

MEETING CHINA'S DEMAND FOR FOREST PRODUCTS: AN OVERVIEW OF IMPORT TRENDS, PORTS OF ENTRY, AND SUPPLYING COUNTRIES, WITH EMPHASIS ON THE ASIA-PACIFIC REGION

Xiufang Sun, Eugenia Katsigris, Andy White¹

[Summary]

This study analyzes trends of China's forest product imports by both product segment and ports of entry, as well as for each of the main Asia-Pacific countries supplying China. A high growth was experienced in China's forest product imports between 1997 and 2003 in both timber products and pulp and paper. Primary data showed that the trends continued for 2004. Logs, lumber, and pulp are the most rapidly growing import segments, as China moves towards handling more of the processing of forest products itself. Forest-rich countries in the Asia-Pacific region are playing an increasingly important role in supplying China's expanding demand. Finally, ocean ports in the Shanghai-Jiangsu and South China regions have maintained their leading role in the forest product trade. These have been joined more recently, and in some cases surpassed, by inland ports in Northeast China, which have been catapulted to leading roles by the booming border trade with Russia.

[Key words]

China, forest product imports, Asia-Pacific, timber products, pulp and paper

¹ Xiufang Sun (xsun@forest-trends.org) is a Market Analyst with Forest Trends, Eugenia Katsigris (jkatsigris@forest-trends.org) is a Market Analyst with Forest Trends, and Andy White (awhite@forest-trends.org) is Senior Director, Policy and Market Analysis, with Forest Trends).

PREFACE

It is now well recognized that China has quickly become one of the world's largest importers of forest products and that this growing demand is linked to increased harvesting and illegal logging and trade in many producer countries. These trends are undoubtedly having important impacts on forests and the livelihoods of forest peoples around the world. NGO and government actors are eager to better understand and address the problems caused by this trade, and where possible, transform this growing demand into incentives for sustainable forest management and improved forest livelihoods.

Unfortunately, detailed information regarding import trends for different products, the gateways and the suppliers, and the impacts and implications of these trends - both in China and in the key supplying countries - has been limited. This paper is an attempt to begin to address this gap in information. It is a brief overview and update of an in-depth analysis of Chinese imports entitled "China's Forest Product Imports, 1997-2002: Analysis of Customs Data with Emphasis on Asia-Pacific Supplying Countries" published separately by Forest Trends, the Center for Chinese Agricultural Policy (CCAP), and the Center for International Forestry Research (CIFOR). The data upon which this analysis is based is from China's customs Information Center.

These papers are the first in a series of studies being conducted by Forest Trends, CIFOR and their partners in the Asia-Pacific region on Chinese and regional trade issues. Additional analyses underway focus on the structure of the export-oriented forest industry in key Asia-Pacific producer countries; projections of China's forest product demand and domestic supply; the livelihood implications of China's growing demand; policy issues and constraints to community production in China; and strategic opportunities for industry, policymakers and NGOs to address problems related to this trade and advance forest conservation and forest livelihoods in China and across the Asia-Pacific region.

The authors would like to thank Gary Bull, Christopher Barr, Dequan He, R. Anders West, Christian Cossalter, and Jintao Xu for their valuable comments and contributions,

and Anne Thiel for her production expertise. The authors, as well as Forest Trends, CIFOR, and CCAP are also grateful to the UK Department for International Development (DfID) for their financial support of this analysis and for their broader support to advance market and policy reforms to improve livelihoods and enhance forest conservation in the Asia-Pacific Region. The opinions expressed in this analysis are those of the authors alone and do not reflect the positions of DfID.

MICHAEL JENKINS

President,
Forest Trends

DAVID KAIMOWITZ

Director General,
Center for International Forestry Research

INTRODUCTION

China's flourishing economy, coupled with policy constraints limiting domestic forest production, has resulted in skyrocketing forest product imports over the last several years. In a decade, China moved from a ranking of seventh up to second among all nations in total value of forest product imports and also is now the top importing country worldwide of industrial round wood.¹

This growing import demand is having major impacts on forests and forest peoples in producer countries and is stimulating increases in illegal logging and deforestation. The link between illegal logging and trade, in particular, is a recognized problem that has been addressed in a number of recent studies. These works have drawn evidence from both discrepancies in trade statistics and on-the-ground investigations.²

Expectations for China's continued strong economic growth suggest that the trends will continue, if not accelerate, in coming years. Full diagnosis of the impacts, as well as projections of import trends and identification of opportunities for low-income producers to possibly benefit from this trade, require a much clearer picture of the flows of forest product imports into China than has been available to date.

¹ In 1990, China was ranked seventh among nations in forest product import value. By 2000, it was ranked second, with only the US importing a greater total value of forest products. Source of data: FAOSTAT Agricultural Data, Food and Agriculture Organization of the United Nations (FAO), 2004: Accessed via <http://faostat.fao.org/> on March 12, 2004.

² The ITTO has recently commissioned a number of trade discrepancy studies, which provide details on the gap between import statistics of destination countries (e.g. China) and export statistics of supplier countries (e.g. Indonesia). Gaps are thought to be a result of product that is illegally harvested in and/or smuggled out of the producer country. An important study that covers illegal logging more generally is FAO's "Law Compliance in the Forestry Sector: An Overview" by Arnoldo Contreras-Hermosilla (2001). Other good sources include reports and briefings produced by the Environmental Investigation Agency's Forests for the World Programme (http://www.salvonet.com/eia/campaigns2_reports.shtml and www.globaltimber.org.uk).

