



**CHINA AND FOREST TRADE IN THE ASIA-PACIFIC REGION:
IMPLICATIONS FOR FORESTS AND LIVELIHOODS**

中国与亚太地区国家林产品贸易研究

**CHINA'S FOREST PRODUCT
IMPORT TRENDS 1997-2002:**

ANALYSIS OF CUSTOMS DATA
WITH EMPHASIS ON ASIA-PACIFIC
SUPPLYING COUNTRIES

Xiufang Sun, Nian Cheng
Andy White, R. Anders West
Eugenia Katsigris



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AUTHOR CONTACTS

Xiufang Sun (xsun@forest-trends.org) is a Market Analyst with Forest Trends.

Nian Cheng (chengxiaoke81@163.com) is a research assistant at the Center for Chinese Agricultural Policy and a graduate student at Beijing Forestry University.

Andy White (awhite@forest-trends.org) is Senior Director, Policy and Market Analysis, with Forest Trends.

R. Anders West (awest@forest-trends.org) is Research Associate with Forest Trends.

Eugenia Katsigris (jkatsigris@forest-trends.org) is a Market Analyst with Forest Trends.

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ACKNOWLEDGEMENTS

The authors greatly appreciate valuable comments on the draft report provided by Gary Bull (University of British Columbia), Christopher Barr (Center for International Forestry Research), Christian Cossalter (Center for International Forestry Research), Jintao Xu (Center for Chinese Agricultural Policy), Dequan He (North Carolina State University), and the editorial contributions of Anne Thiel (Forest Trends). The authors would also like to express their appreciation to the British 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 are those of the authors and do not necessarily reflect those of the British Department for International Development.

INTRODUCTION

China plays a major, and growing, role in the global forest products market today. The largest importer of industrial roundwood in the world since 2001, China is now second only to the United States in total imports of forest products, rising from seventh in less than ten years (FAO 2003¹). In recent years, over 40 percent of total commercial timber consumed domestically in China has been imported (Sun 2000²). This rapid increase in imports has been driven by both the reduction in domestic timber supply and the growth in wood demand. Liberalization of trade in forest products reinforces this growth. Trade statistics and reports on forest production and trade from exporting countries suggest that China is one of the major destinations for timber that is harvested unsustainably or illegally. The rapid growth of wood product imports to China will continue to have impacts on forests and the livelihoods of millions of forest-dependent people throughout Asia-Pacific and the world.

This paper provides a comprehensive overview of China's forest product imports by country of origin, port of entry, and product type from 1997 to 2002. The paper builds on a recent review of the "ecological footprint" of China's imports by the Worldwide Fund for Nature (WWF).³ Chinese import data described in this report have been obtained from China Customs, the only official source of Chinese trade statistics. These data were translated and converted by the Chinese Center for Agricultural Policy (CCAP) and Forest Trends based on the tariff categories and conversion factors listed in Annexes 1 and 2. The converted data used to generate this report is provided in a supplemental document entitled "China's Forest Product Imports, 1997 – 2002: Trade Data by Product, Country of Origin, and Port of Entry."

The data reflect direct imports to Mainland China only, while Hong Kong and Taiwan are treated as supplying regions rather than destinations. According to China Customs, a substantial portion of timber and timber products imported into China have been transshipped or processed and re-exported through Hong Kong (Dai 2003).⁴ This situation, however, has not prevented Chinese customs statistics from capturing most of such product in the import data for the original producer countries. Data on total import volumes from producer nations include product transshipped or processed and re-exported through Hong Kong, as long as this product has not had its value substantially increased through further processing in Hong Kong. (See Annex IV for additional information on products re-exported through Hong Kong.)

¹ Food and Agriculture Organization of the United Nations (FAO). 2003, "Forestry Data" in *FAOSTAT Agriculture Data*. Rome. Accessed on January 27, 2004 at: <http://apps.fao.org/page/form?collection=Forestry.Primary&Domain=Forestry&servlet=1&language=EN&hostname=apps.fao.org&version=default>

² Sun, Changjin. 2000, "WTO and Chinese Forestry: An Outline of Knowledge and Knowledge Gaps. Discussion notes," Beijing: Chinese Research Center for Ecological and Environmental Economics (RCEEE).

³ 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.

⁴ Dai Guangcui. 2003, "Study on Discrepancy in Forest Products Trade Statistics – China Case", part of *ITTO Trade Discrepancy Study*.

The paper describes import trends for major forest products including logs, lumber, wood chips, plywood, veneer, wood pulp, and paper and paperboard. It affirms the importance of imports originating from the group of Asia-Pacific nations studied (Russia, Indonesia, Malaysia, Thailand, Papua New Guinea, Myanmar, Cambodia, and Laos⁵) and shows which of these are major players in China's forest products trade. (See Annex VI for a map showing the location of these Asia-Pacific supplying countries in relation to China.) The "ports" covered in the paper are based on the 42 official ports of entry operated by China's General Customs Bureau. These are referred to as "customs branches" by China Customs; and each aggregates data from the ports and gateways in the region under its supervision. (See Annex III for a description of China's customs structure. Annex VII provides a map of the customs branches covered in this paper.)

While China's customs statistics are generally thought to offer the best available approximation of actual trade it is important to note that these statistics may not reflect the actual volume for imports from bordering countries. Cross-border trade, particularly that from Russia and Myanmar, is particularly difficult to track; and a number of studies have indicated that official statistics do not fully capture all trade. Forest Trends and other partners are currently carrying out separate work on the Sino-Myanmar timber trade, including case studies that will delineate the scale of the gap between China's official statistics and real import volumes. Future research should examine the deconstructed customs data from all major trading partners and compare them with export data from producer countries.

This report is divided into four major sections. The first section describes China's overall wood product imports in value and in roundwood equivalent volume. The second section reviews the imports and trade trends of China's major suppliers during the past six years. The third section describes the product types and import volumes for China's major ports of entry. The final section reviews the main products and principal entry ports of each major product for the group of eight Asia-Pacific supplying nations studied.

For the reader's ease in identifying desired results in the text, each exporting country and Chinese entry port has been designated in a unique color and pattern that remains constant throughout all relevant figures in the document. Also, it should be noted that the countries and entry ports are listed in alphabetical order in each figure's legend. Correspondingly, in the stacked bar graphs of each figure, the countries and entry ports are arranged from bottom to top according to their alphabetical listing. For example, a figure showing imports from Cambodia, Malaysia and Russia would list the countries alphabetically in the legend. Cambodia would then be represented as the first (bottom) country in the bar, followed by Malaysia; and, finally, Russia would be at the top of the bar.

⁵ 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 2002, according to official statistics, RWE volume of forest product imports to China from Vietnam was 165,600 m³, or 0.17 percent of China's total. For Cambodia, the 2002 proportion of total volume was 0.14 percent and for Laos, it was 0.02 percent.) For Vietnam's exports to China, of the total 2002 forest product RWE import volume, wood charcoal made up 66 percent, while logs and lumber (mostly hardwood) made up 9 percent each.

FOREST PRODUCT IMPORTS

China's imports of forest products have increased substantially since the mid-1990s. As shown in Figures 1.1 and 1.2, between 1997 and 2002 the total imports of timber, pulp and paper products rose in value from US\$6.4 billion⁶ to \$11.2 billion and in Roundwood Equivalent (RWE) volume from 40.2 million cubic meters to 95.1 million cubic meters⁷. Between 1997 and 2002, pulp imports demonstrated the fastest growth among these three product categories, tripling in value from 1997 to 2002⁸. During the same period, RWE volume of pulp imports jumped by 280 percent. The data show that historically China imported more paper and paper products than pulp. In 1997, China imported nearly twice as much paper in RWE volume (17 million cubic meters) as pulp (10 million cubic meters). However, by 2002 China imported 38 million cubic meters of pulp and around 19 million cubic meters of paper. This corresponds with the emergence of new paper plants using wood-based fiber and to the rise in paper and paperboard capacity (He, White and Barr 2004⁹).

