



# Analysis of China's trade with the EU and VPA countries 2010-2019

This briefing was commissioned by the European Forestry Institute (EFI) as an output of the 2019 meeting of the Bilateral Coordination Mechanism (BCM) on Forest Law Enforcement and Governance (FLEG). The source of the data, unless otherwise indicated, is the General Administration of Customs, People's Republic of China. All data were compiled and analysed by Forest Trends.

## Key messages:

1. **China has, over the past twenty years, increasingly prohibited harvesting in its own natural forests, triggering a rise in imports of forest products.** Beginning in 1998, following concerns about declines in watershed functions resulting in massive floods, China began to introduce a series of increasingly strict forest protection measures. These culminated in a complete ban on logging in natural forests in 2017. Preliminary data from Forest Trends in 2019 indicate a near-complete halt in logging activity in natural forest areas known historically for high levels of timber harvesting.

With high demand for wood products continuing, China tried to increase domestic production from domestic plantations. But the gap in wood supply still required the wood products industry to increasingly import raw materials. Today, imports account for over half of China's timber supply.

**China's forest product imports reached historic highs in 2018 (by value) and 2017 (by volume), while exports remained stable through 2018, indicating increased domestic consumption.**<sup>1</sup> In the mid-aughts, a swift uptick in timber product exports led to a near-equal balance of imports and exports in 2006.<sup>2</sup> However, a gap began to grow rapidly, from under 1 million cubic metres (m<sup>3</sup>) round wood equivalent (RWE) in 2007 to 85 million m<sup>3</sup> RWE in 2019. For all forest products this trend extends back as far as 25 years. Data on domestic production, available as of 2018 when total wood consumption reached 557 million m<sup>3</sup> RWE, indicate that the total consumption gap (calculated as national production plus imports, minus exports) has grown by approximately 70% over the past decade.

2. **China's timber product import mix is still dominated by logs and sawnwood but is shifting to more semi-processed wood products.** Historically, China has largely imported primary materials, with virtually all high-value hardwood tropical species entering in the form of logs. The proportional import of sawnwood and other more partially processed wood products (veneer, particleboards) has grown as supplier countries enforce log export bans, taxes, or quotas, and embrace other incentives to keep value-added processing within their borders. In 2019, 41% of China's timber product imports were in log form (down from 51% a decade earlier), with another 37% in sawnwood form (up from 32% a decade earlier). Woodchips constitute an additional 15% of imports by volume and 10% by value.
3. **The pulp and paper import mix has shifted far more dramatically.** Imports of paper have plummeted since China banned waste imports (including recycled paper) in 2018, while pulp imports are increasing, topping 100 million m<sup>3</sup> RWE in 2019 compared to just 44 million m<sup>3</sup> RWE in 2010.
4. **China's direct forest product imports from countries implementing or negotiating a Forest Law, Enforcement, Governance and Trade (FLEGT) Voluntary Partnership Agreement (VPA) increased 155% by volume, and 106% by value between 2010-19**<sup>3</sup> By value, VPA country timber product imports represented 19% of China's total timber imports; VPA country pulp and paper imports represented 15% of China's total pulp and paper imports. Forest product imports from VPA countries hit record highs by volume in 2019, at 15 billion m<sup>3</sup> RWE, and were down slightly from the 2018 peak by value. The

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<sup>1</sup> The term "forest products" is used to refer to timber products (including furniture) plus pulp and paper. While the term "forest products" is often used more broadly to cover non-timber and non-wood products such as mushrooms, botanicals, and wildlife, for Forest Trends reports, "forest products" is used to refer to timber products plus pulp and paper products capture under Chapters 47 and 48 of the Harmonized System (HS).

<sup>2</sup> In this report, "timber" or "timber products" refers to products such as logs, panels and sawnwood captured under Chapter 44 (HS 4401-4420) and wood furniture (excluding seating) captured under HS Chapter 94.

<sup>3</sup> 15 tropical countries are currently in some stage of the FLEGT VPA process. Indonesia is the only country exporting FLEGT-licensed timber. Implementing countries include Cameroon, the Central African Republic, Ghana, Guyana, Honduras, Liberia, the Republic of the Congo, and Vietnam. Negotiating countries include Côte d'Ivoire, the Democratic Republic of the Congo, Gabon, Laos, Malaysia, and Thailand.

vast majority of forest product imports from VPA countries were shipped from Indonesia, Vietnam, and Thailand.

5. **The product mix of timber imports from VPA countries is also shifting dramatically away from raw materials.** In 2010 logs comprised nearly 40% of China's total imports from VPA countries; by 2019, this figure had fallen to 15%. Over the same time period the shares of sawnwood and woodchips have grown by 30%, but the largest increases are seen in wood furniture (98%) and "other articles of wood" (295%).

**China and the United States (US) are the largest importers of forest products from VPA countries.** Global imports of forest products from FLEGT-VPA countries reached \$41 billion in 2018.<sup>4</sup> Consumption of forest products from VPA countries has shifted over the past decade, with an overall increase of more than 50% since the financial crisis of 2008-09. China's market share of forest product imports from VPA countries has nearly tripled, from 9% in 2009 to 28% in 2018. Besides the top three importers – which in 2018 were China, the US, and European Union (EU) and European Free Trade Association (EFTA) Member States<sup>5</sup> – other top markets sourcing forest products from VPA countries are exclusively in the Asia-Pacific region, and include Japan, Republic of Korea, Singapore, India, Australia, Malaysia, and Vietnam. These top 10 importers comprise 88% of all forest product imports from VPA countries.

In contrast to China, EU+EFTA Member States' share of forest product imports from VPA countries fell by nearly half, from 19% to 10% from 2009 to 2018. In 2018, EU+EFTA markets imported \$5.8 billion in forest products from VPA countries, compared to \$9 billion imported by China and \$8.3 billion by the US. It is unknown, however, how much product entering China, the US, and other major manufacturing hubs in Asia, is eventually processed and re-exported to Europe.

**More than half of China's timber product exports were bound for markets regulated to exclude illegal timber.** In 2019, 52% of China's timber product exports were bound for the nine countries with regulatory measures aiming to exclude illegally sourced timber that are currently being implemented.

The Republic of Korea joined countries with existing regulatory import measures (US, EU Member States, Australia, and Japan), when it passed implementing standards in 2018. Trade to regulated markets peaked at 60% in 2018 but dropped in 2019 mainly due to a decrease of more than 4.6 million m<sup>3</sup> RWE of exports to the US.

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<sup>4</sup> Full 2019 data for the global forest product trade is not yet available. Data for other countries outside of China was sourced from UN Comtrade, compiled and analyzed by Forest Trends.

<sup>5</sup> For the purposes of this analysis, the term "EU+EFTA" is used to identify European Union Member States (EU MS) plus the four members of the European Free Trade Association (Iceland, Liechtenstein, Norway, and Switzerland). The United Kingdom is still included as an EU MS, as Brexit was not ratified by UK Parliament until 31 January 2020.

As the global consensus is increasingly favouring demonstrably legal timber, Chinese industry will need to adapt to requirements in markets excluding illegal timber if they wish to maintain market access in these regulated jurisdictions.

6. **Forest product exports to the European Union and EFTA Member States hit an all-time high in 2019 by value, and in 2018 by volume.** Since 2010, exports of all forest products to the EU+EFTA has increased 41% by value, but just 21% by volume, indicating that EU consumers are purchasing higher-priced goods from China. In 2019, nearly three quarters of the EU+EFTA imports of China's forest product entered in just six countries: The United Kingdom, Germany, France, the Netherlands, Belgium, and Poland. More than 90% of exports were in the form of wood furniture, plywood, or paper.
7. **It remains difficult to track wood products with Chinese supply chains from import to export points.** Because there are no mandated, robust chain of custody systems, it is challenging to trace wood material sourced in VPA countries (or any other producer country), processed in China and ultimately exported to the EU. With no Chinese import regulations ensuring that all imported timber is verified legal, the challenge of ensuring legally verified sourcing is substantial.
8. **China's forest product imports from some tropical forested countries are at high risk of being harvested or processed in contravention of the law.** Forest Trends assessed China's overall forest product imports across three "risk indicators" that are tied to illegal logging: poor governance, conflict, and the presence of a full or partial log or sawnwood export ban (LEB or SEB):<sup>6</sup>
  - a. **Governance:** In 2019, 50% of China's timber product imports were from countries deemed at "higher-risk" of poor forest governance. This represents a decrease from 2010, when 59% of timber from higher-risk countries, though the absolute volume of imports from countries deemed higher-risk expanded significantly during this period.
  - b. **Conflict:** In 2019, China imported more than \$1.84 billion of timber products from countries on the World Bank Harmonized List of Fragile Situations, including five out of 15 VPA countries.<sup>7</sup> Nearly a quarter of hardwood log and sawnwood imports were sourced from conflict states.
  - c. **Log and sawnwood export bans:** From 2010-2019, China imported \$30 billion of logs and sawnwood sourced from countries with an active export ban on these products. In 2019 alone, Chinese companies imported nearly \$2.5 billion of logs from 41 countries with either full or partial LEBs (representing a 70% increase

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<sup>6</sup> Methodology used by Forest Trends to create indicators of risk is available at <https://www.forest-trends.org/wp-content/uploads/2020/03/Methodology-for-ILAT-Risk-Data-Tool-March-2020.pdf>.

<sup>7</sup> VPA countries on the World Bank Harmonized List of Fragile Situations include: The Republic of the Congo, the Democratic Republic of the Congo (DRC), the Central African Republic, Côte d'Ivoire and Liberia.

since 2010), and nearly \$750 million of sawnwood from 17 countries with either full or partial SEBs (representing a 150% increase since 2010).

