuable *hongmu* species are used to produce furniture priced up to 10 million RMB (US\$1.6 million), though lower-end reproductions compose 60 to 90 percent of the market (European Forest Institute 2014). With such high prices, China's *hongmu* furniture industry has grown to exceed 30,000 enterprises producing and selling rosewood, with an annual selling value of 162 billion RMB (US\$26 billion) (Chinese Redwood Committee 2015).

Exports to “Environmentally Sensitive” Markets: China's rosewood boom is occurring at a time when major export destinations for wood products have passed new laws prohibiting the import of illegally sourced timber (US Lacey Act, amended in 2008; EU Timber Regulation, 2013; and Australia's Illegal Logging Prohibition Act, 2012). Driven by global pressure to mitigate climate change impacts by combatting illegal logging and associated trade as well as a recognition of the harmful economic and social impacts of illegal logging in suppressing global prices and depriving forest communities of their livelihoods, these measures are transforming the global timber products industry by requiring companies to conduct due diligence (or due care) in their sourcing practices.

Some interest in rosewood exists among enforcement officials in these countries, however, no information about enforcement actions by authorities is publically available at this stage. Several of these countries are working to improve timber tracking technology for better identification of illegally traded rosewood, yet this has proved challenging as traditional wood anatomy methods have not worked well for the separation of *Dalbergia* species (due to the hardness of the wood and similarities between species' anatomy, this is a lengthy and time-consuming process). New technologies are improving rapidly, however, and new tools (such as an ionization tool) are being tested (McClure et al. 2015) (**Figure 8**).

FIGURE 7

China's Rosewood Furniture Exports by Country (by Quantity [Thousands] and Value [US\$ Millions])

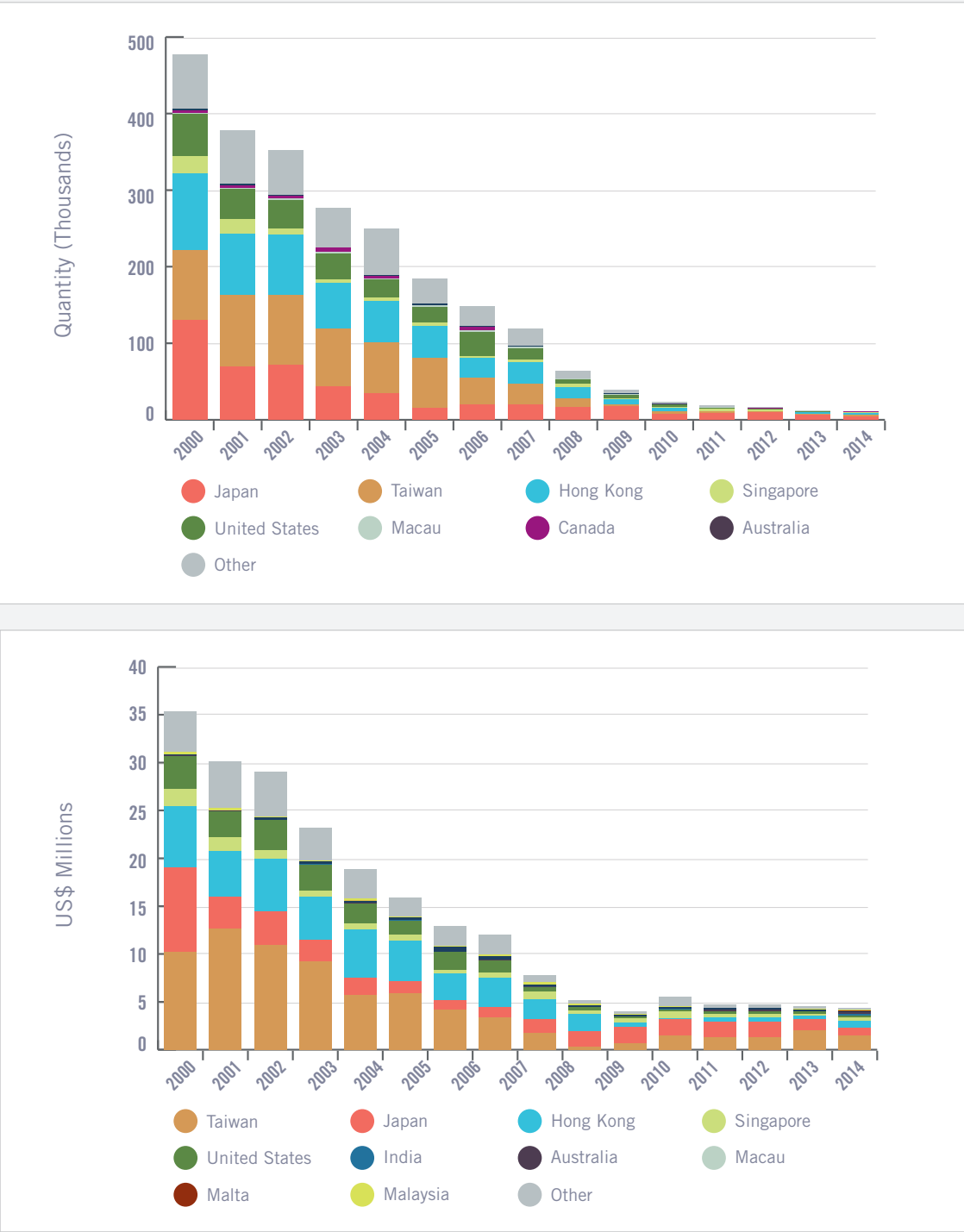
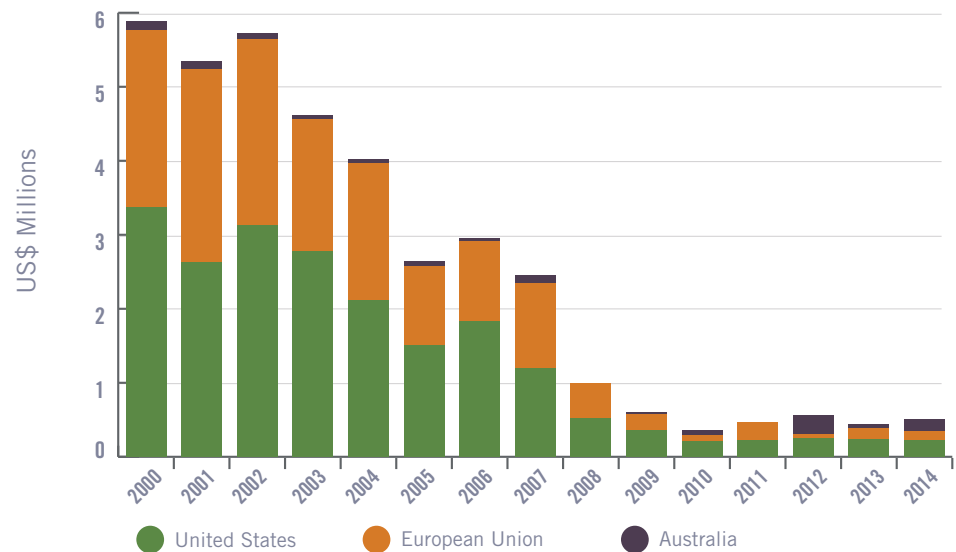
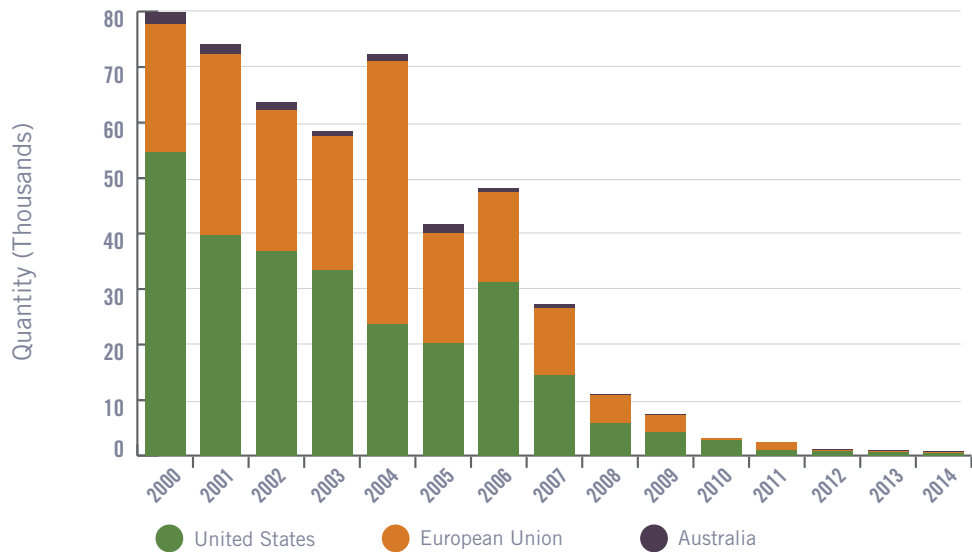