Data recently released by China Customs on forest product imports in 2003 confirm continuation of trends identified in our analysis of 1997-2002 data. In 2003, China's total forest product imports showed strong growth over the previous year, reaching a value of \$12.9 billion and volume of 106.7 million cubic meters RWE. Of these, \$4.6 billion in value and 40.2 million cubic meters RWE in volume were timber products, \$3.9 billion and 47.9 million cubic meters RWE were pulp, and \$4.4 billion and 18.6 million cubic meters RWE were paper products.

China's strong economic growth over the past years has created great potential for increasing demand in forest products. In addition to fully domestic consumption, demand from China's growing export-oriented wood products manufacturing sectors (such as its furniture industry) has contributed strongly to the increase in imports. At the same time, domestic timber supply has dropped due to China's implementation of the Natural Forest Protection Program (NFPP) since 1998. Finally,

6 All subsequent dollar values are U.S. dollars.

7 In order to compare and aggregate volumes of forest products, real volumes of various product types are converted to roundwood equivalent volumes (RWE). Aside from logs, a conversion factor is used to convert a product's physical volume in units of cubic meters to its RWE in cubic meters. For example, one cubic meter of lumber is equivalent to 1.4 cubic meters RWE of lumber, while one cubic meter of logs is equivalent to one cubic meter RWE of logs. For the sake of clarity, the text will designate which volumes are in cubic meters RWE (except in the case of logs). Otherwise, units of cubic meters without the RWE designation, when used for a single type of product, should be interpreted as physical cubic meters. See Annex II for conversion factors used to calculate RWE.

8 Pulp here is a broad term, referring to all items under Chapter 47 (4701-4707) in China's tariff code system, including wood pulp, wastepaper (imported to be recycled into pulp in China), and recycled pulp (paper which has already been recycled into pulp). The term "wood pulp" is used subsequently in the text to refer to product that has not been recycled. In China's tariff code system, wood pulp refers only to a portion of the items in Chapter 47, namely HS#4701-4705.

9 He, Dequan, White, A. and Barr, C. 2004, "Recent Trends and Projections on China's Paper and Board Demand, Supply and Trade," Working Paper (forthcoming), Washington, D.C.: Forest Trends.

reductions in import tariffs may also account for some of the increases in import volumes. Insofar as these reductions have made smuggling less attractive, some of the apparent increases in imports may merely be a reduction in undeclared imports.

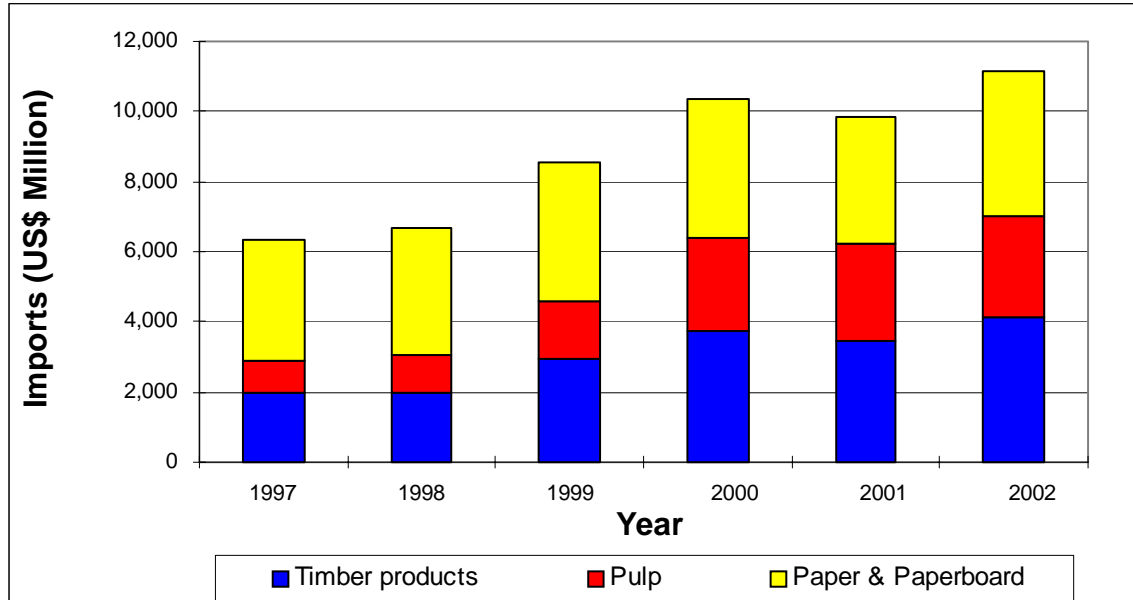


Figure 1.1. Total value of forest product imports (US\$ million)

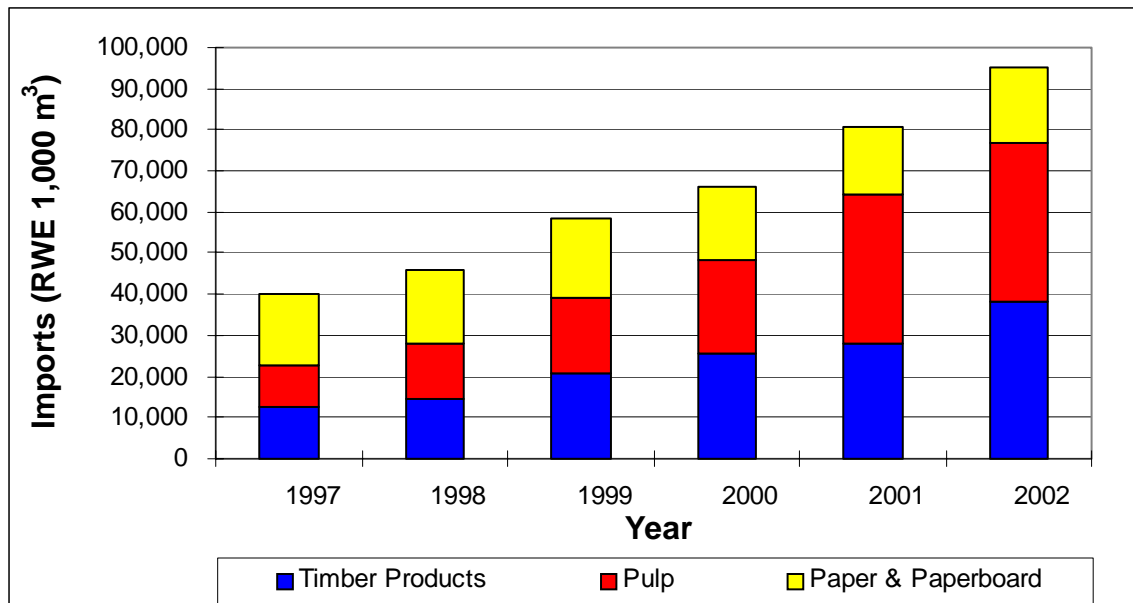


Figure 1.2. Total RWE volume of forest product imports

Currently China imports more pulp and paper than timber products, both in value and RWE volume. However, China's timber product imports are growing at a fast rate. Figures 1.3 and 1.4 illustrate the recent rapid growth in the value and volume of China's timber product imports. The annual import value more than doubled and the volume tripled between 1997 and 2002. Logs and to a lesser extent lumber demonstrated the greatest increases. This reflects China's determination to maintain and expand its timber processing industry.

