



China's Logging Ban in Natural Forests: Impacts of Extended Policy at Home and Abroad

This Information Brief explores some of the anticipated economic and ecological implications of the forthcoming expansion of restrictions on commercial logging in China's natural forests.

Introduction

China is planning to ban commercial logging in all natural forests by the end of 2016 in an extension of an ambitious program which was started in 1998 and whose purpose is to allow forests to recover from decades of over-logging and to help restore forest ecosystems and their resilience. In 2000, the Chinese government fully implemented the National Forest Protection Program (NFPP), which instilled logging bans and harvesting reductions in 68.2 million ha of forest land (Figure 1) – including 56.4 million ha of natural forest (approximately 53 percent of China's total natural forests). In 2014, the State Forestry Administration (SFA) expanded the NFPP with the launch of a trial ban on commercial logging in state-owned natural forests in Heilongjiang Province, which has historically produced over 30 percent of China's domestic log supply. Based on the results of the Heilongjiang trial, the SFA further expanded the trial ban to natural forest areas in other Northeast provinces starting from April 2015, and to the whole country by 2017. The newly released China's 13th Five-Year logging quota (2016-2020), which shows a logging quota of 254.036 million m³ for 2016-2020, reveals a 6.3% drop compared to 2010-2015 and shows that logging ban has been effectively enforced. A closer look at the logging quota for each province, particularly with an eye to plantations and natural forests, shows that there is no quota for commercial logging in natural forests nationwide (SFA 2016).

Domestic Impacts

The environmental effects of the policy have not yet been studied and may not be known for years, but the socio-economic impacts are already being felt. Through 2014, these natural forests provided over half of the country's total domestic timber production, and have been essential to the broader forestry industry and their employees. The central government has allocated 2.35 billion yuan (about US\$379 million) a year to cover foresters' loss of livelihood between 2014 and 2020.

Impact on Chinese Timber Product Imports and Forests Outside of China

China's imports of timber products have been growing exponentially over the past two decades. In 2014, imports of logs and sawnwood totaled 88 million cubic meters (m³) roundwood equivalent (RWE), exceeding the domestic commercial timber production of 82 million m³. Imported timber now accounts for more than half of China's total timber supply. With the new logging ban, timber imports are expected to further expand to fill the gap created by declines in domestic harvesting due to the expansion of the NFPP.

Implication for Due Diligence Systems

Major northeastern species such as Mongolian oak, Chinese ash, and Korean pine are typical species growing in state-owned forests in the Northeast. After 2016, there should be no wood products labeled as being sourced from Chinese forests for these species which do not have plantation-grown substitutes. There will, however, likely be exemptions such as wood from thinning operations, or possibly North America, Russian, and European hardwood species may be mislabeled as of Chinese origin.

Background

In 1998, the flooding of the Yangtze and Yellow Rivers in Central China triggered one of the largest governmental responses to combat deforestation. The catastrophic floods took away many lives and homes, and caused billions of dollars of damages. These floods were thought to be caused by the extensive over logging in the upstream watersheds. In 2000, the Chinese government announced the Natural Forest Protection Program (NFPP) to mediate deforestation and restore these protective watersheds. The NFPP consists of two main programs:

- Logging ban in natural forests upstream of the Yangtze River, and upstream and midstream of the Yellow River, and
- Reduced logging in key state-owned natural forests¹ in northeastern China² (Heilongjiang and Jilin), and Inner Mongolia to reduce their timber production from the natural forests.

The NFPP covered 17 provinces and about 68.2 million ha of forest land (Figure 1), including 56.4 million ha of natural forest, about 53 percent of the natural forests in China. The NFPP also encourages forest management in these areas. The NFPP was initially set for ten years 2000-2010 (Phase I), it is now expanded to 2020 (Phase II: 2010-2020). In Phase II, the NFPP project area has been extended to include 11 more counties, as showed in the map (Figure 1).