This paper provides a brief overview of forest product¹ import trends, by both product segment and port of entry, as well as for each of the main Asia-Pacific producer countries supplying China. Trends are identified primarily through use of official Chinese customs data². The paper is based on a more detailed analysis published by Forest Trends and CIFOR and builds on recent work by WWF and others.³ The paper first describes the overall import trends, and then describes trends by product segment. It next addresses trends in ports of entry and identifies major supplier countries. The paper then describes the roles of eight leading Asia-Pacific producer countries currently involved in the China trade: Cambodia, Indonesia, Laos, Malaysia, Myanmar, Papua New Guinea (PNG), Russia, and Thailand. These countries are home to some several million indigenous and other forest people as well as high concentrations of globally significant biodiversity: 13 of 25 global biodiversity hotspots are located in the region (World Bank, 2000; Operations Evaluation Department, 2000).

¹ Forest products include timber products, pulp, paper and paper products. They are all items under Customs HS codes of 44, 47 and 48. However, this study did not include wood furniture in timber products.

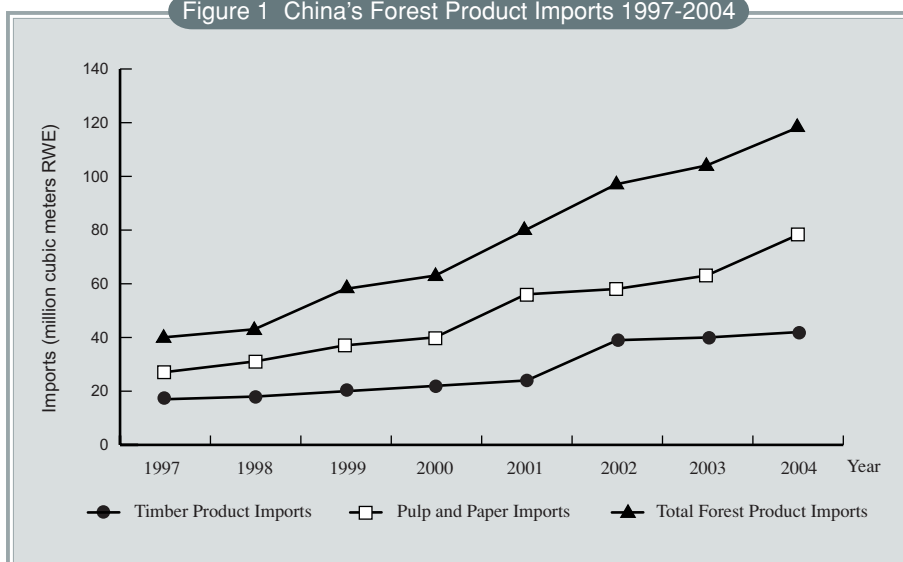
² The data reflect direct imports to Mainland China only, while Hong Kong and Taiwan are treated as supplying regions rather than destinations.

³ Xiufang Sun et al, "China's Forest Product Import Trends, 1997-2002: Analysis of Customs Data with Emphasis on Asia-Pacific Supplying Countries," Forest Trends and CIFOR, 2004; and WWF Forests for Life Programme, TRAFFIC Rufford Foundation and World Bank/WWF Alliance, "China's Wood Market, Trade and the Environment", editors Zhu Chunquan and Rodney Taylor, 2004.

TRENDS IN OVERALL GROWTH AND ITS COMPOSITION

China's forest product imports more than doubled in round wood equivalent (RWE) volume between 1997 and 2003, rising from 40.2 million to 106.7 million cubic meters (see Figure 1).¹ In value, overall imports in the sector increased by 102 percent during the same period, rising from US\$6.4 billion to US\$12.9 billion. Customs data for 2004 show that the trend has continued with forest product import volume rising to 120 million cubic meters RWE and value rising to US\$15.1 billion.

Figure 1 China's Forest Product Imports 1997-2004



Timber product imports more than tripled in volume and more than doubled in value between 1997 and 2003, reflecting China's marked expansion of its timber processing industry. This industrial expansion has been driven not only by growing domestic demand for end products, but also by international demand for exports of China's low-cost finished wood products, such as furniture.

¹ In brief: In order to compare and aggregate volumes of timber products and pulp and paper, various types of forest products are converted to round wood equivalent volumes (RWE). Aside from logs, a conversion factor is used to convert a product's physical volume in units of cubic meters (m³) to its RWE volume in cubic meters (m³ RWE). For example, 1 m³ of lumber = 1.43 m³ RWE of lumber, while 1 m³ of logs = 1 m³ RWE of logs. For the sake of clarity, the text will designate which volumes are m³ RWE (except in the case of logs). Otherwise, units of m³ without RWE designation, when used for a single type of product, should be interpreted as physical cubic meters. Conversion factors to calculate RWE are sourced mainly from FAO, with special pulp conversion factors provided by the China Paper Association.

Pulp and paper are responsible for an even larger volume of forest product import growth over the period studied than are timber products. Pulp and paper products currently account for about 60 percent of China's forest product imports by RWE volume. Their strong growth reflects not only a rise in the quantity of paper demanded, but also in quality criteria. That is, as the quality requirements of both China's domestic paper market and her export-oriented sectors rise (e.g. high quality paperboard for packaging), the nation is moving away from a predominantly straw-based pulp and paper industry towards greater use of (often imported) wood-based fibers (He & Barr, 2004).

The main drivers of these general trends in forest product imports are China's strong economic growth, her low per capita endowment of wood, and policy constraints to domestic production from natural and plantation forests. To a lesser extent, recent reductions in forest product tariffs may play a role in increased imports, including, possibly, a shift from illegal to legal product, as smuggling becomes less attractive.

