



Impacts of the Laos Log and Sawnwood Export Bans

Phuc Xuan To, Naomi Basik Treanor, and Kerstin Canby



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Impacts of the Laos Log and Sawnwood Export Bans:

Significant Reductions in the Exports to Major Markets of Vietnam and China in 2016

Phuc Xuan To, Naomi Basik Treador, and Kerstin Canby

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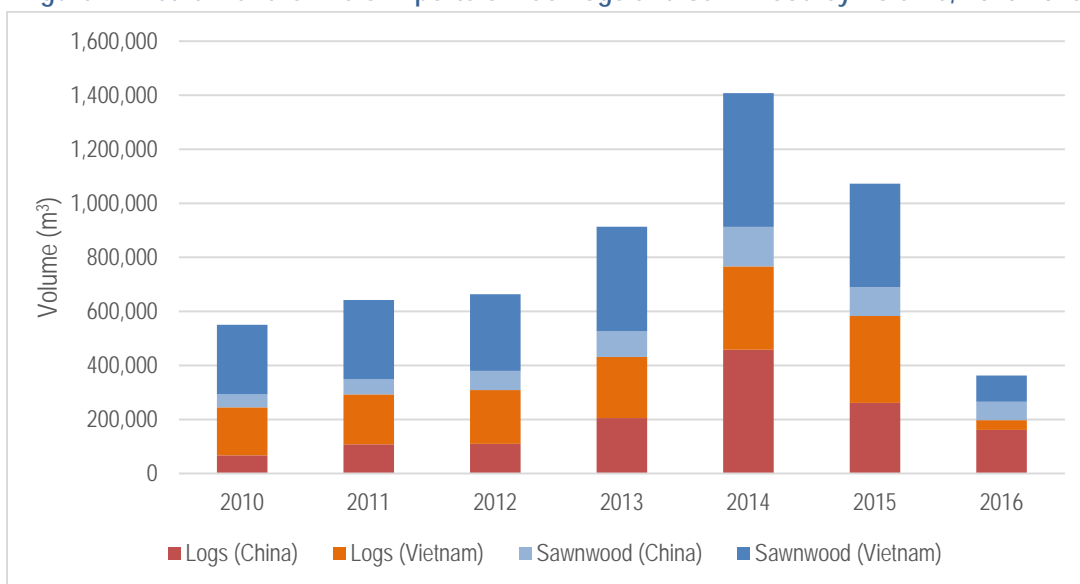
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1. Executive Summary

In May 2016, the Government of Lao PDR enacted a Prime Ministerial Order (PM15) which, along with other commitments, aimed to help control the country's high deforestation rates and promote Laos' own domestic wood product industry¹ by banning the export of all logs and sawnwood. This followed a Notice issued in August 2015 (No. 1360) which also prohibited the export of raw logs.

Effects of these regulations are now being felt by both the Vietnamese and Chinese timber industries. Vietnam and China together imported approximately 87 percent of all Lao timber product exports in 2015 – almost all of which (94 percent) were in log or sawnwood form. Trade data obtained from Chinese and Vietnamese Customs now clearly show an impact: in 2016, Lao exports of logs and sawnwood to Vietnam and China have plummeted to 26 percent of their 2014 levels (Figure 1).

Figure 1: Vietnam and China's Imports of Lao Logs and Sawnwood by Volume, 2010-2016



Source: Vietnam Customs and China Customs statistics, compiled by Forest Trends.

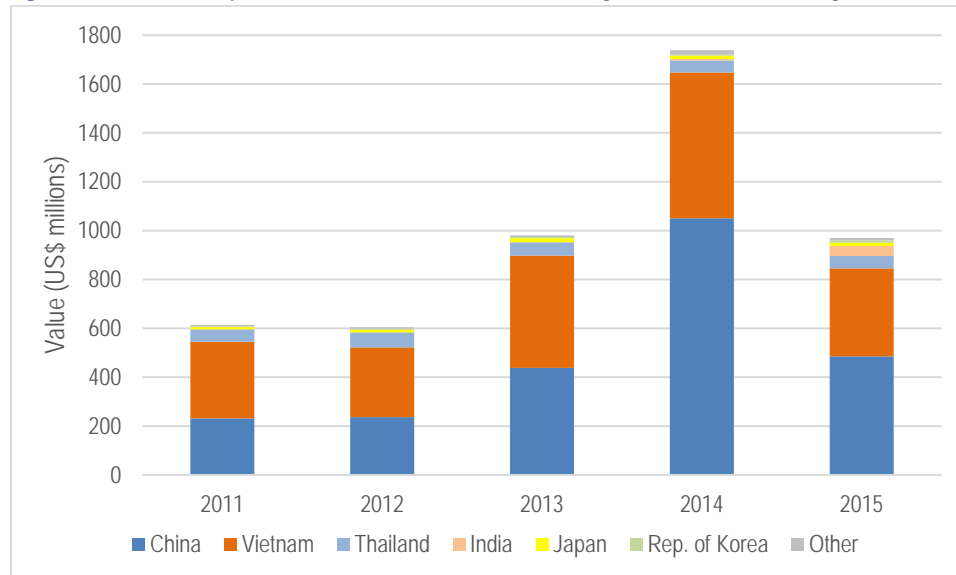
The aim of the Lao log and sawnwood export ban was both economic and environmental. Requiring timber to be processed into semi-final or finished products within Laos itself before export creates jobs and enables higher sale prices (and taxes), thus maintaining most or all of the value of the product in-country. It also serves to check the country's challenge with combatting illegal logging and associated trade: it is more difficult for illegal timber harvesters to illegally "cut-and-run" with raw logs stolen from a country's forests when a log must be transported to a domestic mill, where nearby roads and checkpoints can be more closely monitored.

Historically, Chinese and Vietnamese markets have been the destination for 87 percent of Lao timber product exports -- primarily unprocessed logs or lightly processed sawnwoods (Figure 2). In 2014, China overtook Vietnam as the largest importer of logs and sawnwood from Laos by value. In 2015, just over 50 percent of logs and sawnwood exported from

¹ More information on PM Order 15 can be found at http://www.laotradeportal.gov.la/index.php?r=site/display&id=1035&page=15#.WOu_ZYgrJ3g. In addition to allowing for only specific finished products to be exported, PM15 includes additional elements, such as strengthening monitoring of harvesting operation in forest conversion areas, and requires that logging is only allowed by state logging companies (not by the investors of the conversion area themselves); all timber must be sold through auctions; and, all timber must be processed by national wood processing companies.

Laos were bound for China. After Vietnam and China instituted increasingly stringent natural forest logging bans over the past three decades, and as both countries were becoming global manufacturing hubs, the import of raw materials from neighboring countries became increasingly important. For manufacturing based on valuable precious hardwoods, sourcing from Laos became even more important.

Figure 2: Global Imports of Lao Timber Products by Value and Country, 2011-2015



Source: UN Comtrade, compiled by Forest Trends.

This report identifies the impact of the Lao government's log and sawnwood export bans introduced in 2015 and 2016 by analyzing 2010-2016 Vietnam and China Custom Statistics for the imports of logs and sawnwood from Laos. The report focuses on Vietnam and China not only due to their significance to the export market, but also due to the high quality trade data provided by their customs agencies through the end of 2016.² Highlighted findings include:

1. **Exports to Vietnam and China have dropped to 26 percent of 2014 levels:** The successive bans on unprocessed timber products from Laos in 2015 (No. 1360) and 2016 (PM Order 15) appear to have had their intended effect, at least with regards to exports to Vietnam and China which comprised 94 percent of the Laos export market. The total volumes of logs and sawnwood exported to Vietnam and China in 2016 dropped to only 26 percent of their peak in 2014 – historic lows in this decade.
2. **Declines in exports to Vietnam were most prominent between 2015 and 2016, while declines to China were most prominent between 2014 and 2015:** For China, the decline actually began in mid-2014, coinciding with an overall drop in Chinese demand for rosewood (likely linked to a Chinese economic down-cycle as well as traders' use of stockpiles from previous years). While the trade picked up again in early 2015, it then dropped steeply after Lao PM15 in May 2016. While the decline is *greater* between 2014 and 2015, given these outstanding factors, the corresponding decline between 2015 and 2016 is perhaps more *relevant*. Overall, the total volumes of logs and sawnwood exported to China dropped to only 38 percent (by volume) and 22 percent (by value) of 2014 levels in 2016. The decline in Vietnamese imports can be seen more closely in the months after the 2016 PM15.
3. **Despite the declines, trade still continued in 2016 – especially in rosewood species:** While the trade declined, it did not cease after the Lao prohibitions came into effect – particularly in the highest value and rare species such as rosewoods. In 2016, more than 90 percent of Lao logs imported into China by value, and 60 percent

² Improvements in the quality of Laos customs data would help not only to identify and pursue violations of trade policies, but also could support analyses on where export values are being misdeclared, lowering export taxes paid and ultimately resulting in the loss of government revenue.

by volume, were of rosewood species. More than 80 percent of sawnwood imported into China by value (40 percent by volume), was rosewood. In 2016, Laos was China's largest supplier of rosewood by value, and second-largest (after Nigeria) by volume. For Vietnam, more than 30 percent of logs exported from Laos were rosewood, while 80 percent of the sawnwood was rosewood. While central authorities in both China and Vietnam were formally advised of the export bans, particularly PM15, customs officials and provincial authorities may have failed to recognize that the Order rendered imports illegal. Bilateral dialogues between Laos and neighboring countries, such as the Laos – China Memorandum of Understanding for the forest sector and the Laos – Vietnam Memorandum of Understanding for the forest sector, or any bilateral customs agreements, could be used to further inform and encourage recognition of export requirements and where violations occur.

- 4. Border crossings where trade continues can be identified, helping to pinpoint geographic areas for increased collaboration with local authorities:** Much of the trade crossed at the major international and national border crossings, but secondary/supplementary border crossings (some of them newly opened) controlled by local authorities have been and are still being used as well. This highlights a power dynamic between a central government aiming to control cross-border trade and local governments that still allow trade via border crossings within their jurisdictions.

Chinese customs districts: Statistics from China Customs have allowed Forest Trends to identify the official districts in which imports are registered in China. In 2016, nearly half of logs and sawnwood imported to China were recorded at Kunming customs district in Yunnan Province, which borders Luang Namtha, Oudomxai, and Phongsaly Provinces in Laos. This was a substantial increase over previous years; in 2015 only 18 percent of logs and 38 percent of sawnwood were registered at Kunming. Other imports are first registered at Chinese seaports (primarily Shanghai and Huangpu customs districts). With Laos being a land-locked country, further research is needed to understand the land crossings by which these logs and sawnwoods are leaving the country before (presumably) being loaded on boats to travel to Chinese seaports.