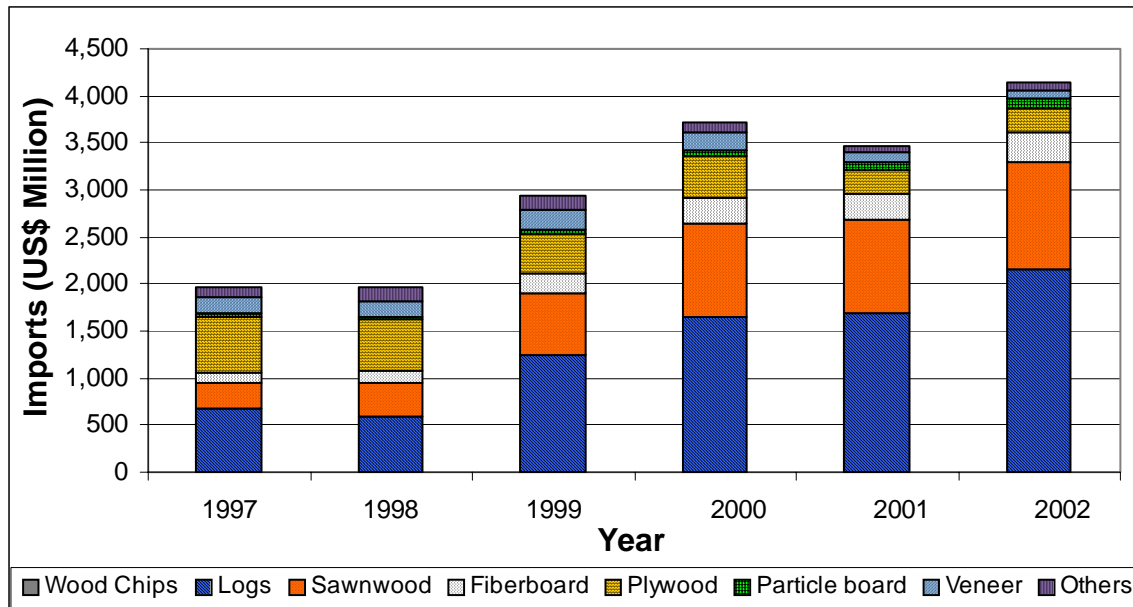


Figure 1.3. Total value of timber imports by product type

By 2002, logs and lumber overwhelmingly dominated China's timber product imports, together making up about 85 percent of volume and 80 percent of value of China's total timber product imports. Between 1997 and 2002, China's log imports increased by 440% from base volume, growing from 4.5 million cubic meters to 24.3 million cubic meters. Imports of lumber grew at a similar rate, from 1.9 million cubic meters to 7.7 million cubic meters (RWE). China's other imports – including plywood, which was at one time the largest import by value – decreased or stagnated during the same time period as China's own plyth and other board factories flourished. The statistics show China moving towards a greater emphasis on importing raw materials to supply its mills rather than importing already-processed products.

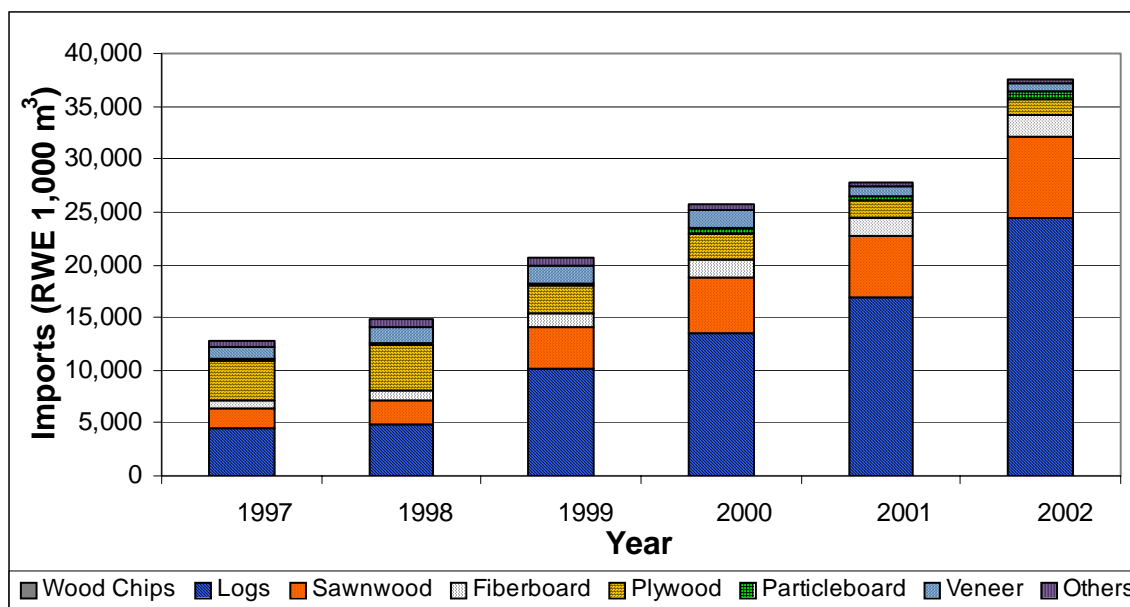


Figure 1.4. Total volume of timber imports by product type

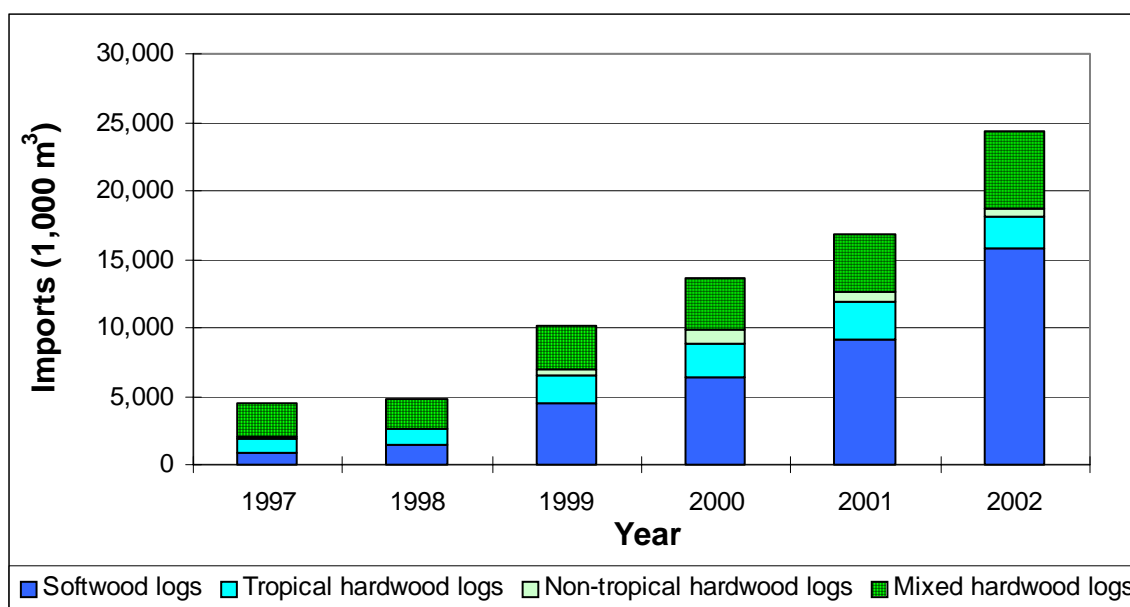


Figure 1.5. Log imports from 1997 to 2002

Figure 1.5 illustrates China's log imports from 1997 to 2002. Softwood log imports grew faster than hardwood log imports. From 1997 to 2002, imports of softwood logs jumped by 15 times from merely 93,000 cubic meters in 1997 to 15.8 million cubic meters in 2002. Imports of hardwood logs, on the other hand, grew by only 1.5 times, from 3.5 million cubic meters in 1997 to 8.6 million cubic meters in 2002. As a result, the share of softwood logs in China's total log imports rose from 21 percent in 1997 to 65 percent in 2002. Imports of tropical hardwood logs showed steady growth from 1997 to 2001, but dropped 17 percent the following year. This was probably partly due to the export bans in major

supplying countries, including Indonesia and Cameroon, and indicates a shift from tropical hardwood to temperate hardwood products. Growth of the mixed hardwood category (explained below), however, may mask continued upward growth in tropical hardwood imports.