TRENDS BY SEGMENT

Timber Products

Timber product imports were analyzed according to the following segments: logs (unprocessed), lumber (sawn wood), wood chips, fiberboard, plywood, particleboard, veneer, and a general "other" designation for more minor products (see Table 1).

Logs, and to a lesser extent lumber, account for the largest portion of the strong timber product import growth occurring between 1997 and 2004. As a result, logs and lumber now make up the bulk of China's timber product imports, with over 26 million cubic meters of logs and 8.6 million cubic meters RWE of sawn wood imported in 2004.

Table 1 China's Timber Product Imports by Product Type
(in million cubic meters RWE)

	1997	1998	1999	2000	2001	2002	2003	2004
Logs	4.47	4.8	10.14	13.61	16.86	24.33	25.46	26.24
Sawn wood	1.89	2.40	3.89	5.19	5.77	7.71	7.87	8.58
Veneer	1.14	1.34	1.6	1.62	0.83	0.72	0.56	0.39
Plywood	3.73	4.23	2.61	2.51	1.63	1.59	1.99	2.00
Fiberboard	0.82	1.04	1.43	1.83	1.93	2.25	2.51	2.09
Particleboard	0.22	0.24	0.37	0.52	0.67	0.89	0.94	0.98
Wood chips	0.004	0.003	0.005	0.002	0.006	0.094	0.503	0.544
Other	0.37	0.56	0.56	0.53	0.42	0.56	0.55	0.45

Trends in timber product data reveal the Chinese economy's increasing capture of the value added of natural resources, as imports enter China in a less processed state. While higher value-added imports (plywood, veneer, fiberboard, etc.) made up almost half of China's timber product imports by value in 1997, by 2004 logs and sawn wood constituted 80 percent of total import value. A comparison of plywood to sawn wood imports further illustrates this trend. In 1997, plywood imports were 3.73 million cubic meters RWE and sawn wood imports were 1.89 million cubic meters RWE. By 2004, volume of plywood imports had dropped to 2.0 million cubic meters RWE, reflecting the growth of China's own plywood capacity, while sawn wood import volume had grown to 8.58 million cubic meters RWE.

In the log category, softwood logs have dominated growth and now make up 60 percent of log import volume, as compared to only 21 percent in 1997. In fact, from 1997 to 2003, softwood log imports grew 15 times from a base of merely 930 000 cubic meters to 15.0 million cubic meters. Starting from a much larger base of 3.5 million cubic meters in 1997, hardwood log imports in comparison grew by only two times, but were also quite substantial by 2003, reaching 10.4 million cubic meters.

Within the hardwood log category, tropical hardwood log imports were responsible for over 80 percent of growth. While temperate hardwood log imports grew steadily between 1997 and 2003, more than doubling in volume, tropical hardwood logs made up the majority of hardwood logs throughout, constituting over 75 percent of volume for each of the years studied.¹

The bulk of lumber imports are made up of hardwood (75 percent of lumber imports by volume in 2003). Softwood lumber imports, however, showed growth rates similar to those of their hardwood counterparts. Hardwood lumber imports grew from 1.0 million cubic meters in 1997 to 4.1 million cubic meters in 2003, with the strongest rises in tropical hardwood lumber, which made up the majority of hardwood lumber imports for each of the years studied. Temperate hardwood lumber, however, played a somewhat more substantial role than its counterpart in the log category, accounting for about a third of hardwood lumber

¹ In all, Chinese Customs designates three categories for both hardwood logs and hardwood lumber: (1) tropical, (2) temperate, and (3) mixed. The "mixed hardwood" categories, however, consist of all hardwoods (either tropical or temperate) for which China Customs does not have specific species designations. The analysis on which this paper is based divides each of hardwood logs and hardwood lumber into two categories only: tropical and temperate. The "mixed hardwood" categories used by China Customs are disaggregated by country and, following ITTO's definition of tropical timber, all hardwood product from tropical countries is treated as tropical, while that from other countries is classified as temperate.

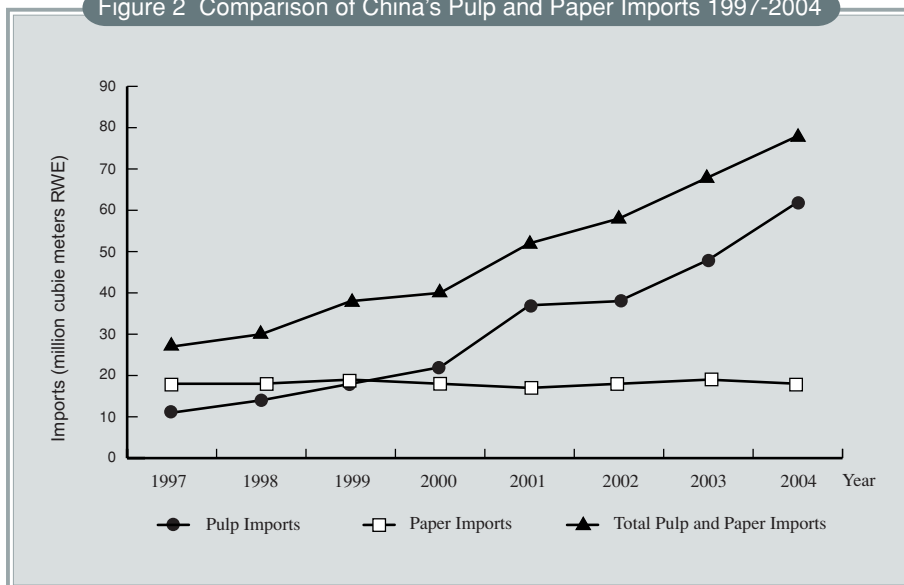
growth by volume over the period, and actually exceeded temperate hardwood log imports in RWE volume in 2003. Softwood lumber imports rose from a base of 300 000 cubic meters in 1997 to 1.4 million cubic meters in 2003, with growth attributed to a sharp rise in Russian lumber imports.