Vietnamese border crossings: Statistics from Vietnam Customs helped Forest Trends to identify the specific land border crossings between Laos and Vietnam, with particular note being given to those that have continued to allow logs and sawnwood to be exported. Identification of these specific checkpoints provides opportunities for the national and local governments in Laos to collaborate on better monitoring and enforcement.

5. Pressure to modify the ban and recent Lao efforts to curtail annual harvesting levels remains high:

- Still within Laos, there is an existing stockpile of 100,000-150,000 m³ of logs and sawnwood harvested (some, allegedly, illegally) prior to the announcement of the ban and already purchased by Vietnamese traders (valued at least US\$40-80 million).³ There may also be some stockpiles owned by the Chinese. Vietnamese traders have been trying to find ways around the ban to transport these stockpiles to Vietnam, as they represent a huge loss for the Vietnamese traders.
- Without the large export demand for sawnwood, Lao sawmills are running below capacity; many have stopped operation. The Lao domestic market is currently too small to make up for the loss. Many of the sawmills that are now idle were also owned by some of the same Vietnamese timber traders (under Lao names) who own the stockpiles, thus posing additional challenges for these Vietnamese traders.

The impact of Notice 1360 and PM15 on 2016 imports of logs and sawnwood from Laos is clear. Already, there is anecdotal evidence of Chinese investors purchasing mills on the Lao side of the border with Yunnan Province and minimally processing timber sourced from natural forests being cleared for hydropower and rail projects. While this

³ This value is calculated based on average price of log and sawnwood imported from Laos into Vietnam in 2016. Usually, the average price appearing on the contract of sale is lower than the real market price because traders want to pay lower import taxes (which are based on the value of wood declared in the contract).

may be evidence that traders and investors are responding to the bans by processing wood so it can be exported in compliance, these do not guarantee that these timber products have been harvested legally.

Although a useful first step, export bans alone will need to be complemented by the implementation of all Lao policy and regulatory approaches that aim for sustainable forest management – many of which have a renewed focus in other sections of PM15. The Lao government has maintained a strong position on the bans throughout the past year, and is seeking to implement timber trade monitoring in pilot provinces for Laos' FLEGT Voluntary Partnership Agreement (VPA) with the European Union (linked to a FLEGT Timber Legality Assurance System (TLAS)) and to run other pilots related to improved demarcation of conversion areas, inventories, and data management. Full implementation of PM15 can also help Vietnamese and Chinese traders assure the legality of their wood products and, in the case of Vietnam, contribute to the Vietnamese VPA implementation process towards FLEGT licensed timber. At both the regional and national level, keeping strong commitments to PM15 will be necessary for the Government of Laos and its neighbors to meet their global commitments to reduce emissions from deforestation and forest degradation.

2. Logs: Impact on Exports to Vietnam and China

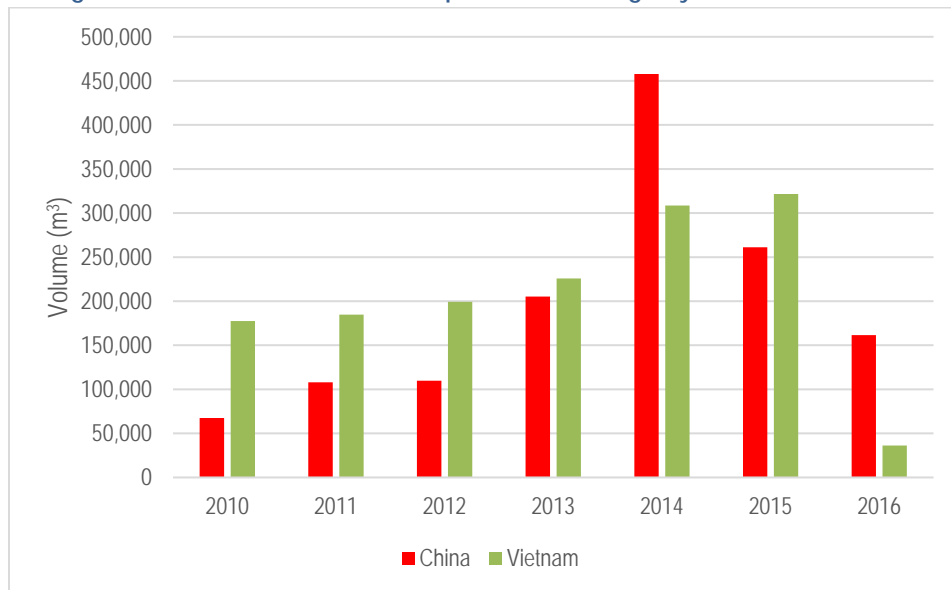
Volume

Effects of No. 1360 and PM15 are now demonstrable through the immediate decline in the logs imported into Vietnam and China from Laos in 2015 and 2016.

Vietnamese import volumes were only 36,000 cubic meters (m³) in 2016 – just 11 percent of 2015 levels. In the last six months of 2016, these imports dwindled to only 174 m³, compared to 12,500 m³ and 18,500 m³ in the 2015 and 2014 respectively (Figure 4).

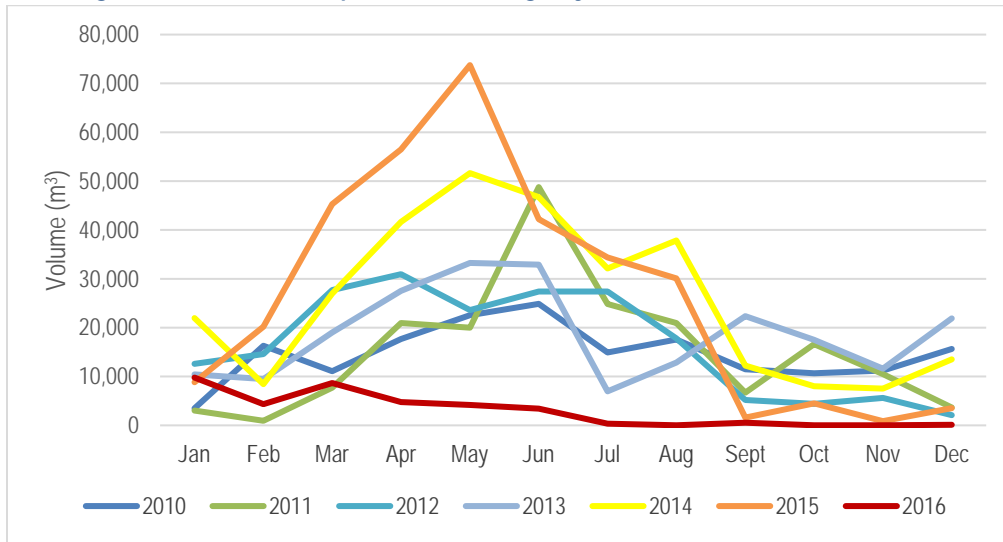
Chinese imports of Lao logs had already diminished greatly after peaking in mid-2014 when there was a downturn in Chinese demand for rosewood and No. 1360 was decreed. However, they also immediately dropped by nearly 60 percent in June 2016 – just one month after the ban was enacted – and continued over the course of the next six months. Log exports from July to December of 2016 dwindled to just over 35,000 m³, compared to 126,000 m³ from January through June (Figure 5).

Figure 3: Vietnam and China's Imports of Lao Logs by Volume, 2010-2016



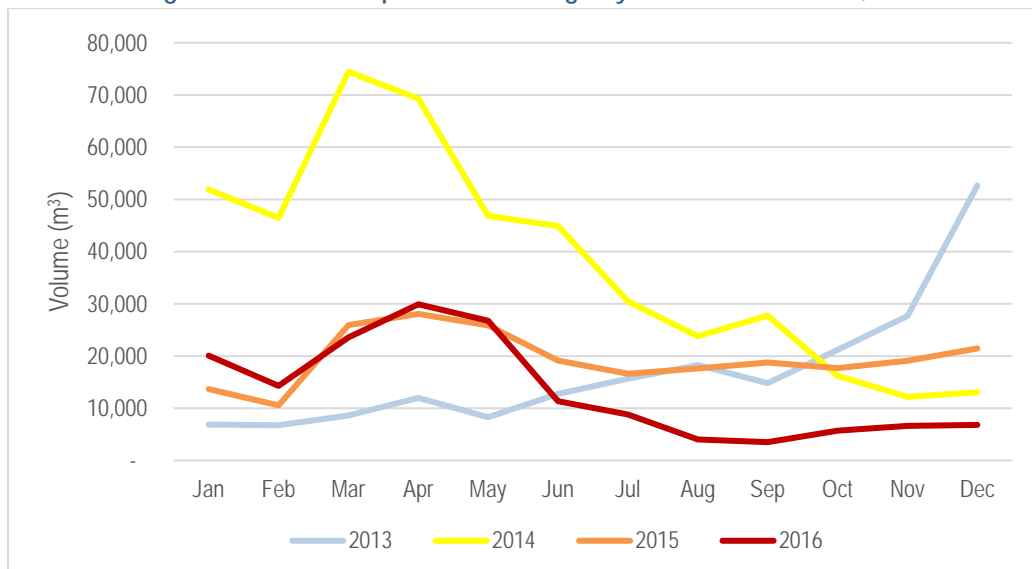
Source: Vietnam Customs and China Customs statistics, compiled by Forest Trends.

Figure 4: Vietnam's Imports of Lao Logs by Volume and Month, 2010-2016



Source: Vietnam Customs statistics, compiled by Forest Trends.