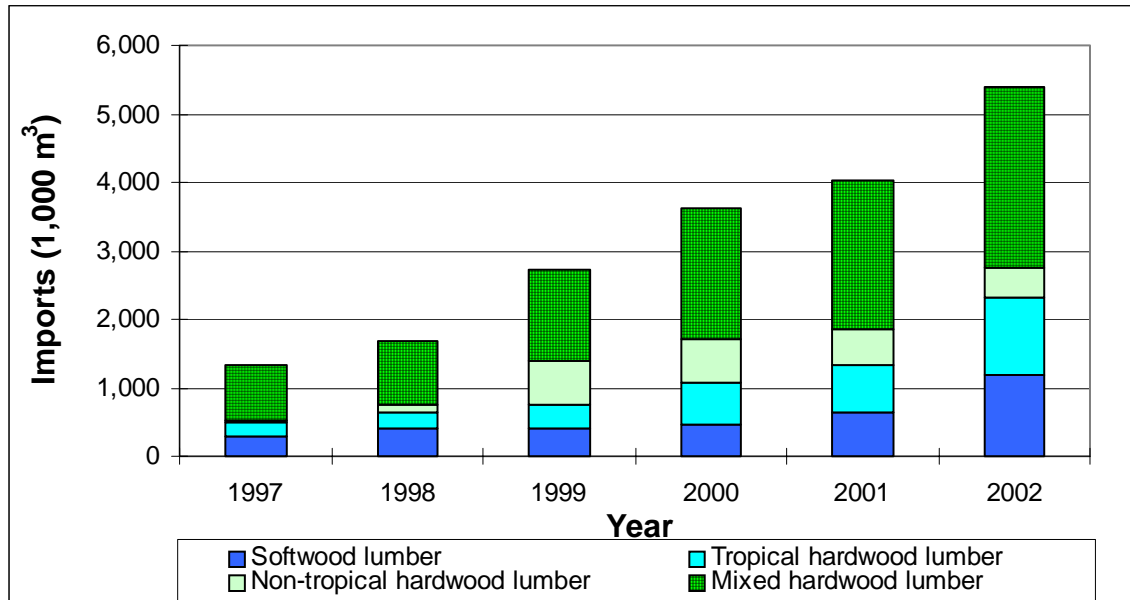


Figure 1.6. Lumber imports from 1997 to 2002

The category of “mixed hardwood logs” in Figure 1.5 represents those items of tariff code 44039990 in the customs statistics and includes all unnamed hardwood logs, either tropical or temperate.¹⁰ While the various species of softwood logs are grouped together as conifers, the Chinese classification system for forest product imports assorts hardwood logs into several categories. That is, the system distinguishes between many of the hardwoods, like oak, beech, camphor and paulownia. Not all hardwoods, however, are individually represented. Tariff code 44039990 denotes those hardwood logs that are not demarcated by tree species or genus in China’s classification system. Without tree types, these hardwoods cannot be more definitively organized as tropical or temperate in origin.¹¹ Despite this ambiguity between tropical and temperate hardwoods, the noteworthy trend is that softwood logs surpassed hardwood logs as an import and that both softwood and hardwood imports are increasing annually.

¹⁰ The tariff codes for Chinese forest product imports are listed in the Annex I.

¹¹ Assessing each import on a country-by-country basis could perhaps further refine the findings. For example, hardwood logs from Russia are temperate whereas hardwood logs from Indonesia are tropical. Assuming, then, that all logs or lumber in the mixed hardwood category that come from tropical countries are tropical hardwood, our analysis indicates that over 70% of both mixed hardwood logs and mixed hardwood lumber each year are tropical. It should be noted, however, that within many countries both tropical and temperate forests exist, especially within the montane regions of mainland Southeast Asia. “Mixed” category hardwood logs from these nations could be either tropical or temperate, thus introducing some degree of uncertainty into the analysis. Rather than introduce conjecture to the report, then, the data were left as received from the Chinese customs bureaus. Our estimates in disaggregating the mixed hardwood log category and combing with the temperate hardwood log and tropical hardwood log categories, respectively, however, indicate that overall tropical

Figure 1.6 displays Chinese lumber import statistics for 1997 through 2002 and shows that hardwood lumber has accounted for the majority of China's lumber imports. Nevertheless, imports of softwood lumber increased 290 percent from 300,000 cubic meters in 1997 to 1.19 million cubic meters in 2002. The proportion of softwood lumber in China's total lumber imports increased over the past three years from 13 percent in 2000 to 16 percent in 2001 and 22 percent in 2002. This growth trend was attributed to a sharp rise in Russian lumber imports. Imports of tropical hardwood lumber also grew quickly, jumping by 490 percent from 1997 to 2002.

As with log imports, a "mixed hardwood" category is also evaluated for lumber imports (see Figure 1.6). This category represents the items of tariff code 44079990 in the Chinese customs statistics. It includes all hardwood lumber, either tropical or temperate, that is not classified by tree species or genus. Mixed hardwood lumber remains inexplicit for the same reasons as its mixed hardwood log counterparts.¹² Despite this lack of clarity within the hardwood lumber category, the growing use of both hardwood and softwood lumber remains the overriding trend.

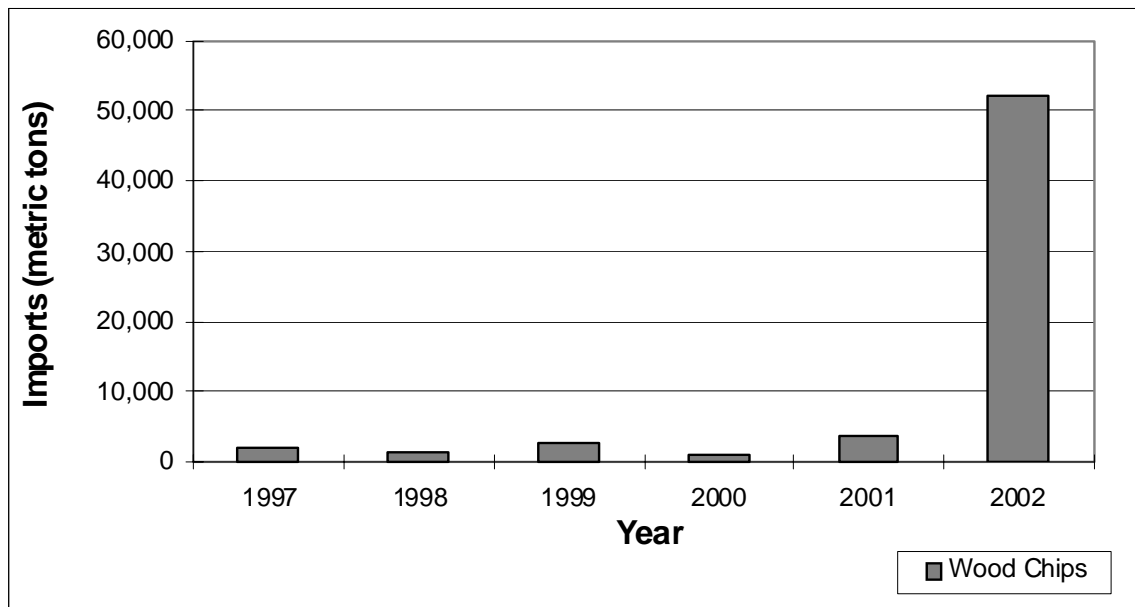


Figure 1.7. Wood chip imports from 1997 to 2002

hardwood logs accounted for over 80 percent of hardwood log import growth over the period studied and constituted over 75 percent of hardwood log volume each year.

¹² Estimates based on disaggregation of the mixed hardwood lumber category and combination with the tropical hardwood lumber and temperate hardwood lumber categories indicate that tropical hardwood lumber exhibited the strongest growth and also accounted for 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 log category, accounting for 32 percent of hardwood lumber growth by volume over the period and actually exceeding temperate hardwood log imports in RWE volume in 2002.

Figure 1.7 illustrates China's imports of wood chips from 1997 to 2002. China's trade statistics show that China was a net exporter of wood chips. From 1997 to 2001, China imported 1,000 to 3,000 metric tons¹³ of wood chips annually. In 2002, wood chip imports surged to 52,000 tons.