The “New” Logging Ban

The halt of commercial logging in state-owned natural forests in Heilongjiang province started on April 1, 2014. This is technically not a new ban, but rather an extension of the NFPP. The ban in Heilongjiang affects two important state-owned logging firms, Longjiang Forest Industry and Greater Khingan Forestry Company (Anling Forestry). Before the 2014 trial logging ban, Heilongjiang's annual timber production had already been drastically reduced. By 2013, only 0.89 million m³ of wood were being harvested, down from 4.1 million m³ in the years prior to the NFPP II (Zhang 2014). Initiating a logging ban in Heilongjiang, the powerhouse of Chinese domestic production,³ however, sent a strong message and is seen as symbolic of Chinese efforts to prevent further ecosystem degradation.

The extension of the ban in April 2015 covered all natural forests across Northeast China and Inner Mongolia and the government plans for further expansions to all other state-owned natural forests, including those in the 14 provinces currently not covered by the NFPP. The government plans to start the trial bans in non-state-owned natural forests in late 2015. Eventually, this would lead to the complete cessation of commercial logging in all natural forests across mainland China by 2017 (Zhao 2015).

No information on the expected duration of these bans is available. However, it has been stated that at least in some areas, the objective of the bans is to allow the forest inventories to rise again to a level that would support commercial industries again in the future. If the ban lasts for 10 years, the per hectare timber stocks of forests in the Khingan Mountains, for example, would

¹ Key state-owned forests refers to the state owned forests under the 135 state forest enterprises (SFEs) historically supervised by the central forest authority. Two-thirds of the SFEs are located in NE China and occupy more than 90% of total forests in that region.

² NE state forest area generally refers to Heilongjiang and Jilin provinces, as well as the east part of Inner Mongolia. Sometime the official document calls the region as NE China and Inner Mongolia. The logging quota system has been implemented in the key state-owned natural forests in NE China and Inner Mongolia since 2000 with one exception: Yichun in Heilongjiang Province. Yichun initiated a logging ban in natural red pine forests in 2004.

³ Heilongjiang has the most natural forests and a long history of industry based on forest resources, but also a reputation of decades of over-harvesting. Its own development also suffers the resource and environmental crises caused by the over-exploitation.

increase from about 77 m³ to 88 m³; the forests managed by Longjiang Forestry Industry Bureau will increase from 95 m³ to 110 m³ (Zhang 2014).

Figure 1. The Project Area of the Natural Forest Protection Program



Source: SFA.⁴

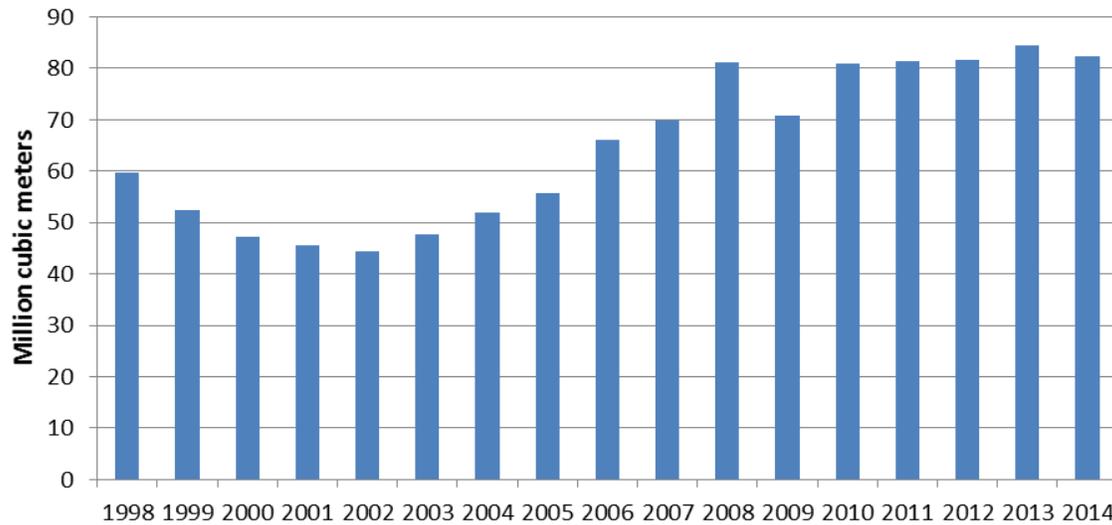
Impacts

The new bans will undoubtedly bring many changes to China's forest sector, as it did when the NFPP was first introduced in 2000. At that time, domestic timber production dropped, then slowly regained as China's plantation programs came on-line. From its low point in 2002, commercial domestic timber production in China rose from 44.36 million m³ to 84.38 million m³ in 2013 (Figure 2), with natural forests providing about half the total domestic supply (49 million m³) (Zhao 2015). Industry sources revealed timber production in 2014 was down to 82.33 million m³ (Zhu 2015).