Pulp and Paper

As with timber products, trends in pulp and paper imports between 1997 and 2004 show the Chinese economy's increasing capture of value added (see Figure 2). Sharp increases in pulp imports constitute the bulk of growth in the pulp and paper category and have moved the segment from one in which paper has historically dominated imports to one in which pulp imports far exceed those of paper.

In 1997, China imported 70 percent more paper by RWE volume (17.3 million cubic meters) than pulp (10.2 million cubic meters). Pulp imports tripled in value between 1997 and 2003, with RWE volume jumping by 3.7 times. As a result, by 2003, China imported 47.9 million cubic meters RWE of pulp as compared to 18.6 million cubic meters RWE of paper. Pulp imports in 2004 continued to grow and reached 60.5 million cubic meters RWE in volume and US\$5293 million in value. The trends correspond with expansion of China's wood-fiber-based domestic paper manufacturing capacity.

Figure 2 Comparison of China's Pulp and Paper Imports 1997-2004



TRENDS IN TOP PORTS OF ENTRY OF CHINA'S FOREST PRODUCT IMPORTS

As part of efforts to develop a richer and more informative picture of the growing trade flows of forest products into China, import data was analyzed by major port of entry. The map provided in the Annex depicts the location of the main ports covered. It should be noted that a "port" as referred to in this study indicates one of the 42 ports of entry operated by China's General Customs Bureau. Import data for each of these ports of entry actually represents aggregate imports for all ports and gateways in the geographic area under that port of entry's supervision. "Nanjing", for example, covers all ports in Jiangsu Province. In contrast, there are seven ports of entry in Guangdong Province, each covering a number of entry points. This section first presents port of entry trends for forest products overall and by product and then touches upon port trends by producer country and associated product.

General Port of Entry Trends

Leading ports of entry for China's forest products tend to be either ocean ports in areas of China's greatest economic growth and manufacturing capability or inland ports serving border trade with producer countries. In general, there are three major geographic clusters that include the leading ports of entry for most types of forest products.

These geographic clusters are:

- 1) The Guangzhou-Shenzhen corridor, located in South China's Guangdong Province and including the ports of Guangzhou, Huangpu (also covering areas near the city of Guangzhou), and Shenzhen (located on the border with Hong Kong);
- 2) The Shanghai-Jiangsu region, including the ports of Shanghai and Nanjing in eastern China; and
- 3) The far Northeast border area, including Harbin (the provincial capital of Heilongjiang Province and also the port of entry aggregating customs data for the whole province) and Manzhouli (a border town and railhead in the northeastern part of the Inner Mongolia Autonomous Region).

The first two of these clusters, representing major ocean port areas, have consistently played an important role in forest product imports over the period studied (1997-2003).

They share the common import drivers of strong economic growth, much of China's most prosperous populace, and phenomenal concentrations of manufacturing capacity (e.g. furniture) serving both the domestic and export markets.

The third cluster, consisting of the "overland" ports of Harbin and Manzhouli, has emerged to prominence more recently, reflecting the critical role of these ports in sharply growing imports from the Russian Far East. This cluster is located in a much less prosperous region of China than the first two clusters.

Among the ports of entry not included in these three clusters, Qingdao (an ocean port in North China's Shandong Province and the port of entry aggregating customs data for the province as a whole) is probably the most important to note, given that it is a top player in pulp imports. Qingdao's role in the pulp trade is not surprising, as Shandong Province is known as a major center of China's papermaking industry. Kunming port (covering all gateways in Southwest China's Yunnan Province) is also of note, given its central role in the expanding border trade with Myanmar.

Port of Entry Trends by Product

Table 2 below summarizes the major findings on ports of entry for specific categories of forest product. For timber products generally, it can be seen that the leading five ports by volume include a mix of ocean ports serving coastal China's economic powerhouses (Nanjing and Shanghai in the Shanghai-Jiangsu area and Shenzhen in Guangdong Province) and, now at the top of the list, newer entrants from Northeast border areas (Harbin and Manzhouli, which replaced South China's Guangzhou and Huangpu in the top five in timber import value in 2001 and 2002, respectively). In contrast, pulp and paper show much less of a role for Northeast border ports, with ocean ports instead clearly dominating this trade.

Log Imports

The log category shows an even stronger influence of increasing overland border trade than timber products generally. The inland border ports of Harbin, Manzhouli, and Hohhot, alongside seaports Nanjing and Qingdao, were all in the top five for log imports in 2002. Interestingly, with the rise in Russian border trade, Nanjing was recently overtaken in its role as highest volume port of entry for logs by both Harbin and Manzhouli.

