

# **ANNEX 1** Methodology

#### Data

Unless otherwise stated, data for this report were sourced from the General Administration of Customs, People's Republic of China ("China Customs").

### **Product Scope**

For the purposes of this report, "forest products" refers to goods traded under the following HS codes:

#### Table 4 | HS codes analyzed

Category	HS code	Description	
Timber products	440111, 440112, 440121, 440122, 440131, 440139, 440140	Fuel wood, wood chips, and wood pellets (collectively referenced as "wood chips")	
	4402	Charcoal	
	4403	Logs	
	4404	Hoopwood	
	4405	Wood wool/wood flour	
	4406	Sleepers	
	4407	Sawnwood	
	4408	Veneer	
	4409	Flooring, molding and strips	
	4410	Particleboard	
	4411	Fiberboard	
	4412	Plywood	
	4413	Densified wood	
	4414	Wooden frames	
	4415	Packing cases and pallets	
	4416	Casks and barrels	
	4417	Tools	
	4418	Joinery products	
	4419	Tableware and kitchenware	
	4420	Marquetry	
	4421	Other articles of wood	
	940161, 940169, 940330, 940340, 940350, 940360	Wood furniture	

Category	HS code	Description
Pulp and paper (P&P) products	4701	Mechanical wood pulp
	4702, 4703, 4704	Chemical wood pulp
	4705	Mech-chem wood pulp
	4706	Recycled paper
	4707	Wastepaper
	48	Paper and paperboard

#### **Legality Risk**

Forest Trends has developed a methodology<sup>1</sup> to create proxies and indicators of the risk that forest products could be sourced illegally from a particular supplier country.

In addition to Forest Trends' indicators of national governance and harvest risk, this paper also examines trade in countries classified by the World Bank FCS, as an indicator of the risk that trade and associated revenues therefrom could be fueling violent conflict.

Finally, Forest Trends maintains a database of FPERs, which compiles national and subnational laws restricting the export of logs and sawnwood.<sup>2</sup> FPERs range from comprehensive bans on all raw or crudely processed forest products, to more narrow, partial restrictions targeting certain types of timber, specific tree species, or distinct regions of harvest. In some countries, the wording of the FPER policies may be ambiguous or difficult to interpret. In some cases, government officials can grant exemptions under special circumstances. For this reason, it can be difficult to determine if the import of timber from a FPER country is illegal. Nevertheless, the presence of an FPER signals a need for additional risk assessment and mitigation actions to ensure that the import of certain products from these countries does not violate the specific laws and regulations of the source country.

#### Caveats

We note several important caveats in our analysis of trade data. Data are accurate as of the date they were obtained by Forest Trends; Customs authorities will regularly revise already-reported data, but our experience is that this does not significantly change the analysis. China Customs provides data to the 8-digit HS code level of detail, which often correspond to species or species groups, but may in reality, encompass a broad range of products (e.g., "other tropical hardwood logs"). This makes species-level analysis challenging. China Customs no longer sells or otherwise provides data to the level of individual shipments; therefore, this paper does not analyze specific importers, exporters, or other corporate entities manufacturing and/or trading in forest products.

<sup>&</sup>lt;sup>1</sup> Available at https://www.forest-trends.org/fptf-ilat-home/.

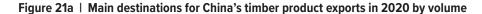
<sup>&</sup>lt;sup>2</sup> Forest Trends' legislative database is available to the public and updated regularly at https://www.forest-trends.org/known-forest-product-export-restrictions/

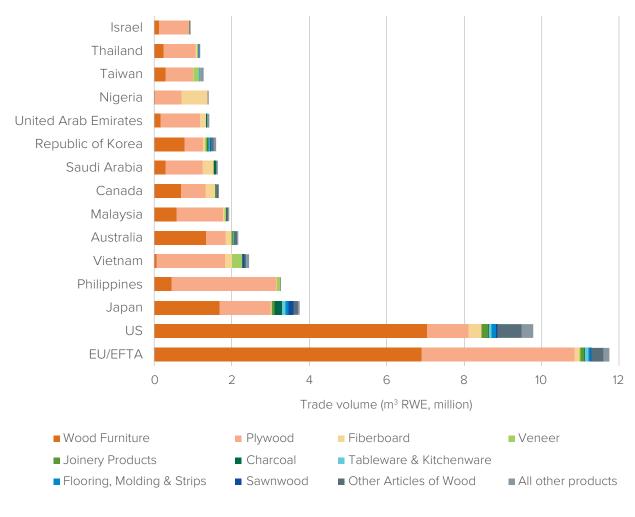
## ANNEX 2

# **Detailed Analysis of China's Forest Product Trade**

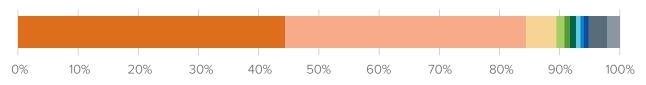
#### **EXPORTS**

#### **Timber Products**









United Arab Emirates Taiwan Singapore South Africa **Philippines** Saudi Arabia Vietnam Malaysia Hong Kong Canada Republic of Korea Australia Japan EU/EFTA US 2 0 4 6 8 10 Trade volume (m<sup>3</sup> RWE, million) ■ Wood Furniture Plywood Marguetry Joinery Products ■ Tableware & Kitchenware ■ Fiberboard ■ Frames Veneer ■ Flooring, Molding & Strips Other Articles of Wood ■ All other products % of total trade volume 0% 10% 20% 30% 40% 60% 70% 80% 90% 100% 50%

Figure 21b | Main destinations for China's timber product exports in 2020 by value

#### Wood Furniture

The main destinations for China's wood furniture exports were the US and the EU/EFTA, followed by Japan, Australia, and Hong Kong (Figure 21). Wood furniture exports to the US rose every year from 2011 to 2018, (Figure 22), before falling sharply at the end of the decade. Meanwhile, furniture exports to the EU/EFTA rose gradually through the decade (apart from a dip in 2016), so that by 2020, the export volume to the EU/EFTA was on a par with the US; the export value of the EU/EFTA was one-third lower due to the preference of the US market for higher value furniture. In regards to other key destinations, there were significant increases in the export volumes sold to Australia (74%), Republic of Korea (139%), and Malaysia (159%), but little change in export volumes to Japan and Canada.