The State Forestry Administration (SFA) does not publish timber production data from natural forests or plantations separately, neither by species. However, different sources reveal that proportion of timber production from natural forests was as high as three quarters before 1998, then dropped sharply, and continue dropping over years. The 8th forest inventory data revealed increases in timber harvested from plantations. Production data by province shows an even higher portion of timber production coming out of plantation rather than natural forests.

⁴ Modified based on the NFPP project map provided by the SFA website. Original map is available from <http://trlbh.forestry.gov.cn/portal/trlbh/s/1853/content-607880.html>

Figure 2. China's Commercial Domestic Timber⁵

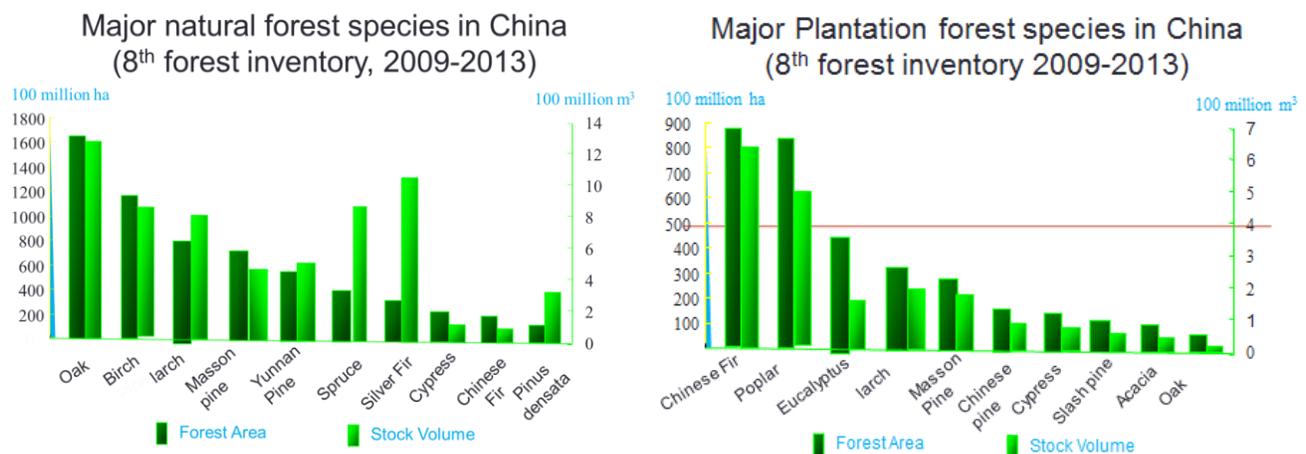


Source of Data: China Forestry Statistical Yearbook, SFA.

Types of Species That Will Be Available

China's vast and ambitious plantation programs are expected to continue to make up some of the gap that will arise after the ban.⁶ However, typically the species sourced from natural forests are not easy to substitute from plantation areas. Solid wood flooring, furniture, plywood veneer industries in particular (Zhang 2014) have been dependent on hardwood natural forest timber species (e.g., oak and birch) which cannot be sourced from plantation forests at this time nor in the immediate future.⁷

Figure 3. Major Timber Species in China



(Source: SFA, 8th Forest Inventory (2009-2013).

⁵ Commercial timber production here does not include fuelwood. It is similar to the category of sawnlogs & veneer logs defined by FAO.