The softwood log trade is dominated by inland border trade. The top three softwood log ports of entry by volume are all inland border ports (Manzhouli, Harbin, and Hohhot)

Table 2 Chinese Ports of Entry - Top Ports and Port Trends by Product Category

Product	Top Ports in 2002	Notes on Port Trends
Timber Products	1. Manzhouli 2. Harbin 3. Shenzhen 4. Nanjing 5. Shanghai	Reflecting growth in Russian timber trade, rising share for Harbin and Manzhouli which replaced Guangzhou and Huangpu in top five in timber product import value in 2001 and 2002, respectively.
Logs	1. Harbin 2. Manzhouli 3. Nanjing 4. Hohhot 5. Qingdao	Nanjing had been largest port of entry for logs before 2000, but was overtaken by Harbin and Manzhouli due to growing trade with Russia.
Softwood Logs	1. Manzhouli 2. Harbin 3. Hohhot	Strong growth trends for border trade with Russia; e.g. softwood log imports through Manzhouli increased 13 times from 1997 to 2002
Tropical Hardwood Logs	1. Nanjing 2. Qingdao 3. Guangzhou 4. Kunming 5. shenzhen	Nanjing top port throughout period (1997-2002), handled 53% of volume in 2002. Shanghai's role dropped over the period, while Qingdao's and Kunming's rose.
Temperate Hardwood Logs	1. Harbin 2. Qingdao 3. Shanghai	Harbin top port for all years (1997-2002), handled 47% of volume in 2002. Shanghai's role dropped over the period, while Qingdao's rose.
Sawn Wood	1. Shenzhen 2. Shanghai 3. Huangpu 4. Guangzhou 5. Manzhouli	Dramatic growth in both Shenzhen and Shanghai, located in China's fastest growing regions and home to thousands of export-oriented wood product manufacturers (e.g. furniture and wood flooring mills) requiring large quantities of lumber.
Softwood Lumber	1. Manzhouli 2. Shenzhen	Manzhouli and Shenzhen replaced Hohhot as top ports, each accounting for about one quarter of total in 2002.
Tropical Hardwood Lumber	1. Shanghai 2. Shenzhen 3. Huangpu	Strongest growth in Shanghai, which led with 34% of volume in 2002.
Temperate Hardwood Lumber	1. Shenzhen 2. Huangpu 3. Shanghai	Shenzhen top port since 1998; handled 42% of volume in 2002. Overland trade limited: Harbin joined top five in 2001; handled only 8% in 2002.

Product	Top Ports in 2002	Notes on Port Trends
Plywood	1. Shenzhen 2. Shanghai 3. Guangzhou 4. Huangpu	Plywood imports overall declining, as China's production capacity increases; remaining imports dominated by coastal ports; Russia border trade ports not represented in top five.
Veneer	1. Guangzhou 2. Jiangmen 3. Shanghai 4. Shenzhen 5. Huangpu	After 2000, Shanghai and Huangpu imports dropped significantly and Jiangmen and Guangzhou imports grew; overall, veneer imports in decline.
Wood Chips	Qingdao	China is net exporter of wood chips; 2002 surge in imports mainly into Qingdao from Australia.
Pulp	1. Nanjing 2. Shanghai 3. Qingdao 4. Manzhouli 5. Huangpu	Combined imports of top five ports accounted for 75% of total. Shanghai was top port between 1997 and 2000; Nanjing surpassed Shanghai in 2001; in general, coastal ports dominate.
Paper and paperboard	1. Shenzhen 2. Huangpu 3. Shanghai	Few changes over the six year period. In 2002, Shenzhen imported 41% and Huangpu 23%.

Note: Leading ports are listed in order of decreasing import volume.

exhibiting strong growth trends from border trade with Russia. Softwood log imports through Manzhouli, for example, increased 13 times between 1997 and 2002.

Tropical hardwood logs enter China mainly through ocean ports, while over half of temperate hardwood logs enter through overland trade. Nanjing was the leading port in volume of tropical hardwood log imports throughout the period studied, accounting for 53 percent of imports in 2002. Temperate hardwood logs similarly show a single leading port, with Harbin handling the greatest volume for each year studied and accounting for 47 percent of imports in 2002. Interestingly, for both tropical and temperate hardwood logs, Shanghai's role as port of entry has dropped, while that of Qingdao has grown.

Sawn Wood Imports

Overall, the sawn wood category does not show the same dominance of overland border trade with Russia found in the log category. This trend correlates with the greater role of hardwoods in the composition of lumber imports. In general, sawn wood im-

ports tend to be most focused on ports serving China's major economic powerhouse regions. For sawn wood overall, for example, the top two ports are Shenzhen and Shanghai, each located in one of China's fastest growing regions. Thousands of export-oriented wood product manufacturers are based in these regions, including furniture and wood flooring mills, which consume large quantities of imported lumber.

For hardwood lumber, tropical and temperate product share the same three leading ports (Shanghai, Shenzhen, and Huangpu) for most of the period studied. For tropical hardwood lumber, Shanghai showed the largest growth and was the leading port of entry in 2002, with 34 percent of volume. For temperate hardwood lumber, Shenzhen has been the leading port since 1998 and accounted for 42 percent of volume in 2002. It is interesting to note that overland trade does not play the same role in temperate hardwood lumber imports as it does in temperate hardwood log imports, with Harbin handling only 8 percent by volume of the former in 2002.

Finally, for softwood lumber, Manzhouli and Shenzhen have overtaken Hohhot as the top ports, with each accounting for about one quarter of softwood lumber imports by volume.

Imports of Panel Products

While small and declining imports make analysis of ports of entry for board products less important in understanding overall trade flows, the paths of these products still merit some attention. Of particular interest is the complete absence of inland ports bordering Russia in the top five ports of entry for both plywood and veneer. Instead, the trade for these products is fully dominated by ports in the Guangdong (South China) and Shanghai regions.