Figure 5: China's Imports of Lao Logs by Volume and Month, 2013-2016

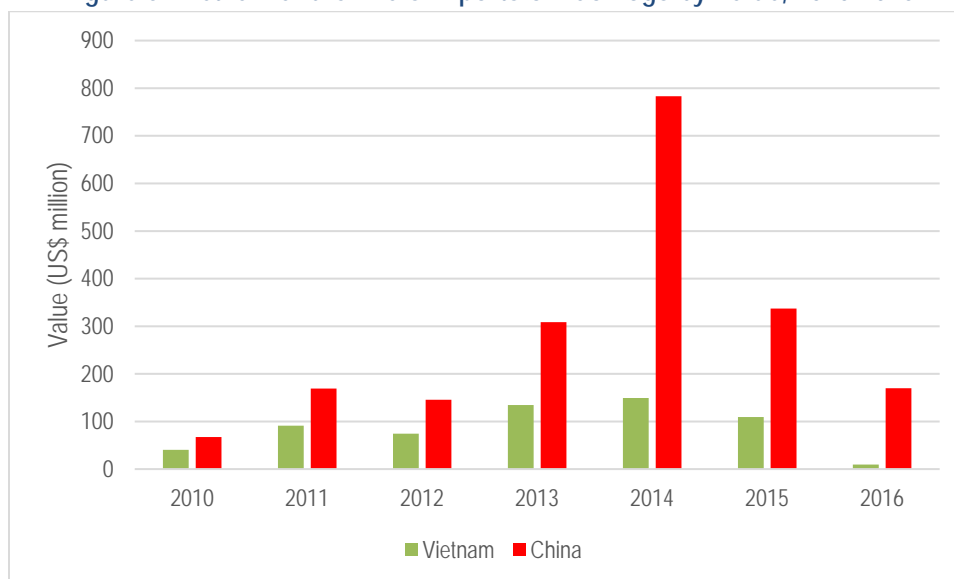


Source: China Customs statistics, compiled by Forest Trends.

Value

Overall, the rise and fall in volume of Vietnam and China's imports of Lao logs corresponded to the rise and fall in the value of this trade between 2010 and 2016 (Figure 6). In China, the value of imported logs fell by approximately half from 2014 to 2015, then again the following year. In total, log imports in 2016 were worth just US\$170 million – 20 percent of their US\$783 million value in 2014. In Vietnam, the import value in 2016 (US\$10 million) was less than 9 percent of the 2014 US\$149 million import value.

Figure 6: Vietnam and China's Imports of Lao Logs by Value, 2010-2016



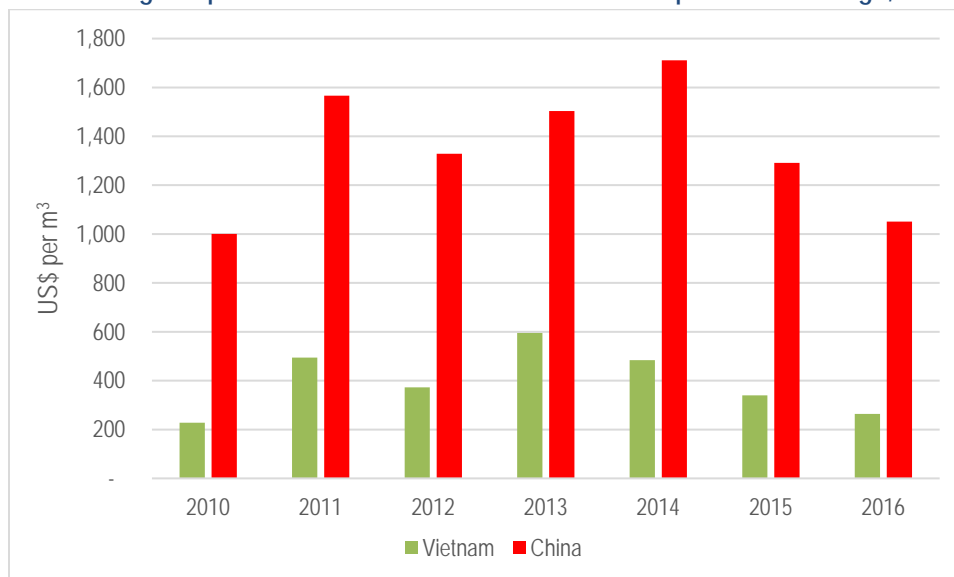
Source: China and Vietnam Customs statistics, compiled and analyzed by Forest Trends.

Analysis of trade trends based on stated import values is notoriously tricky: values of exported timber (both for logs and sawnwood) declared on contracts of sale and recorded by customs at border crossings are often under-reported by traders (allowing them to pay reduced export taxes and/or import tariffs).⁴ In addition, currency fluctuations and shifts in prices paid for any one cubic meter of any one species may change over time.

What is clear from the analysis is that the average price paid (or at least reported) by Chinese importers is multiple times the average price of logs imported into Vietnam (Figure 7). The peak of prices for both importing countries was in 2013-2014 and prices have declined since. In China, for example, a peak of US\$1,711 per cubic meter in 2014 was followed by a decline to US\$1,051 per cubic meter by 2016. This may reflect a shift in the mix of high- to low-value logs imported, or simply a decline in demand during that time period (and thus a decline in prices for those same logs). The decline from 2014 to 2016 in China, for example, may reflect the over-saturation of the Chinese market with rosewood logs from Laos and neighboring countries following a rush of imports in 2013-2014 and subsequent stockpiling. It may also be due to a marked decrease in prices for the highest-value rosewood species following the Government of China's corruption crackdown in recent years, and industry reaction to the listing of certain rosewood species on the UN Convention on International Trade in Endangered Species of Flora and Fauna (CITES) in 2016.

⁴ The Vietnamese government imposes a 10 percent tax on imported logs and sawnwood.

Figure 7: Average Reported Price of Vietnam and China's Imports of Lao Logs, 2010-2016



Source: Vietnam and China Customs statistics, compiled and analyzed by Forest Trends.

Active Crossings for Log Imports

Despite their seeming simplicity, log export bans are difficult to enforce for various reasons, ranging from the low capacity of government agencies, to fragmentation of enforcement jurisdictions between local and central authorities, to outright fraud and corruption within one or multiple links along the supply chain.

Vietnam

In 2016, logs from Laos were imported into Vietnam through a total of 22 border crossings, classified as either international, national, secondary/supplementary, or temporary.⁵ Among them, eight crossings have an import volume above 1,000 m³ each (Table 1). Nghe An province in Vietnam has the most (six).

The volume of log imports through Lao Bhe (Quang Tri) and Nà Cáy (Son La) crossings was small, but the total value was large -- indicating the passage of high value species. The average price of logs imported through Lao Bhe (Quang Tri) was US\$2,299/m³, and that imported through Nà Cáy (Son La) was US\$850/m³. The average price of logs traveling across the Bura Mú 1 (the most important crossing in terms of volume) was US\$194/m³.

⁵ The Vietnamese government classifies four types of inland border crossings: i) international crossings for the movement of people (all nations) and their means of transportation; ii) bilateral or national crossings for the movement of Vietnamese and Lao people and their means of transportation; iii) secondary/supplementary crossings are used for people of the provinces on both sides of the border; and iv) temporary crossings that connect two local markets at the both sides of the border.

Table 1: Vietnam's Imports of Lao Logs by Border Crossings in 2016 (Vietnamese Side of the Border)

| Crossings (Province) | Type of Crossing | Quantity (m ³) | Total Value (US\$) | Average Price (US\$ per m ³) |
|------------------------------|------------------|----------------------------|--------------------|--|
| Buộc Mú 1 (Nghe An province) | Temporary | 13,625 | 2,644,588 | 194 |
| Lao Bảo (Quang Tri) | International | 622 | 1,430,366 | 2,300 |
| Buộc Mú 2 (Nghe An province) | Temporary | 7,240 | 1,390,687 | 192 |
| Cha Lo (Quang Binh) | International | 1,999 | 763,600 | 82 |
| Tam Hợp (Nghe An) | Secondary | 3,153 | 587,376 | 86 |
| Nà Cài (Son La) | Secondary | 572 | 486,588 | 51 |
| La Lay (Quang Tri) | International | 2,167 | 455,594 | 10 |
| Bo Y (Kon Tum) | International | 575 | 373,424 | 49 |
| Keng Đu (Nghe An) | Temporary | 1,166 | 345,696 | 96 |
| Xiềng Trên (Nghe An) | Temporary | 1,242 | 248,489 | 0 |
| Ta Do (Nghe An) | Temporary | 1,545 | 226,111 | 46 |
| Cầu Treo (Ha Tinh) | International | 557 | 207,904 | 73 |
| Thanh Hoa port (Thanh Hoa) | National | 669 | 198,873 | 297 |
| Ca Roong (Quang Binh) | National | 312 | 102,620 | 329 |
| Hồng Vân (Thừa Thiên Huế) | National | 432 | 77,322 | 179 |
| Thanh Thủy (Nghe An) | National | 243 | 31,601 | 130 |
| Na Mèo (Thanh Hoa) | International | 38 | 9,523 | 251 |
| Thông Thụ (Nghe An) | Temporary | 25 | 5,416 | 217 |
| Huổi Póc (Dien Bien) | National | 10 | 2,982 | 298 |
| Nam Giang (Quang Nam) | National | 2 | 1,920 | 960 |
| Total | | 36,194 | 9,590,679 | |

Source: Vietnam Customs statistics, compiled by Forest Trends.

China

From 2013 to 2016, China registered log imports from Laos at 18 customs districts. Following PM15, more logs are making their way across the China – Laos 400 km land border and being registered at the Kunming customs district in Yunnan Province. In 2016, nearly half (43 percent) of logs imported from Laos into China were transported via the border separating the Lao provinces of Luang Namtha, Oudomxai, and Phongsaly and registered at Kunming customs district.⁶ This was a substantial increase from 2014 and 2015 when 13 and 18 percent of logs, respectively, were registered in Kunming. During those years, most Lao logs (43 percent) were registered in Shanghai customs district (a seaport).

The volume of log imports through Nanning was the smallest compared to other customs districts, but the total value was large - indicating that the species registered in this district was of the highest market value. The average price of logs imported through Nanning was US\$2,015/m³. Interestingly, logs imported through Kunming (the only land crossing, and the most important in terms of import volume) were of the lowest market value at US\$378/m³, though a stream of high-value log imports from Laos were registered in Kunming following PM15 in July and August (with average price

⁶ Among these provinces, only Luang Namtha and Phongsaly have international border crossings. Technically, the trade in timber from the local border crossing in Oudomxai, and China, is not permitted.

for August at US\$1,337/m³) and again from October through December (with average price peaking in November at US\$2,003/m³). Average prices across all districts varied widely in 2016, with a range of over US\$1,600/m³, and by month, with average prices lowest from March through May, increasing sharply in June, and peaking in November.