FIGURE 8

China's Rosewood Furniture Exports to the US, EU, and Australia (by Quantity [Thousands] and Value [US\$ Millions])





SECTION 2

Evidence of Illegalities in Rosewood Supply Chains

Numerous reports and statements by government officials in Asia and Africa, as well as by international NGOs, have outlined the high correlation between the increased global demand in rosewood, illegal logging, and the fact that remaining *hongmu* resources are increasingly under threat of extinction. Illegalities in the rosewood harvesting and trade have been well-documented in Southeast Asia and more recently in Africa. In Southeast Asia, it is estimated that the illegal timber trade in ASEAN countries (mainly high-value, export-bound rosewood species) is worth approximately \$US17 billion per year (UNODC 2013). For example, in Thailand, a 2011 survey estimated that the country had less than 100,000 Siamese Rosewood trees remaining (CITES undated). Research elsewhere in the Mekong further indicates that the species is under severe threat (EIA 2014a). Throughout tropical forests, some species are so rare and valuable that the networks of those seeking and illegally logging trees are operating similar to wildlife poachers. Rosewood is often sought out by teams of “middlemen” and loggers of illegal timber, often assisted by impoverished rural villagers tasked with prospecting forests for certain high-value species, who then link to buyers or trading networks. These middlemen may provide huge financial incentives to the rural poor to break the law, with much larger payloads than those earned in traditional rural activities such as contract farming. Violence often ensues when local law enforcement encounters these operations, with ample evidence of fatalities for both forest rangers (police) and loggers (EIA 2015). However, the middlemen behind the illegal harvesting and trade operations are rarely targeted by enforcement actions, often due to political connections and influence.

A significant portion of middlemen and traders facilitating the harvesting and transport of logs through their complex supply chains are Chinese (by ethnicity or nationality), particularly in Southeast Asia, and often working with — or bribing — government and law enforcement officials (EIA 2015). In these cases, China unofficially influences and facilitates essential elements of rosewood production and trade, with relatively unregulated and unmonitored traders acting in direct contravention of producer country laws and regulations.

While extraction of some rosewood species is prohibited by law in many countries (such as Laos, Myanmar, and Madagascar) and while many others have instituted log exports bans (such as Myanmar, Cambodia, the Gambia, and Senegal), loopholes in the legal frameworks or poor enforcement also allow harvesting to continue even when laws and policies protecting rosewood exist. When occasional enforcement and successful seizures of illegal rosewood occur, prosecution is rare.

BOX 4

Typology of Illegalities in the Rosewood Trade

The below evidence of illegalities in the rosewood trade can be summarized by the following typology:

1. **Violations of host (producer) country laws:** Rosewood is often logged in violation of environmental policies and regulations meant to protect remaining rosewood stocks (such as logging bans) or in forest areas officially zoned for conservation such as Protected Areas. Where land, forests, and trees are not claimed by the state, as in most of the Mekong Region, rosewood clearance without consent of or compensation to landowners is also a violation of local laws. The relatively loose “web” of loggers combing the forests for high-value specimens makes it more difficult to enforce licensing or clearance regulations, as do complicity of forestry administration and enforcement officials (see “Corruption and Fraud”).
2. **Smuggling and other illegalities in transport:** Additional illegal activity may occur when rosewood is transported across the border in contravention of laws prohibiting export or restricting it to certain transit pathways, such as in Myanmar where all legal timber shipments must go through the seaport of Yangon, or Ghana where rosewood export has been outlawed. Smuggling also enables traders to evade export taxes. Local villagers, traders, and transporters often work in complex networks to facilitate illegal transport of rosewood across land or sea borders, often facilitated by local authorities. In Thailand, for example, investigations have revealed smuggling of Thai rosewood (the harvest of which is illegal) to neighboring Laos and Cambodia, where it is then passed off as Lao or Cambodian species and “exported” back to Thailand. Third-country traders (e.g., in the above case pertaining to Thailand, Laos, and Cambodia, Vietnamese, or Chinese businessmen) and middlemen also facilitate this trade and subsequently profit from illegal transport of rosewood.
3. **Corruption, fraud, and links to conflict:** Bribery of local and national officials and money laundering are found throughout rosewood supply chains in Asia and Africa. Examples cited include the payments of government administration and security officials to allow illegal harvesting and of customs officials to mislabel shipments (either because the species or product in question is illegally logged or transported, or to under-declare the volume or value of the shipment to evade taxes), the collusion of local and national authorities with transport networks to facilitate cross-border shipment of illegal rosewood, or the laundering of illegal wood by alerting authorities where to seize wood, which is then re-sold — at prices that still allow for profit not only to the buyer but also the authorities involved in these schemes, but then profit from the re-sale of the same timber by those agencies. And in some countries, notably in West Africa (Lawson 2015), revenues from illegal rosewood are used to finance armed conflict. With an estimated 40 percent of all armed intrastate conflicts since the Cold War linked to natural resources (UNEP 2009), it is unsurprising that rosewood, given its value, plays a role.
4. **Violation of CITES and purchasing (demand) country laws and regulations:** Continued trade in species listed on Appendix I and II of CITES constitutes a clear violation of the ban in international trade imposed by CITES and can be seen as illegal in the absence of an outright prohibition on illegal imports. To bypass CITES legislation, shipments are at times mislabeled as non-listed species, or CITES permits are forged. In the US, EU, and Australia, failure to comply with legislation prohibiting the import and trade of illegally sourced timber can result in fines, forfeiture of goods, and/or jail time.