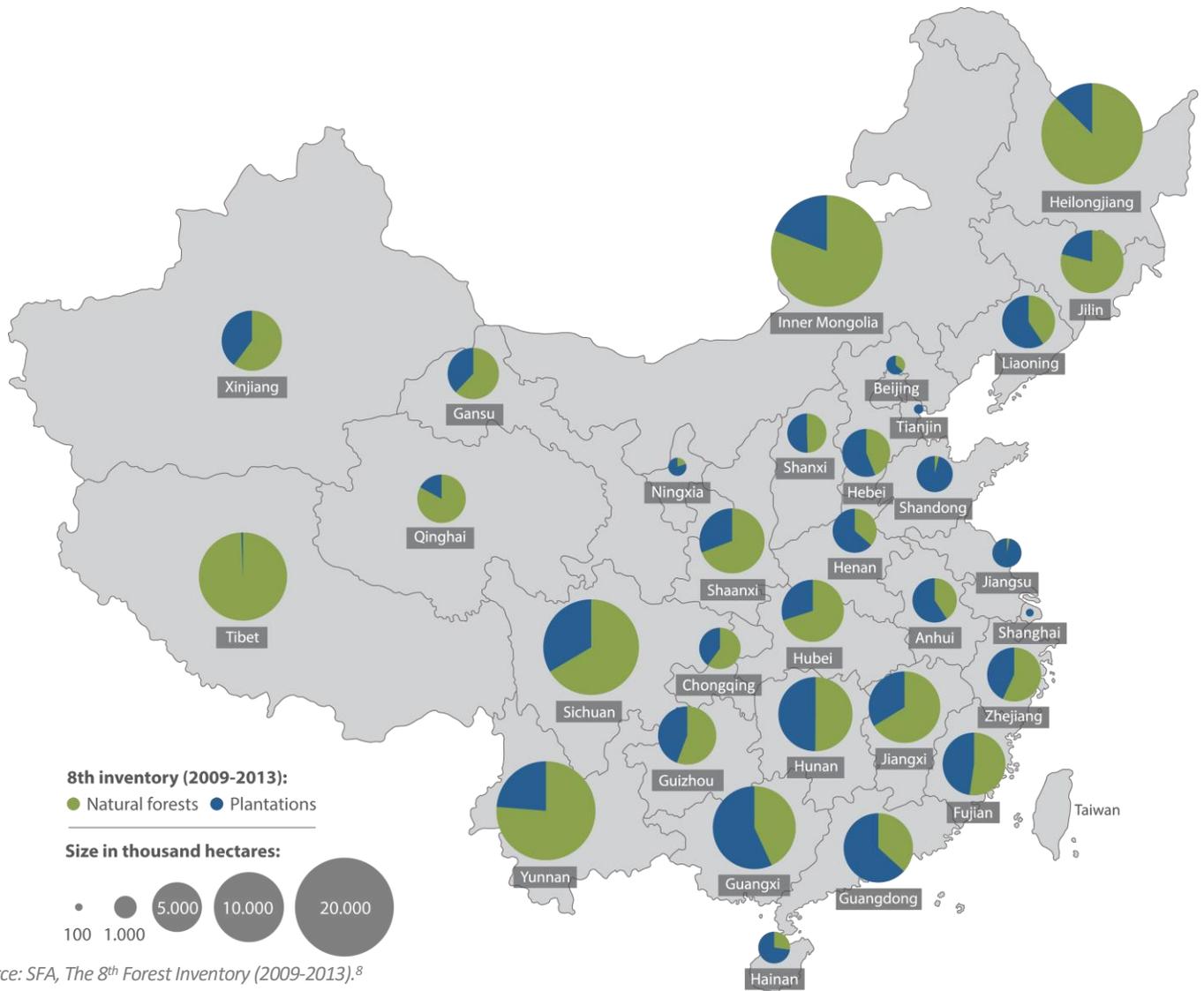
⁶ China has included the development of fast-growing and high-yielding plantation forests into the six major forestry projects since 2002. The area of plantation has reached 69.33 million ha in 2013 – a 31% increase 2003. In the recent years, the afforestation area of fast-growing and high-yielding forests takes up about 20% of the all new plantations. Ma (2011) estimated that the annual supply potential of China's fast-growing and high-yielding forests is 187.78 million m³, of which *Eucalyptus* takes up 30.99 million m³, fir takes up 18.50 million m³ and pine is 12.49 million m³.