Table 2: China's Imports of Lao Logs by Customs District in 2016 (Chinese Side of the Border)

| Crossings (Customs District) | Quantity (m ³) | Total Value (US\$) | Average Price (US\$ per m ³) |
|------------------------------|----------------------------|--------------------|--|
| Fuzhou | 136 | 88,690 | 652 |
| Guangzhou | 1,473 | 2,507,304 | 1,702 |
| Hangzhou | 765 | 1,134,315 | 1,483 |
| Huangpu | 26,294 | 50,770,345 | 1,931 |
| Jiangmen | 268 | 454,960 | 1,698 |
| Kunming | 69,703 | 26,381,441 | 378 |
| Nanjing | 4,196 | 6,490,005 | 1,547 |
| Nanning | 63 | 126,938 | 2,015 |
| Ningbo | 865 | 1,256,734 | 1,453 |
| Shanghai | 57,296 | 80,237,173 | 1,400 |
| Xiamen | 405 | 241,163 | 595 |
| Total | 161,464 | 169,689,068 | |

Source: China Customs statistics, compiled by Forest Trends

Key Log Species being Exported from Laos

Species-specific information on Chinese and Vietnamese imports and exports is, as it is for virtually all countries around the world, difficult to obtain as there are (a) typically few requirements to declare species and (b) even less monitoring of the accuracy of these declarations when they are made. China monitors a few select species (e.g., rosewood and teak) while Vietnamese customs data is extremely variable in terms of being able to capture species.

It is apparent from both Vietnam and China Customs data that Laos exports high-value species to both markets. Just under one third of species exported in log form from Laos to Vietnam commanded the highest price, while in China, rosewood (*hongmu*) species – which still comprise a large portion of Laos' log exports – from the Mekong region are still in high demand.

Vietnam

In 2016, Vietnam imported 51 different log species from Laos. Only 10 had an import volume greater than 1,000 m³. However, these 10 species account for more than 74 percent of the total log imports from Laos (Table 3).

The government of Vietnam classifies all timber species into 8 "Groups," according to their degree of value and "preciousness." Species in Groups 1 through 4 are considered precious and command high market prices, with species in Group 1 being the highest. Species in Group 5 and below are considered of low quality and value. Of all the logs imported from Laos into Vietnam in 2016, 31.3 percent (11,332 m³) were of the highest value (belonging to Groups 1 and 2). Of the 51 species imported as logs, 15 were within these two groups.

Table 3: Top 10 Log Species Imported into Vietnam in 2016 (1,000 m³ or over)

| Vietnamese Name | Trade Name | Scientific Name | Volume (m ³) | Value (US\$) | Group |
|-----------------|----------------------------------|---|--------------------------|--------------|-------|
| Sa mu | Not available (NA) | Cunninghamia konishii Hayata | 4,315 | 1,073,799 | 1 |
| Dầu | Keruing, Sepetir | Dipterocarpus Sp, Dipterocarpus tonkinensis A.Chev | 4,220 | 694,030 | 5 |
| Xoan đào | Sapele, Sipo, Sapelli, Kossipo | Pygeum arboretum Endl.et Kurz | 3,338 | 495,030 | 6 |
| Chò chỉ | Balau | Parashorea Stellata Kury, Andira spp, Shorea thorelii Pierre Perimeter | 3,154 | 479,451 | 3 |
| Giổi | Magnolia, Arau, Talauma, Bilinga | Nauclea diderrichii | 2,947 | 751,282 | 3 |
| Hương | Rosewood, Doussie | Pterocarpus cambodianus Pierre, Pterocarpus pedatus pierre, Pterocarpus erinaceus | 2,763 | 1,427,186 | 1 |
| Gội | Pasak, Aglaia, Agl | Aglaia Spp | 2,182 | 342,363 | 4 |
| Giá trị | Teak, Iroko, Afrormosia | Tectona Grandis | 1,515 | 545,490 | 3 |
| Tràm/keo | Acacia | Acacia Auriculiformis, Robinia Pseudoacacia | 1,400 | 39,731 | 6 |
| Nghiến | NA | Parapentace Tonkinensis Gagnep | 1,044 | 335,053 | 2 |

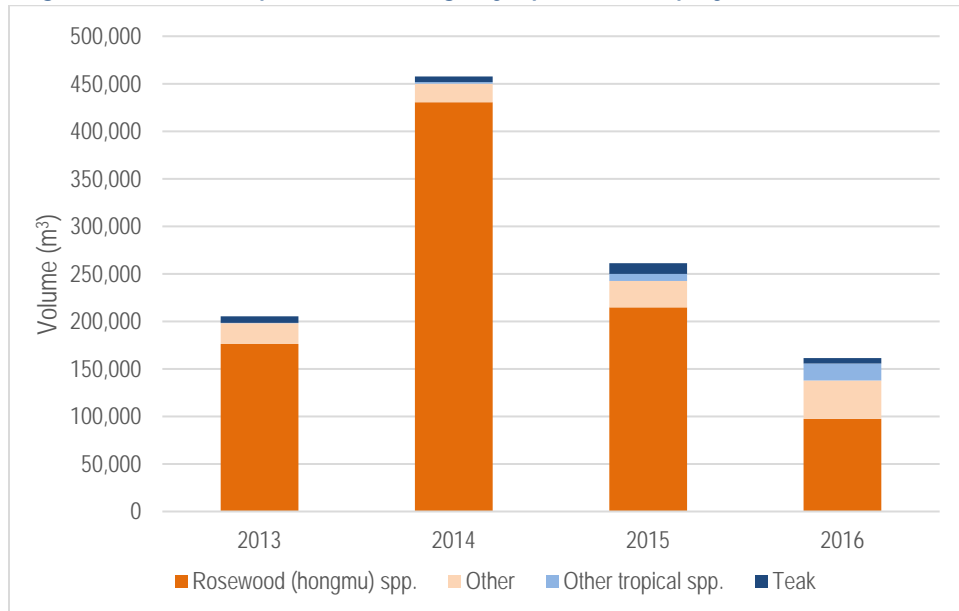
Source: Vietnam Customs statistics, compiled by Forest Trends.

China

In 2014, nearly 95 percent of log imports from Laos were classified as rosewood. By 2016, this percentage had declined to 60 percent. This decrease is likely reflective of several factors:

- Chinese demand for rosewood has largely dropped following an all-time high in 2013-2014 following China's economic slowdown, generational preferences (with younger consumers gravitating away from classical-style *hongmu* furniture and décor), anti-corruption efforts, and stockpiling.
- Rosewood stocks in Laos, and indeed throughout the Mekong region, have decreased, with some high-value species on the brink of commercial extinction. This has led Chinese importers to seek out other sources of rosewood, primarily in West Africa. Third, *Dalbergia cochinchinensis* (Siamese rosewood) was listed on CITES Appendix II in 2013, followed by a genus-wide listing of all *Dalbergia* species in September 2016. It should be noted, however, that because CITES listings are at the species-level, traders often respond by seeking out other look-alike species (in this case, *Pterocarpus macrocarpus* [Burmese padauk] and others) to meet consumer demand.

Figure 8: China's Imports of Lao Logs by Species Group by Volume, 2013-2016



Source: China Customs statistics, compiled and analyzed by Forest Trends.

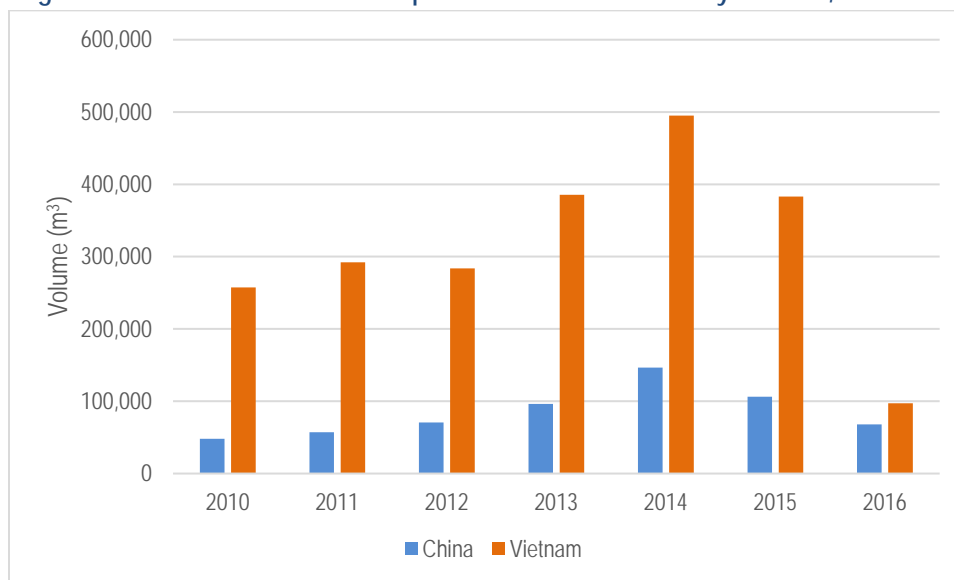
3. Sawnwood: Impact on Exports to Vietnam and China

Volume

In 2016 Vietnamese import volumes of Lao sawnwood were just 25 percent of 2015 levels (Figure 6). Effects of the PM15 were even more immediate than that for logs. The trade in sawnwood between the two countries immediately declined to near zero in July 2016. The imports in the last six months of 2016 dwindled to only 4,410 m³, compared to 123,700 m³ and 165,773 m³ in the last six months of 2015 and 2014 respectively (Figure 7).

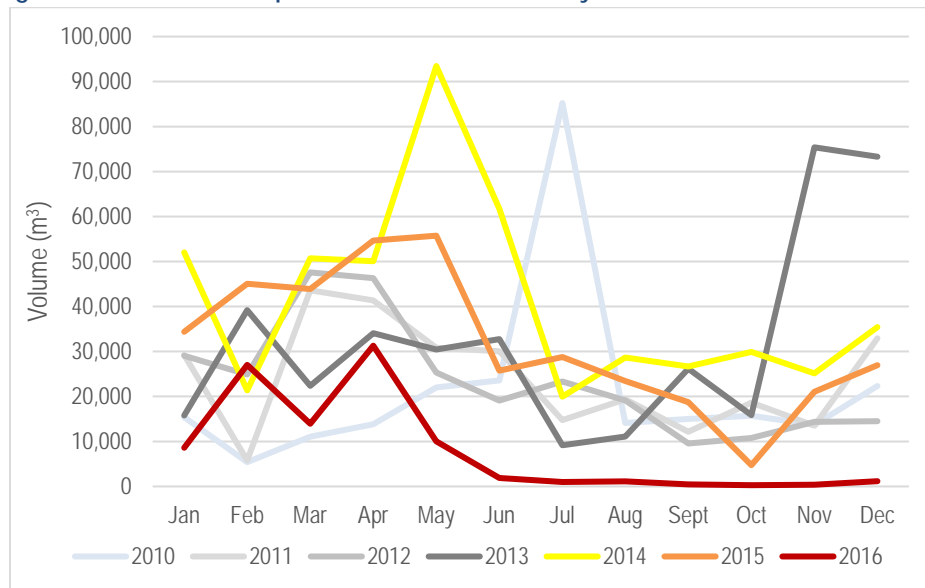
In 2016, China imported 67,882 m³ of Lao sawnwood, following a drop of 27 percent in 2015 over 2014 levels, and another decrease of 36 percent in 2016 over 2015 levels. The impact of PM15 can be seen in the stark drop in imports from the second to third quarter of 2016 – from nearly 33,000 m³ for April through June, to just under 2,400 m³ for July through September. Monthly data illustrate that this decrease corresponds to the PM Order, as imports immediately declined 77 percent between May and June 2016. The drop was more pronounced for sawnwood than for logs. Interestingly, the export of Lao sawnwood to China had been declining gradually since mid-2014, but peaked in April and May 2016 right before the PM Order before declining rapidly thereafter.