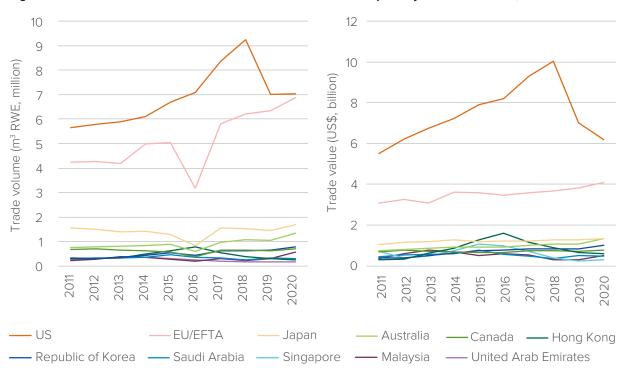


Figure 22 | Trends in main destinations for China's wood furniture exports by volume and value, 2011-2020

#### **Plywood**

The US was the main destination for China's plywood exports in most years until 2017, but was then overtaken by the EU/EFTA (Figure 23). From 2011 to 2016, the export volume and value to the US increased by 49% and 70%, respectively. But since the 2016 peak, China's plywood exports to the US have been in freefall: by 2020 the export volume was only one-fifth and the export value 23% of 2016 levels; the US ended the decade fourth in importance for export volume and third for export value. Another observation of note is that the sharp downward trend preceded the trade war. In contrast, China's plywood exports to the EU/EFTA fell only slightly over the decade. With the collapse of the US market, the EU/EFTA has become the main destination for China's plywood.

By 2020, Philippines was the second main market by both volume and value, having started the decade fifth in importance – from 2011 to 2020 plywood exports to the Philippines rose eightfold in volume and over sixfold in value (despite a slight fall from 2019 to 2020). Other countries that significantly increased their market share were Vietnam, Malaysia and, to a lesser extent, Taiwan, Thailand, Canada, and Australia. Export volumes to Vietnam and Malaysia were up 250% and almost 400%, respectively; by 2020 Vietnam and Malaysia were the third and fifth (respectively) main destinations for China's plywood exports. The main countries with a reduced market share were Japan (down 40%) and Republic of Korea (down 69%). There was also a slight fall in plywood exports to the two main Middle East markets – UAE and Saudi Arabia. These data show that several emerging Asian economies (but not the Middle East) have substituted the increasingly demanding "Global North" markets for China's plywood. Over the decade, the combined plywood export volume to the US, EU/ EFTA, Japan, and Republic of Korea fell 4.4 million m<sup>3</sup> RWE, while the combined export volume to Philippines, Vietnam, Malaysia, Thailand, and Taiwan rose by 4.8 million m<sup>3</sup> RWE.

Figure 23 | Trends in main destinations for China's plywood exports by volume and value, 2011-2020

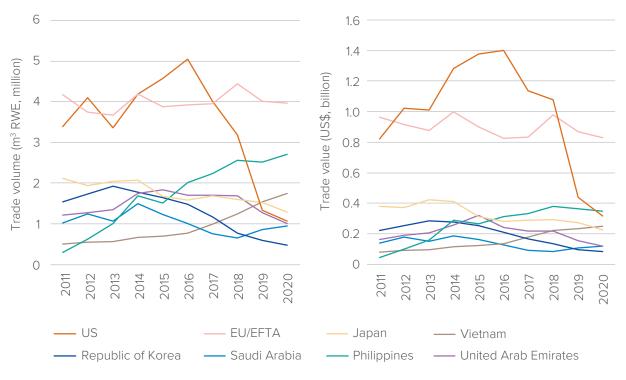
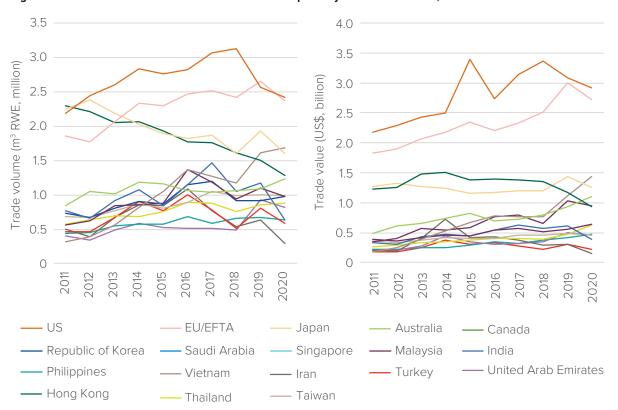


Figure 24 | Trends in China's main markets for P&P exports by volume and value, 2011-2020





#### **Pulp and Paper Products**

For most of the decade, the US was the main market for China's P&P exports, although by the end of it the EU/EFTA had caught up. P&P exports to the US rose steadily in volume and value to a peak in 2018 (Figure 24), but then fell sharply in volume from 2018-2020 (the export value fell more gradually due to the rising price of paper). The other main markets were regional, with Vietnam the fastest rising destination. The P&P export volume to Vietnam rose 441% over the decade, making Vietnam the third main market in 2020, up from 18th in importance (by volume) in 2011. Export volumes also rose to Malaysia (by 74%), Thailand (54%), Australia (47%), Taiwan (45%), and Republic of Korea (34%). Export volumes fell in Hong Kong (44%), Japan (29%), and India (17%).

#### **IMPORTS**

#### **Timber Products**

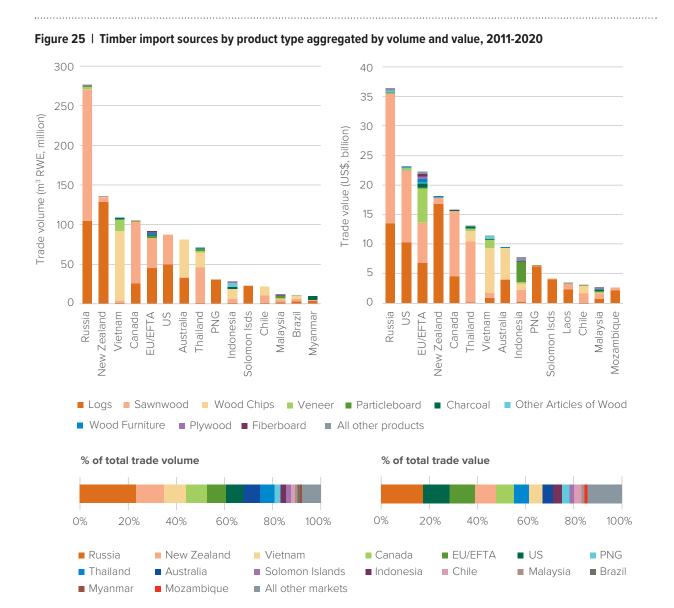
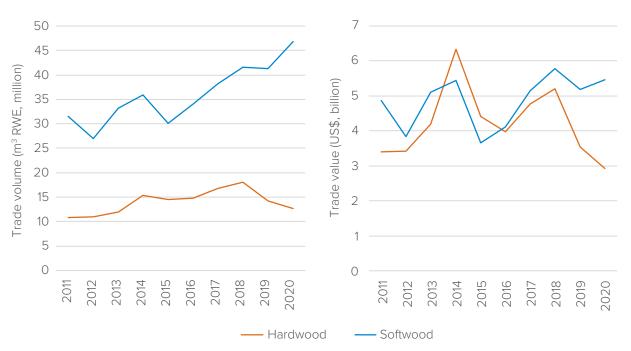