Asia

Illegalities in Asia's rosewood trade have long been documented, as has the associated environmental damage, corruption, fraud, money laundering, and murder – more than 150 people have been killed in recent years enforcing laws related to rosewood (EIA 2015). The increasing scarcity of rosewood species has given way to well-integrated, transnational organized crime syndicates that make this highly profitable trade a viable regional security threat, challenging national and regional efforts to preserve remaining rosewood stocks (Coyne 2015). However, there is action to address the illegal rosewood trade through CITES: Vietnam and Thailand have proposed closing the “Annotation 5” loophole (which restricts CITES’ protection of logs, sawnwood, and veneer, leading producers to superficially process wood into semi-finished products) and listing replacement species for Siamese Rosewood that has risen to popularity on the Chinese market. An Action Plan to address both of these issues was put forth at a Regional Dialogue on Siamese Rosewood in December 2014 and supported by all parties, including China.¹³

Myanmar

Rosewood species in Myanmar, including Burmese padauk (*Pterocarpus macrocarpus*) and tamalan (*Dalberia oliveri*), are rapidly declining, and it is estimated that if current rates of harvest were to continue, stocks of both species would be completely consumed in as little as three years (EIA 2014b). Both are classified as “reserve” species, meaning any harvesting and trading must be specifically permitted by the Ministry of Environmental Conservation and Forestry (MOECF). Exports are rarely recorded in official trade statistics.

The cross-border timber trade from Myanmar to China has come under massive international scrutiny of late, with reports of smuggling of illegally harvested wood products generating revenues which finance continued internal conflict, including a high-profile arrest — and subsequent release — of 155 Chinese loggers in Kachin State in 2015. Both the governments of China and Myanmar banned overland trade in timber products in 2006 (Office of Yunnan Provincial People's Government 2006), and in April 2014, Myanmar instituted a log export ban. However, Chinese Customs data indicate that in 2014, 92 percent of rosewood log imports from Myanmar were registered in Kunming (the landlocked capital of Yunnan Province) — with US\$52 million worth of rosewood logs transported across the border in the month after the ban took effect — suggesting contravention of the 2006 measure, which requires all timber products be exported by sea from the port of Yangon under the auspices of Myanmar Timber Enterprise (MTE) and that the vast majority of the trade remains illegal. Bribes also appear to be commonplace at border crossings. Seizures of *hongmu* on the Myanmar side of the border are regular, with stockpiles then auctioned through official channels; seizures more than tripled between 2013 and 2014 (EIA 2014b). Participation in the legal timber trade, on the other hand, is often not as profitable, as import-export permits are often difficult to obtain. (ibid.).

It is important to note that the lack of central government authority in many border areas, which are controlled by non-state armed groups (NSAGs) such as the Kachin Independence Organization, has implications for the government's ability to manage and regulate illegal logging, timber concessions, and associated trade. The pluralistic legal environment, and the historic context of ethnic political conflict and the role of timber in these conflicts, plays a crucial role in the rosewood trade and its legality or lack thereof.

¹³ Available at http://www2.dnp.go.th/dnp/ii/index.php?option=com_flexicontent&view=item&cid=25:preventing-illegal-logging-and-trading-of-rosewood&id=97:rosewood-11&Itemid=251

Cambodia

The Royal Government of Cambodia banned the logging of Siamese rosewood in 2013, and harvesting rare tree species and exporting roundwood logs is prohibited under the country's Forestry Law, which, in 2002, also indefinitely suspended all logging concessions due to their inability to demonstrate adequate governance processes and compliance with national laws and regulations (Royal Government of Cambodia 2002). Despite the ban on Siamese rosewood logging and the roundwood log export ban imposed in 2002, the trade in high-value *hongmu* species, particularly Siamese rosewood, is proliferating, dominated by select timber “barons.” These actors also enjoy access to seizures of illegally cut rosewood, as they are often the first to gain access to auctions, where illegally sourced wood is then effectively laundered into the legal supply (EIA 2014a; Global Witness 2015). Increasingly, rosewood is exported to Vietnam and China (directly and through Vietnam or Hong Kong) in the form of sawnwood to circumvent the ban on exporting roundwood logs (Forest Trends, forthcoming; **Box 3**).

Since the suspension of Cambodia's logging concession around 2002, timber extraction is largely taking place during the clear-cutting for Economic Land Concessions (ELCs) for agro-industrial plantations (Forest Trends 2015; Global Witness 2015). There is no legal framework to support the allocation of forestland to concessions, or for the cutting and collection of this “conversion timber,” and the merging of illegally harvested timber from adjacent lands is also common (Forest Trends 2015). Ninety percent of hardwoods from Cambodia are now from ELCs, often run by “timber barons” who clear forests in large swaths, beyond the permitted volume and often outside concession boundaries, or without undergoing required community consultation — making the resulting conversion timber illegal. In addition, complex systems of cronyism exist across the supply chain, often abetted by individuals within government agencies (Global Witness 2015). It is also estimated that over 80 percent of ELCs were allocated on intact old-growth forestlands as late as 2010, equal to almost 20 percent of the nation's forest cover at the time (Forest Trends 2015).