Figure 9: Vietnam and China's Imports of Lao Sawnwood by Volume, 2010-2016



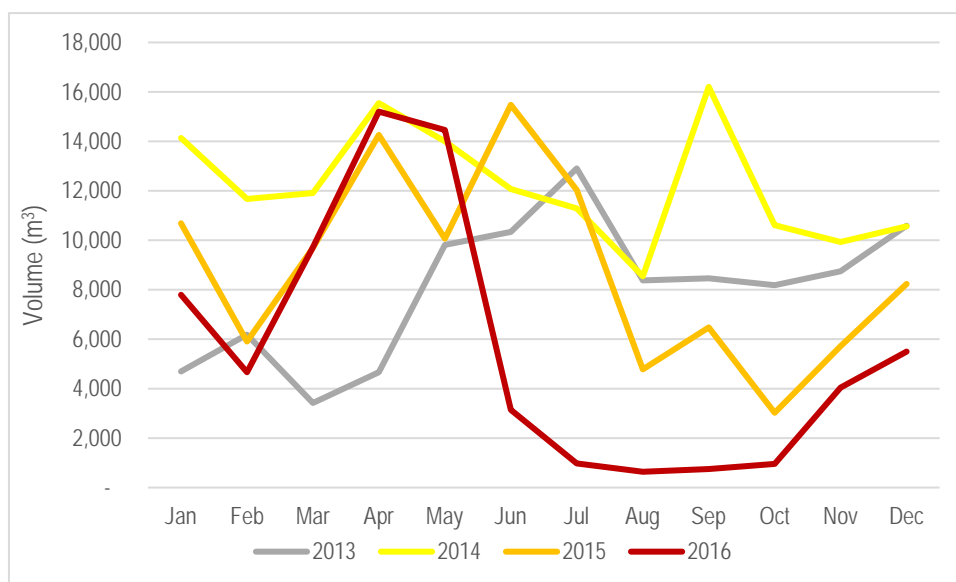
Source: Vietnam and China Customs statistics, compiled by Forest Trends.

Figure 10: Vietnam's Imports of Lao Sawnwood by Volume and Month, 2010-2016



Source: Vietnam Customs statistics, compiled by Forest Trends.

Figure 11: China's Imports of Lao Sawnwood by Volume and Month, 2013-2016

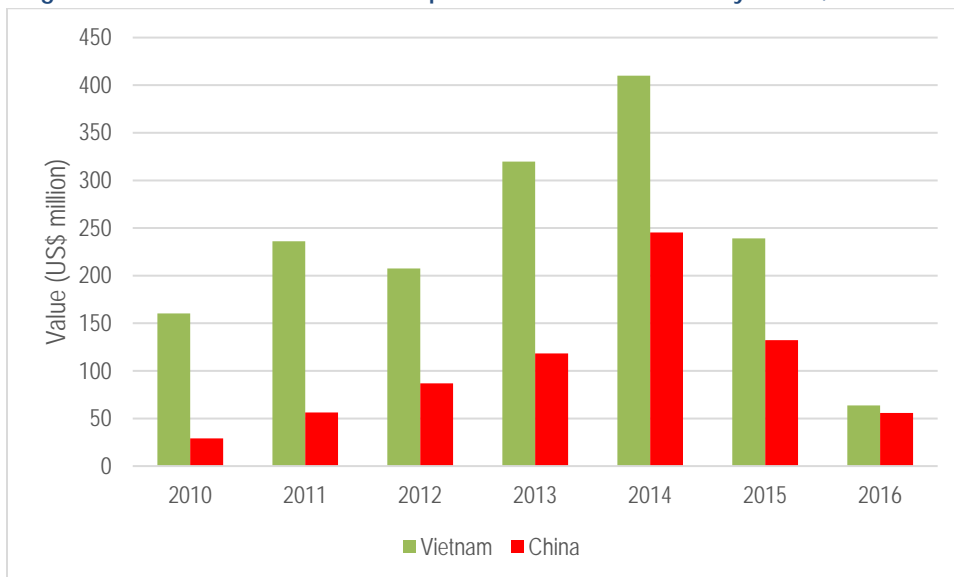


Source: China Customs statistics, compiled and analyzed by Forest Trends.

Value

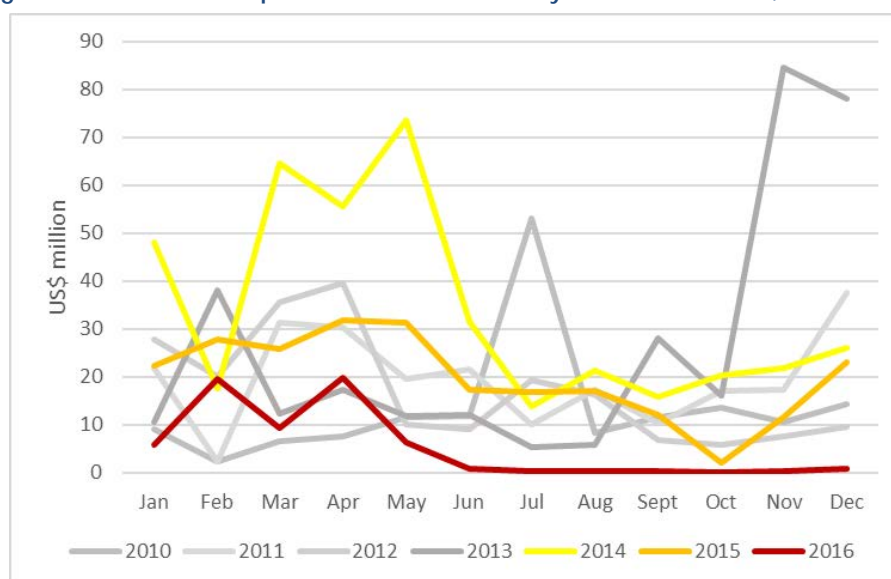
Overall, the rise and fall in volumes of Lao sawnwood imports into both China and Vietnam corresponded highly to the rise and fall in the total value of this trade between 2010 and 2016 (Figure 12). In Vietnam, the import value in 2016 was only US\$63 million — less than 26 percent of the 2015 import value. The majority of the decrease occurred in the second half of 2016 (Figure 12). Similarly, Chinese imports of Lao sawnwood fell by 46 percent from 2014 to 2015, then again by 58 percent from 2015 to 2016. The import value in 2016 was US\$56 million. The majority of this decrease occurred in the second half of 2016, with monthly imports from July to December averaging just 23 percent of January-through-June levels.

Figure 12: Vietnam and China's Imports of Lao Sawmwood by Value, 2010-2016



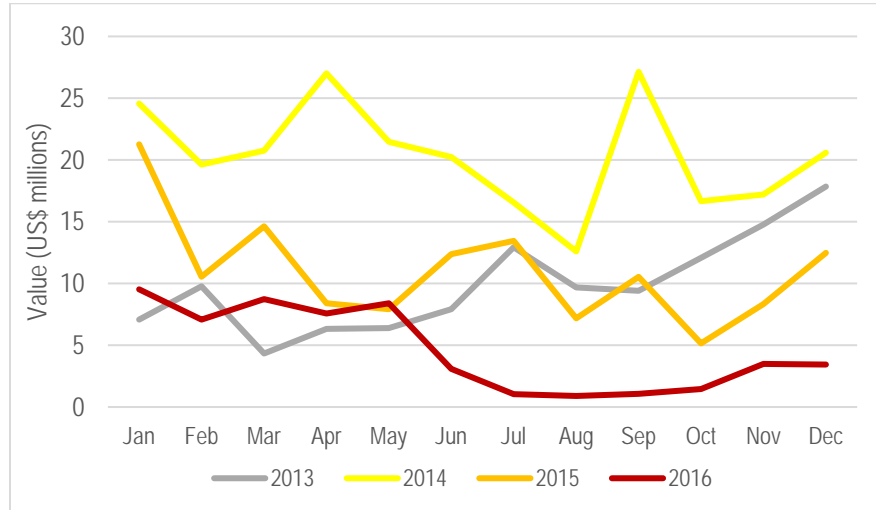
Source: Vietnam and China Customs statistics, compiled by Forest Trends.

Figure 13: Vietnam's Imports of Lao Sawmwood by Value and Month, 2010-2016



Source: Vietnam Customs statistics, compiled by Forest Trends.

Figure 14: China Imports of Lao Sawnwood by Value and Month, 2013-2016



Source: China Customs statistics, compiled and analyzed by Forest Trends.

Active Border Crossings for Sawnwood Imports

Vietnam

Vietnam customs data reveal that in 2016 a total of 25 border crossings or ports were used for the import of sawnwood from Laos (Table 4). Among those, 12 accounted for 97 percent of all Lao sawnwood imports that year, and were mainly located in Kon Tum, Nghe An, Ha Tinh, Quang Binh, and Quang Tri provinces (Vietnam's Central Coast and Central Highland regions). Some import occurred through secondary/supplementary crossings in Vietnam's northern regions of Dien Bien and Thanh Hoa provinces.

Although small in volume, some sawnwoods from Laos were imported to Vietnam via Cambodian border crossings despite the long distance from Laos through Cambodia to Vietnam. It is unclear whether (i) traders were transporting Lao sawnwood using a more convenient route out of Laos via Cambodia, (ii) traders wanted to avoid the tightening controls between Laos and Vietnam, or (iii) if the wood was actually sourced in Cambodia and traders used fraudulent papers to claim the wood was of Lao origin, in order to avoid Cambodian law enforcement mechanisms.