9. **The China-US trade war has impacted the timber trade.** There is evidence that China is shipping manufactured wood products through Vietnam (and possibly other countries such as Cambodia) and onward to the US to circumvent tariffs. Both the US and Vietnam have taken steps to crack down on fraudulent labelling. US government investigations and court decisions have focused on source country labelling and tariff circumvention, but do not address the verification of the legality of these manufactured products. However, neither interviews with Chinese industry, nor the data itself, show redirection of exports from the US to the EU.
10. **The following developments are poised to impact China's wood product trade from 2020 onward:**
  - a. **Continued economic slowdown and COVID-19:** In 2019, China's economy grew at its slowest pace in almost three decades, due in part to the trade war with the US.<sup>8</sup> This year, despite a "phase one" trade deal between China and the US signed in January, which loosened some tariffs and other duties, it is expected to contract further due to the COVID-19 outbreak. Preliminary data show a steep fall in production output and trade – starting in China but reverberating globally. In February, China's Purchasing Managers' Index (PMI) fell to a record low of 37.5, improving slightly in March.<sup>9</sup> Cross-border trade with China has been severely hampered by the outbreak, manufacturing facilities remain shuttered or operating at less-than-full scale, and a severe decline in global spending may signal a deflationary spiral.
  - b. **Diversification of export markets:** China increasingly exports wood products to emerging markets in Asia, Latin America, and the Middle East. This shift began during the global financial crisis of 2008-2009, but given the economic growth in emerging economies, has become a permanent shift in status quo. Exports to the "Global North" – Europe, North America, and Australia/New Zealand – from 2010-2019 have fallen from nearly three quarters of exports to 55%.
  - c. **Belt and Road infrastructure facilitating new trade pathways:** New rail connections between China and Europe, and a highway currently under construction that will stretch from Kazakhstan to Belarus, will facilitate the entry of Eastern European wood products into China. This corridor will allow goods to travel by truck between China and Europe in just 11 days, as opposed to over a month by sea.
  - d. **Consumer shift to "green" products:** Chinese consumers are increasingly preferring environmentally friendly furniture and building materials, including

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<sup>8</sup> [http://www.stats.gov.cn/english/PressRelease/201910/t20191018\\_1703353.html](http://www.stats.gov.cn/english/PressRelease/201910/t20191018_1703353.html)

<sup>9</sup> [http://www.stats.gov.cn/english/PressRelease/202003/t20200302\\_1729254.html](http://www.stats.gov.cn/english/PressRelease/202003/t20200302_1729254.html). A PMI reading below 50 indicates contraction; above 50 indicates expansion

high-quality wood-based products, as they eschew plastic. Despite the economic slowdown, the improvement in middle- and upper-class living standards is set to continue, and the outlook for growth in imports of furniture and wood-based panels remains high.

- e. **Increasing manufacturing costs in China:** The price of raw materials, labour, and capital has increased steadily over the years in China, furthering the incentive for Chinese business to move or invest in overseas facility. In neighbouring countries such as Vietnam, Cambodia, and Laos, this is often as easy as relocating a processing factory across the border. Elsewhere, businesses have adopted a range of practices, from seeking out suppliers for products formerly made on the mainland, from purchasing entire modes of production and staffing them with Chinese labour.
- f. **Revised Forestry Law:** Article 65 of China's newly-amended Forestry Law states that "purchasing, processing, or transporting timber that [is] known from illegal sources...is prohibited."<sup>10</sup> This provides a clearer legal basis for China to exclude illegal timber from the market, as well as legal guidance for China's wood processing industry to conduct due diligence. However, as of this writing there are no enforcement modalities, and legal interpretations differ as to whether Article 65 covers imported timber. Going forward, the State Council and relevant ministries could use the existing domestic timber legality supervision system to formulate relevant administrative regulations, rules, measures, or implementation instructions for imported timber.

## The recent shift in focus from export markets to domestic markets

China is the biggest consumer of wood in the world. The past two decades have seen rapid economic growth and improved living standards, supported by government stimulus packages and incentives for the wood processing export sector and infrastructure programmes, as well as housing booms and the rise of the "middle classes" with their distinctive demand profile (better quality furniture, interior decoration, and high-quality paper, for example). By the mid-2020s, China's middle class is expected to reach 780 million people;<sup>11</sup> in two years' time (by 2022), McKinsey estimates that more than 75% of China's urban consumers will earn, in purchasing power parity terms, between the average income of Brazil and Italy.<sup>12</sup> As living standards have improved, some households are seeking out products that are also environmentally sustainable, preferencing wood-based panel construction and wood furniture over other materials, while

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<sup>10</sup> Standing Committee of the National People's Congress, P.R.C. 2019. Forestry Law of the People's Republic of China (2019 revision). 28 December. Unofficial translation.

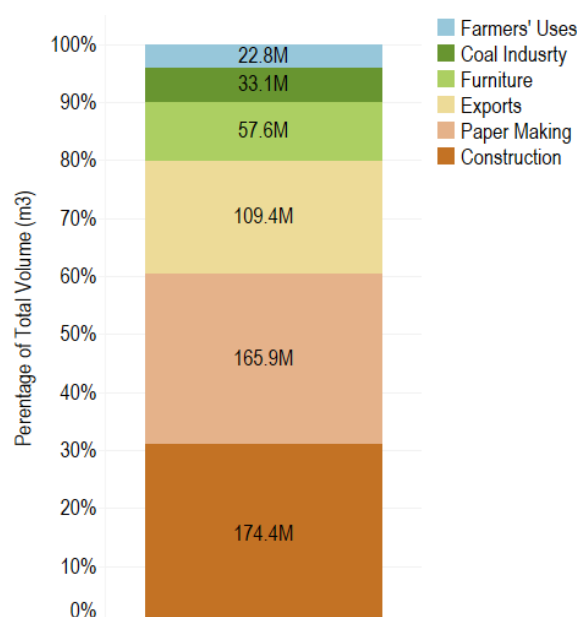
<sup>11</sup> Kharas (2017)

<sup>12</sup> <https://www.mckinsey.com/industries/retail/our-insights/mapping-chinas-middle-class>

others maintain demand for high-value rosewood (*hongmu*) furniture and décor made from high-value hardwood species.

With this growing consumer class and increase in domestic demand, China is no longer just “world’s factory,” wherein the bulk of Chinese production was ultimately exported and then consumed in other countries. On the contrary, by 2018, total consumption in China was 557 million m<sup>3</sup> RWE, of which 76% was used by the wood industry. Exports accounted for less than one fifth (19%) of the total, indicating the relative dominance of other domestic sectors.<sup>13</sup>

**Figure 1. China’s wood product consumption, 2018, by primary use**



Source: Data from the National Forestry and Grassland Administration, P.R. China, compiled and analysed by Forest Trends.

## China’s imports from VPA countries

### Overview

Forest products from VPA countries have hovered between 20-25% of China’s total forest product imports over the past decade by value, peaking at 26% in 2014. Twenty years ago, in 1999, over 52% of China’s total timber product imports were from countries that later went on to negotiate VPAs with the EU. In terms of tropical timber, VPA countries have comprised between 55-60% of China’s timber product imports, and 30-33% of its pulp and paper imports between 2010 and 2019. This represents a decline since 1999, when their market share was 84% for timber and 73% for pulp and paper – most likely due to the entrance of other major tropical

<sup>13</sup> Data are not yet available for Chinese wood consumption in 2019. Total wood consumption = industrial consumption, fuelwood, and subsistence (farmers’) uses. Source: NFGA. 2019. China Forestry Development Report 2018.



suppliers, such as Papua New Guinea and the Solomon Islands for timber and Brazil for pulp and paper. Thailand, Vietnam, and Indonesia were the largest VPA source countries in 2019 for timber products. Of the 15 VPA countries, only timber imports from Cote d'Ivoire, Democratic Republic of the Congo (DRC), and Malaysia, decreased between 2010 and 2019.

Conversely, the market share of VPA countries in terms of China's total pulp and paper imports – of which nearly 90% are from Indonesia – has grown, from just 6.5% in 2010 to nearly 15% in 2019. Other countries such as Vietnam and Laos have recently developed new pulp and paper processing capacity, but VPA countries' supply of pulp and paper to China is still dominated by Indonesia.

**Table 1a. Percentage of China's total timber product imports from VPA countries, 2010-2019, by value**

| Year                | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| VPA countries       | 23.4% | 21.6% | 24.9% | 24.5% | 26.1% | 25.8% | 23.8% | 21.3% | 20.2% | 19.8% |
| All other countries | 76.6% | 78.4% | 75.1% | 75.5% | 73.9% | 74.2% | 76.2% | 78.7% | 79.8% | 80.2% |

**Table 1b. Percentage of China's total pulp and paper (P&P) imports from VPA countries, 2010-2019, by value**

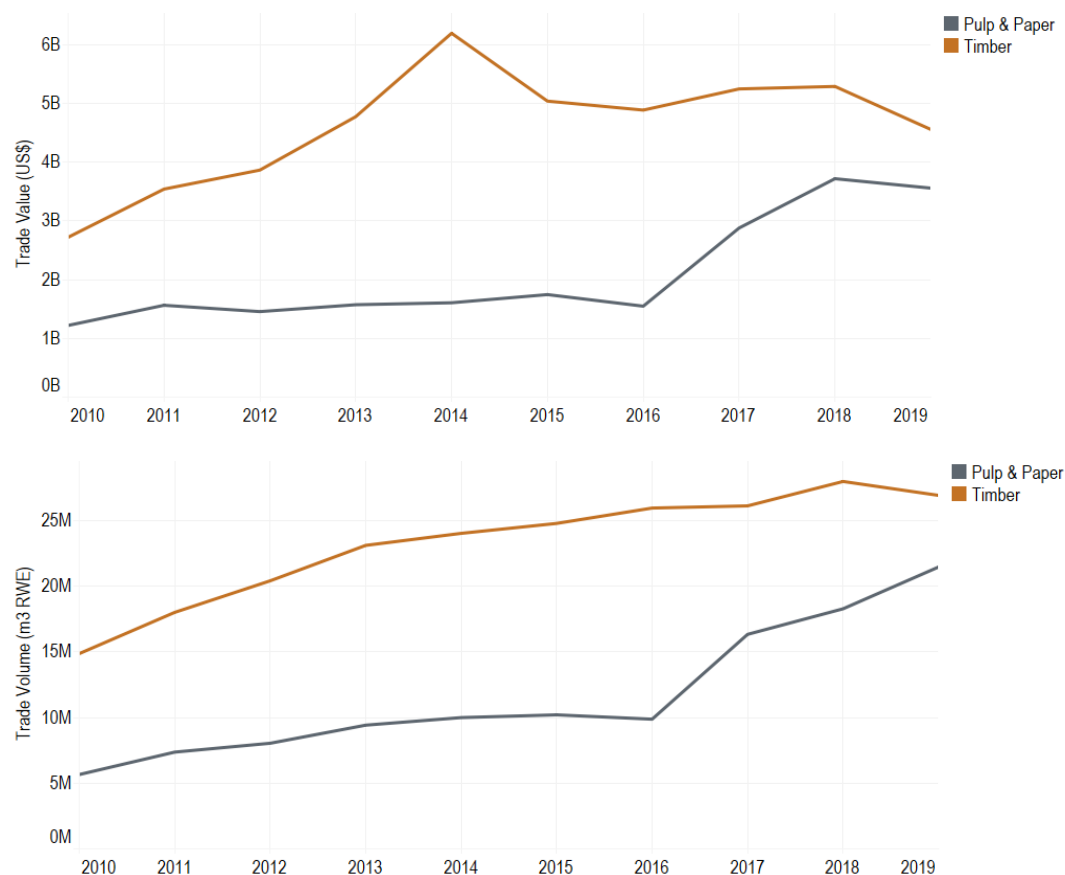
| Year                | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017 | 2018  | 2019  |
|---------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| VPA countries       | 6.5%  | 6.5%  | 6.6%  | 7.3%  | 7.4%  | 7.9%  | 7.3%  | 11%  | 12.3% | 14.6% |
| All other countries | 93.5% | 93.5% | 93.4% | 92.7% | 92.6% | 92.1% | 92.7% | 89%  | 87.7% | 85.4% |

In total, China imported 26.9 million m<sup>3</sup> RWE of timber products (valued at \$4.6 billion) from VPA countries in 2019, an increase of more than two thirds from 2010 levels by both value and 81% by volume. Timber imports peaked by value in 2014, coinciding with the “boom” in demand for hongmu species, and by volume in 2018.