Laos

Through a series of legal ordinances starting in 2009, Laos has prohibited the exports of logs as well as other forms of timber including sawnwood,¹⁴ and in 2008 and 2011, Prime Ministerial orders explicitly outlawed the harvesting of all *Dalbergia* species.¹⁵ Despite the existing legal framework, a 2014 report provides evidence of illegal logging and trade of Siamese rosewood from its origins in Laos through a complex supply chain reaching from the trading hub of Pakse to north Vietnam, crossing over to China, registered in the Shenzhen SEZ and Hong Kong — avoiding CITES registration — and ultimately shipped onward to its destination in China (EIA 2014a). Chinese Customs registered more logs than any other timber product category originating from Laos in 2014 (more than 50,000 m³ RWE, valued at over US\$120 million, nearly double the volume and value registered the previous year; see **Box 3** for comparable Vietnamese Customs data), and in 2013, 86 percent (by volume; 95 percent by value) of total unprocessed timber exports, bound largely for Vietnam and China, were reportedly composed of valuable *hongmu* species whose harvesting was illegal and undocumented (Smirnov 2015).

Traders along the route from Laos to China have been able to work around CITES protections by hiding rosewood inside other products, misdeclaring cargo, and warehousing supplies in Hong Kong (prior to February 2015, when CITES implementation came into force in Hong Kong) until undeterred shipment into China can be guaranteed. Companies have also adapted to CITES regulations on Siamese rosewood by switching to other *hongmu* species that are less regulated, particularly as depletion of Siamese rosewood stocks in Laos has

¹⁴ See: PM Orders nos. 11/1999, 10/2000, 15/2001, 18/2002, and 25/2004.

¹⁵ See: PM Orders nos. 17/2008 and 10/2011.

caused prices to increase. This trade is enabled by weak rule of law, particularly in relation to environmental laws, and rapidly increasing prices that increase incentives for loggers to operate illegally (Forest Trends 2013b). Ad-hoc exemptions to Laos' logging bans have been written into a wide range of laws, decrees, and orders; for example, the Forest Law explicitly permits senior officials in the central government to permit export of "prohibited species" at will, as well as "special" quotas of logs, usually in return for investment in or ownership of development projects on the land in question (EIA 2012).

On the Cambodia-Laos border, a hotspot of rosewood trade where enforcement remains weak, an estimated 70 to 90 percent of villagers in Cambodia's Siem Pang district are involved in informal and illegal cross-border logging, often as a primary income source, according to one Cambodian official's estimate in 2011 (Forest Trends 2013b). Thai and Vietnamese traders do not engage in the logging operations themselves, but buy from Lao villages and thus are more easily able to evade law enforcement. Thai traders have, in some cases, gained access to logging quotas associated with infrastructure and hydropower projects, such as the Nam Theun II dam, often by bribing senior government officials for access to Siamese rosewood (EIA 2014a). Complicity of government officials is also an enabling factor; in 2014, an anti-corruption government body revealed that most cases concerning illegal logging involved state officials. For example, there is evidence that Singapore-based traders paid senior officials at the Department of Forestry to secure access to seized rosewood stocks (EIA 2014a). Confiscated wood seized from local farmers and illegal brokers is sold at an inflated price at government and military auctions, primarily to Vietnamese and Chinese businesses.

Thailand

Thailand instituted a log export ban in 1989 and spearheaded efforts to create credible protection for rosewood under CITES, having proposed the Appendix II listing for Siamese rosewood in 2012. The country has also promulgated a logging and trading ban on the species. However, illegal *hongmu* continues to leak across the Cambodian and Lao borders into Thailand. Investigations reveal that Thai companies circumvent this ban by smuggling Thai rosewood into Laos and then mis-declaring it as Lao rosewood. These companies are often well-connected, with resources available to obscure the origin of a rosewood shipment and facilitate its onward movement to Chinese markets. Traders interviewed in Laos estimate that approximately 60 percent of rosewood on offer in Laos was actually harvested in Thailand (EIA 2014a).

Vietnam

Vietnamese traders often act as middlemen between rosewood-producing countries in the Mekong (such as Laos and Cambodia) and China, such that much of the rosewood declared by Chinese Customs as Vietnamese imports is actually sourced elsewhere (**Box 3**).

Recently, a circular issued in October 2014 by Vietnam's Ministry of Industry and Trade suspended both log and sawnwood imports from natural forests in Cambodia and Laos, and one of Vietnam's top three timber industry associations is developing a Code of Conduct that would make membership contingent on refusing to trade in wood imported from Cambodia and Laos (Forest Trends, forthcoming).

Vietnam does not require proof of legality of the wood itself — as long as taxes are paid, there is no regulation requiring Vietnamese importers to carry out due diligence in timber sourcing (Saunders 2014), allowing rosewood to cross from Laos and Cambodia unhindered either for processing in Vietnam's burgeoning artisanal furniture manufacturing sector or simply for export to China and other countries. Handcrafted rosewood

products (all *Dalbergia* species) from Vietnam’s wood villages,¹⁶ for example, also make their way to European markets by way of the UK (To 2015).

Government documents have been known to be manipulated or switched to obscure origin or species or to have value mis-declared; CITES re-export permits can be illegally procured. In 2012, a 500-m³ container of rosewood was seized by the Vietnam Customs Department while it was being loaded onto a ship in Da Nang port. The material in question was labeled as Cambodian, but was later revealed to be predominantly Siamese rosewood from Laos with a higher value than had been recorded and to have crossed from Laos and across Vietnam unimpeded. The seizure became so high-profile that the Prime Minister issued a public call to resolve the case (To et al. 2014). In 2013, Vietnamese authorities seized a shipment of rosewood sawnwood that had originated in Cambodia and was transiting through Vietnam en route to Denmark (To 2015). Both seizures occurred due to a tip-off over fraudulent tax documents. Investigations also reveal that a large portion of semi-finished Siamese rosewood from Vietnam, in addition to logs, are smuggled via illicit routes across the border to China to evade taxes (EIA 2014a).

India

Red sandalwood trees (*Pterocarpus santalinus*), a rosewood species native to South India, are protected by the military, making harvesting illegal. However, evidence suggests that between 800 and 2,000 metric tons of high-value logs are smuggled into China annually (European Forestry Institute 2014). In recent years, this figure has declined due to increasing scarcity of sandalwood, though the species is still reportedly in demand. Trade routes extend by sea from Chennai Port in India via Malaysia, Singapore, or Hong Kong, and overland via Myanmar to Yunnan or via Nepal to Tibet (European Forestry Institute 2014).