Table 4: Vietnam's Imports of Lao Sawnwood by Border Crossings in 2016 (Vietnamese Side of the Border)

| Crossings (Province) | Type of Crossing | Quantity (m ³) | Total Value (US\$) | Average Price (US\$ per m ³) |
|---------------------------|------------------|----------------------------|--------------------|--|
| La Lay (Quang Tri) | International | 14,225 | 16,839,205 | 1,183 |
| Lao Bảo (Quang Tri) | International | 15,614 | 13,420,262 | 859 |
| Cầu Treo (Ha Tinh) | International | 26,060 | 11,879,915 | 455 |
| Cha Lo (Quang Binh) | International | 11,741 | 7,443,481 | 633 |
| Bo Y (Kon Tum) | International | 4,358 | 4,784,082 | 1,097 |
| Nậm Cắn (Nghe An) | International | 8,638 | 2,178,034 | 252 |
| Nam Giang (Quang Nam) | National | 1,590 | 1,833,206 | 1,152 |
| Thông Thụ (Nghe An) | Temporary | 4,747 | 1,381,891 | 291 |
| Cà Roong (Quang Binh) | National | 1,786 | 1,072,401 | 600 |
| Tây Trang (Dien Bien) | International | 1,360 | 762,358 | 560 |
| Xiềng Trên (Nghe An) | Temporary | 2,550 | 560,418 | 219 |
| Buộc Mú (Nghe An) | Temporary | 1,712 | 437,920 | 255 |
| Na Mèo (Thanh Hoa) | International | 1,577 | 377,923 | 239 |
| Keng Đu (Nghe An) | Temporary | 840 | 257,645 | 306 |
| Khánh Bình (An Giang)* | National | 35 | 138,210 | 3,948 |
| Ka Tum (Tay Ninh)* | National | 29 | 129,060 | 4,450 |
| Khanh Binh (An Giang)* | National | 10 | 44,955 | 4,495 |
| Hưng Điền (Long An)* | Temporary | 9 | 39,600 | 4,400 |
| Hồng Vân (Thua Thien Hue) | National | 22 | 24,578 | 1,117 |
| Chiềng Khương (Dien Bien) | Temporary | 82 | 22,404 | 273 |
| Ta Do (Nghe An) | Temporary | 79 | 19,489 | 246 |
| A Đốt (Thua Thien Hue) | National | 49 | 14,179 | 289 |
| Huổi Puốc (Dien Bien) | National | 15 | 12,245 | 816 |
| Thanh Thủy (Nghe An) | National | 13 | 4,426 | 340 |
| Total | | 97,138 | 63,677,885 | |

Source: Vietnam Customs statistics, compiled by Forest Trends *crossing between Cambodia and Vietnam.

Lao sawnwood entering Vietnam through Vietnam-Cambodia border crossings commands the highest average price, at about US\$4,500/m³ – which may mean that traders only use these crossings for highly expensive species. The average price at other crossings between Laos and Vietnam is also high at La Lay (US\$1,184/m³), Nam Giang (US\$1,153/m³), and Bo Y (US\$1,098/m³). The average price at Nậm Cắn, Thông Thụ, and Xiềng Trên crossings was low.

The variation of price among crossings may reflect the mix of species imported through these crossings being of higher or lower market value. The fact that higher value species may be going through certain crossings may reflect the geographic origin of those species (where they are likely to be harvested), or variations in law enforcement effectiveness. Some crossings are easier or more difficult than others in allowing the trade of different sawnwood species. According to traders' insights, this is because government officials working at some crossings have different levels of familiarity with paperwork and procedures required for the import or export of particular timber species. This

also reflects variations in informal relationships between traders and officials in charge of imports and exports at different crossings – the dynamics of which will be described in another briefing.

China

Lao sawnwood imports were registered in 12 customs districts in 2016, with two thirds (66 percent) crossing the overland border between northern Laos and Yunnan Province, China, before being declared in Kunming customs district. By value, however, only 34 percent of Lao sawnwood imports were registered in Kunming. As with logs, Lao sawnwood imports to Kunming commanded the lowest average price, at \$378/m³ compared to an average of \$822/m³. The highest average prices for Lao sawnwood were found in Qingdao, in Shandong province – the third-northernmost district importing Lao sawnwood; Shantou, in Guangdong province; and Huangpu, in Guangzhou.

Table 5: China's Imports of Lao Sawnwood, by Border Crossings in 2016 (Chinese Side of the Border)

| Crossings (Customs District) | Quantity (m ³) | Total Value (US\$) | Average Price (US\$ per m ³) |
|------------------------------|----------------------------|--------------------|--|
| Guangzhou | 115 | 150,983 | 1,313 |
| Hangzhou | 69 | 116,667 | 1,691 |
| Huangpu | 2,738 | 4,977,033 | 1,818 |
| Jiangmen | 36 | 61,246 | 1,701 |
| Kunming | 45,428 | 18,803,400 | 414 |
| Nanjing | 377 | 634,729 | 1,684 |
| Ningbo | 4,233 | 6,530,147 | 1,543 |
| Qingdao | 54 | 144,397 | 2,674 |
| Shanghai | 14,437 | 23,866,774 | 1,653 |
| Shantou | 110 | 205,405 | 1,867 |
| Tianjin | 72 | 71,561 | 994 |
| Xiamen | 171 | 215,987 | 1,263 |
| Total | 67,840 | 55,778,329 | |

Source: China customs statistics, compiled by Forest Trends.

Key Sawnwood Species Being Exported from Laos to Vietnam and China

Vietnam

In 2016, Vietnam imported 66 different species of sawnwood from Laos (Table 6). Only 15 species had an import volume greater than 1,000 m³. However, these 15 species accounted for more than 89.6 percent of Vietnam's total sawnwood imports by volume.

Most of the sawnwood imported into Vietnam from Laos are high value species. *Hương* (*Pterocarpus cambodianus* Pierre, Group 1) and *Gụ* (*Sindora maritima* Piere, Group 2) are the species with the largest import volumes. These are precious species of high market value. Of all the species imported from Laos into Vietnam in 2016, 22 (30 percent) are in Groups 1 or 2 (precious, high value) – mostly the very expensive rosewood – totaling 77,357 m³ and comprising 79.6 percent of the total sawnwood imported to Vietnam from Laos that year.

Table 6: Top 15 Sawnwood Species Imported into Vietnam in 2016 (1,000 m³ or over)

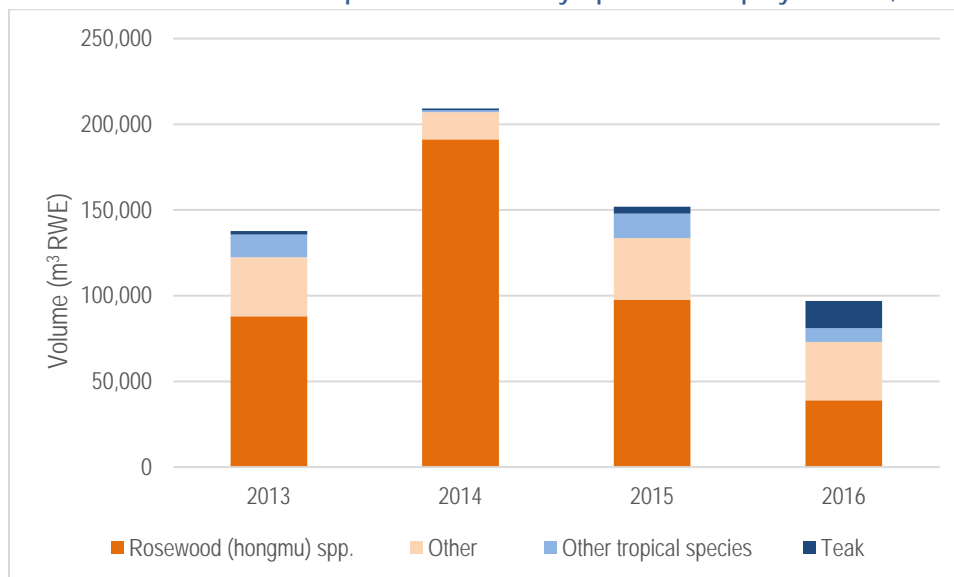
| Vietnamese Name | Trade Name | Scientific Name | Volume (m ³) | Value (US\$) | Group |
|-----------------|--------------------------------|---|--------------------------|--------------|-------|
| Hương | Rosewood, Doussie | Pterocarpus cambodianus Pierre, Pterocarpus pedatus pierre, Pterocarpus erinaceus | 26,848 | 30,304,636 | 1 |
| Gụ | Kossipo | Sindora maritima Piere, Sindora Cochichinensis Baill, Sindora tonikiensis A.Chev | 22,339 | 12,240,820 | 2 |
| Gỗ | Doussie, Pachyloba, Papao | Afzelia Xylocarpa, Afzelia pachyloba, Sindora Siamensis, Pahudia cochinchinensis Pierre | 6,797 | 4,699,200 | 2 |
| Giổi | Magnolia, Arau, Talauma | Nauclea diderrichii | 6,171 | 2,035,956 | 3 |
| Pơ mu | Hinoki | Fokiennia hodginsii A. Henry | 4,442 | 1,205,554 | 1 |
| Lim | Tali, Okan, Denya, Azobe | Erythrophloeum fordii Oliv | 3,800 | 2,849,774 | 2 |
| Kiên kiên | Merawan Giaza | Hopea pierrei Hance | 3,328 | 1,002,540 | 2 |
| Nghiến | Not available (NA) | Parapentace Tonkinensis Gagnep | 2,901 | 927,828 | 2 |
| Bằng lăng | Pyinma | Lagerstroemia loudoni Taijim | 2,793 | 830,875 | 3 |
| Xoan đào | Sapele, Sipo, Sapelli, Kossipo | Pygeum arboretum Endl | 1,692 | 337,005 | 6 |
| Sa mu | NA | Cunninghamia konishii Hayata | 1,272 | 380,245 | 1 |
| Cẩm | Paorosa, Bosse, Rosewood | Dalbergia Oliverii Gamble, Dalbergia Oliverii Gamble Cambodiana Pierre | 1,258 | 1,778,105 | 1 |
| Gội | Pasak, Aglaia, Agl | Aglaia Spo | 1,210 | 247,820 | 4 |
| Tấu mật | NA | Vatica tonkinensis A.chev | 1,108 | 334,942 | 2 |
| Dầu | Keruing, Sepetir | Dipterocarpus Spp, Dipterocarpus tonkinensis A.Chev | 1,082 | 325,668 | 5 |

Source: Vietnam customs statistics, compiled by Forest Trends.

China

In 2016, China imported nearly 39,000 m³ RWE of rosewood from Laos in sawnwood form. Over 40 percent of China's imports of Lao sawnwood were rosewood species, compared to 60 percent for Lao logs. This marks a dramatic 70 percent decrease from 2014, in which over 90 percent of Lao sawnwood imports into China were comprised of rosewood species. The reasons for this decline are similar to those outlined for logs, above.