Indonesia and to a lesser extent Vietnam and Laos have seen a more dramatic increase, recovering steadily from the global financial crisis until 2016, then jumping year-over-year by volume – more than doubling between 2016 and 2019, from just under 10 million to 21.5 million m<sup>3</sup> RWE. By value, however, P&P imports dropped in 2019 even as their volume increased, having posted a marked increase from \$1.5 billion to 3.7 billion from 2016 to 2018.

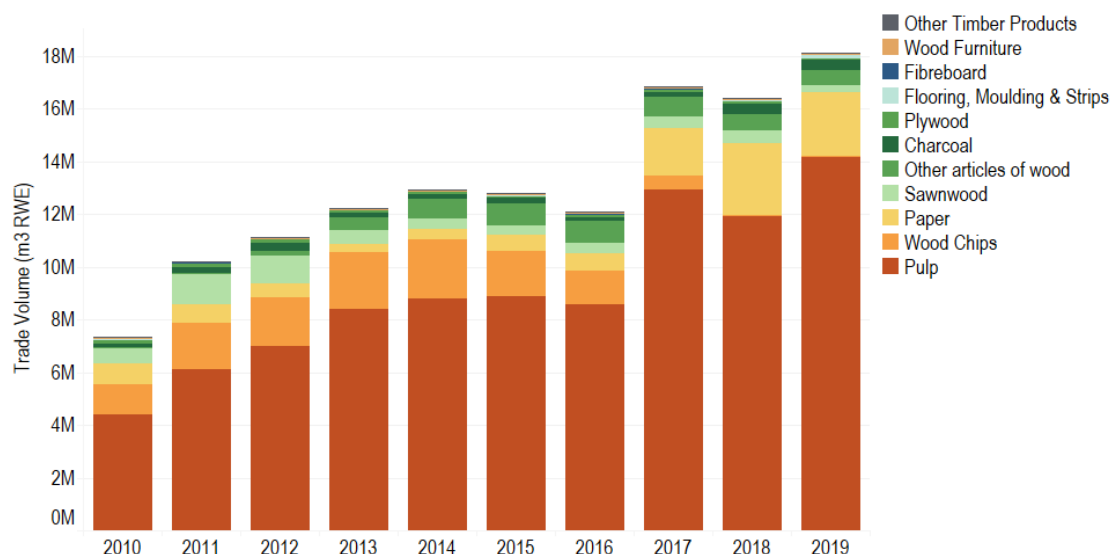


**Figure 2. China's total forest product imports from VPA countries, 2010-2019, by value and volume**



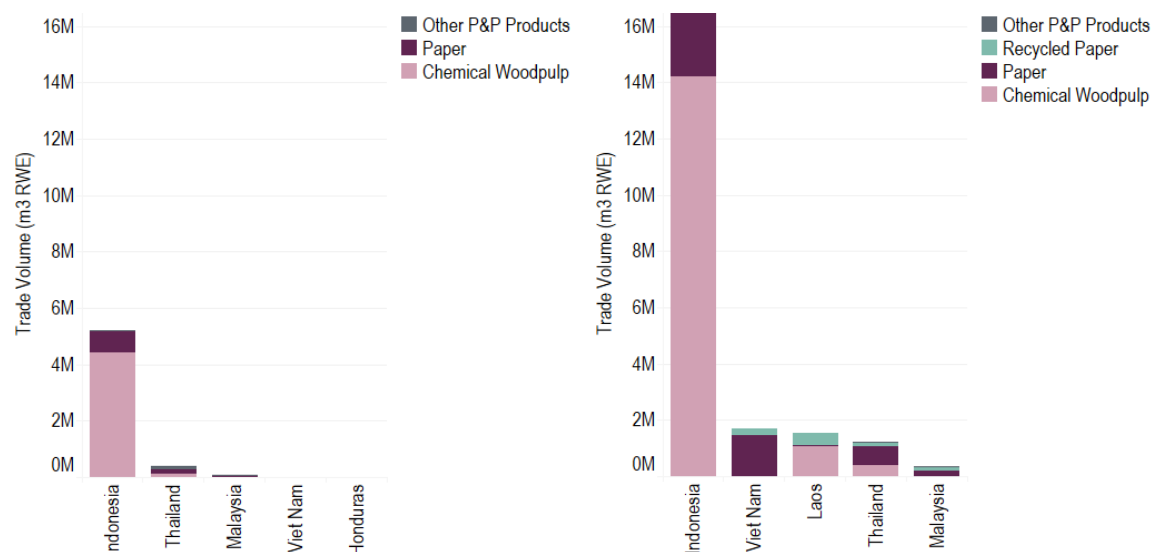
Indonesia remains the primary VPA country supplying China with pulp and paper. China's P&P imports from Indonesia increased by 220% between 2010 and 2019, from 5.2 to 16.6 million m<sup>3</sup> RWE, and from \$1.1 million to 2.7 million, posting strong year-over-year growth for the past three years by volume. Much of this increase is due to Indonesia's shifting pulp industry, as the country has quickly transitioned from exporting woodchips to using them in its pulp and paper mills. This is clear from China's import data, particularly between 2016 and 2017, and is a significant factor behind the overall jump in P&P imports from VPA countries that year (but less perceptible in the overall timber trade trends due to corresponding increases in imports from other VPA countries, in particular Vietnam).

**Figure 3. China's forest product imports from Indonesia, 2010-2019, by product, by volume**



Other VPA countries, namely Vietnam, Thailand, Malaysia, and Laos are increasingly exporting to China. Laos more than tripled its exports of wood pulp each year between 2017 and 2019 – from under 200 m<sup>3</sup> RWE per year until 2017, to 640 872 and 1.5 million m<sup>3</sup> RWE by 2018 and 2019, respectively. Now valued at nearly \$270 million in 2019, this boom in production is the result of strategic investment in the country's wood production capacity and a commitment to sustainable investment in tree plantations. Pulp and paper – but mainly finished paper – imports from Vietnam also increased more than 2 000% between 2016 and 2019, from just 8 000 m<sup>3</sup> RWE in 2016 (\$11 million) to 1.7 million m<sup>3</sup> RWE (\$249 million) in 2019.

**Figure 4. China's pulp and paper imports from VPA countries 2010 (left) vs. 2019 (right), by volume**



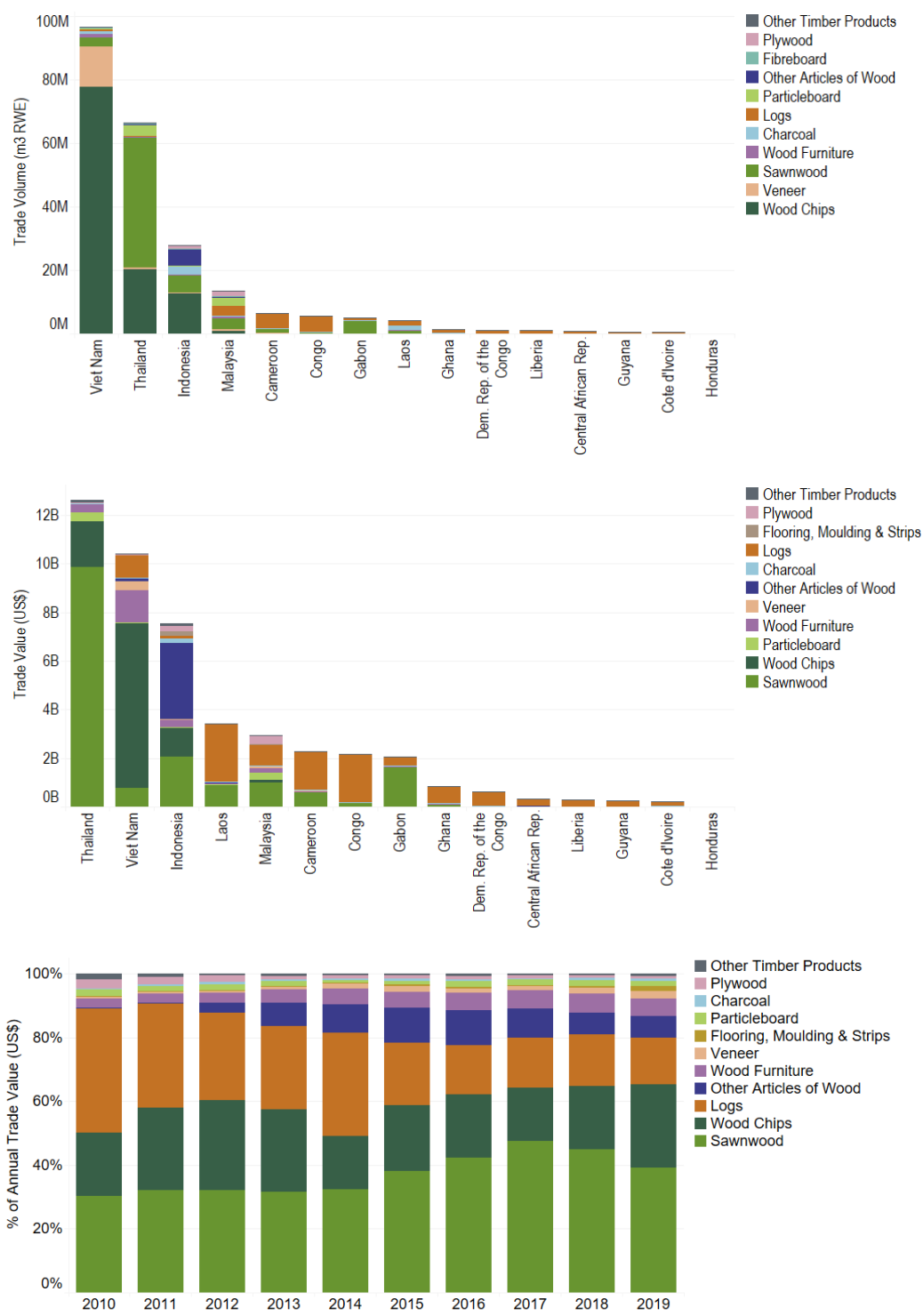
**Timber imports by VPA country:** Vietnam, Thailand, Indonesia, and Malaysia together have steadily comprised nearly 90% of China's timber product imports from VPA countries since 2010, although relative market shares have shifted. Malaysia and Indonesia have lost market share since 2010, falling from 13% to 4% and 14% to 6% respectively. This is partly due to a decline in log and woodchip imports from Malaysia and Indonesia, but also to the relative rise of Vietnam and Thailand as competitors. Vietnam's exports to China have boomed relative to its VPA cohorts: in 2010 Vietnam supplied under a third of China's timber imports from VPA countries; as of 2019, that number has grown to 52%.