Africa

New research in only the past two years is beginning to illuminate illegalities in the West African rosewood trade, although investigations in Madagascar date from the mid- to late-2000s. As in Asia, illegalities relate to the contravention of laws prohibiting harvesting and export of rosewood species (in several cases log export bans), but are now also being shown to be connected to armed conflicts as highlighted below in the case of Senegal and Gambia — making the resultant Chinese imports classifiable as “conflict timber.” In addition to the countries outlined below, logging and/or export bans are also in place in Benin, Burkina Faso, Côte d’Ivoire, Guinea-Bissau, Mali, Nigeria, Togo, and elsewhere, but are consistently violated by smuggling log shipments or transforming raw logs into plywood, sawnwood, and other forms for easier cross-border transport. Forest Trends research on *Pterocarpus erinaceus* (African rosewood) is now showing that rosewood harvesting was occurring informally on the sides of Chinese-run infrastructure projects in West and Central Africa.

Ghana

Despite two bans on rosewood harvesting and export (enacted in 2011 and 2014) and regulations outlawing the use of chainsaws to convert logs to lumber for export, a well-organized system of unlicensed cutting, permitting, and exporting has emerged in Ghana for the mid-value Ghanaian species (NCRC and Forest Trends, unpublished). Salvage permits have been issued for extensive swaths of land where rosewood trees are thought to grow; stumpage fees, conveyance fees, and district taxes are largely evaded in this practice.

¹⁶ Villages located in Vietnam’s Red River Delta and elsewhere where a majority of households are involved in some aspect of the wood products manufacturing process.

There are complex links between numerous Ghanaian actors along the supply chain, including traditional chiefs and their emissaries, chainsaw loggers, truck drivers, forestry officials, law enforcement agents, politicians, traditional forest dwellers, and settlers. Field research has demonstrated that in some communities, rosewood logging has exacerbated uneven power relations between these actors and brought stigma to community members who speak up against illegal logging; in the main rosewood-producing regions, escalating demand has undermined the rule of law and the ability of state and non-state (private) forest agencies to promote sustainable forest management (ibid.).

In July 2014, the government of Ghana revoked the licenses of the seven companies previously authorized to export rosewood, banned the transit of rosewood through Ghana (either originating from neighboring countries or previously smuggled out of Ghana to conceal its origin), and cancelled all existing permits to fell rosewood trees (Globaltimber.org.uk). While speculation for Ghanaian rosewood has not reached the heights of that for Siamese rosewood, Chinese Customs is reporting 3.5 times higher values for the imports than shown by mirror export statistics from Ghana (for 2014).

The Gambia and Senegal

Log exports are illegal under the Senegalese Forest Code (1998), and export of *Pterocarpus erinaceus* is specifically prohibited under several statutes. However, more than 99 percent of rosewood exported from the Gambia is in fact sourced from the Casamance region of neighboring Senegal, an area under low-level insurgency. In the past five years, rosewood has become an important financial resource for the Movement of Democratic Forces of Casamance (MFDC), the Senegalese rebel group controlling the region and with exclusive control of cutting and supplying rosewood to the Gambian market for export to China (which did not exist until 2010 for either Gambia or Senegal).

The Gambia promulgated a log export ban in November 2012, but exports, including to China, continued; the ban was subsequently lifted in June 2014. It is estimated that 95 percent of Gambian rosewood exported to China is in fact sourced from Senegal, having passed through the hands of the MFDC, and as such can be classified as conflict timber — bringing approximately US\$19.5 million in revenue to the MFDC from 2010 to 2014 alone. This trade is abetted by an effectively open border between Casamance and the Gambia (i.e., a lack of control of the logs then passing through the Gambia to the ports), and alleged support from the Gambian President and other elites such as high-ranking military officials to the MFDC itself. Clearly, the existing legal framework, including the log export ban, has been unsuccessful in stopping rosewood exports.

The rosewood issue gained national prominence in February 2015, when the President of Senegal made a commitment to addressing illegalities in trade, ordering the army to cooperate with foresters to fight traffic in illegal timber and calling on the Forest Service to revise the 1998 Forest Code to add heavy sanctions and penalties for international timber trafficking.¹⁷ The revised Forest Code is, at the time of writing, awaiting Ministerial approval. Senegal has now applied to list all *P. erinaceus* populations on CITES Appendix III and received unanimous support from countries in West Africa for an Appendix II listing, to be proposed at the 17th meeting of the CITES Conference of Parties (COP 17) in 2016 (Salif Gueye 2015).

¹⁷ As of April 2015, the proposed addendum to the Forest Code specifies that international timber trafficking is punishable by a minimum sentence of five years and a fine of 30-50 million CFAs (Central African Francs). For recurring offenses, the maximum penalty applies.

Madagascar

A ban on the harvesting of Malagasy rosewood (of several *Dalbergia* species, including *Dalbergia louvelii*) and ebony has been in place since 2006, yet the illegal trade has continued, with little viable stocks of rosewood remaining outside of national parks. Logging therefore now takes place inside the country's designated national parks and protected areas, which are under-resourced, particularly since the 2009 political coup and resulting instability and economic sanctions. An investigation co-organized by the Malagasy Forestry Administration, Madagascar National Parks, and NGOs revealed intensive logging in a national park in the Northeast, a failure of the Forestry Administration to control illegal harvesting and trade, and revenues of US\$460,000 per day on international markets pocketed by a dozen timber barons within Madagascar. It was also estimated that only one percent of the value of Malagasy rosewood remains in Madagascar, with 98 percent exported to China with the help of 15 to 20 major Chinese buyers actively involved in the trade (EIA and Global Witness 2010).

Pressure from the international community in response to this investigation has prompted Malagasy authorities to issue a series of decrees to stem illegal logging and trade, including a 2010 measure against cutting, extraction, and export of rosewood and ebony. In 2009, the US Department of Justice brought a case against Gibson Guitars, in the first criminal investigation under the Lacey Act, for importing illegal Malagasy ebony. Gibson was fined \$600,000, setting an important precedent for prosecution under the Lacey Act — and for importers of tropical hardwoods from Madagascar. The Chinese government has taken preliminary steps to control illegal rosewood imports from Madagascar, including one high-profile seizure in 2013 (see Footnote 4 for description of “Project Axe”).

In March 2013, Madagascar listed its rosewood species under Appendix II of CITES, and in 2014 Madagascar elected a new president who immediately announced a renewed campaign against illegal rosewood harvesting and trade and requested that all transit and destination countries support the ban (CITES 2014). Yet illegally harvested rosewood and ebony species continue to be exported on a weekly basis without oversight and shipped to China via Zanzibar, Tanzania, Kenya, and Hong Kong (Caramel 2015), with Chinese Customs not registering the imports due to the Hong Kong loophole (prior to February 2015), offshore smuggling routes, and complex trading routes that allow for obfuscation of origin. These mechanisms, coupled with a lack of law enforcement capacity by enforcement agencies and the National Park service in key areas of Madagascar, have allowed illegal extraction and export to continue (Caramel 2015; EIA 2014c).