Table 5 | Main sources of China's timber imports by volume, 2011-2020

L	.ogs	Saw	nwood	Woo	d chips	Total tim	ber imports
Source country	% share	Source country	% share	Source country	% share	Source country	% share
New Zealand	28.7	Russia	42.0	Vietnam	47.5	Russia	23.3
Russia	23.3	Canada	19.8	Australia	25.8	New Zealand	11.4
US	11.1	Thailand	11.1	Thailand	10.8	Vietnam	9.2
EU/EFTA	10.0	EU/EFTA	9.5	Indonesia	6.3	Canada	8.8
Australia	7.3	US	9.3	Chile	6.0	EU/EFTA	7.7
PNG	6.7	Chile	2.4	Brazil	2.1	Australia	6.8
Canada	5.7	New Zealand	1.5	Malaysia	0.7	Thailand	5.9
Solomon Islands	5.0	Indonesia	1.4	US/Russia	0.3	PNG	2.6

Figure 26 | China's hardwood and softwood log imports by volume and value, 2011-2020



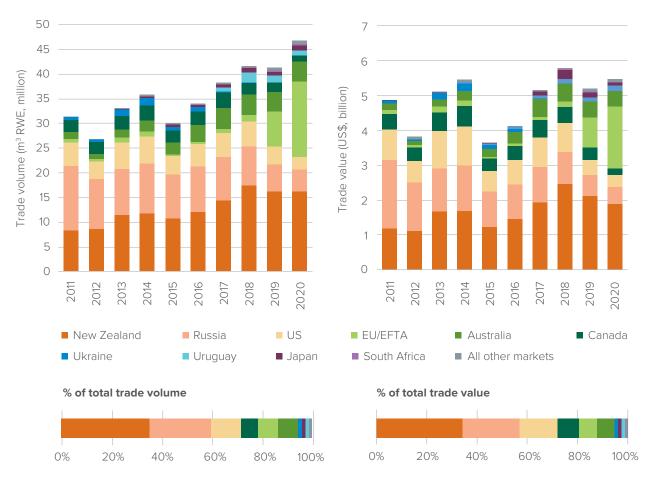


Figure 27 | Main source countries for China's softwood log imports by volume and value, 2011-2020

Import values were more volatile with 2014 and 2018 peaks, especially for logs. Although logs were still the main timber import in 2020 (42% of volume and 40% of value), their relative importance (in volume) has fallen. The log import value was only slightly higher in 2020 than 2011, despite a 40% increase in volume, reflecting the shift to softwoods and other lower value species (e.g., Thai rubberwood used for furniture making). This appears to have been driven by changing domestic demand preferences (e.g., away from expensive redwood furniture) and possibly by the increasing scarcity/prices of some tropical timber species. The sharp fall in import values of logs and sawnwood from 2018 to 2020 similarly signaled a shift to lower value species and sources.

Russia's relative importance as a source country has fallen (Figure 25): in 2020 it supplied 21% of the import volume compared to 26% in 2011, mainly due to a downturn from 2018 to 2020. In contrast, the import volume from the EU/EFTA rose very sharply (168%) from 2018 to 2020 as other major sources (Russia, Canada, Australia, New Zealand, and the US) contracted. In 2020, the EU/EFTA replaced Russia as the main source country by import value. The import volume and value from Canada, the second source in 2011, more than halved over the decade. The US was China's fourth largest source of timber by volume in 2011 but dropped to seventh in 2020. Over the decade the timber import volume and value from the US both fell 29% and from 2018 to 2019 it halved in value. Apart from the EU/EFTA, the

main countries to take advantage of China's rising demand for wood were Vietnam and Australia<sup>3</sup> import volumes from both countries rose 177% over the decade. Among smaller suppliers, the timber import volume rose 1043% from Brazil and 282% from Chile.

#### Logs

Softwood log imports rose significantly over the decade, while the hardwood log import volume in 2020 was not much higher than 2011. This divergence of trends was almost entirely in the second half of the decade. From 2015 to 2020, softwood log imports rose 56% in volume and 50% in value, while hardwood log imports fell slightly in volume (despite the 2018 peak) while rising in value by 34%. In 2020, softwood log imports comprised 79% of the log import volume compared to 67% in 2015. These trends continued in 2021 – in the first half of 2021 softwood log imports rose 41% in volume and 75% in value (import prices were up 24%), while hardwood log imports fell by 1% in volume and rose 13% in value (YoY) (ITTO 2021a).

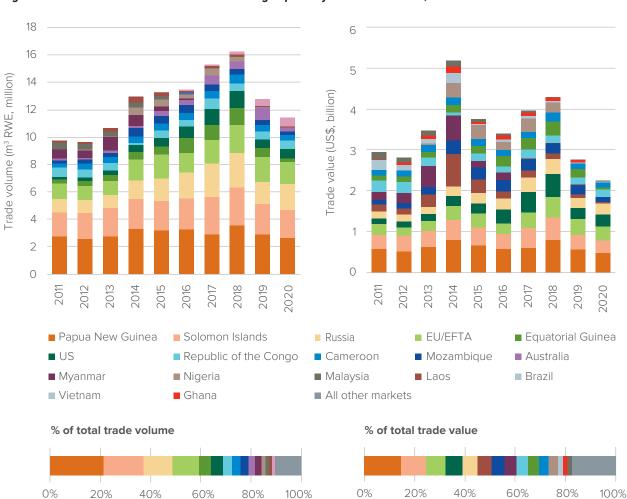
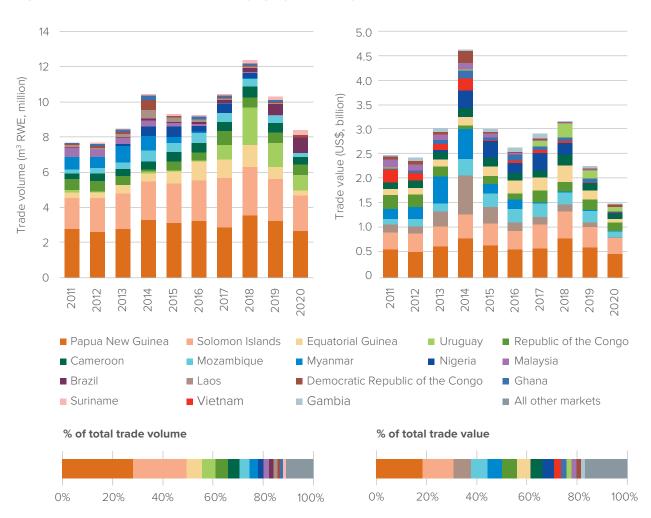