Figure 15: China's Sawnwood Imports from Laos by Species Group by Volume, 2013-2016



Source: China Customs statistics, compiled and analyzed by Forest Trends.

Annex: Additional Import Information

Vietnam's Imports of Lao Logs by Volume and Month, 2010-2016 (m³)

| Month | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------|---------|---------|---------|---------|---------|---------|--------|
| Jan | 3,488 | 3,032 | 12,583 | 10,435 | 21,950 | 8,831 | 9,783 |
| Feb | 16,311 | 939 | 14,609 | 9,470 | 8,422 | 20,209 | 4,331 |
| Mar | 11,093 | 7,726 | 27,684 | 19,004 | 26,991 | 45,282 | 8,676 |
| Apr | 17,677 | 20,961 | 30,950 | 27,524 | 41,636 | 56,479 | 4,753 |
| May | 22,561 | 19,992 | 23,596 | 33,250 | 51,644 | 73,748 | 4,181 |
| Jun | 24,875 | 48,774 | 27,403 | 32,915 | 46,740 | 42,219 | 3,422 |
| Jul | 14,909 | 24,861 | 27,388 | 6,966 | 32,111 | 34,371 | 330 |
| Aug | 17,568 | 20,945 | 17,794 | 12,870 | 37,863 | 30,095 | 21 |
| Sept | 11,494 | 6,716 | 5,207 | 22,367 | 12,227 | 1,586 | 541 |
| Oct | 10,652 | 16,635 | 4,413 | 17,508 | 8,023 | 4,516 | 21 |
| Nov | 11,209 | 10,504 | 5,630 | 11,617 | 7,527 | 864 | 18 |
| Dec | 15,643 | 3,659 | 2,090 | 21,886 | 13,513 | 3,516 | 115 |
| Total | 177,480 | 184,744 | 199,349 | 225,812 | 308,647 | 321,718 | 36,060 |

Vietnam's Imports of Lao Logs by Value and Month, 2010-2016 (m³)

| Month | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------|------------|------------|------------|-------------|-------------|-------------|-----------|
| Jan | 1,068,280 | 1,986,560 | 5,130,637 | 4,551,207 | 9,632,556 | 4,566,708 | 2,316,585 |
| Feb | 3,578,315 | 413,663 | 4,142,622 | 11,733,675 | 11,208,199 | 6,001,812 | 1,486,944 |
| Mar | 2,042,493 | 6,510,171 | 8,435,104 | 10,370,808 | 23,252,578 | 15,938,181 | 2,142,172 |
| Apr | 3,452,264 | 11,540,190 | 15,165,823 | 14,662,207 | 20,615,242 | 20,563,010 | 1,523,826 |
| May | 3,944,104 | 10,027,418 | 5,952,850 | 12,392,432 | 22,592,701 | 21,845,657 | 1,154,475 |
| Jun | 4,010,486 | 13,579,387 | 6,397,257 | 8,554,538 | 17,639,670 | 13,020,580 | 575,423 |
| Jul | 2,284,202 | 6,567,238 | 9,361,572 | 3,249,952 | 9,801,236 | 12,230,648 | 129,419 |
| Aug | 4,165,820 | 12,498,495 | 8,216,681 | 5,429,859 | 12,986,359 | 11,045,137 | 5,778 |
| Sept | 4,152,359 | 7,720,260 | 2,021,223 | 29,212,143 | 4,993,667 | 1,682,406 | 215,585 |
| Oct | 2,718,315 | 11,899,486 | 2,913,636 | 10,327,162 | 5,026,696 | 982,167 | 8,787 |
| Nov | 3,987,614 | 3,893,423 | 3,451,118 | 7,471,487 | 5,409,736 | 414,396 | 21,143 |
| Dec | 5,058,952 | 4,691,666 | 3,145,779 | 16,448,481 | 6,296,907 | 994,831 | 10,541 |
| Total | 40,463,204 | 91,327,957 | 74,334,303 | 134,403,951 | 149,455,547 | 109,285,534 | 9,558,996 |

Vietnam's Imports of Lao Sawnwood by Volume and Month, 2010-2016 (m³)

| Month | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------|---------|---------|---------|---------|---------|---------|--------|
| Jan | 15,403 | 29,221 | 29,045 | 15,785 | 52,028 | 34,377 | 8,590 |
| Feb | 5,398 | 5,789 | 24,886 | 39,182 | 21,355 | 45,045 | 27,022 |
| Mar | 11,064 | 43,600 | 47,577 | 22,353 | 50,724 | 43,886 | 13,938 |
| Apr | 13,815 | 41,359 | 46,288 | 34,056 | 50,076 | 54,664 | 31,287 |
| May | 22,003 | 30,834 | 25,310 | 30,433 | 93,458 | 55,744 | 10,029 |
| Jun | 23,567 | 30,038 | 19,091 | 32,737 | 61,712 | 25,732 | 1,861 |
| Jul | 85,218 | 14,757 | 23,340 | 9,156 | 19,946 | 28,781 | 970 |
| Aug | 14,110 | 19,373 | 19,123 | 11,086 | 28,676 | 23,444 | 1,136 |
| Sept | 14,991 | 12,159 | 9,547 | 26,182 | 26,672 | 18,740 | 461 |
| Oct | 15,720 | 18,644 | 10,760 | 15,837 | 29,916 | 4,730 | 277 |
| Nov | 13,701 | 13,509 | 14,350 | 75,381 | 25,154 | 21,041 | 390 |
| Dec | 22,337 | 32,922 | 14,512 | 73,297 | 35,409 | 26,964 | 1,176 |
| Total | 257,326 | 292,204 | 283,830 | 385,485 | 495,126 | 383,149 | 95,572 |

Vietnam's Imports of Lao Sawnwood by Value and Month, 2010-2016 (m³)

| Month | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| Jan | 9,093,855 | 21,687,373 | 27,775,445 | 10,430,917 | 48,078,562 | 22,320,561 | 5,683,443 |
| Feb | 2,248,988 | 2,298,013 | 20,169,243 | 37,995,287 | 17,453,032 | 27,847,067 | 19,631,538 |
| Mar | 6,507,957 | 31,278,332 | 35,626,582 | 12,221,040 | 64,513,675 | 25,793,269 | 9,342,206 |
| Apr | 7,583,719 | 30,347,874 | 39,662,669 | 17,278,073 | 55,619,205 | 31,799,067 | 19,815,556 |
| May | 11,607,011 | 19,470,382 | 10,152,805 | 11,826,961 | 73,659,599 | 31,329,784 | 6,294,644 |
| Jun | 11,756,793 | 21,481,473 | 8,932,058 | 12,098,114 | 31,580,604 | 17,308,885 | 679,291 |
| Jul | 53,092,940 | 10,129,451 | 19,380,983 | 5,207,064 | 13,804,997 | 16,884,542 | 322,086 |
| Aug | 8,288,719 | 17,377,383 | 16,182,374 | 5,908,270 | 21,328,520 | 17,027,128 | 354,075 |
| Sept | 11,564,688 | 10,286,143 | 6,756,311 | 28,115,643 | 15,793,977 | 12,050,425 | 222,359 |
| Oct | 13,628,852 | 17,041,271 | 5,780,742 | 16,048,847 | 20,353,540 | 2,126,159 | 143,020 |
| Nov | 10,666,536 | 17,274,622 | 7,631,605 | 84,641,899 | 21,707,814 | 11,653,628 | 312,520 |
| Dec | 14,324,005 | 37,455,338 | 9,545,651 | 78,047,563 | 26,110,411 | 23,029,322 | 877,147 |
| Total | 160,364,062 | 236,127,657 | 207,596,466 | 319,819,678 | 410,003,936 | 239,169,839 | 62,488,219 |

China's Imports of Lao Logs by Volume and Month, 2013-2016 (m³)

| Month | 2013 | 2014 | 2015 | 2016 |
|-------|---------|---------|---------|---------|
| Jan | 6,886 | 51,896 | 13,668 | 20,083 |
| Feb | 6,752 | 46,455 | 10,555 | 14,285 |
| Mar | 8,608 | 74,461 | 25,940 | 23,572 |
| Apr | 12,005 | 69,303 | 28,067 | 29,921 |
| May | 8,285 | 46,848 | 25,871 | 26,757 |
| Jun | 12,753 | 44,893 | 19,136 | 11,350 |
| Jul | 15,660 | 30,470 | 16,621 | 8,803 |
| Aug | 18,259 | 23,794 | 17,619 | 4,031 |
| Sept | 14,816 | 27,740 | 18,768 | 3,512 |
| Oct | 21,171 | 16,235 | 17,702 | 5,715 |
| Nov | 27,668 | 12,191 | 19,103 | 6,623 |
| Dec | 52,676 | 13,070 | 21,453 | 6,812 |
| Total | 205,539 | 457,356 | 234,503 | 161,464 |

Annex 6: China's Imports of Lao Logs by Value and Month, 2013-2016 (m³)

| Month | 2013 | 2014 | 2015 | 2016 |
|-------|-------------|-------------|-------------|-------------|
| Jan | 8,088,832 | 84,028,630 | 25,829,406 | 26,701,953 |
| Feb | 9,489,774 | 69,574,589 | 18,746,039 | 20,516,374 |
| Mar | 12,133,701 | 132,097,534 | 36,199,849 | 18,217,340 |
| Apr | 17,416,805 | 116,337,155 | 36,756,308 | 14,098,747 |
| May | 9,778,124 | 80,561,656 | 29,912,824 | 17,315,728 |
| Jun | 20,193,768 | 78,967,852 | 26,273,966 | 14,677,197 |
| Jul | 24,476,478 | 56,248,316 | 25,743,044 | 12,374,199 |
| Aug | 27,976,822 | 42,762,716 | 27,488,979 | 6,295,359 |
| Sept | 21,504,318 | 48,920,453 | 27,709,261 | 5,743,178 |
| Oct | 32,057,326 | 28,099,113 | 25,799,948 | 9,942,927 |
| Nov | 40,917,067 | 22,025,695 | 26,181,648 | 12,379,522 |
| Dec | 85,237,229 | 20,583,440 | 30,592,342 | 11,426,544 |
| Total | 309,270,244 | 780,207,149 | 337,233,614 | 169,689,068 |