⁷ In NE China, successful plantation forests are heavily focused on birch and other types of pine species, with limited hardwood species. For birch, the rotation age in NE China approaches 40 years.

Data is available to show that approximately 49 million m³ of China's domestic timber production were sourced from natural forests (state- and non-state owned). The SFA also publishes data on total forest area by species and their estimated stock volume. However, the SFA does not publish any data on annual timber production segregated by natural forests and plantations by species. One, however, can deduce some calculations by reviewing the land area and stock volume of the natural forests by dominant species or forest types (Figure 3) and the distribution of the natural forests by provinces (Figure 4).

Northeast China and Inner Mongolia temperate forests, for example, are mostly natural forests, while plantations exist mainly in southeast and southern China. In Heilongjiang Province, the main forests are not plantation, but natural taiga in the north and temperate mixed forests in the south. The dominant conifer in these taiga forests are larch (*Larix gmelinii*) in the Great Khingan Mountains and *Picea-Abies* in the Lesser Khingan Mountains. As for the mixed forests, the dominant species are Mongolian oak (*Quercus mongolica*) and larch (*Larix gmelinii*) in the Great Khingan Mountains, and *Picea-Abies-Pinus koraiensis* in the Lesser Khingan Mountains (Liu et al. 2007).

Figure 4. The Distribution and Forest Land Area of Natural Forests and Plantations by Province (2009-2013)



Source: SFA, *The 8th Forest Inventory (2009-2013)*.⁸

⁸ Data was retrieved on December 12, from http://211.167.243.162:8085/8/zhuantifront/zhuantipageinit?lm=zbxx&type=0101&mzhuanti.cl_SHU=8&mzhuanti.dAN_WEI_BM=10&mzhuanti.IE_BIE_DM=0101

In very rough estimates, one can estimate that in provinces of Guangxi, Guangdong, and Fujian, where most production emanates from plantations, volumes harvested will likely be unaffected by the new bans. In the provinces of Jilin, Heilongjiang, and Inner Mongolia, timber production was mostly from natural forests and should, in theory, no longer be available after April 2015 (Table 1). By 2016, in theory, no species sourced only from natural forests should be available on the market. There will be, however, legal and illegal reasons why these species may still be available:

- Forest thinning/sanitary cuts: forest management plans may include legal actions to thin forests. In other countries, however, similar measures have been used as a cover to cut more than was technically needed for forest health;
- Illegal cutting; and
- Over-quota harvesting.⁹

Table 1. Timber Production by Province, 2013 (million m³)

Province	Timber Production	Province	Timber Production
Guangxi	22.9	Henan	2.4
Guangdong	8.1	Sichuan	2.4
Fujian	5.7	Heilongjiang	2.2
Shandong	5.6	Inner Mongolia	1.8
Anhui	4.8	Guizhou	1.8
Hunan	4.3	Liaoning	1.8
Yunnan	4.3	Zhejiang	1.5
Jilin	3.5	Jiangsu	1.4
Jiangxi	2.7	Hainan	1.2
Hubei	2.5	Others	3.0

Source: China Forestry Statistical Yearbook 2013.

Economic Impacts

The 2014 trial ban on commercial logging affected the 18.45 million ha natural forests managed by the Longjiang Forestry Industry and Greater Khingan Mountains Forest Group, the two main operators of the area.