As this report went to press, a judge in Singapore had just dismissed a case against the Kong Hoo importing company, which had been accused of importing nearly 30,000 logs of allegedly illegal Malagasy rosewood, valued at US\$50 million. Singapore's Attorney General is considering further action in this case, as the legality of the export permit for this shipment remains unclear. (However, no CITES export permits have been granted for Malagasy rosewood to date.) The shipment was allegedly bound for Hong Kong (Vijayan 2015).



SECTION 3

Existing Mechanisms for China to Combat Illegal Rosewood Trade

In the past decade, and in response to both internal and international pressures for reform, China has developed a number of domestic and outward-looking tools to transform its timber import market, including CITES enforcement, national standards for rosewood classification, bilateral agreements with producer and consumer countries committing to combat the trade in illegal wood products, guidelines on forest sector enterprises operating overseas and related investments, and a draft Timber Legality Verification System (TLVS). The Chinese government has not considered the establishment of binding regulations with a due diligence approach to combat the trade in illegally sourced wood products, similar to the US Lacey Act or the EU Timber Regulation (EUTR) and instead has focused on establishing voluntary mechanisms (with the exception of CITES enforcement).

- **CITES Enforcement:** The Chinese government has applied additional control measures for CITES-listed rosewood species. Importers of listed species are now required to provide contracts, invoices, Certificates of Origin, and phytosanitary certificates for customs clearance, and in 2012, 16 provinces established a Nationwide Network for Implementation of CITES principles (European Forestry Institute 2014). The China CITES Management Authority has also actively encouraged technical trainings and workshop sessions for staff and customs officers, focused primarily on species identification. While there is some evidence that the CITES listing has suppressed illegal rosewood trade, critics argue that the industry abuses the so-called “Annotation 5 loophole,” which restricts trade in products under the scope of CITES to logs, sawnwood, timber, and veneer, making all other forms of rosewood exempt from CITES trade regulations. Illegal actors take advantage of this loophole by adding slight modifications to the ends of rosewood logs, qualifying them as “semi-finished” products that can circumvent CITES. However, CITES is still seen by many as a crucial enforcement tool.
- **National Standard for *Hongmu* (2000) and other national standards:** This standard identifies the legal scope of the precious wood species category, but does not explicitly target illegalities in rosewood imports and associated trade.¹⁸ Issued by the State Administration for Quality Supervision and Inspection and Quarantine (SAQSIQ), it is enforced to bring credibility to marketing claims and serves as an industry guide regarding the choice of materials for manufacture and consumption. Thirty-three species are identified, with six also listed on CITES, though additional species are being used in the rosewood industry. The National Standard for *Hongmu* is currently undergoing revision in order to consolidate the number of rosewood species listed in the official criteria. Industry experts and researchers are divided on whether the Standard should be simplified, expanded, or abandoned in favor of a new and more binding instrument, yet many concede that this forthcoming round of changes

¹⁸ On the contrary, by defining certain species as precious wood, these may have attracted even more attention as well as relevant price hikes.

will have little market impact on the demand for legal rosewood products, let alone the demand for illegal sources.

Other domestic standards, such as the Rosewood Furniture General Technical Specification (issued in 2011 by SAQSIQ) and the Rosewood Commercial Labeling and Rosewood Product Classification (both issued in 2012 by the Ministry of Commerce [MofCOM] and covering commercial names of rosewood species and quality of products, respectively) do not cover legality issues.

- **Voluntary guidelines on overseas forest enterprises (2007, 2009, forthcoming):** The China State Forestry Administration (SFA) and Ministry of Commerce have promulgated a successive set of guidelines with an aim to encourage responsible business conduct on the part of Chinese companies operating abroad and an emphasis on compliance with local laws. All are voluntary, with no reporting or compliance (monitoring or incentive) mechanisms, and it is unclear whether they have had a net-positive effect on mitigating risks of illegality in companies' operations. China has begun piloting these guidelines in select countries, including Russia, Gabon, and Papua New Guinea, though no formal commitments have been made. These guidelines — particularly a forthcoming version, which may be expanded to cover traders and importers as well — have the potential to mitigate illegalities in the rosewood trade, but only if they are implemented properly given their voluntary nature.
- **Bilateral agreements and Memoranda of Understanding to Encourage Legal Trade:** The Bilateral Coordination Mechanism (BCM) between China and the EU was established in 2009, and a Memorandum of Understanding (MoU) with the US in 2007. In addition, China has signed MoUs with several producer and consumer countries (Indonesia in 2002, Australia in 2010, Japan in 2011) that aim to strengthen responses to illegal timber trade. The effects of these agreements, other than to raise awareness with government agencies, are unknown.
- **Timber Legality Verification System (TLVS):** China began to design a mechanism to combat illegal timber imports in 2009, and a draft was released in 2011. In its current draft form, the TLVS has two streams: a government-led initiative in which bilateral agreements are to be established with exporting countries (government-guided Timber Verification Scheme, or CGTVS), and an industry-led initiative in which industry associations can provide guidance to members trading in products from countries with which no bilateral agreements yet exist, where the onus is on timber associations to develop responsible purchasing policies and verify legality throughout supply chains (Association-guided Timber Verification Scheme, or CATVS). However, both schemes are proposed as voluntary mechanisms. No bilateral agreements under the CGTVS have been established as of this report's publication.

Additional mechanisms include policies enabling financial incentives to Chinese enterprises that can demonstrate compliance with environmental and social standards (such as the Green Credit Policy [2007] and resultant Green Credit Guidelines [2012]), and a domestic procurement policy. There has also been an upswing in voluntary, private sector-led Chain-of-Custody certificate schemes, though it should be noted that these are outside of official regulatory and legal frameworks and thus, like the Guidelines, are not government-enforced. All could be adapted to cover rosewood markets and ultimately encourage import of only legally sourced rosewood in compliance with producer country laws.

While data on exact rates of illegal timber imports are hard to come by, Chatham House (Hoare 2015) estimates that half of all trade in illegal wood-based products was bound for China between 2000 and 2013. The report suggests that this trade was facilitated by the absence of binding regulations in China, thereby diluting the impacts of the US Lacey Act, EUTR, and ILPA when high-risk wood products are diverted away from these markets

toward China and other importers with no regulation (“leakage”). Since rosewood species are overwhelmingly consumed within China, the deterrent effect of the EUTR and Lacey Act to prevent illegal trade are already even less significant.