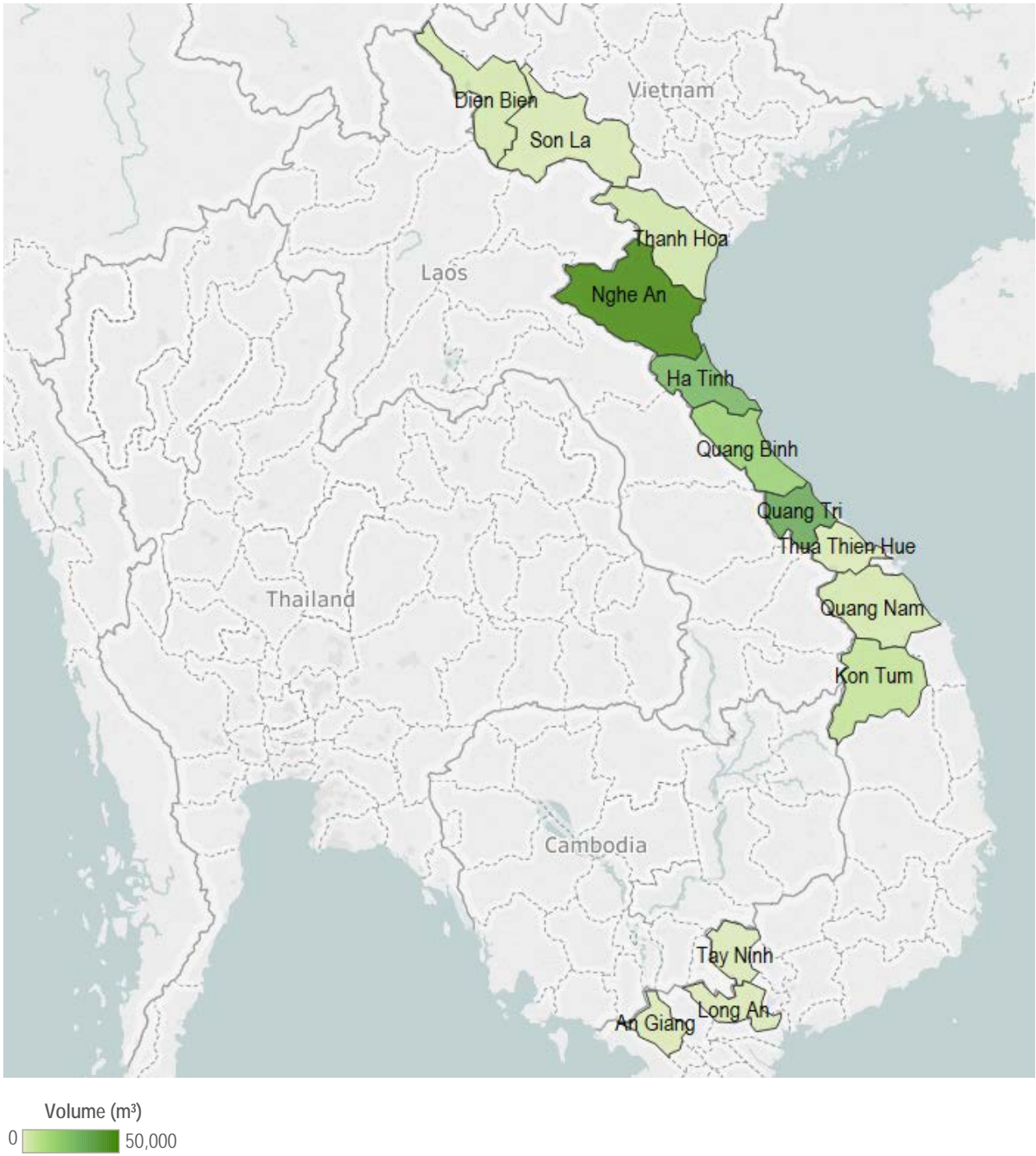
China's Imports of Lao Sawwood by Volume and Month, 2013-2016 (m³)

| Month | 2013 | 2014 | 2015 | 2016 |
|-------|--------|---------|---------|--------|
| Jan | 4,694 | 14,137 | 10,689 | 7,797 |
| Feb | 6,183 | 11,670 | 5,906 | 4,663 |
| Mar | 3,421 | 11,913 | 9,692 | 9,714 |
| Apr | 4,665 | 15,548 | 14,259 | 15,202 |
| May | 9,813 | 13,999 | 10,068 | 14,459 |
| Jun | 10,336 | 12,069 | 15,476 | 3,144 |
| Jul | 12,906 | 11,289 | 12,031 | 974 |
| Aug | 8,380 | 8,544 | 4,779 | 639 |
| Sept | 8,461 | 16,205 | 6,475 | 750 |
| Oct | 8,183 | 10,609 | 3,025 | 955 |
| Nov | 8,748 | 9,929 | 5,718 | 4,046 |
| Dec | 10,588 | 10,563 | 8,234 | 5,497 |
| Total | 96,378 | 146,475 | 106,352 | 67,840 |

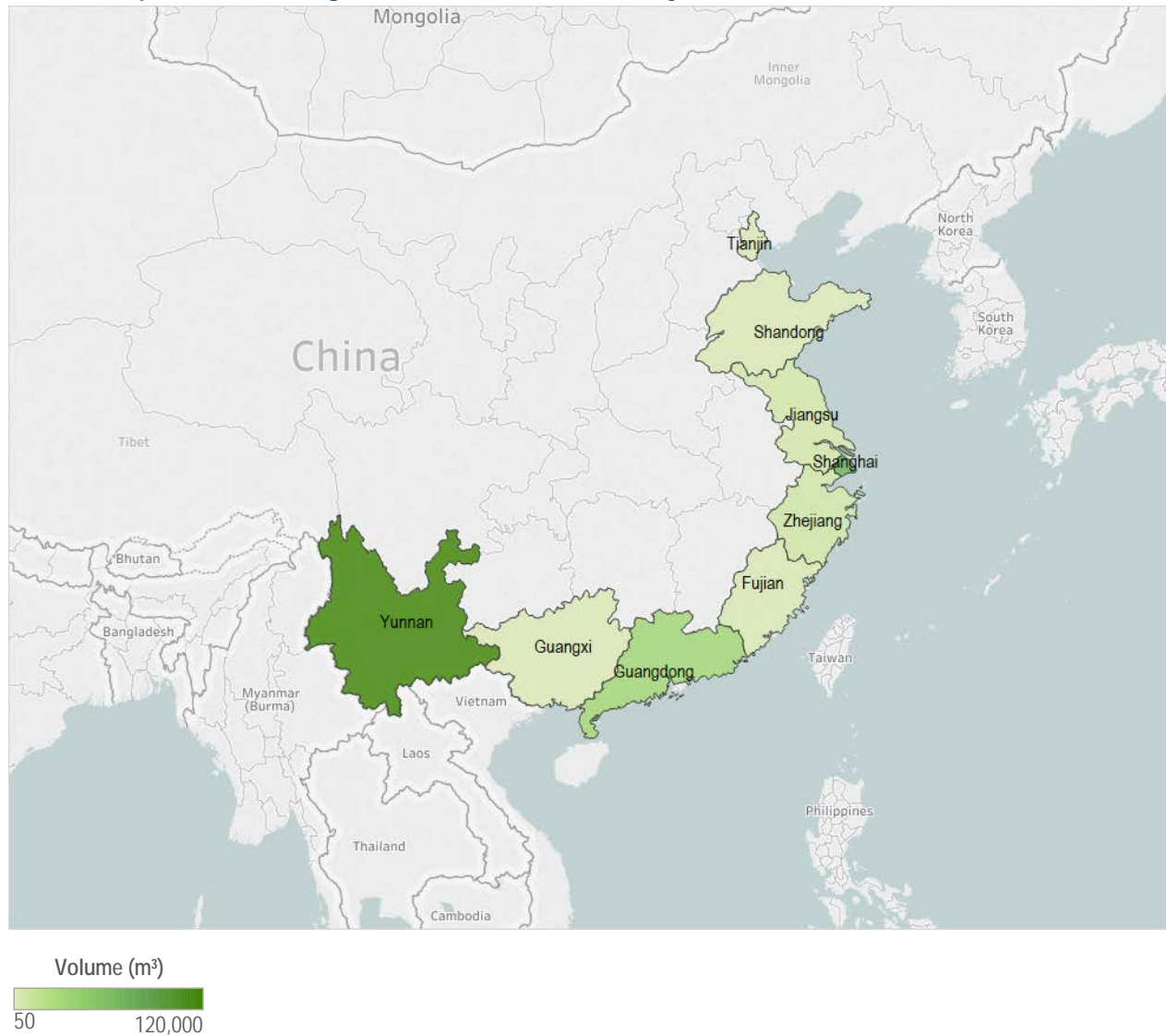
China's Imports of Lao Sawwood by Value and Month, 2013-2016 (m³)

| Month | 2013 | 2014 | 2015 | 2016 |
|-------|-------------|-------------|-------------|------------|
| Jan | 7,073,953 | 24,563,878 | 21,263,725 | 9,526,998 |
| Feb | 9,771,434 | 19,621,770 | 10,552,157 | 7,074,769 |
| Mar | 4,332,835 | 20,754,242 | 14,622,458 | 8,732,059 |
| Apr | 6,325,280 | 27,015,491 | 8,396,545 | 7,564,896 |
| May | 6,389,092 | 21,472,103 | 7,921,106 | 8,403,438 |
| Jun | 7,923,981 | 20,239,089 | 12,377,256 | 3,086,394 |
| Jul | 12,927,547 | 16,556,166 | 13,444,193 | 1,043,897 |
| Aug | 9,684,871 | 12,596,035 | 7,181,010 | 894,766 |
| Sept | 9,403,842 | 27,132,946 | 10,540,251 | 1,073,475 |
| Oct | 12,078,207 | 16,655,424 | 5,152,653 | 1,458,963 |
| Nov | 14,771,541 | 17,210,861 | 8,336,579 | 3,485,358 |
| Dec | 17,845,568 | 20,584,429 | 12,474,938 | 3,433,316 |
| Total | 118,528,151 | 244,402,434 | 132,262,871 | 55,778,329 |

Vietnam's Imports of Lao Logs and Sawnwood in 2016 by Province



China's Imports of Lao Logs and Sawwood in 2016 by Province





Pioneering Finance for Conservation

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Promoting development of sound, science-based, and economically sustainable mitigation and no net loss of biodiversity impacts

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Communities Initiative

Strengthening local communities' capacity to secure their rights, manage and conserve their forests, and improve their livelihoods

Ecosystem Marketplace

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Forest Policy, Trade, and Finance Initiative

Supporting the transformation toward legal and sustainable markets for timber and agricultural commodities

Public-Private Finance Initiative

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Supply Change

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