Six VPA countries – Honduras, Cote d'Ivoire, Guyana, DRC, Liberia, and CAR – supplied just over 1% of China's timber product imports from VPA countries in 2019 by both volume and value.

**Timber imports by product:** From 2010 to 2019, China imported nearly \$18 billion of sawnwood, \$11 billion of logs, and \$10 billion of woodchips from VPA countries. By volume, woodchips were the largest category, comprising 47% of the total.

The product mix imported from VPA countries has shifted over the years, as forest producers develop more processing capacity. In 2010 logs comprised nearly 40% of all imports from VPA countries; by 2019, this figure had fallen to 15%. Over the same period the shares of sawnwood and woodchips have grown by 30%, but the largest increases are seen in wood furniture (98%) and "other articles of wood" (295%).

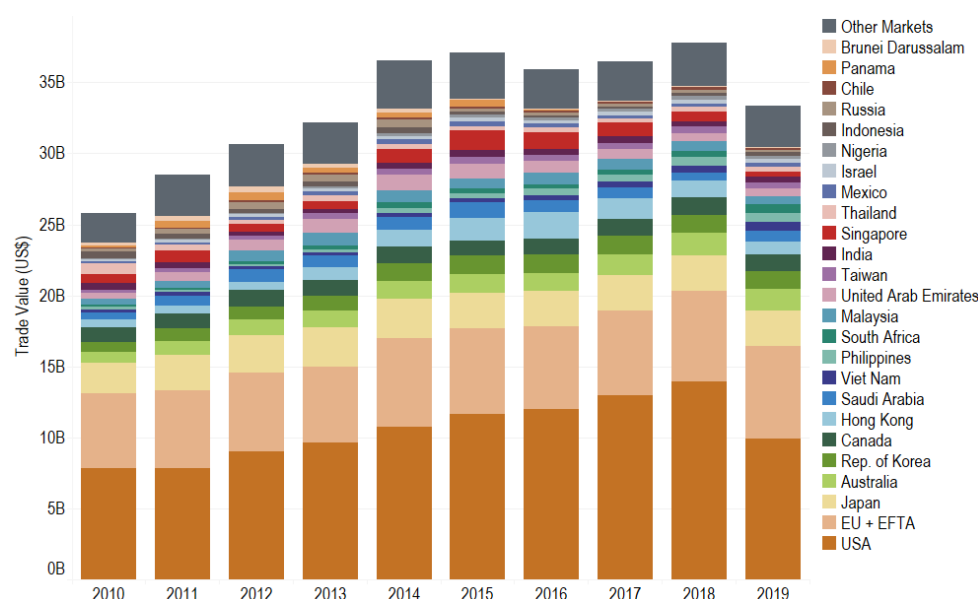
**Figure 5: China’s timber product imports from VPA countries, 2010-2019 (all years), by volume, value, and percentage of total value**



## China's exports of forest products

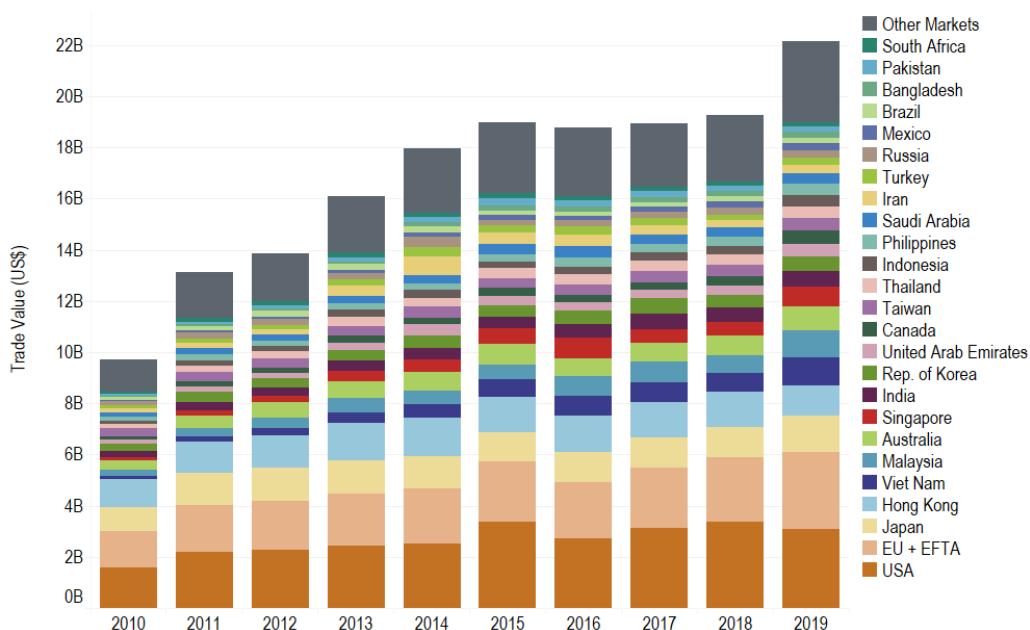
Between 2010 and 2019, China's top buyers of timber products by value were the US (31%), EU+EFTA Member States (18%), Japan (8%), Australia (4%), Canada, and the Republic of Korea (both 3%). The top 25 markets for China's timber exports together comprised more than 90% of exports in 2019. While the absolute value of exports to the EU+EFTA has increased from \$5.3 to \$6.5 billion over the past decade, the European market share decreased from 21% in 2010 to 17% in 2018, before recovering to 21% in 2019. This may be due to the sharp drop in exports to the US following the US-China trade war, which is largely responsible for a \$4.4 billion (12%) drop in overall exports from 2018 to 2019.

**Figure 6. China's timber product exports by country (top 25), 2010-2019, by value**



The top 25 export destinations for Chinese pulp and paper comprised 86% of total exports by value in 2019. Of note are increases to emerging Asian markets, such as Vietnam, which went from China's 19<sup>th</sup> largest destination for pulp and paper exports to its fifth; in total, exports to Southeast Asia doubled as a share of total exports and nearly quintupled by value. Exports to the Middle East, almost exclusively comprised of finished paper, also increased by 157%.

**Figure 7. China's pulp and paper exports by country (top 25), 2010-2019, by value**



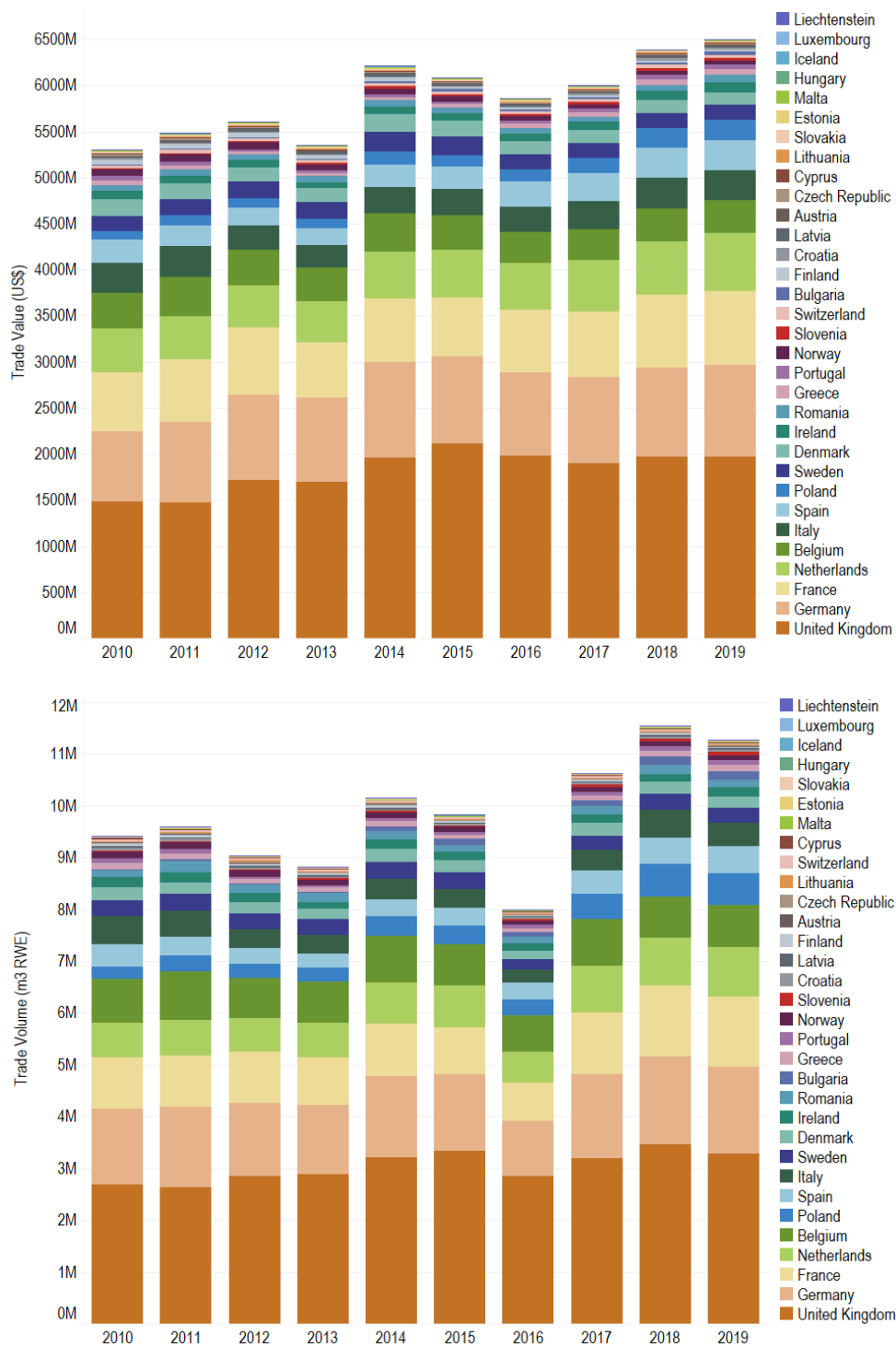
## China's exports of forest products to EU+EFTA Member States

China's exports to EU+EFTA Member States hit an all-time high in 2019 at \$6.5 billion. By volume, however, exports peaked in 2018 at 11.5 million m<sup>3</sup> RWE, before falling slightly (to 11.3 million m<sup>3</sup> RWE). While the European market share of Chinese timber product exports has, with some slight variation, held steady at approximately one fifth of total exports over the past decade, the share of China's pulp and paper exports to EU+EFTA has dropped slightly, from 15% to 12% by value and 11% to 8% by volume.