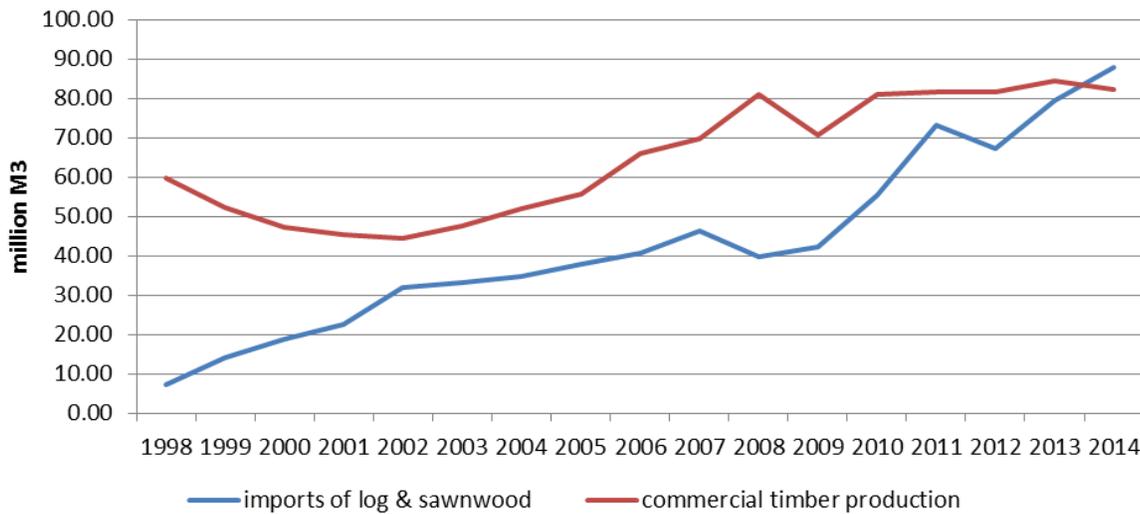
Many foresters and other employees will lose their jobs, or have to cut their work hours. The central government has allocated 2.35 billion yuan (about US\$3790 million) a year to cover foresters' living costs between 2014 and 2020. The local forestry administrations are also looking for alternative livelihoods in tourism and non-timber forest product industries. Tensions between the government and the forest-dependent communities in the region, however, remain high (Zhang 2014).

Increases in Imports

Starting in early 2000, Chinese timber imports have risen exponentially, partly in order to cover the gap in timber supply caused by the early NFPP logging bans and reducing harvesting set by the quota systems. Currently, roughly half of Chinese timber demand is met by imports (Figure 5), but this should be expected to increase as the new logging bans come into force. Mr. Jianchun Xiao, head of the Greater Khingan Mountains Forest Group, said in an interview, "We will pay more attention to logging abroad, and gradually increase the commercial timber production in Russia and Guyana. We will build a new Greater Khingan Mountains overseas" (Zhang 2014).

⁹ Historically, harvesting above quotas were widespread. It is assumed, however, that after 2016 over-quota harvesting will no longer occur.

Figure 5. China's Domestic Timber Production & Imports, Volume RWE



Source: Zhu 2015.

Although it is too early to judge the policy, its impacts on global efforts on combatting illegal logging and associated trade should not be overlooked. China will need to import more timber and timber products, particularly hardwood species,¹⁰ and will need to procure enough legally verified and/or certified timber from international markets in order to avoid the reputational risk that China is disseminating manufactured timber products sourced from illegally harvested woods and contributing to the collapse of forests around the globe.

Table 2: 8th inventory, 2009-2013 (thousands of ha.)

Province	Natural Forests	Plantations
Anhui	1550	2250
Beijing	213	375
Chongqing	1896	1264
Fujian	4150	3780
Gansu	3143	1927
Guangdong	3335	5725
Guangxi	5788	7642
Guizhou	3642	2888
Hainan	513	1367
Hebei	1928	2462
Heilongjiang	17150	2470
Henan	1310	2280
Hubei	5002	2138
Hunan	5071	5049
Jiangsu	50	1570
Jiangxi	6636	3384

Province	Natural Forests	Plantations
Jilin	6028	1612
Liaoning	2263	3307
Inner Mongolia	20125	4755
Ningxia	124	496
Qinghai	3367	693
Shaanxi	5901	2629
Shandong	100	2450
Shanghai	0	68
Shanxi	1394	1426
Sichuan	11330	5710
Tianjin	0	112
Xinjiang	4200	2780
Tibet	14633	87
Yunnan	14602	4538
Zhejiang	3420	2590

¹⁰ Import data from China customs for oak logs has grown in the past ten years, from 0.32 million m³ to 0.84 million m³. Increases in oak sawnwood imports are faster than oak logs, from 0.14 million in 2003 to over 1 million in 2014. The top five supplying countries of oak logs in 2014 were France, Russia, United States, Belgium, and Germany, while top five suppliers of oak sawnwood were the United States, Russia, France, Canada, and Germany.

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Other policy and information briefs can be found at
www.forest-trends.org



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