Pulp and Paper

Like panel products, the pulp and paper trade also shows dominance of ocean ports near major manufacturing centers. For pulp, the top five ports of entry, responsible for 75 percent of imports, were Nanjing, Shanghai, Qingdao, Manzhouli, and Huangpu, with Nanjing surpassing Shanghai's ongoing position as the top port for pulp imports in 2002. It is interesting to note that only one of the two main ports serving the Russia overland trade made the top five pulp ports and was ranked only fourth. This reflects the lesser (though not insignificant) role of Russian pulp, as compared to Russian logs, in the border trade.

Table 3 Main Ports of Entry by Asia-Pacific Producer Country and Product: 2002

	Softwood Logs	Hardwood logs	Softwood Lumber	Hardwood Lumber	Plywood	Veneer	Pulp	Paper
Russia	Harbin	Harbin	Manzhouli Hohhot	Harbin			Manzhouli	Manzhouli Shenzhen
Indonesia		Nanjing Shenzhen		Shanghai Shenzhen	Shenzhen Shanghai Guangzhou		Nanjing Qingdao	Shenzhen Huangpu Shanghai
Malaysia		Nanjing Guangzhou Shenzhen		Shenzhen Huangpu Shanghai	Huangpu Shenzhen Shanghai	Guangzhou Shanghai		
Thailand				Guangzhou Huangpu Shenzhen			Nanjing Gongbei	Shenzhen
PNG		Nanjing				Shanghai		
Myanmar	Kunming		Kunming					
Cambodia				Nanjing Huangpu Jiangmen	Shanghai Qingdao	Jiangmen Shenzhen		
Laos		Kunming Huangpu Shenzhen		Kunming				

Note: For each country-product pair, the table lists the top one to three ports for 2002, beginning with the top port and stopping after either 70 percent of the volume is accounted for or the third port is listed, whichever comes first. For each country, only the main forest product import categories are covered. While results are based on 2002 data, 2003 data shows a continuation of main trends, with only slight changes in ordering of top ports in some cases.

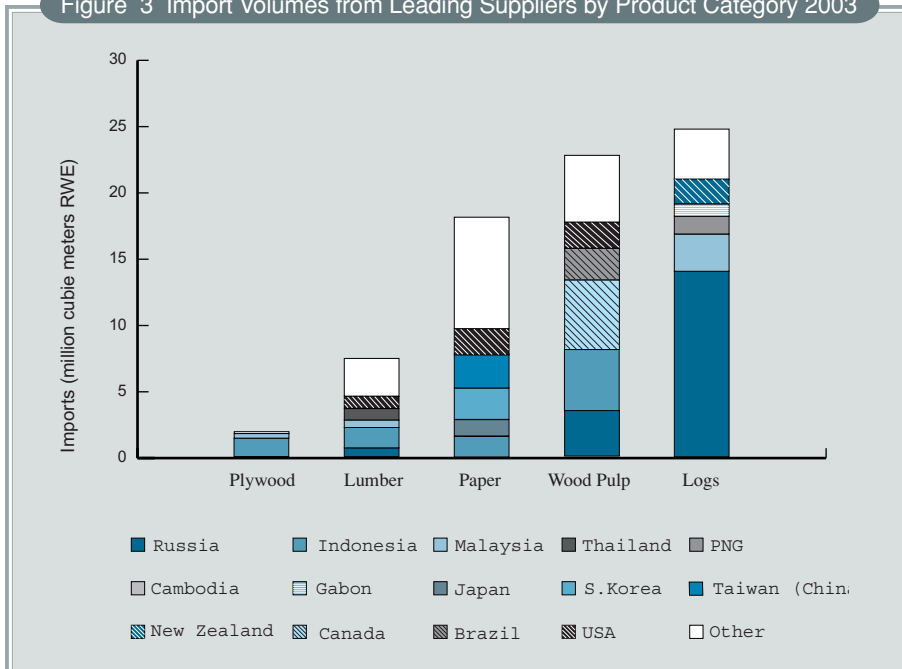
Paper and paperboard imports show few changes in major ports of entry over the six years studied. In fact, the South China ports of Shenzhen and Huangpu (the latter covering the area in and around east Guangzhou) have dominated this trade throughout the period, with Shenzhen importing 41 percent and Huangpu 23 percent of total volume in 2002.

Port of Entry Trends by Producer Country and Associated Product

Table 3 displays key port of entry results by producer country and associated product. It illustrates the leading role of border ports across product areas for Russia (Harbin and Manzhouli Ports) and Myanmar (Kunming Port). It further shows a mix of the two ocean port clusters (Shanghai-Jiangsu and Guangdong) for imports of other major suppliers, such as Indonesia, Malaysia, and Thailand.

A few additional country-specific results are of note here. First, Nanjing, China's leading importer of tropical hardwood logs, handled 86 percent of Papua New Guinea log

Figure 3 Import Volumes from Leading Suppliers by Product Category 2003



imports in 2002. Second, while border trade through Harbin and Manzhouli dominates Russian imports, ocean shipping to Dalian and Nanjing is beginning to play a role in this trade. Similarly, in the case of Myanmar, a small portion of product is being shipped to Shanghai and other ocean ports. Last, in the pulp trade with Asia-Pacific producers, Nanjing and Qingdao (based in Shandong, a center of China's paper industry) handle the majority of Indonesian pulp, while border port Manzhouli handles the majority of Russian pulp.

TRENDS IN IMPORTS FROM MAJOR SUPPLYING COUNTRIES

Trends in China's major supplying countries are discussed below by product. The role of top players by volume in key product areas is depicted in the chart in Figure 3. In general, the China timber product trade is dominated by Asia-Pacific countries, whereas in the case of pulp and paper, countries both within and outside of the region play significant roles.