A number of government institutions and agencies within China have been tasked, indirectly, with the capacity to promote legal rosewood trade via the mechanisms listed above. These include, inter alia: the SFA, responsible for the development of the *Hongmu* Standard and overseas investment guidelines, and for support to MofCOM in issuing regulation affecting forest product and trade; the SFA’s CITES Management Office; the Chinese Academy of Forestry (CAF, SFA’s research arm); industry associations (involved in the development of standards and best practice); MofCOM, responsible for trade issues; Ministry of Foreign Affairs and overseas consulates; China Customs (which also works to combat smuggling), and the General Administration of Quality Supervision, Inspection, and Quarantine (AQSIQ) (to which log importers must present official certificates).



Photo credit: Eve Richer



RECOMMENDATIONS AND CONCLUSIONS

The Government of China is in a unique position to take a leadership role to ensure that only legally sourced rosewood enters its borders; it also has the ability to influence loggers, traders, and smugglers in and between producer countries and along trade routes for legal trade — by requiring that all Chinese participants in the supply chain ensure compliance with all laws and regulations of producer and transport countries. Already, China has a set of mechanisms that sets out to encourage sustainable and legal timber imports. We recommend that these tools be better utilized and made obligatory to all importers and traders of forest products to more definitively shift the market away from illegally sourced rosewood (as well as other species).

These actions should be complementary to enforcement efforts by rosewood-producing countries or, where existing legal frameworks are weak, rise to the level of China's own laws by instituting measures such as regular assessments and disclosures of non-compliance, and social and environmental monitoring. Other major trading countries, such as Vietnam and Thailand, would need to do the same.

The Government of China should take the following measures:

- **Enact demand-side legislation to encourage only legal, sustainable timber imports, which would include rosewood.**
- **Ensure all Chinese participants in the rosewood supply chain adhere, or ensure their suppliers adhere, to host country laws, policies, and regulations governing the harvest, transport, sale, and export of timber.**
- **Cease all log and sawnwood imports from countries with export restrictions/bans on these products.**
- **Prioritize the timely drafting of the next set of Guidelines for overseas investment in the forest sector and include enforceable action for non-compliance.** The application of these Guidelines to traders, importers, and third-party suppliers alone would be an extreme improvement on previous versions but they can be further strengthened through the adoption of an obligatory due diligence-based approach (as in counterpart guidelines for the minerals sector enacted in 2014)¹⁹ and include an explicit ban on the purchase or sale of illegal timber.

¹⁹ The Chinese Guidelines for Social Responsibility in Outward Mining Investments, which are set to include supplemental Due Diligence Guidelines for Responsible Mineral Supply Chains. These Guidelines, enacted by the China Chamber of Commerce for Metals, Minerals and Chemicals (CCC MC), aim to meet the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, widely recognized as the standard for international best practice on responsible mineral supply chains.

- **Utilize existing Memoranda of Understanding and bilateral agreements with producer countries to tackle illegal rosewood trade.** These existing channels contain a number of provisions governing bilateral trade with China and could be expanded to encourage only legal harvesting and trade of rosewood.
- **Enact financial regulations to curb speculation in the rosewood market.** Chinese financial institutions should take cues from other regulatory attempts to curb speculation on luxury commodities, such as jade.
- **Improve collaboration with Hong Kong.** An inter-agency task force should be established between industry associations, the CITES Management Office, and customs officials with counterpart agencies in Hong Kong to bring rosewood smuggling and laundering issues to light and impose penalties when violations occur. This will better capitalize on the political will that exists within China and, recently, Hong Kong to enforce CITES and other applicable laws and regulations addressing smuggling.
- **Improve the National *Hongmu* Standard (2000) or related standards** to include guidance for at least the legal harvesting and trade of hongmu, expanding criteria beyond species identification and quality control.
- **Establish a document tracking system within China to follow *hongmu* product supply chains from initial import to final sale (within China or to international destination[s]).**

In addition, industry associations and non-governmental organizations in China should support CITES enforcement and use advocacy channels to hold Hong Kong authorities accountable to curbing rosewood smuggling and laundering. They should also demand application of a robust third-party verification or certification system recognized on international markets to more accurately confirm species and origin, in addition to determining legality. Fortunately, the technology for both enforcement agencies as well as retailers needed to verify rosewood origin and species is improving quickly (McClure et al. 2015), and such a system may soon be applicable to a number of contexts.



REFERENCES

- Caramel, Lawrence. 2015. "China's Rosewood Craving Cuts Deep into Madagascar Rainforest." *The Guardian*, February 16. <http://www.theguardian.com/environment/2015/feb/16/rosewood-madagascar-china-illegal-rainforest>.
- CITES. Thailand and Vietnam, Consideration of Proposals for Amendment of Appendices I and II (CoP16 Prop. 60).
- CITES. 2014. "Press Release: President of Madagascar and CITES Secretary-General call for international support to halt surge in illegal timber trade." Available at <https://cites.org/en>.
- China Customs. 2014a. "青岛海关：2014青岛十大缉私案例公布 一年案值90亿." <http://www.customs.gov.cn/publish/portal0/tab69398/info733528.htm>.
- China Customs. 2014b. "福州海关破获N特大红木走私案 案值近八千万元 (图)." <http://www.customs.gov.cn/publish/portal0/tab1/info714770.htm>.
- Chinese Redwood Committee. 2014. "China Redwood Import Analysis Report." Available at www.zghm.org.
- Chinese Redwood Committee. 2015. "2014-2015 China Redwood Industry Development Report." Available at www.zghm.org.
- Chovanec, Patrick. 2010. "The Soaring Price of Jade." *Forbes*, September 30. <http://www.forbes.com/sites/china/2010/09/30/the-soaring-price-of-jade/>.
- Coyne, John. 2015. "Thailand's Border Timber War." *Australian Strategic Policy Institute*, May 25. <http://www.aspistrategist.org.au/thailands-border-timber-war/>.
- Customs Today. 2015. "Hong Kong Customs Seizes 92 Tonnes Endangered Rosewood, Clutches Two Culprits." February 9. <http://customstoday.com.pk/hong-kong-customs-seizes-92-tonnes-endangered-rosewood-clutches-two-culprits-2/>.
- Environmental Investigation Agency (EIA). 2012. "Checkpoints: How powerful interest groups continue to undermine forest governance in Laos." London: EIA.
- EIA. 2014a. "Routes of Extinction: The corruption and violence destroying Siamese rosewood in the Mekong." London: EIA.
- EIA. 2014b. "Myanmar's Rosewood Crisis: Why key species and forests must be protected through CITES." London: EIA.