Figure 28 | Main sources of China's hardwood log imports by volume and value, 2011-2020

<sup>&</sup>lt;sup>3</sup> In late 2021, however, log imports from Australia fell to almost zero amid the escalating geo-political tensions; in November 2021 China imposed an import ban on Australia's logs, officially citing pest incidence.

**Softwood:** The main sources for China's softwood log imports by volume over the decade were New Zealand (35%), Russia (24%), the US (12%), EU/EFTA (8%), Australia (8%), and Canada (7%). A big change over the decade (Figure 27) was the threefold fall in volume, and 75% reduction in value, of softwood logs from Russia – in 2011 Russia supplied 10% of China's import volume compared to 42% in 2020. Meanwhile, the softwood log import volume from the EU/EFTA rose twentyfold, almost doubled from New Zealand, and rose threefold from Australia, while declining significantly from the US (by 44%) and Canada (51%). Among smaller suppliers, imports rose very fast from Japan (eightyfold) and Uruguay (ninefold).

Figure 29 | Main "tropical countries" supplying logs to China by volume and value, 2011-2020



In 2021, there was a surge in spruce log imports from Europe due to a major disease outbreak caused by the spread of the European spruce bark beetle. It was estimated that 500 million m³ of spruce timber would be harvested from 2021 to 2024 (ITTO 2021a). Consequently, softwood log imports from Germany rose 119% in the first half of 2021 (YoY) so that Germany became the second (to New Zealand) most important supplier of softwood logs to China. Softwood log imports also rose sharply in the first half of 2021 from Brazil (1,622%), Uruguay (467%), and New Zealand (58%). It was predicted that large

quantities of spruce timber would come from Russia, much of it via the new China-Europe Rail Express. This has cut the previous journey time by two-thirds; the first timber train arrived in Xinxiang in late summer (of 2021) with 2500 m<sup>3</sup> timber (ITTO 2021c).

**Hardwood:** In contrast to softwood log imports, the main sources for hardwood log imports changed little (Figure 28) – PNG, Solomon Islands, Russia, and the EU/EFTA accounted for 64% of the hardwood log import volume in 2011 and 61% in 2020. Over the decade, the relative share of PNG fell slightly (from 26% in 2011 to 21% in 2020), the Solomon Islands was unchanged (16%), and the shares of Russia and EU/EFTA rose slightly. Among the second rank of source countries, the import volumes from Cameroon and Australia rose 30% and 140%, respectively, and fell slightly from the Republic of the Congo, Equatorial Guinea and Mozambique. The import volume of hardwood logs from the US rose rapidly to a peak in 2018, but then almost halved in 2019.

**Tropical logs:** China was the destination for about two-thirds of internationally traded tropical logs, according to Global Witness (2019). PNG and the Solomon Islands were the dominant sources of logs from tropical forested countries (i.e., those from sub-regions with significant tropical forest cover; Figure 29). Between them they supplied half of the log import volume from tropical forested countries over the decade; next in importance were Equatorial Guinea (6%), Uruguay (5%), Republic of the Congo (5%), Cameroon (5%), Mozambique (4%), and Myanmar (3%). The annual contribution of tropical logs to China's total log import volume was mainly in the range of 18-21%.

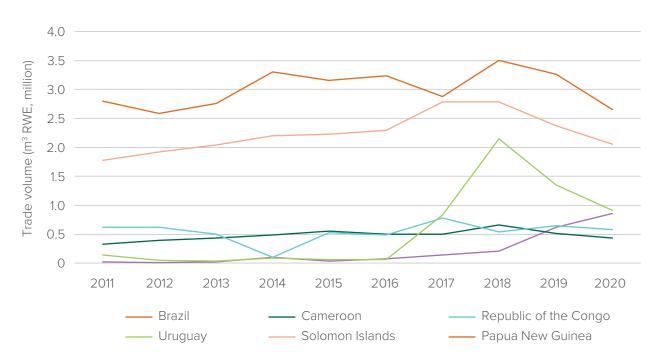


Figure 30 | Trends in log imports from main tropical source countries by volume, 2011-2020

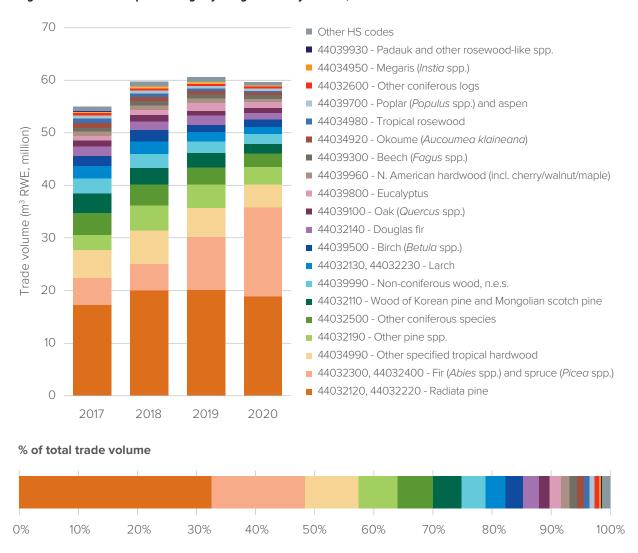


Figure 31 | China's imports of logs by 8-digit codes by volume, 2017-2020

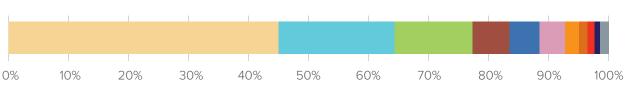
After rising to a peak in 2018, import volumes from PNG, the Solomon Islands, and especially Uruguay, fell sharply at the end of the decade (Figure 30). The fastest rising tropical country sources were Brazil (eightfold rise in import volume from 2016 to 2020), Uruguay (sevenfold increase over the decade), Suriname (fourfold increase), and Democratic Republic of Congo (almost twofold). Conversely, log imports fell sharply from Myanmar (by almost 100% following a log export ban), Malaysia (99%), and Laos (74%). in contrast to the other main sources, China increased its log imports fourfold (by volume) from Brazil (about three-quarters of this was hardwood logs) from 2018-2020.