Trends in Timber Product Suppliers

Russia, Malaysia, and Indonesia have been the three leading suppliers by volume of timber products to China since 1997. Total imports of timber products from these

three countries accounted for over 50 percent of China's total each year between 1997 and 2003. In 2003, China's combined timber product imports from the three totaled approximately 23.6 million cubic meters RWE valued at US\$2.2 billion.

The rise in Russian imports over the years studied has been sharp; and Russia is now the top timber product supplier by volume to China. In 1997, Russian timber product imports were 970 000 cubic meters RWE and valued at US\$93 million. By 2003, import volume had risen to 15.3 million cubic meters RWE, with a value of US\$1.055 billion.

New Zealand, Thailand, the United States, Gabon, Papua New Guinea, Germany, and Myanmar may be considered a second tier of leading timber product suppliers. Together they exported over 9.7 million cubic meters RWE or US\$1.3 billion worth of timber products to China in 2003.

Log Imports

Russia and Malaysia are the two leading suppliers of logs. By 2003, with average annual growth rates of 79 percent from 1997, Russian product dominated log imports, far surpassing in scale imports from any other country. It should be noted that the analysis presented is by volume. A value analysis, giving heavier weighting to hardwoods due to their higher price, would diminish, but not eliminate, Russia's lead in the China log trade.

Reviewing log trends over time, a shift in the top log suppliers between 1997 and 2003 is evident. Gabon, Russia, Malaysia, North Korea, and Cameroon, in order of descending volume, were the top suppliers in 1997, while in 2003, the top players in order of descending volume were Russia, Malaysia, New Zealand, Papua New Guinea, and Gabon.

Lumber and Panel Imports

Notable lumber suppliers in 2003 include Indonesia, the United States, Thailand, Russia, and Malaysia. While Indonesia has ranked in the top five list since 1997, its lumber exports to China have grown rapidly, rising from 19 percent of total volume in 1997 to 26 percent of a much larger base in 2002, but dropped to 20 percent in 2003. The United States is China's second largest supplier of lumber, accounting for 12 percent of imports in 2003, while Malaysia has dropped from top supplier in 1997 to the fifth position in the list. Growth in Russian lumber imports (from a very low base) has also

been substantial, moving Russia to position four. The Russian government's efforts and policies aimed at encouraging the development of its own wood processing industry may have contributed to this growth (FAS, 2003).

In the panel segment, Malaysian imports appear to have suffered the most from reductions in China's plywood and veneer imports, though Indonesian plywood imports have also dropped. Throughout the period studied, Indonesia was China's top plywood supplier, with Malaysia following in second place. Malaysia dominated veneer imports over the seven-year period. Veneer imports from Cambodia, the number two supplier, have, like those from Malaysia, dropped in recent years.

Trends in Pulp and Paper Suppliers

Suppliers outside of the Asia-Pacific region play a significant role in China's pulp and paper trade. In 2003, for example, Canada was China's top wood pulp supplier; Brazil and the United States ranked four and five, respectively, for wood pulp; and the United States was China's number three paper supplier.¹ Also of note is Chile, which made the top five for wood pulp in 2002. Indonesia and Russia, from within the Asia-Pacific region, are the other two of the leading five wood pulp suppliers in 2003. The greatest absolute growth in wood pulp imports between 1997 and 2003 is found in the cases of Brazil (for which imports grew by 6.2 times), Indonesia (for which imports grew by 2.7 times), and Russia (for which imports grew by 4 times).

The key paper supplying countries or regions during these years are Taiwan (ranked number one in 2003), South Korea, the United States, Indonesia, Japan, and Hong Kong (replaced by Indonesia in the top five after 1997). Lack of overall growth in paper imports during the period studied is reflected in declining imports from the United States. Some of China's top paper suppliers, incidentally, largely process wood fiber grown elsewhere (i.e. South Korea, Japan, Taiwan and Hong Kong), while others produce their own wood (i.e. the United States and Indonesia).

Trends in Imports from Asia-Pacific Producing Countries

The Asia-Pacific countries covered in this report (Cambodia, Indonesia, Laos, Malaysia, Myanmar, Papua New Guinea, Russia, and Thailand) include some of China's leading

¹ Wood pulp as referred to here and in Figure 3 is considered a subset of the pulp category discussed earlier and included in Figure 2. Imports of the general pulp category also include wastepaper (imported to be recycled into pulp in China) and recycled pulp (paper which has already been recycled into pulp), while the term "wood pulp" refers only to product that has not been recycled.

suppliers, and the Chinese trade accounts for a large portion of the forest product exports of all of these countries.¹ In aggregate, forest product imports from Asia-Pacific countries grew at an even greater rate than Chinese forest product imports as a whole, so that the Asia-Pacific countries covered in this study expanded their share of total forest product imports by volume from 30 percent in 1997 to 38 percent in 2003.

Timber products, in particular, are dominated by Asia-Pacific countries, with the group of eight countries studied accounting for 70 percent of imports in 2003 (up from 64 percent in 1997). The share of these Asia-Pacific countries in log imports grew from 48 percent to 78 percent during the same period. As indicated in Figure 3, the position of leading supplier in each of the main timber product areas was held by one of the Asia-Pacific countries studied: Russia (mostly softwood) and Malaysia (mostly hardwood) held the number one and number two positions in logs, while Indonesia (mostly hardwood), was the top lumber supplier. Indonesia and Malaysia were number one and number two, respectively, in plywood, while Malaysia and Cambodia held the number one and number two positions, respectively, for veneer.