MAJOR SUPPLIERS OF FOREST PRODUCTS

Russia, Indonesia and Malaysia have been the three largest suppliers of timber products to China since 1998, as shown in Figures 2.1 and 2.2¹⁴. Total imports of timber products from these three countries accounted for over 50 percent of China's total each year. In 2002, China's combined timber imports from these countries totalled approximately 23.6 million cubic meters (RWE) valued at \$2.1 billion. Timber imports from Russia experienced significant increases, from over 970,000 cubic meters (RWE) valued at \$93 million in 1997 to 15.8 million cubic meters (RWE) valued at \$1.059 billion in 2002. The sharp growth in imports of Russian logs contributed to this rise. The US, Gabon, Germany, Thailand, New Zealand, Papua New Guinea, and Myanmar composed a second tier of countries that together supplied more than 8.8 million cubic meters (RWE) or \$1.2 billion worth of timber products to China in 2002.

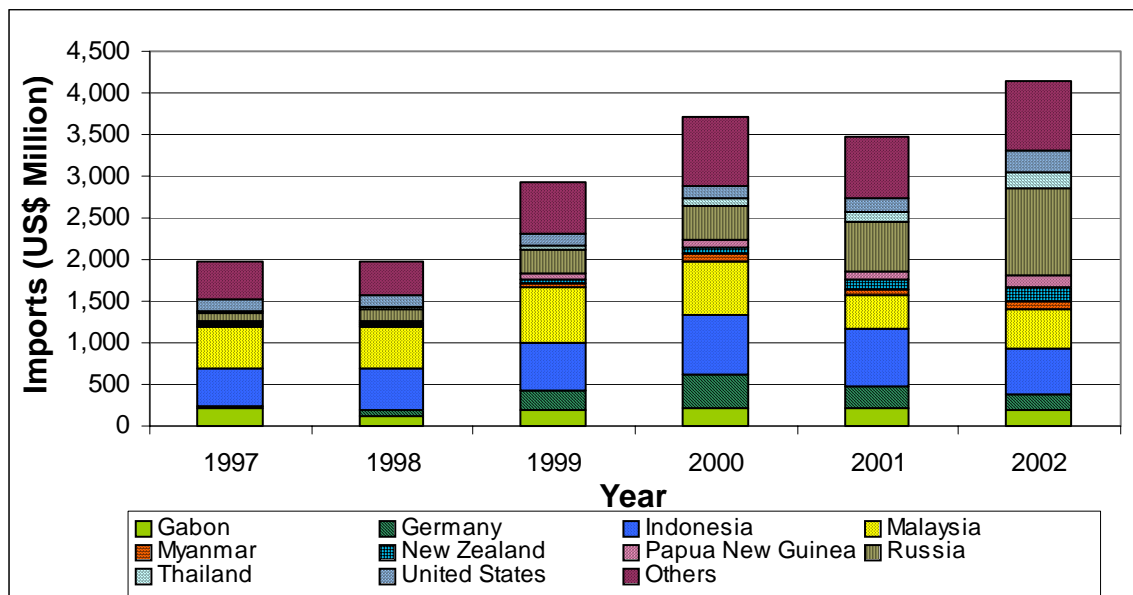


Figure 2.1. Value of timber imports by supplying country

¹³ All subsequent tons are metric tons.

¹⁴ Figures 2.1 through 2.9 detail the major supplying countries. For a particular table, all countries that at one time during the period 1997 to 2002 ranked at least fifth in value or volume as the source of imports of the product being analyzed are included.

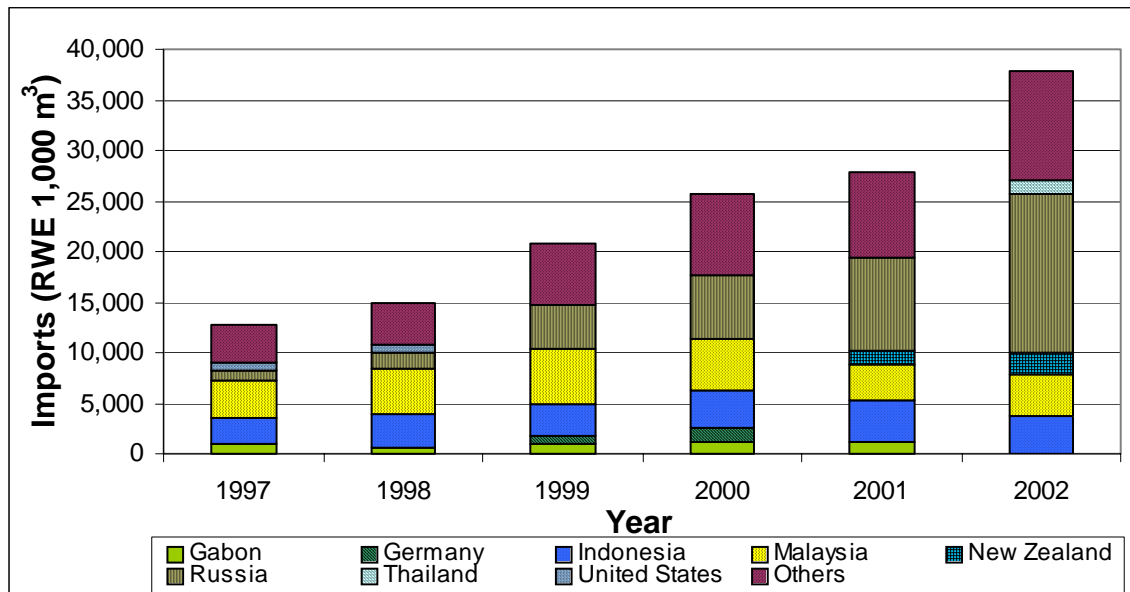


Figure 2.2. RWE volume of timber imports by supplying country

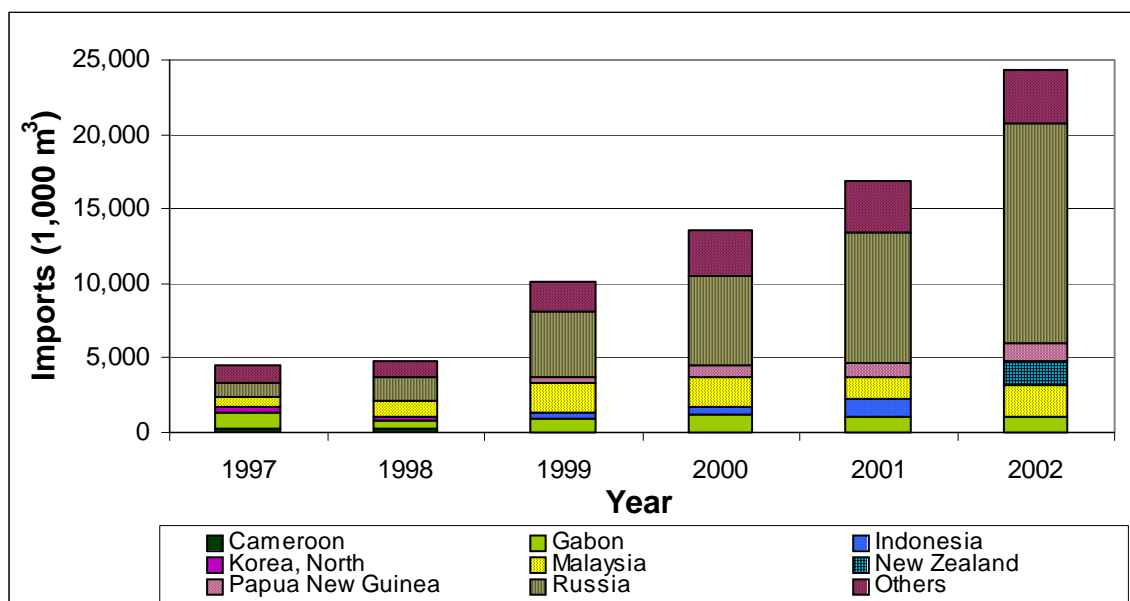


Figure 2.3. Leading log supplying countries

Figure 2.3 shows that in 1997, the top five supplying countries of Chinese log imports were Gabon, Russia, Malaysia, North Korea, and Cameroon. By 2002, the top five countries became Russia, Malaysia, New Zealand, Papua New Guinea, and Gabon. The combined log imports from the leading five countries totaled 3.4 million cubic meters in 1997 and 20.8 million cubic meters in 2002. This accounted for 76 percent of China's total log imports in 1997 and 86 percent in 2002. Russia has been China's largest log supplier since 1998, with an average annual growth rate of 73 percent over the years studied. In 1997, China imported less than 1 million cubic meters of logs from Russia. This figure jumped to 14.8 million cubic meters by 2002.