These trends continued in 2021. In the first half of 2021, log import volumes fell from PNG (26% YoY), the Solomon Islands (6%), Mozambique (52%), Equatorial Guinea (55%), Democratic Republic of Congo (62%), and Suriname (45%), while imports from Republic of the Congo and Cameroon were flat. Following the military coup, log imports from Myanmar rose 39% (ITTO 2021a).

Analysis of China's log imports by 8-digit HS code revealed that in 2020 radiata pine (Pinus radiata) logs comprised 30% of the import volume (and 25% of the value), while fir (Abies) and spruce (Picea) logs made up 28% of the volume (and 23% of the value). Radiata pine log imports were already important in 2017 (Figure 31), fir and spruce logs comprised only 8% before quadrupling in volume from 2018 to 2020. The next categories in importance were "other specified tropical wood" (7% of 2020 import volume), "other pine" wood (6%), and "other coniferous wood" (4%).

16 14 12 Trade volume (m<sup>3</sup> RWE, million) 10 Other HS codes ■ 44039930 - Padauk and other rosewood-like spp. 8 ■ 44032600 - Other coniferous logs ■ 44032120, 44032220 - Radiata pine 6 44034950 - Megaris (Instia spp.) 44039800 - Eucalyptus 44034980 - Tropical rosewood ■ 44034920 - Okoume (*Aucoumea klaineana*) 44032190 - Other pine spp. ■ 44039990 - Non-coniferous wood, n.e.s. 44034990 - Other specified tropical hardwood ()2017 2018 2019 2020 % of total trade volume

Figure 32 | China's imports of logs from tropical sub-regions by 8-digit codes by volume, 2017-2020



The only entry for tropical timber in the 8-digit code volume data was "other specified tropical wood." But when only "tropical sub-regions" were specified, several tropical timber species were noted: 44% of the log import volume in 2020 was "Other specified tropical wood", 5% was okoume (Aucoumea

<sup>&</sup>lt;sup>4</sup> Tropical sub-regions are defined as the following geographical areas: the Caribbean, Central Africa, Central America, East Africa, Oceania, Other Oceania, South America, South Asia, Southeast Asia, Southern Africa, and West Africa.

klaineana), 5% was "tropical rosewood" (hongmu spp.), 3% was Intsia spp. (Mengaris), and 0.3% was padauk (Pterocarpus spp.). These data also revealed a sharp downturn in tropical log imports (Figure 32), especially of rosewood (hongmu) species, at the end of the decade: from 2017 to 2020 the import volume of "Other specified tropical wood" was down 17%, tropical rosewood fell 61%, padauk was down 81%, and okoume fell 52%. This downward trend continued in 2021, with tropical log import volume down 6% in the first half of 2021 and falling to 14% in the third quarter of 2021 (YoY) (ITTO 2021a; ITTO 2021d).

The downward trend in China's tropical log imports continued in 2021. In the first half of 2021, there was an 8% fall in the tropical log import volume and a 4% fall in its value. It was also reported (ITTO 2021a) that in the first half of 2021 the average price of tropical logs rose 14%.

#### Sawnwood

Softwood sawnwood imports rose in the second half of the decade while hardwood sawnwood imports fell (Figure 33). From 2015 to 2020, softwood sawnwood imports rose 45% in volume and 29% in value, while hardwood imports rose 1% in volume and fell 20% in value. In 2020, softwoods comprised 73% of the sawnwood import volume compared to 66% in 2015. The steep fall in the sawnwood import value from 2018 to 2019 was due to the fall in imports from the US. It can also be noted that from 2019 to 2020 there was a reversal of the trend in that the softwood sawnwood import volume fell while the hardwood sawnwood import volume rose.

Trade volume (m<sup>3</sup> RWE, million) Trade value (US\$, billion) Hardwood -Softwood

Figure 33 | China's hardwood and softwood sawnwood imports by volume and value, 2011-2020

This trend continued in 2021; in the first half of 2021, softwood sawnwood import volume fell 24% and hardwood sawnwood import volume rose 3% (YoY). Total sawnwood imports also fell in volume (17%) and value (3%). Due to a "resumption of production," oak import volumes rose from the main suppliers, France, the US, and Russia. It was also reported that sawnwood import prices increased in the first half of 2021 due to a combination of recovering from COVID-19, reduced supply from some countries (most notably Russia and Canada), and container ship problems (ITTO 2021e).

Softwood: Russia has emerged as China's primary source of softwood sawnwood (Figure 34). In 2020, it supplied 58% of the import volume and 59% of the value. By comparison, China's main source in 2011 was Canada (46% of volume) followed by Russia (at just 36%) and the US (8%). The other main sources in 2020 were the EU/EFTA (15% of import volume) and Canada (12%). Over the decade, the import volume of softwood sawnwood from Russia almost tripled and from the EU/EFTA it rose almost eightfold. In contrast, imports from Canada, the US, and New Zealand fell.

Among smaller suppliers, Ukraine, Belarus, Brazil, Argentina, and Uruguay rapidly increased their market shares over the decade. In the first half of 2021, softwood sawnwood volumes from Russia and Canada fell 21% and 51%, respectively (YoY) and rose sharply from Brazil (121%) and New Zealand (106%) (ITTO 2021e).