During the global financial crisis of 2008-2009, China diversified its timber export markets, with a larger share going to middle-income countries in Asia, Latin America, and the Middle East. Coupled with economic growth and greater purchasing power in emerging economies, this seems to have permanently shifted the status quo.

In absolute terms (rather than market share), China's timber product exports to EU+EFTA have fluctuated over the course of the past decade, more so by volume than by value. Exports declined gradually from 2010-2013, recovered in 2014, then dropped to decade-lows in 2016 before bouncing back. By both volume and value, the top ports of entry for Chinese timber in Europe were the United Kingdom, Germany, France, the Netherlands, and Belgium, although these countries do not represent the final points of consumption.

Figure 8. China’s exports of timber products to EU + EFTA Member States, by country, 2010-2019, by volume and value

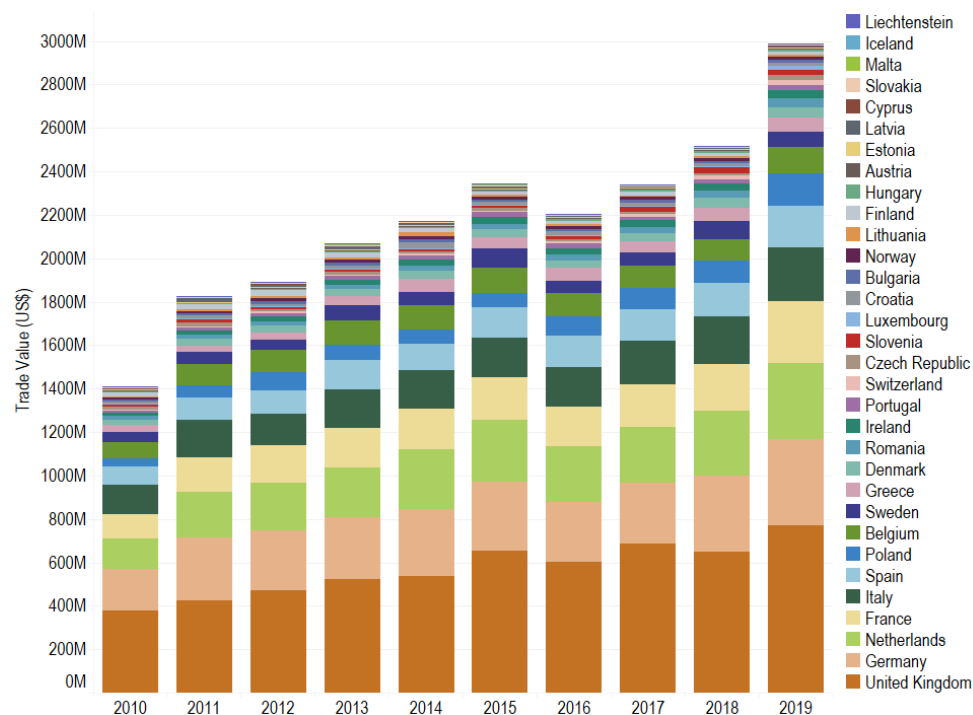


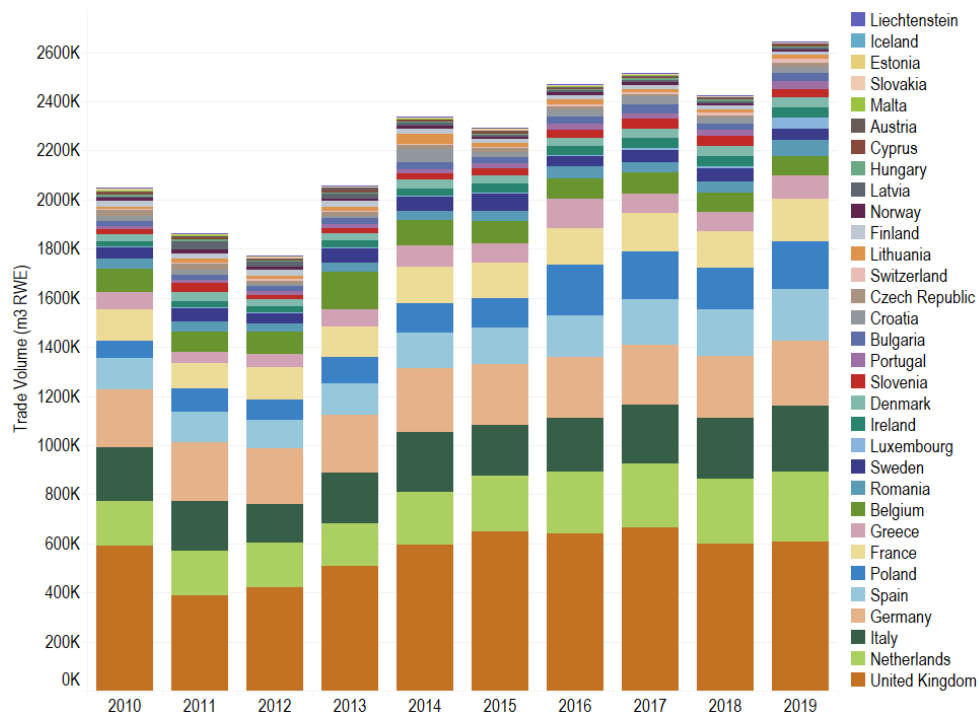


Exports of pulp and paper to EU+EFTA increased from \$1.4 billion in 2010 to \$3 billion in 2019, representing growth of more than 110% over the course of the decade, and nearly 20% from 2018 to 2019 alone. By volume, exports fell from 2 million m<sup>3</sup> RWE in 2010 to 1.8 million m<sup>3</sup> RWE in 2018, a decade-low, before bouncing back to pre-financial-crisis levels and an all-time high of 2.7 million m<sup>3</sup> RWE in 2019. In addition to the top European destinations for Chinese timber, major pulp and paper importers include Italy, Spain, Poland, Sweden, and Greece.

The price per m<sup>3</sup> RWE of pulp and paper exports to EU+EFTA has grown steadily, and now surpasses, the price of timber exports. In 2010, timber product exports were valued, on average, at \$563 per m<sup>3</sup> RWE. This figure crept upwards to \$733 per m<sup>3</sup> RWE in 2016, then dropped back to \$577 per m<sup>3</sup> RWE in 2019. The price of P&P exports, on the other hand, has nearly doubled: from \$689 per m<sup>3</sup> RWE in 2010 to \$14129 per m<sup>3</sup> RWE – much higher than the average price of China's P&P exports globally (\$756 per m<sup>3</sup> RWE).

**Figure 9. China's exports of pulp and paper products to EU + EFTA Member States, by country, 2010-2019, by volume and value**