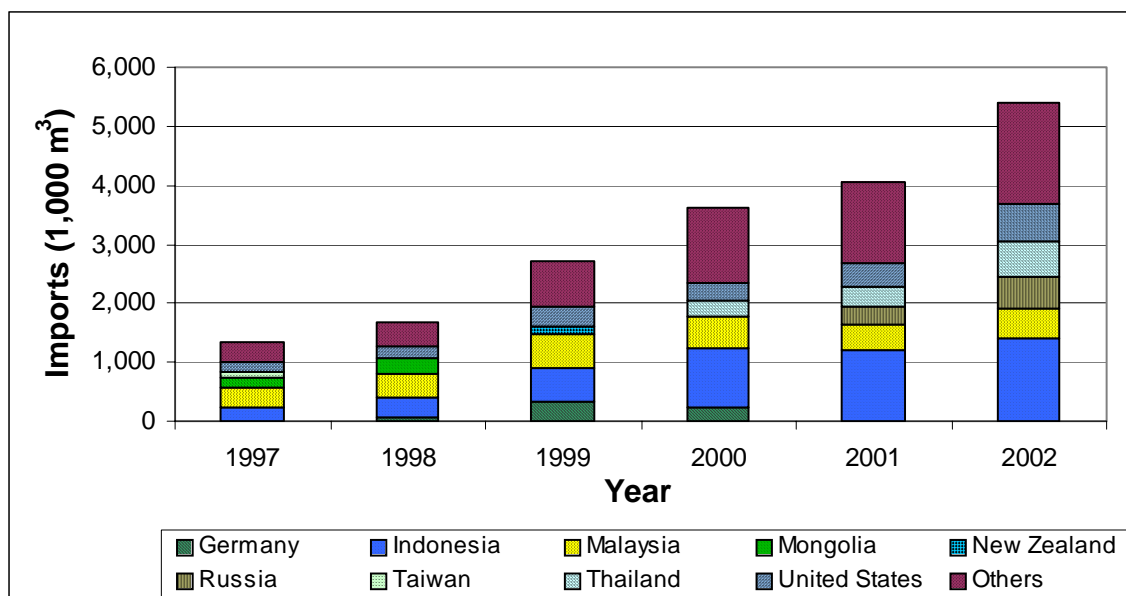


Figure 2.4. Leading lumber supplying countries or regions

Figure 2.4 exhibits the five leading suppliers of China's lumber imports from 1997 to 2002. Lumber imported from these five leading countries or regions has accounted for more than 60 percent of total lumber imports to China for the past several years. Interestingly, Indonesia, Malaysia, and the US have remained on the list for the last three years, but their rankings have changed significantly. Lumber imports from Indonesia have experienced rapid growth, making Indonesia the leading supplier of China's lumber imports beginning in 1999. The share of Indonesian lumber in China's total lumber imports climbed from 19 percent in 1997 to 26 percent in 2002. The United States has enlarged its share and ranked as the second largest supplier of lumber to China in 2002, with a market share of 11 percent. In contrast, Malaysia dropped from first position in 1997 to the fifth position in 2002.

Increases in imports of Russian lumber were also evident. Before 2000, Russia was notably absent from the list, with annual imports of Russian lumber less than 100,000 cubic meters. However, by 2002 Russia became the fourth largest lumber supplier of China. The Russian government's efforts and policies aimed at encouraging development of its own wood processing industry may have contributed to this growth (FAS 2003¹⁵).

¹⁵ FAS (Foreign Agricultural Service), 2003, "Solid Wood Products Annual Report 2003 – China," in *Gain Report*. #CH3118, Beijing.

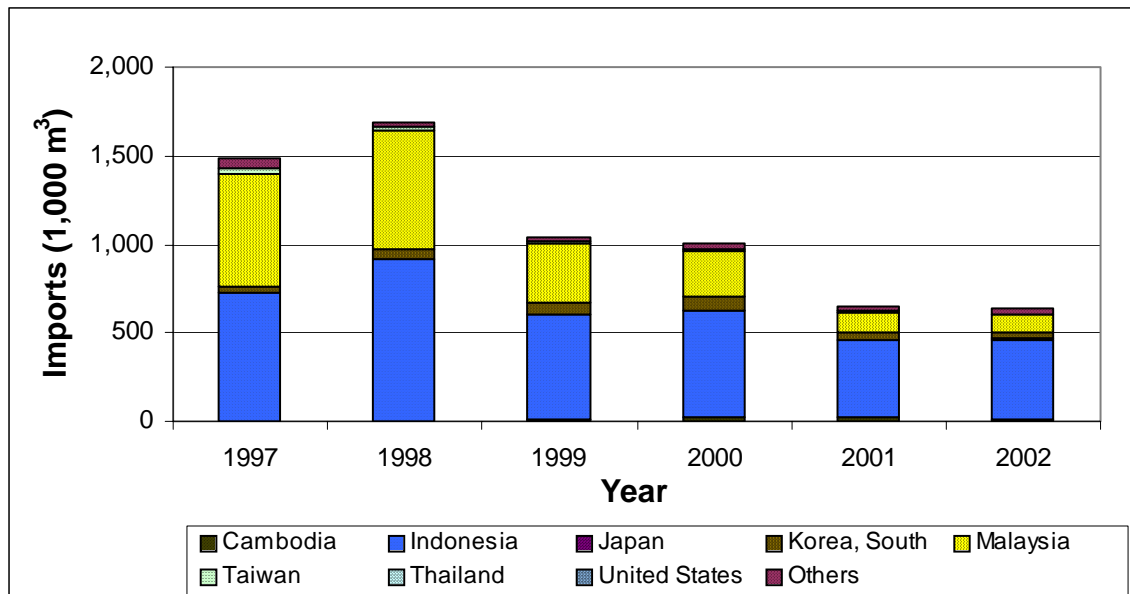


Figure 2.5. Leading plywood supplying countries or regions

Figure 2.5 shows China's principal plywood supplying countries or regions from 1997 to 2002. Indonesia and Malaysia were the two major suppliers of China's plywood imports, distantly followed by South Korea, Taiwan, Cambodia and others. There has been a downward trend in total plywood imports since 1998, with Malaysia's share decreasing the most quickly among supplying countries. In 1998, the year of peak imports, China's plywood imports included 921,000 cubic meters from Indonesia and 668,000 cubic meters from Malaysia. However, by 2002 China imported only 453,000 cubic meters from Indonesia and 99,000 cubic meters from Malaysia. This correlates with the development of the Chinese plywood industry.