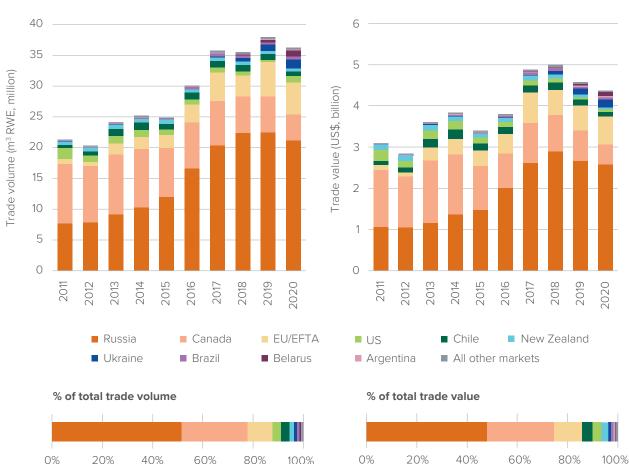


Figure 34 | Main sources of China's softwood sawnwood imports by volume and value, 2011-2020

**Hardwood:** Thailand was the main source of China's hardwood sawnwood imports by volume (Figure 35) through the decade (34%), while the US was most important by value (28%). The import volume from Thailand tripled from 2012 to 2017 before falling back from 2018 to 2020 (although to a level still double that of 2011). From 2011 to 2017, the import value from the US more than doubled, but then halved from 2018 to 2019. The third main supplier through most of the decade was Russia (11%). In the second rank of suppliers, the fastest risers were Gabon (334% from 2011 to 2020), Vietnam (82%), and the EU/EFTA (61%). In contrast, import volumes fell from Indonesia (by 56%), the Philippines (40%), and Malaysia (39%). Indonesia dropped from the third main source in 2011 to sixth in importance in 2020.

20 6 18 5 16 Trade volume (m³ RWE, million) Frade value (US\$, billion) 14 12 10 8 2 6 4 2 0 0 2019 2019 2013 2014 2015 2016 2017 2018 2020 2012 2013 2014 2015 2016 2017 2018 2020 2012 ■ Thailand US ■ EU/EFTA ■ Philippines Russia Indonesia Gabon ■ Cameroon ■ Myanmar Malaysia ■ Vietnam Canada All other markets Mozambique Peru Laos % of total trade volume % of total trade value 0% 0% 20% 40% 60% 80% 100% 20% 40% 60% 80% 100%

Figure 35 | Main sources of China's hardwood sawnwood imports by volume and value, 2011-2020

#### Woodchips

China's woodchip imports doubled in volume in the last decade (Figure 36). The import volume from Vietnam, the main source country, rose 150%, increasing Vietnam's market share from 48% in 2011 to 58% in 2020. The import volume from Australia also rose sharply until 2016, levelled off, then fell sharply from 2018 to 2020. Meanwhile, woodchip imports from Thailand and Indonesia also fell sharply: from Thailand the import volume fell 54% over the decade, reducing its market share to only 4% in 2020, and Indonesia became an insignificant source in 2020 (in 2011 its market share was 15%).

Conversely woodchip imports from Chile and Brazil, which were insignificant suppliers until mid-decade, rose rapidly: in 2020, Chile contributed 9% of the import volume and Brazil 4%. From 2018-2020, the woodchip import volume from Brazil rose 74% to over one million m<sup>3</sup> RWE.

16 14 million) 12 Trade volume (m³ RWE, 10 8 6 4 0 2012 2013 2014 2015 2016 2017 2018 2019 2020 2011 — Chile —— Brazil —— All other markets Vietnam — Australia — Thailand — Indonesia % of total trade volume 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Figure 36 | Main sources for China's woodchip imports by volume, 2011-2020

#### **Pulp and Paper Products**

The main sources for China's P&P imports changed significantly over the last decade. The US (29% of volume), EU/EFTA (20%), Canada (13%) and Japan (8% of volume) were main sources in 2011. From 2016 onward, these sources declined, especially the US (Figure 38). This trend was mirrored by rising imports from Brazil and Indonesia; P&P import volumes from both countries rose 250% over the decade. Brazil became the main source by volume in 2019 (and was only just below the EU/EFTA in value) and imports from Indonesia surged 44% from 2019 to 2020.

While the fast rise in P&P imports from Indonesia did not raise a legality issue, there were concerns about the deforestation impacts, both past and future. This was firstly because a significant proportion of Indonesia's current pulp production and exports is from plantations established on drained peatlands between 2004 and 2012 (TRASE 2021). The future deforestation threat relates to ambitious plans for pulp plantations involving expansion into Papua, one of Indonesia's main forest frontiers, with strong Chinese involvement. Nine Dragons Paper, China's biggest pulp company, was reported to be planning



a \$1 billion investment with the aim of producing 6 million tons of pulp per year (in 2019 Indonesia's total pulp production was 9 million tons). This was also a threat to indigenous land rights (Mongabay 2021).

China's P&P imports also grew rapidly from several smaller suppliers, more than doubling from Chile and Uruguay, and rising by 69% from Russia. In 2020 the main P&P suppliers by volume were Brazil (18%), Indonesia (14%), USA (13%), EU/EFTA (12%), Canada (11%), Chile (6%), Russia (5%) and Japan (4%). There has therefore been a clear trend of substitution of global north suppliers (except Russia) by Brazil, Indonesia, Chile, Uruguay, etc.

Figure 37 | Pulp and Paper imports by volume and value, 2011-2020 120 20 18 Trade volume (m³ RWE, million) 100 16 Trade value (US\$, billion) 14 80 12 60 10 8 40 6 20 2 0 0 2014 2015 2016 2018 2013 2015 2018 2017 2017 Chemical Woodpulp Wastepaper Paper Mech-Chem Woodpulp Recycled Paper Mechanical Woodpulp % of total trade volume % of total trade value 0% 20% 40% 60% 80% 100%

0%

20%

40%

60%

80%

100%

#### **US-CHINA TRADE**

#### **Exports from China to the US**

Figure 38 | Main sources of China's P&P imports by volume and value 2011-2020

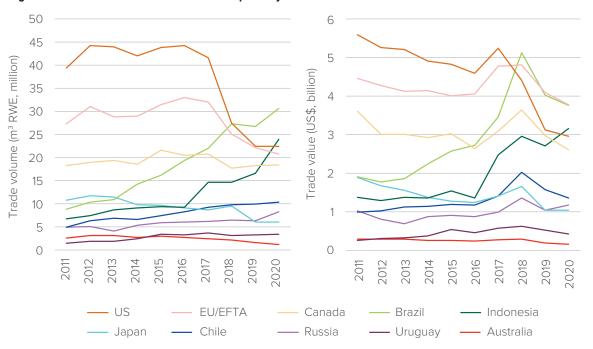
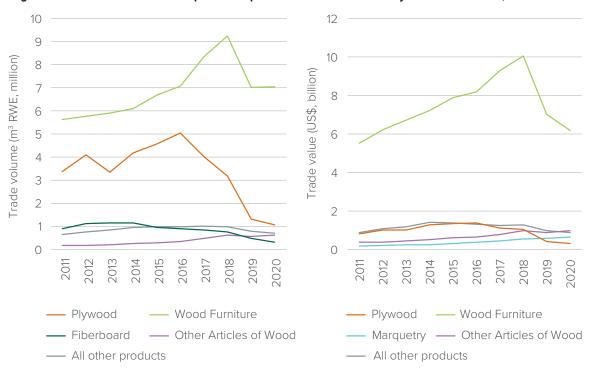