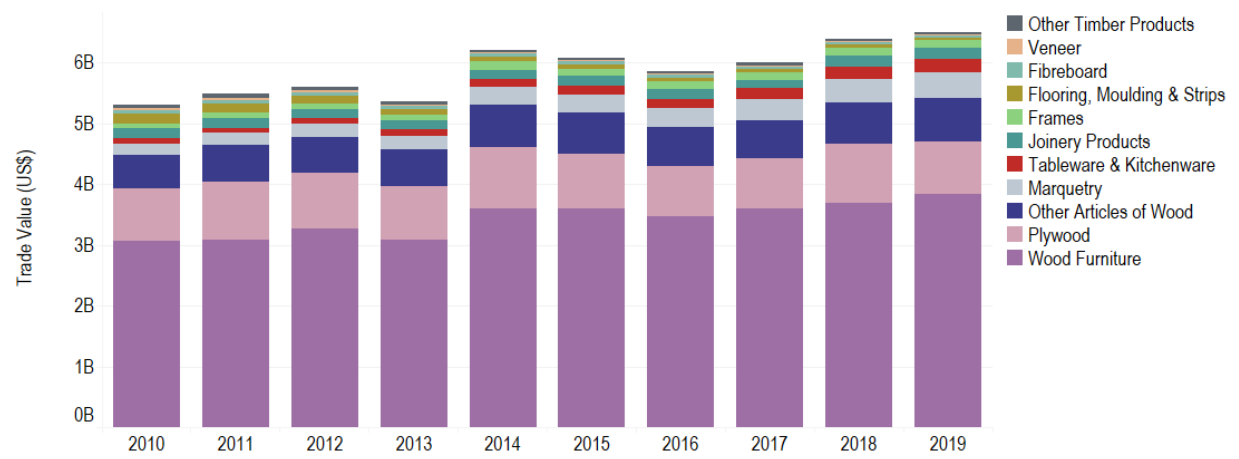




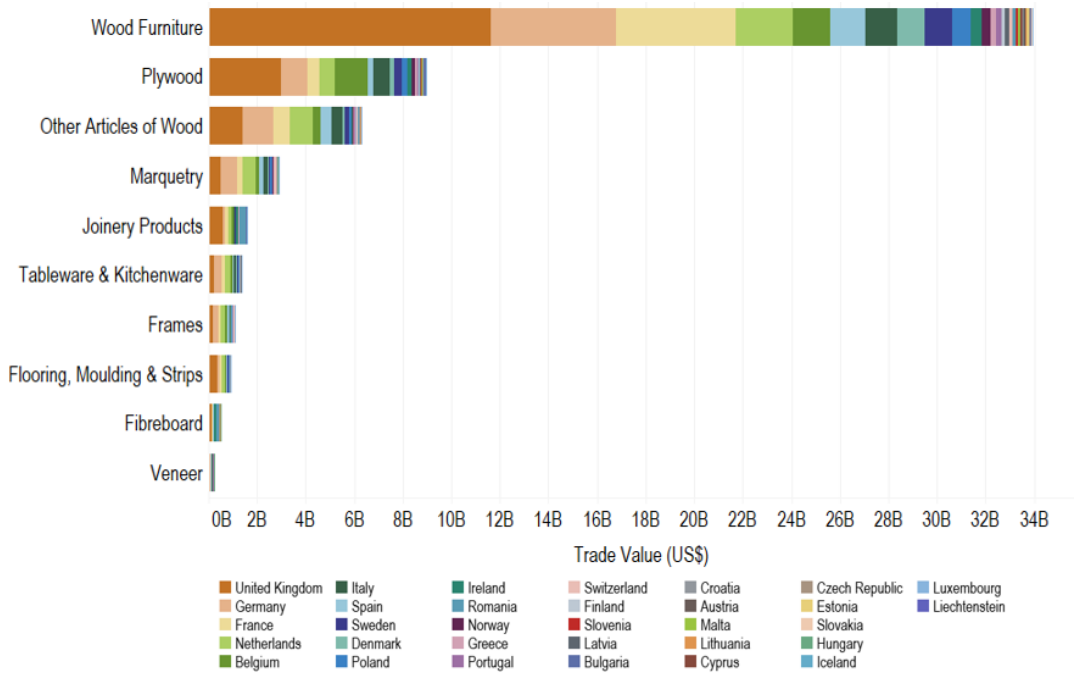
Most of the timber exported from China to EU+EFTA, 59% by value and 56% by volume, is in furniture form. 36% of timber product exports by volume – but just 13% by value – are in plywood form. The cheaper units of “other articles of wood” were responsible for 11% of exports by volume, but 3% by value. These proportions have held steady over the past decade except for 2016, when more plywood than furniture was exported.

Of the \$34 billion in wood furniture exported from China to EU+EFTA from 2010 to 2019, over a third (by value) was destined for the UK. A similar proportion of China’s plywood exports to the EU are also bound for the UK, with another 15% imported by Belgium. Over 50% of China’s exports of “other articles of wood” to EU+EFTA are bound for the UK, Germany, or the Netherlands.

**Figure 10. China’s top 10 timber product exports to the EU + EFTA, 2010-2019, by value**



**Figure 11. China’s top 10 timber products to the EU + EFTA by destination Member State, 2010-2019 (all years), by value**



## Comparison to other major export markets

As of 2017, more than half of China's timber product exports are destined for markets with import control regulations.<sup>14</sup> This number peaked in 2018 at 60%, when the Republic of Korea's implementing standards for the Revised Act on the Sustainable Use of Timbers were released. However, trade to regulated markets dropped by 5.12 million m<sup>3</sup> RWE from 2018 to 2019 – almost all of which (4.62 million m<sup>3</sup> RWE) was due to decreased exports to the US due to tariffs and other ramifications of the trade war. In total, China exported more than 35 million m<sup>3</sup> RWE of timber to markets with operational import measures plus Thailand and Vietnam, which are currently developing Timber Legality Assurance Systems to verify that wood products conform to national laws, whether they are domestically harvested or imported.

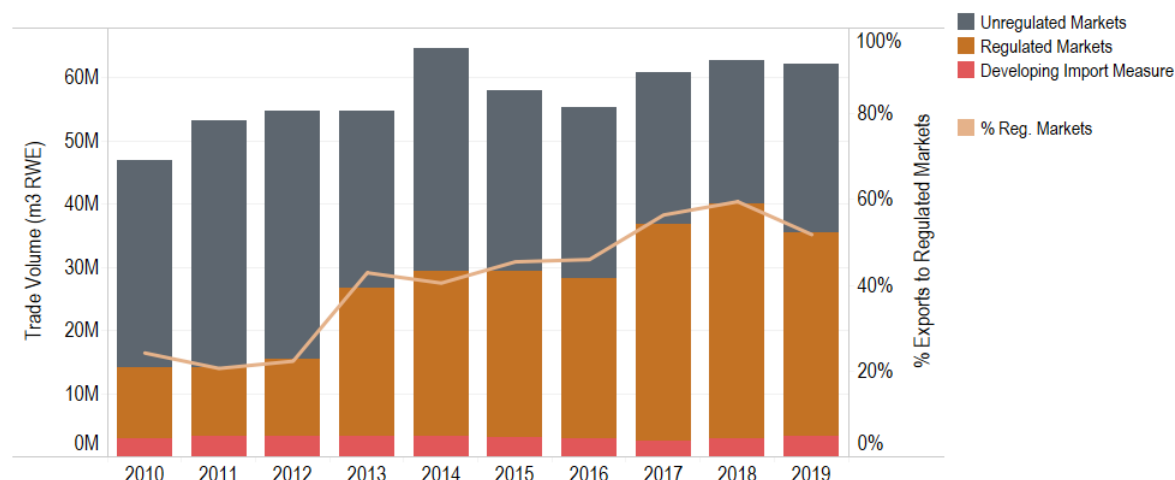
Given the rise in demand for legal timber, Chinese companies will need to provide evidence of the legality of wood products exported to “regulated” markets – particularly for composite or processed products with material originally harvested in high-risk countries. The supply chains for imported material, that is manufactured within China into secondary products for export markets, remain poorly understood. Because there are no mandated Chain of Custody systems, and no enforcement modalities within China to ensure that only verified-legal timber enters the country, tracking material through these supply chains and onward to regulated markets remains a challenge.

Following on the above analysis of China's exports to the EU+EFTA, this section briefly analyses China's exports to other regulated markets.

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<sup>14</sup> Figure 11 includes consumer markets as of the year that import control measures entered into force. Regulated markets include the US (Lacey Act amendments, 2008), EU+EFTA (EU Timber Regulation, 2013), Australia (Illegal Logging Prohibition Act, 2013), Canada (Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act [WAPPRIITA], 2013), Indonesia (as of first issuance of FLEGT licenses, 2016), Japan (Clean Wood Act, 2017), Republic of Korea (Revised Act on the Sustainable Use of Timbers, 2017 [mandating that all companies comply with implementing standards starting October 2018]), Malaysia (DG Circular LPKM 1/155/1/Vol.5(45) on New Import Regulation under the Timber Legality Assurance System, 2015; followed by an amendment DG Circular extending the grace period for implementation of timber import legality regulations, 2016, both applicable to Peninsular Malaysia only), and Colombia (Ministerio del Medio Ambiente, Resolución Número 1367 de 2000 [despite the time since its passage and 2016 guidelines on implementation, this regulation appears to be rarely enforced]). Markets developing import control measures include Thailand, Vietnam, Indonesia (until 2016), and Malaysia (until 2017). This methodology recognizes that a) some measures take effect mid-year, and b) it may be months or years before enforcement capacity and modalities are fully developed.

**Figure 12. China's timber product exports to regulated vs. unregulated markets, 2010-2019, by volume**



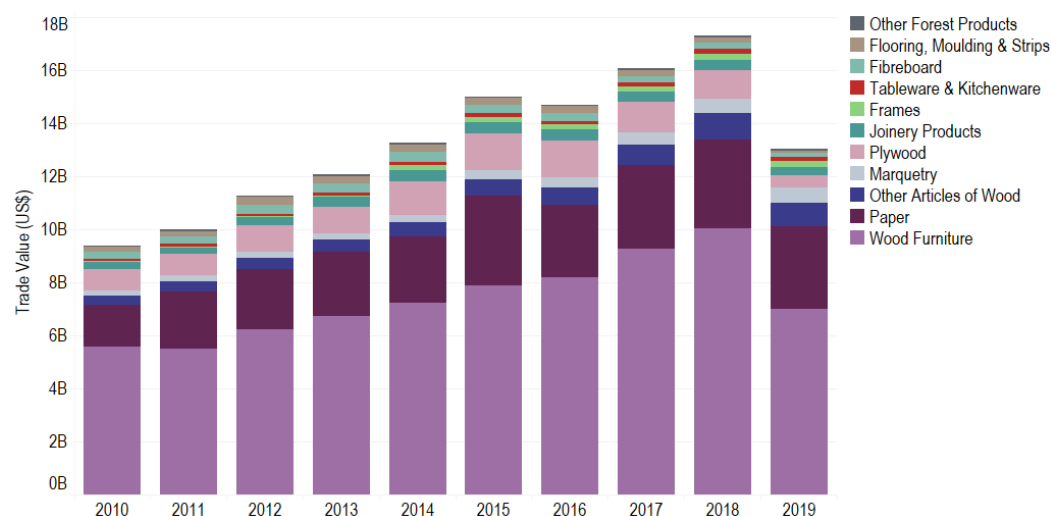
## United States

The trade war between the US and China and the resulting issuance of tariffs and anti-dumping and countervailing duties, has had a pronounced impact on all aspects of the global economy, including the forest product trade.<sup>15</sup> After hitting a record \$17.3 billion in 2018, China's forest product exports to the US plummeted, to \$13 billion – a decrease of 24% by value and 28% by volume – in 2019.

However, there are signs that manufactured wood products are being imported into Vietnam from China, occasionally processed further, labelled as Vietnamese, and then exported to the US to circumvent tariffs. This is evident in Vietnamese trade data which show an unusual increase in highly processed timber products such as furniture and flooring imported from China since the trade war began. Both the US and Vietnam have taken steps to crack down on fraudulent labelling, but it remains challenging to verify the legality of these manufactured products.

<sup>15</sup> The International Monetary Fund (IMF) estimates that the trade war helped cut global economic growth to its slowest pace since the 2008-2009 financial crisis, from 3.6% in 2018 to 3.0% in 2019. Source: IMF. 2019. *World Economic Outlook: Global Manufacturing Downturn, Rising Trade Barriers*. October. Washington, DC: IMF.