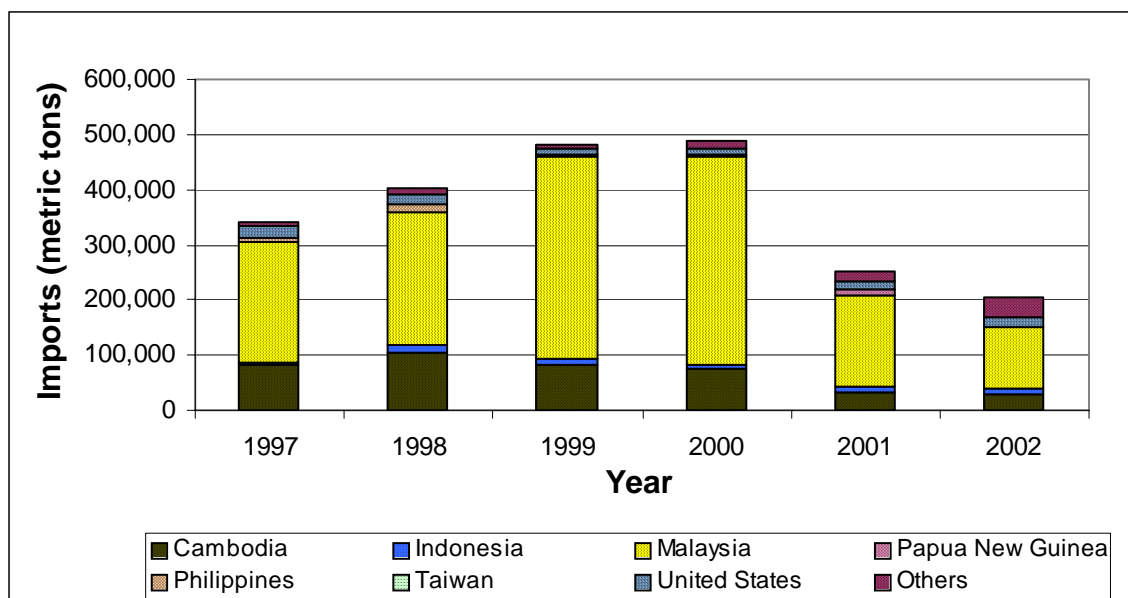


Figure 2.6. Leading veneer supplying countries or regions

Figure 2.6 shows the five primary supplying countries of China's veneer imports during the period 1997 to 2002. Malaysia was the single largest supplier of China's veneer imports throughout, distantly followed by Cambodia, the United States and several other countries. China's veneer imports dropped sharply after 2000, particularly those imports from Malaysia. In 2000, China imported 374,000 tons of veneer from Malaysia. However, this amount dropped to 111,000 tons by 2002.

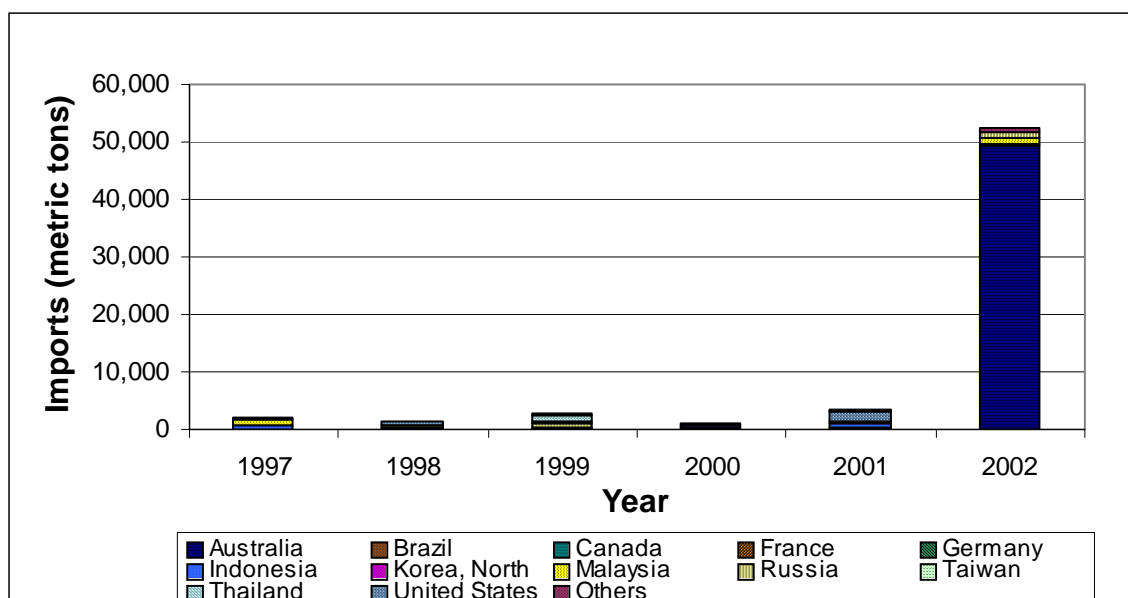


Figure 2.7. Leading wood chip supplying or regions

As evident in Figure 2.7, Chinese imports of wood chips was extremely low prior to 2002. That year, however, a strong surge in imports is evident, resulting from wood chip imports originating from

Australia. Total imports of wood chips were approximately 2,000 tons in 1997. In 2002, wood chip imports from Australia alone jumped to nearly 50,000 tons, accounting for 94 percent of China's total wood chip imports that year.