Figure 39 | Trends in main timber product exports from China to the US by volume and value, 2011-2020



The HS system in neither China nor the US adequately captures species-level data for all timber products, even at the 8- or 10-digit level, particularly for products beyond logs and sawnwood, for which codes are meant to distinguish the type of product (e.g., bedroom furniture). Forest Trends therefore submitted a Freedom of Information Act (FOIA) request in 2020 to the US Department of Agriculture's Animal Plant and Health Inspection Service to better understand what traders were declaring for timber products classified as being harvested in China on the Plant Declaration form (a requirement for products covered under the US Lacey Act). The Plant Declaration includes information on species and country of harvest. In analyzing the data obtained via FOIA, Forest Trends found that the US declared at least 95 genera covering at least 407 species as being harvested in China. The top ten genera are summarized in Table 6 below.

Table 6 | Top 10 genera listed by US importers as being harvested in China

Genus	Number of species	% of total species identified
Populus	32	15%
Eucalyptus	39	13%
Pinus	21	10%
Betula	19	9%
Acer	15	7%
Quercus	11	5%
Acacia	11	5%
Paulownia	5	2%
Phyllostachys	3	1%
Cunninghamia	1	0.45%

#### Imports from the US into China

China's log and sawnwood imports from the US fluctuated for most of the decade. Log imports were predominantly softwood, while sawnwood imports were mainly hardwood. From 2018 to 2019, these fell very sharply, with sawnwood imports more than halving in volume and value. From 2019 to 2020, there was a significant recovery in the sawnwood import volume, but not in value, reflecting a shift to lower-value species; log imports from the US, however, continued to fall. The timber import value from the US in 2019-2020 was below half of that of 2017-2018 (Figure 40).

<sup>&</sup>lt;sup>5</sup> The FOIA request submitted by Forest Trends asked for Plant Declaration data for 2016-2019 imports of four specific product categories (sawnwood/ HS4407, veneer/HS4408, flooring and molding/HS4409, and plywood/HS4412) where China was listed as the country of harvest. Forest Trends asked for data related to a specific set of 13 species and genera made up of mostly temperate hardwoods (e.g., Birches/Betula spp., Oaks/Quercus spp., Maples/Acer spp.).

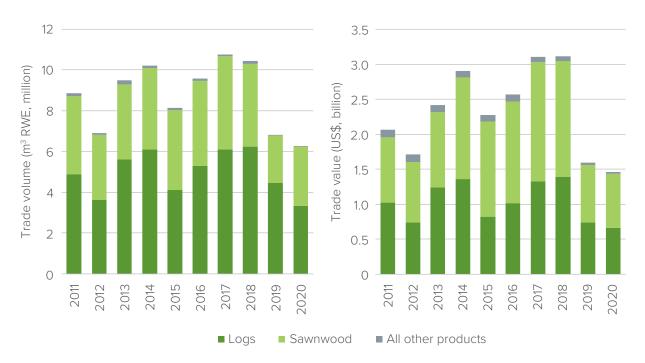


Figure 40 | China's timber product imports from the US by volume and value, 2011-2020

As shown by Figure 41, China's log imports from the US were dominated by coniferous softwoods, while sawnwood imports were mainly hardwood species, especially oak, cherry, walnut, maple, and ash.

China's P&P imports from the US, dominated by chemical woodpulp and wastepaper, fell sharply over the decade (Figure 42). In 2020, the import volume was down 43% and the import value fell 47%. The main cause was the wastepaper import quotas; by 2020 the import volume of wastepaper had fallen to one-third of the 2016 level. In contrast, chemical woodpulp imports from the US were on a slight upward trajectory and overtook wastepaper as the main P&P import by value in 2018. The import volume/value of paper from the US was relatively steady over the decade, except for a sharp rise (50%) in the import volume from 2019 to 2020, compared to the other P&P products.



Figure 41 | China's log (top) and sawnwood (bottom) imports from the US by volume, by 8-digit HS code (species group), 2017-2020

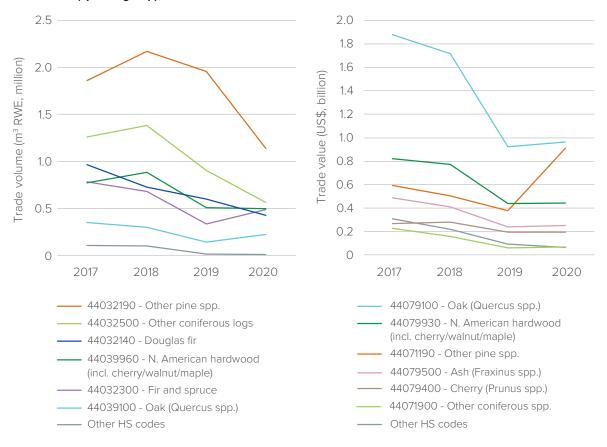
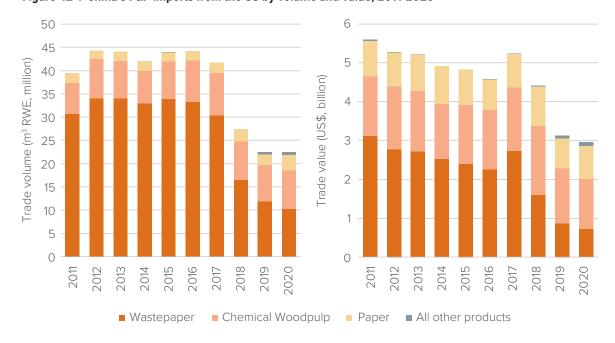