- EIA. 2014c. "The Ongoing Illegal Logging Crisis in Madagascar: An EIA briefing for CITES SC65." Washington, DC and London: EIA.
- EIA. 2015. "Addressing ASEAN's Regional Rosewood Crisis: An Urgent Call to Action." A briefing for the 11th Meeting of the Association of South-East Asian Nations (ASEAN) Experts Group on CITES (CITES AEG), Brunei, May 5-8.
- European Forest Institute (EFI). 2014. "China's *Hongmu* Furniture Industry and Timber Trade Linkages with Myanmar/Burma." Paper prepared for the International Workshop on Promoting Legal and Sustainable Trade and Investment of Forest Products, Shanghai, China, March 25-27.
- Forest Trends. 2013a. "Tropical Hardwood Flows in China: Case Studies of Rosewood and Okoumé." Washington, DC: Forest Trends.
- Forest Trends. 2013b. "The Socioeconomic Context of Illegal Logging and Trade of Rosewood along the Cambodian-Lao Border." Washington, DC: Forest Trends.
- Forest Trends. 2014. "Chinese Overseas Investment in Forestry and Industries with High Impact on Forests: Official guidelines and credit policies for Chinese enterprises operating and investing abroad." Washington, DC: Forest Trends.
- Forest Trends. 2015. "Conversion Timber, Forest Monitoring, and Land-Use Governance in Cambodia."
- Forest Trends, forthcoming. "Roundwood and Sawn Timber Trade of Vietnam in 2014."
- Globaltimber.org.uk. 2015. Ghana. Accessed April 8. www.globaltimber.org.uk/ghana.htm.
- Globaltimber.org.uk. 2015. Nigeria. Accessed April 8. www.globaltimber.org.uk/nigeria.htm.
- Global Witness. 2015. "The Cost of Luxury: Cambodia's illegal trade in precious wood with China." London: Global Witness.
- Global Witness and EIA. 2010. "Investigation into the Global Trade in Malagasy Precious Woods: Rosewood, Ebony, and Palisander." Washington, DC and London: Global Witness and EIA.
- Guangzhou Customs District. 2014. "海关破获十亿元红木走私案 (图)." <http://guangzhou.customs.gov.cn/publish/portal31/tab60991/info719371.htm>.
- Hoare, Alison. 2015. "Tackling Illegal Logging and the Related Trade: What Progress and Where Next?" London: Chatham House.
- Huang, Shaojie. 2014. "China's Demand Threatens Rare Hardwoods in Mekong." *New York Times*, May 13. <http://sinosphere.blogs.nytimes.com/2014/05/13/chinas-demand-threatens-rare-hardwoods-in-mekong>.
- ITTO. 2004. Tropical Timber Market Report, 16-31st October. Available at http://www.itto.int/market_information_service.
- Lawson, S. and L. MacFaul. 2010. "Illegal Logging and Related Trade: Indicators of the Global Response." London: Chatham House.
- Lawson, Sam. 2015. "The Illegal Rosewood Boom in Africa." Presentation at the 25th Illegal Logging Update and Stakeholder Consultation Meeting, London, UK, June 26.

- McClure, P., G. D. Chavarria and E. Espinoza. 2015. "Metabolic chemotypes of CITES protected *Dalbergia* timbers from Africa, Madagascar, and Asia." *Rapid Commun. Mass Spectrom* 29(9): 783-788. DOI: 10.1002/rcm.7163.
- Nature Conservation Research Center (NCRC) and Forest Trends. Unpublished. "The Production and Export of Rosewood (*Pterocarpus erinaceus*) from Ghana to China."
- Office of Yunnan Provincial People's Government. 2006. "Interim Measures to Manage Timber and Mineral Cooperation between Myanmar and Yunnan Province." May 11. Policy reference number: Policy Office, Yunnan [2006] 91.
- Panamá América. 2014. Decomisan millonaria carga de madera "cocobolo." August 4. <http://www.panamaamerica.com.pa/content/decomisan-millonaria-carga-de-madera-cocobolo>.
- Pepke, E. et al. 2015. "Impacts of Policies to Eliminate Illegal Timber Trade." Minneapolis, US: Dovetail Partners, Inc.
- Prestemon, Jeffrey. 2015. "The Impacts of the Lacey Act Amendment of 2008 on U.S. Hardwood Lumber and Hardwood Plywood Imports." *Forest Policy Economics* 50: 31-44.
- Royal Government of Cambodia. 2002. Law on Forestry. NS/RKM/0802/06. Available at http://www.forestry.gov.kh/Documents/Forestry%20Law_Eng.pdf.
- Salif Gueye, Babacar. 2015. "Illegal Logging and Trade of Rosewood: Case study of Senegambia." Presentation at the 25th Illegal Logging Update and Stakeholder Consultation Meeting, London, UK, June 26.
- Saunders, Jade. 2014. "Trade in Illegal Timber: The response in Vietnam." London: Chatham House.
- Smirnov, Denis. 2015. "Assessment of Scope of Illegal Logging in Laos and Associated Trans-Boundary Timber Trade (as Baseline for International Leakage Estimation)."
- To, Phuc Xuan. 2015. "Dynamics of Timber Trade in the Mekong." Presentation at the Timber Regulation Enforcement Exchange: Chinese supply chains, risk, and legal compliance, Barcelona, Spain, April 14-16.
- To, P.X., S. Mahonty, and W. Dressler. 2014. "Social Networks of Corruption in the Vietnamese and Lao Cross-Border Timber Trade." *Anthropological Forum: A Journal of Social Anthropology and Comparative Sociology* 24(2): 154-174. DOI: 10.1080/00664677.2014.893505.
- United Nations Environment Programme (UNEP). 2009. *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*. Nairobi: UNEP.
- United Nations Office on Drugs and Crime (UNODC). 2013. "Transnational Organized Crime in East Asia and the Pacific: A Threat Assessment." Bangkok and Vienna: UNODC.
- Vijayan, K.C. 2015. "Judge throws out case of illegal import of rosewood." *Straits Times*. November 10. <http://www.straitstimes.com/singapore/courts-crime/judge-throws-out-case-of-illegal-import-of-rosewood>.
- WWF-Hong Kong and Global Footprint Network. 2011. "Hong Kong Ecological Footprint Report 2010: Paths to a sustainable future." Hong Kong: WWF.
- Xiamen Daily. 2014. "名贵紫檀"化身"毛巾"来闯关 厦门侦破三起红木走私案." July 24. <http://fj.people.com.cn/xm/n/2014/0724/c356120-21763816.html>.



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