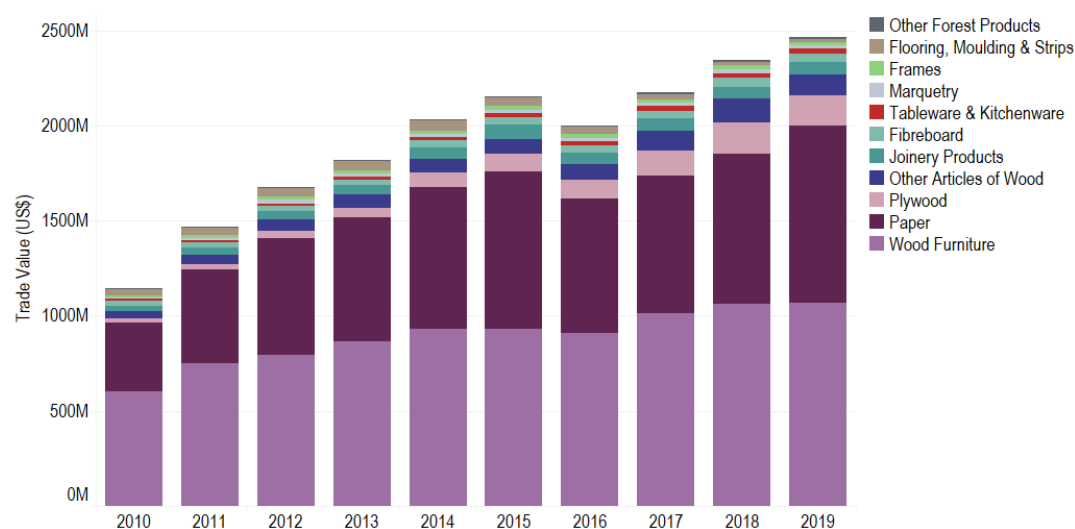
**Figure 13. China's forest product exports to the US, 2010-2019, by value**



## Australia

China exported nearly \$2.5 billion in forest products to Australia in 2019. While this represents an all-time high, exports to Australia remain far below those to the US or Europe. Over 80% of exports to Australia are in furniture or paper form.

**Figure 14. China's forest product exports to Australia, 2010-2019, by product, by value**



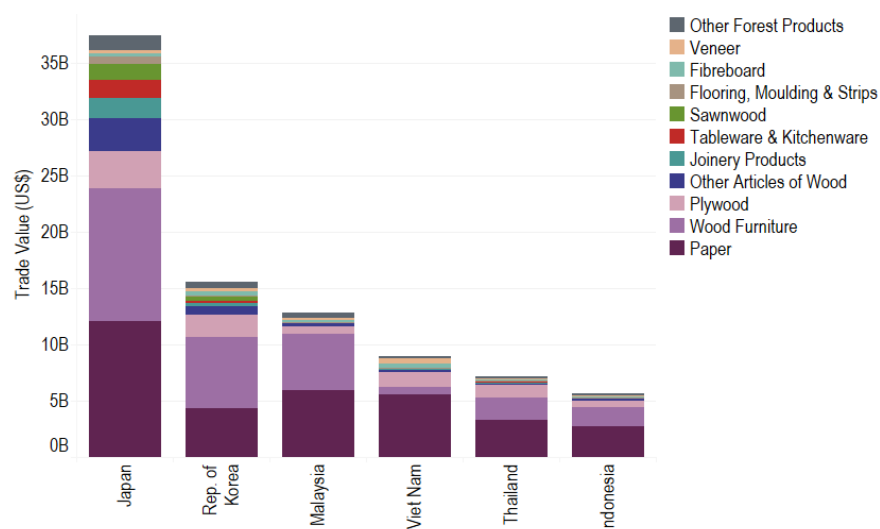
## Asian markets developing or implementing new import regulations

Between 2010 and 2019, China exported nearly \$88 billion in forest products to Japan, Republic of Korea, Malaysia, Vietnam, Indonesia, and Thailand. Over 40% of these exports were destined for Japan. Among these markets, growth in exports to Vietnam (425%) and Malaysia (140%) is most significant. Exports to Asian markets are overwhelmingly in processed or semi-

processed form, with nearly three quarters by value exported as paper or wood furniture. By volume, plywood constitutes nearly a third of all exports to the six markets combined.

Exports to all six countries show steady growth – 2019 marked historic highs in exports, by both volume and value, to every country except Republic of Korea, where exports peaked in 2017 by value and 2014 by volume. Decreasing exports of plywood, which fell by nearly half from 2017 to 2019 alone, are largely responsible for this drop.

**Figure 15. China's forest product exports to Asian consumer countries developing import control mechanisms, 2010-2019 (all years), by value**



## China's imports from countries with forest product export bans

China is not alone in restricting the harvesting and export of timber from natural forests. Over the past several decades, more than 55 countries have enacted policies to restrict or prohibit the export of certain (often unprocessed) products such as logs and sawnwood. Log and sawnwood export restrictions range from comprehensive bans on all raw or crudely processed logs or sawnwood, to more narrow, partial bans targeting certain types of timber, specific tree species, distinct regions of harvest, and/or quotas. The aim of these policies is generally twofold: to protect forests while bolstering domestic value-adding processing industries.

Logs or sawnwood sourced from a country with a full LEB or SEB policy, respectively, is more likely to be considered illegally sourced. Logs or sawnwood imported from countries with partial LEB or SEB policies should signal an increased risk that companies could be violating the specific aspects of each exporting country's export policy, and that further due diligence assessments and risk mitigation would be needed to rule out the possibility of LEB or SEB violations. In addition, the data below cover all log or sawnwood imports from LEB and SEB



countries; for partial bans, this includes species or geographic areas in addition to those explicitly covered by the ban.<sup>16</sup>

China's imports of timber products from countries with active LEBs and/or SEBs have generally continued to increase year over year, peaking in 2014 during the rosewood boom before falling in 2015 and rising again until 2018. In 2019, Chinese companies imported nearly \$2.5 billion of logs from 41 countries with either full or partial LEBs, amounting to 42% of China's total imports of logs from all countries – and over 60% of total hardwood log imports. Meanwhile, in 2019, Chinese companies imported nearly \$750 million of sawnwood from 17 countries with either full or partial SEBs, amounting to 11% of China's total imports of sawnwood – and nearly a quarter (24%) of total hardwood sawnwood imports.

From 2018 to 2019, imports from both LEB and SEB countries decreased by \$3 million each. The 2019 drop in imports from LEB countries is largely due to decreased log imports from Papua New Guinea and Nigeria after the November 2018 CITES-imposed trade suspension on the export of *Pterocarpus erinaceus*. The drop in imports from SEB countries likely stems from improved enforcement of export restrictions in Indonesia, Vietnam, and Laos.

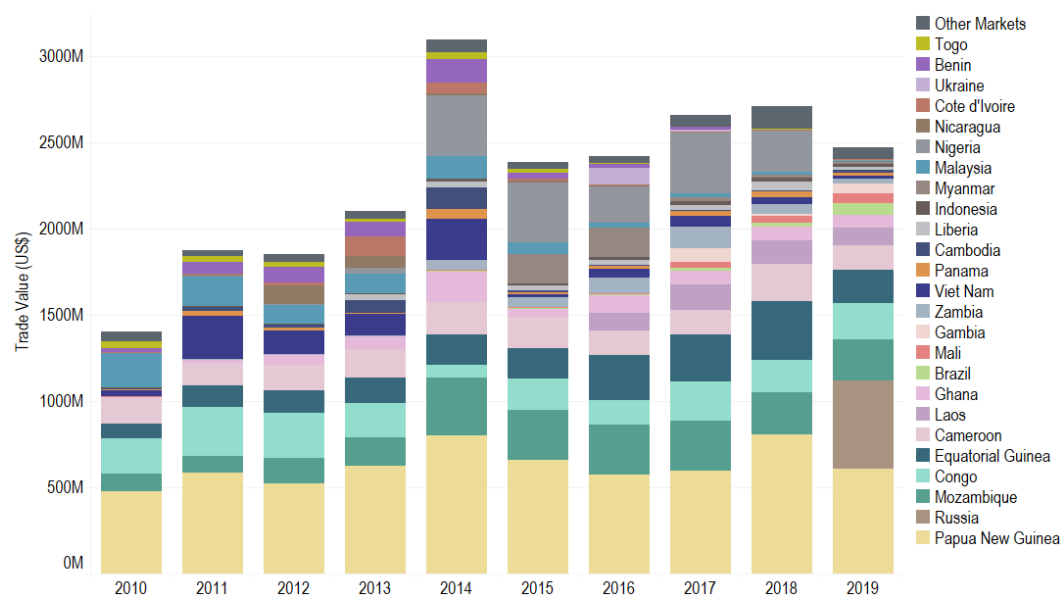
Of particular note is a 2018 Order in Russia establishing a quota for exports of birch logs to countries outside of the Eurasian Economic Union, with a diameter of at least 15cm and a length of at least one meter, between January and June 2019. This is considered a partial export ban as it restricts exports of a certain species, and was issued due to the importance of birch species in the domestic Russian market for wood processing and consumption. Quotas are distributed by the Ministry of Industry and Trade and function as one-time licenses. Exports of birch logs meeting the physical criteria but without licenses, are considered in violation of the ban. Using China's declared imports of birch logs as a proxy, the Order appears to have had a moderate impact: from January to June, China imported \$57 million in birch logs from Russia, but \$73 million once the Order was lifted.<sup>17</sup>

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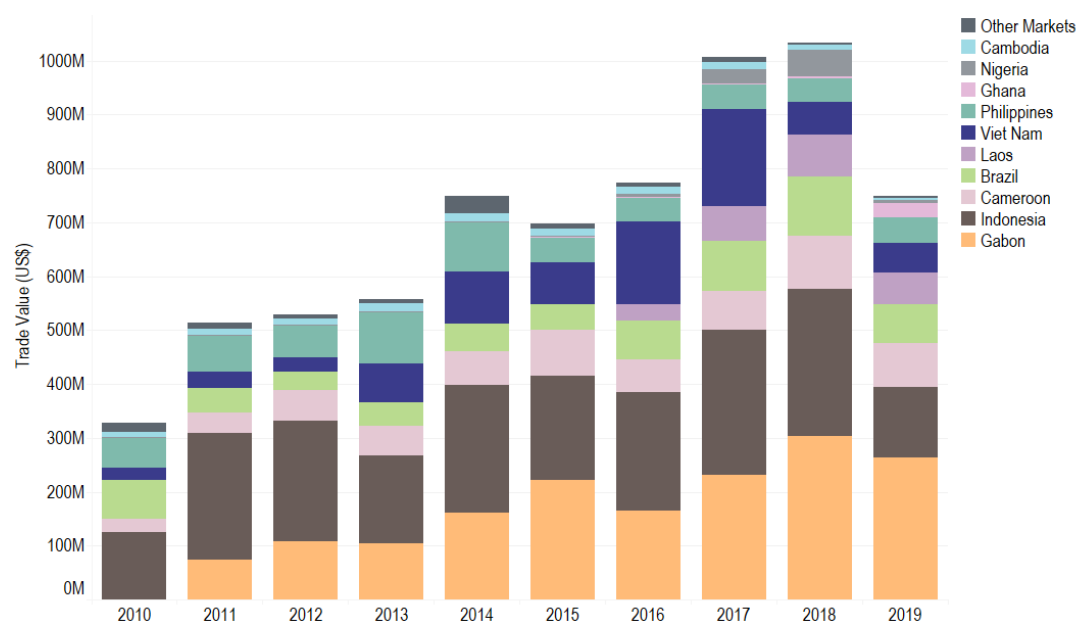
<sup>16</sup> To assess the risk that China is importing timber in contravention of source country export regulations, Forest Trends compiled a list of countries with known LEBs and SEBs and analysed China Customs data for imports categorized under HS Code 4403 (wood in the rough, or roughly squared) and HS Code 4407 (wood sawn or chipped lengthwise). For the purposes of this study, log and sawnwood imports from Canada, New Zealand and the USA were not included, given these countries' high forest governance capacity and low risk of illegal exports. Log imports of all species are included in the figures below, although some LEBs or SEBs are species-specific. The full list of known export bans is available at <https://www.forest-trends.org/known-log-export-bans/>.