Finally, despite the influence of non-Asia-Pacific suppliers in pulp and paper, the role of Asia-Pacific countries in this category is still substantial and on the rise. The group of Asia-Pacific countries studied is particularly relevant in the case of wood pulp, with Indonesia and Russia holding the number two and three places in 2003. For paper, while Asia-Pacific countries were well represented among the top five suppliers in 2003 (e.g. South Korea, Taiwan, and Japan), only fourth-ranked Indonesia among the forest-rich countries studied made this list.

Key findings from the analysis of the eight Asia-Pacific producer countries studied are summarized here by country and in Table 4.

For Russia, phenomenal growth in softwood logs (14 times over the period studied) is the main theme, with other import volumes dwarfed in comparison. Softwood lumber and pulp and paper (especially pulp) imports from Russia, however, are also growing.

For Indonesia, expansion of hardwood lumber (up 4.7 times over the period studied) and pulp supplied to China are the main themes. Indonesian plywood, log, and paper

¹ Vietnam is not included among the Asian countries for which detailed analysis was conducted. Basic data on Vietnam's forest product exports to China, however, indicate that the country, like Cambodia and Laos, is a minor supplier. (In 2003, according to official statistics, RWE volume of forest product imports to China from Vietnam was 183 655 m³, or 0.17 percent of China's total. For Cambodia, the 2003 proportion of total volume was 0.08 percent and for Laos, it was 0.02 percent.).

Table 4 Summary of Asia-Pacific Supplying Countries Studied

Country	2003 Forest Product Exports to China (million m ³ RWE)	Main Products in 2003	Trends in Main Products over Period Studied
Russia	19.74	Softwood logs; also lumber, pulp	Logs dominate, strong growth in all between 1997-2002, with a small drop in log imports in 2003
Indonesia	9.67	Hardwood lumber, pulp	Lumber, pulp up; paper, plywood down
Malaysia	5.15	Hardwood logs and lumber	Relatively slow growth; plywood, veneer down
Thailand	2.73	Hardwood lumber	Lumber up; paper down, pulp small but growing
PNG	1.39	Hardwood logs	Logs up by 6.5 times
Myanmar	1.23	Hardwood logs and lumber	Timber products up 3 times (official)
Cambodia	0.081	Veneer, plywood	Veneer dropping
Laos	0.023	Hardwood logs and lumber	Gradual rise of both logs and lumber

Note: For Vietnam's exports to China, of the total 2003 forest product RWE import volume of 179 913m³, wood charcoal made up 61 percent, while logs and lumber (mostly hardwood) made up 7 percent and 13 percent, respectively.

imports had all dropped by 2003 from peaks achieved during the intermediary years of the period studied.

Malaysia's imports exhibited much less robust growth than China's forest product imports as a whole. As would be expected, then, Malaysia has dropped from its position as number one timber product supplier in 1997 and, by 2003, while ranked number two, had been far surpassed by Russia in volume. Hardwood logs and lumber made up the greatest proportion of Malaysia's imports to China by 2003, with reductions in plywood and veneer volumes occurring over the period studied.

For Thailand, which ranked fourth in provision of timber products to China in 2003, lumber (predominantly hardwood) was the most significant import. Paper had accounted for over half of Thai imports in 1999, but volumes have since dropped; and pulp imports, while growing, are still less than those of paper.

Papua New Guinea's forest product imports to China are predominately hardwood

logs. Expansion of this trade was substantial during the period studied, growing by 5 times; and, in 2003, PNG-supplied product accounted for 13.2 percent of China's hardwood log imports.

Dominated by timber products, Myanmar's forest product imports to China are mainly logs (70 percent of RWE volume in 2003) and lumber (28 percent of RWE volume in 2003), both of which are mostly hardwood. Myanmar's official timber product imports to China grew by 3 times over the period studied, with log imports appearing to level off after 2000 and lumber imports continuing to grow.

Cambodia is a minor supplier of forest products to China; and imports, predominantly timber products, dropped after 2000. Veneer was the main product supplied by Cambodia, followed by plywood between 1997 and 2002. In 2003, however, plywood was the top forest product supplied to China by Cambodia, followed by lumber.

In terms of official customs data, Laos is the least significant forest product supplier to China of those studied. Pulp and paper imports from Laos were negligible during the period studied; and hardwood logs (54 percent of imports by RWE volume in 2003) and lumber were the main timber products imported from the small nation.

CONCLUSIONS

The foregoing summary of import trends confirms high growth rates of China's forest product imports between 1997 and 2003 in both timber products and pulp and paper. Logs, lumber, and pulp are the most rapidly growing import segments, as China moves towards handling more of the processing of forest products itself. Forest-rich countries in the Asia-Pacific region are playing an increasingly important role in supplying China's expanding demand. Finally, ocean ports in the Shanghai-Jiangsu and South China regions have maintained their leading role in the forest product trade. These have been joined more recently, and in some cases surpassed, by inland ports in Northeast China, which have been catapulted to leading roles by the booming border trade with Russia.

China's increasing dependence on forest product imports and anticipated future economic growth mean that Chinese demand is likely to continue to have dramatic social, environmental, and economic implications for forests and forest peoples, particularly in the Asia-Pacific region. These trends will continue to challenge the efforts of NGOs and some governments to address illegal logging and trade, and establish

sound institutions for governing forests in supplying countries. That being said, it is not known how long these trends will continue, what products will be in demand in what volumes over time, where this wood is likely to come from, what the particular implications are for each supplier country, and what the longer-term impacts of this trade will be. Answering these questions and crafting strategic interventions to address the problems of unsustainable forestry and illegal trade - transforming this demand into positive incentives for forest stewardship - will require more information and much more concerted action.