Figure 42 | China's P&P imports from the US by volume and value, 2011-2020



## ANNEX 3 US-China Trade War

### Timeline of tariff changes and other developments in the US-China trade war<sup>16</sup>

Date	Tariff changes and other developments
July 2018	US-China trade war began as US imposed 25% tariffs on US\$34 billion worth of Chinese imports, not including wood products; China retaliated by imposing 25% tariffs on 545 US goods.
August 2018	The US imposed 25% tariffs on a further US\$16 billion worth of Chinese goods; China responded by applying 25% tariffs on US\$16 billion worth of US goods.
September 2018	The US placed a 10% tariff on US\$200 billion worth of Chinese imports, including tropical sawnwood and veneer, tropical hardwood flooring and molding, tropical plywood, composite wood panels, various bamboo products, wooden seats, wooden furniture and furniture parts, and related timber imports; China responded with customs duties on US\$60 billion worth of US goods, including hardwood logs, veneer, wood composite panels, various finished wood products and furniture.
December 2018	Presidents Xi Jinping and Donald Trump called a truce in the trade war at G20 summit in Argentina
May 2019	After trade negotiations broke down, US increased tariffs from 10% to 25% on US\$200 billion worth of Chinese goods, including some timber/furniture items; China retaliated by increasing tariffs from 10% to 25% on US\$60 billion worth of US products, including hardwood logs and sawnwood.
June 2019	The two presidents again agreed to a trade war truce at the G20 summit in Japan
August 2019	The US announced that the planned levies on US\$455 billion worth of Chinese products were either delayed or removed, and China announced planned tariffs of 5-10% on US\$75 billion worth of US goods.
September 2019	US tariffs on more than US\$125 billion worth of Chinese imports began, but the US agreed to briefly delay new tariffs on US\$250 billion worth of Chinese goods.
October 2019	The US announced delay in planned tariff increase of 25-30% on US\$250 billion of Chinese goods.
January 2020	China and the US signed the Phase-One Trade Deal. This included a commitment by China to import US goods and services over 2020-2021 at least US\$200 billion in excess of the 2017 import bill. Timber products (logs and sawnwood) were included under manufacture products, but there was no guarantee they would be included in China's additional US imports (in practice China will only achieve a tenth of the target according to a recent report). The deal also included provisions to root out the sale of counterfeit goods, boost Chinese market access, and calls for China to strengthen intellectual property protection. The planned new tariffs were scrapped, and US import tariffs on US\$120 billion worth of Chinese exports were lowered to 7.5%. Tariffs on US\$250 billion worth of Chinese imports stayed in place.

For more details, see; "US-China trade war timeline: key dates and events since July 2018" (Mullen 2021), "U.S. and China sign phase one of a trade deal" (Dalheim 2020), "China extends hardwood tariff exemptions" (Dalheim 2021), "New research counts the costs of the Sino-American trade war" (The Economist 2022), multiple editions of ITTO Tropical Timber Market Report.

Date	Tariff changes and other developments
February 2020	China halved additional tariffs on US\$75 billion worth of US products imposed in 2019: tariffs on most logs and sawnwood were reduced to 5% (from 10%), and on the most popular sawnwood species, most wood-based panels, woodcrafts, and furniture to 2.5% (from 5%). China then exempted, until September 2020, 65 US imports from the tariffs originally imposed in May 2019, including several timber products:  Other oak logs (HS 44039100)  North American hardwood logs (HS 44039960)  Jointed-end, other oak sawnwood (HS 44079100)  Non-jointed-end, other oak sawnwood (HS 44079100)  Cherry sawnwood, with thickness over 6mm (HS 44079400)  Ash sawnwood, with thickness over 6mm (HS 44079500)  Other North American hardwood sawnwood with thickness over 6mm (HS 44079930)  These exemptions were later extended to April 2022.
May 2020	China announced a second batch of trade-war tariff exemptions covering 79 US products.
September 2020	Dozens of US imports from China were granted short extensions to previous tariff exemptions; China exempted additional tariffs on a batch of 16 US products for another year.
December 2020	President-elect Joe Biden told The New York Times he would not make any "immediate moves" to lift trade war tariffs.
February 2021	US Treasury Secretary Janet Yellen said that tariffs on China will be "kept in place."
July 2021	The 2020 Trade Deal did not address "fundamental problems" according to Yellen; as noted in The Economist, at the end of the Trade Deal US imports from China were only "fractionally lower than before it implemented tariffs").

## US Anti-dumping measures and China's timber exports

Foreign companies that price their products in the US market below the cost of production or below prices in their home markets are subject to antidumping duties (AD). The Antidumping Duty Law provides American businesses and workers with an internationally accepted mechanism to mitigate the harmful effects of unfair pricing of imports into the US. Countervailing duties (CVD) also mitigate the economic impact on domestic industries from imported goods found to have received government subsidies in their source country identified as inconsistent with WTO rules.

Dumping allegations, duty evasion and circumvention, including through "transshipment" of Chinese timber exports to the US through transit countries, are closely monitored by US CBP in conjunction with the Commerce Department. The Enforcement and Compliance Unit in the International Trade Administration of the Department of Commerce is responsible for prosecuting AD and CVD cases and has been very active during the US-China trade war. In 2019, CVDs averaged 16% and ADs ranged from 4.5% to 262%, with most Chinese producers facing antidumping duties of 39%.

A prominent case was brought by the American Kitchen Cabinet Alliance in 2019. In February 2020, the Department of Commerce determined that Chinese producers/exporters of wooden cabinets and vanities (valued at over US\$4 billion in 2018) sold the item in the US at "less than fair value" and also received countervailing subsidies. Consequently, almost all Chinese manufacturers faced a combined AD/CVD

cash deposit rate of about 59%, and cash deposits were required on all wooden cabinets and vanities imported from China. Following this case, the CBP found some cabinet importers were evading AD and CVD orders on Chinese products by transshipping them through Malaysia.

Another case involved a petition by the Coalition of American Millwork Producers, an alliance of wood molding and millwork producers, that sought to impose ADs and CVDs on wood moldings and millwork from China (and from Brazil). The petitioners estimated US\$215 million worth of these products were imported to the US from China (and US\$350 million from Brazil). This resulted in the Department of Commerce finding that Chinese (but not Brazilian) producers had sold dumped and subsidized wood moldings and millwork products to the US in violation of WTO rules. As a result, Commerce imposed ADs and CVDs on wood molding and millwork products from China. Not all cases have resulted in judgements in favor of the US petitioners. In December 2021, the Department of Commerce announced a final judgment on the eighth annual review of an antidumping and anti-subsidy investigation on multi-layered wood flooring from China. This resulted in a decision to apply a zero AD rate.





Forest Trends works to conserve forests and other ecosystems through the creation and wide adoption of a broad range of environmental finance, markets, and other payment and incentive mechanisms. This report was released by Forest Trends' Forest Policy, Trade, and Finance program, which seeks to create markets for legal forest products, while supporting parallel transformations away from timber and other commodities sourced illegally and unsustainably from forest areas.

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