<sup>17</sup> Order of the Government of the Russian Federation of July 17, 2018 No. 836. Available at <https://cis-legislation.com/document.fwx?rgn=108462>.

**Figure 16. China's log imports from countries with active LEBs, 2010-2019, by value**



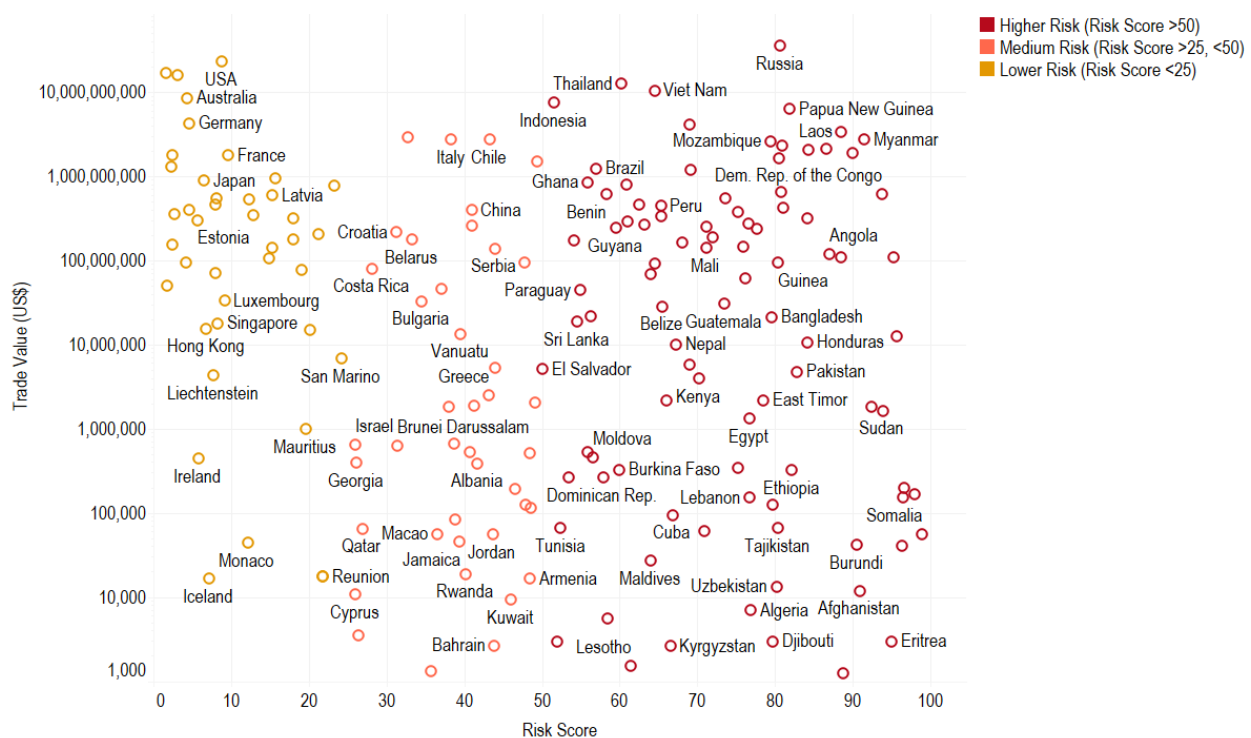
**Figure 17. China's sawnwood imports from countries with active SEBs, 2010-2019, by value**



## Annex: Risk Analyses – Governance and Conflict

Governance and Harvest Risk: Forest Trends uses a new methodology to create proxies or indicators of risk in forest product supply chains. This approach is not an absolute assessment of illegal logging risk for a source country. Rather, it can offer an indication of relative national-level risk based on existing indices of corruption, governance, political, and harvest risk associated with a trading country. The data therefore offers insight into the initial stages of risk assessment but cannot be used in isolation or as an alternative to seeking out detailed assessments of forest crime.<sup>18</sup>

**Figure 18. China's timber product imports by source country risk, 2010-2019, by value**

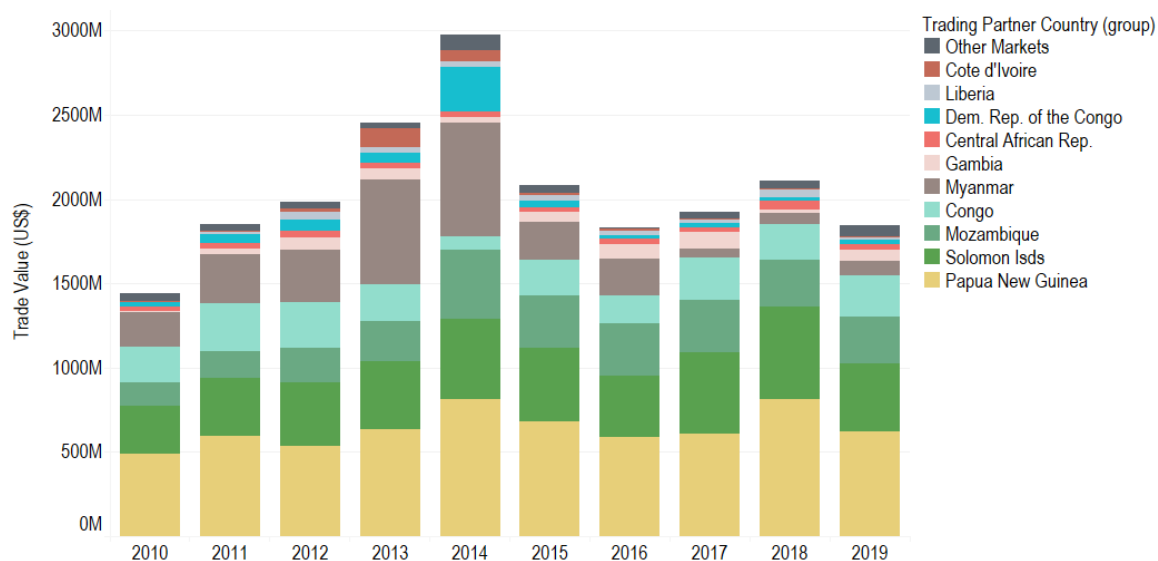


While in 2010, 59% of China's timber product imports by volume were sourced from higher-risk countries, by 2019 this percentage had fallen to 50%. Yet sourcing from higher-risk countries has also increased rapidly in absolute terms: from 42 million m3 RWE to 75 million m3 RWE in the same time period. Figure 17 shows China's source country risk profile between 2010 and 2019. Countries with higher risk ratings and large volumes of trade with China are in the upper right, and include Russia, Papua New Guinea, Laos, and others.

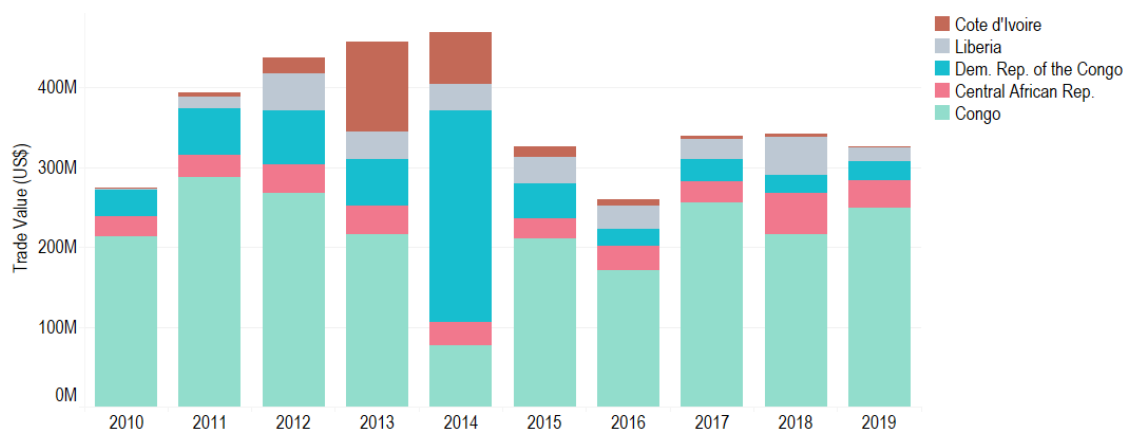
<sup>18</sup> See underlying methodology at Forest Trends' ILAT Risk website available at <https://www.forest-trends.org/fptf-ilat-home/>.

**Conflict:** The World Bank's releases annual assessments of fragile and conflict situations in its the Harmonized List of Fragile Situations.<sup>19</sup> The list for FY2019 was used for this report and is an indicator that trade could be funding armed conflict. We note that conflict is generally a spatially explicit phenomenon; understanding the complexity of conflict and illegality requires subnational spatial analysis.

**Figure 19. China's forest product imports from conflict states, 2010-2019, by value**



**Figure 20. China's forest product imports from VPA countries that are also conflict states, 2010-2019, by value**



In 2019, China imported more than \$1.8 billion of timber products from countries classified on the World Bank list. This represents 8% of total imports, but nearly a quarter of hardwood log and sawnwood imports. Over \$326 million of these imports were from VPA countries.

<sup>19</sup> <https://www.worldbank.org/en/topic/fragilityconflictviolence/brief/harmonized-list-of-fragile-situations>

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