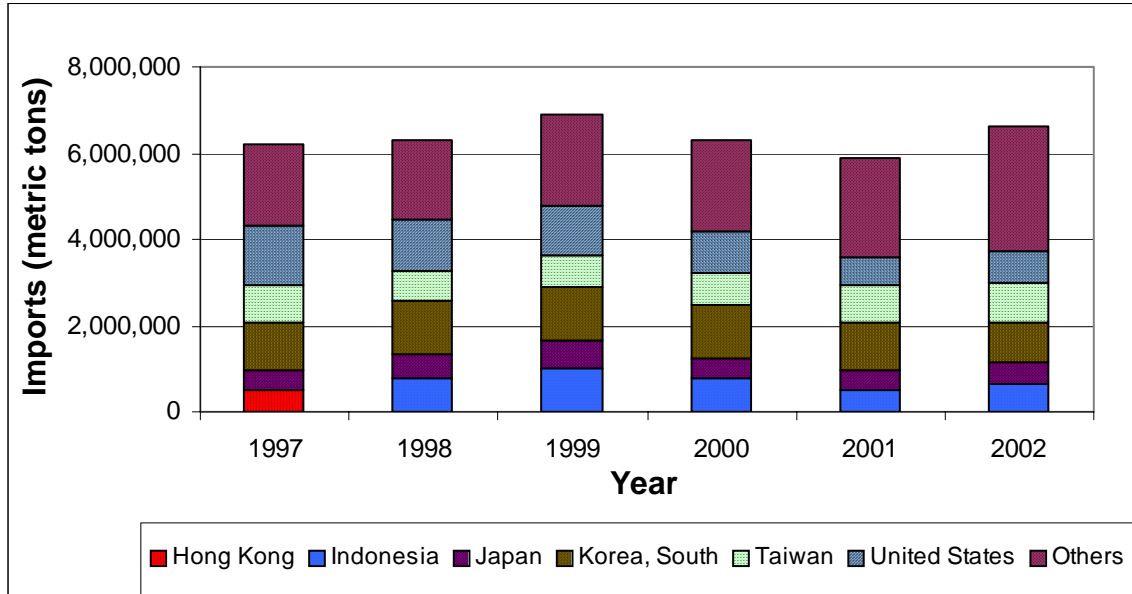


Figure 2.8. Leading wood pulp supplying countries

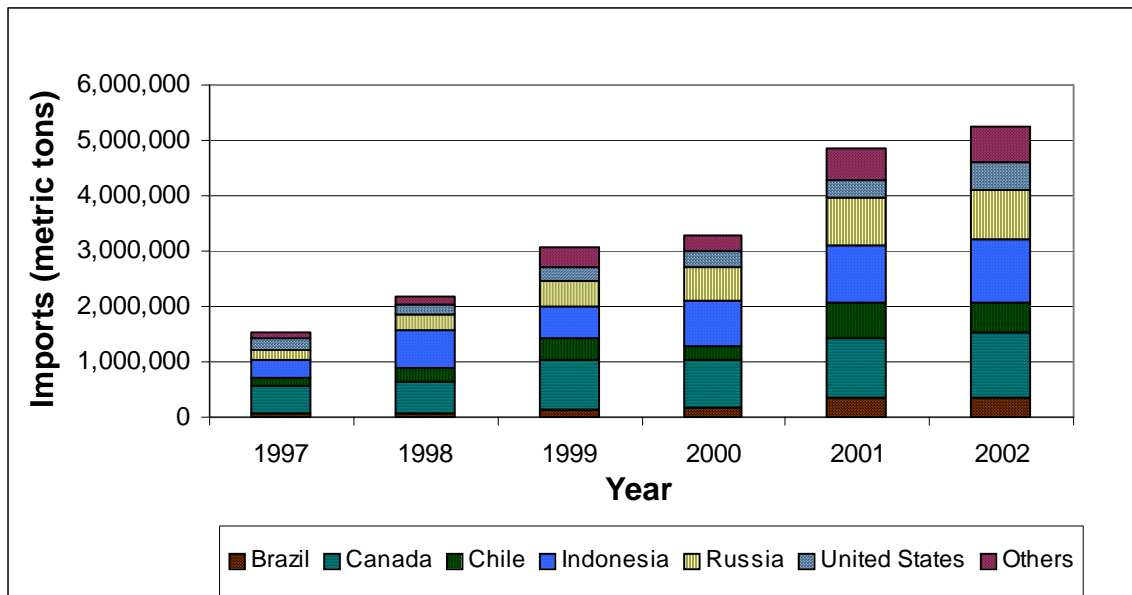


Figure 2.9. Leading paper and paperboard supplying countries or regions

Figures 2.8 and 2.9 show the countries or regions that supplied wood pulp and paper to China. From 1997 until 2002, Canada, Indonesia, Russia, Chile, and the United States were the top five suppliers of Chinese wood pulp imports, though Brazil replaced the United States temporarily as the fifth largest supplier in 2001. Between 1997 and 2002, wood pulp imports from Russia rose by 4.2 times, those from

Chile by 2.7 times, and those from Indonesia, 2.5 times. South Korea, the United States, Taiwan, Japan, Indonesia, and Hong Kong were China's key paper supplying countries and regions during the period studied. Slow growth of paper imports from 1997 to 2002 was evident and reinforced by declining imports from the United States. Some of these paper-supplying countries and regions largely process wood grown elsewhere (i.e. South Korea, Taiwan, Japan, and Hong Kong), while others (i.e. the US and Indonesia) tend to produce their own fiber.

MAJOR ENTRY PORTS

Figure 3.1 and Figure 3.2 show China's imports of timber products by port of entry¹⁶. Major ports of entry include Harbin, Manzhouli, Nanjing, Shanghai, Shenzhen, Huangpu, and Guangzhou. In 2002, combined imports of timber products coming through the five leading ports (Shenzhen, Nanjing, Shanghai, Manzhouli, and Harbin) accounted for over 65 percent of China's total imports of timber products. Shenzhen, Nanjing, and Shanghai were the three leading ports of entry for timber products both in terms of value and volume from 1999 to 2002, with an upward trend in imports of timber products through these ports since 1999. Since 2000, imports of timber products to Harbin and Manzhouli quickly rose both in value and in volume; and these were the leading two ports by volume of timber products in 2002. Harbin and Manzhouli, located near the Russian border, are the two main ports of entry for Russian timber products. Their role in the trade reflects the fact that the vast majority of Russian timber imports enter China over land routes.

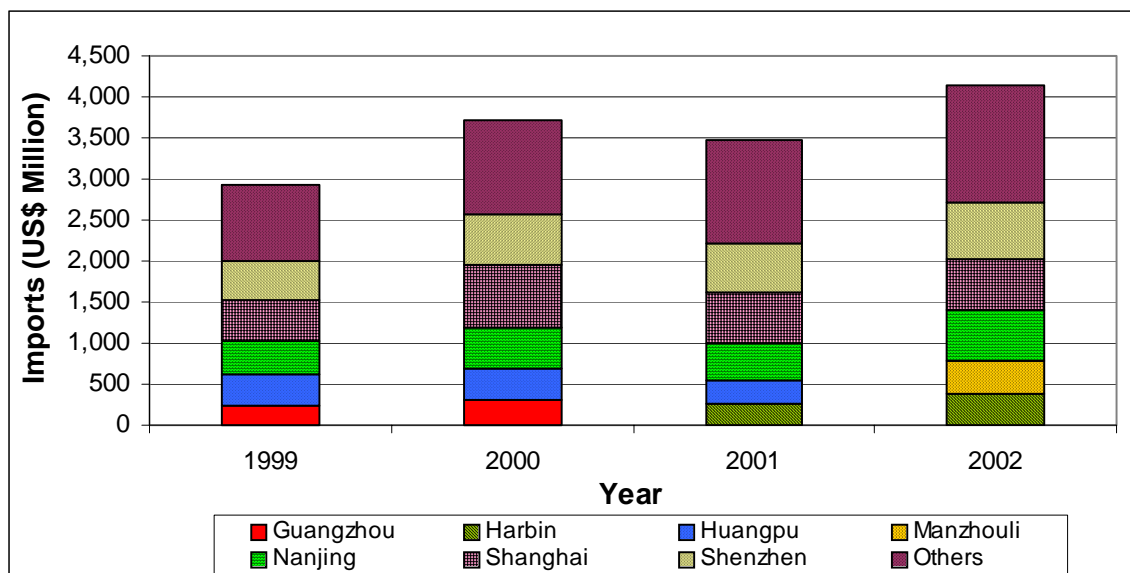


Figure 3.1. Value of timber product imports by port of entry

¹⁶ The figures detailing the leading entry ports identify all locations that at one time during the period 1997 to 2002 ranked at least third. The exceptions are Figures 3.1 and Figure 3.2, which identify ports of entry that at some point ranked at least fifth between 1999 and 2002.

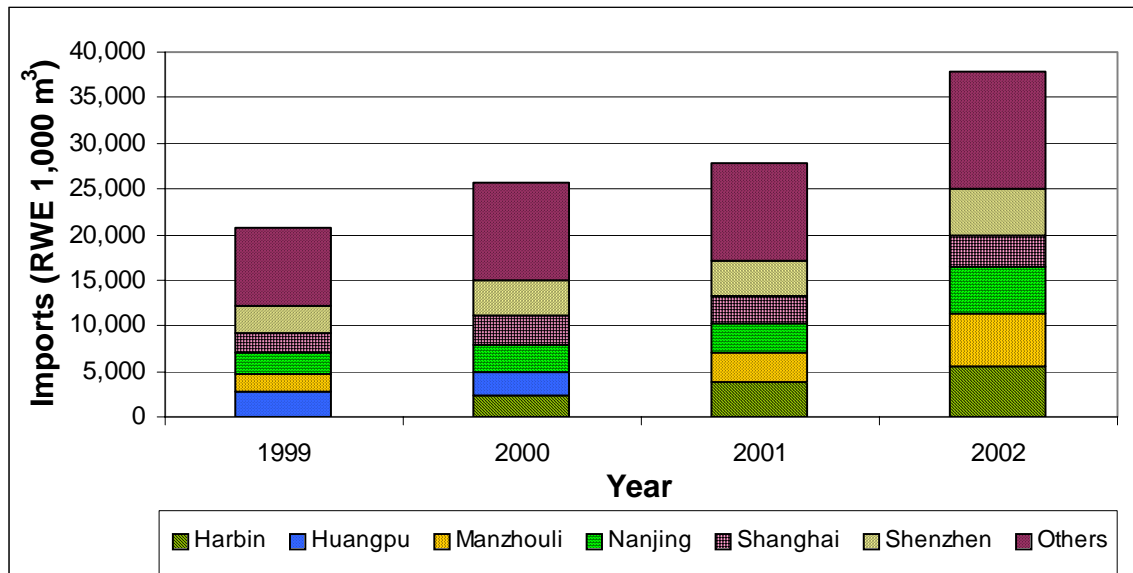


Figure 3.2. Volume of timber product imports by port of entry

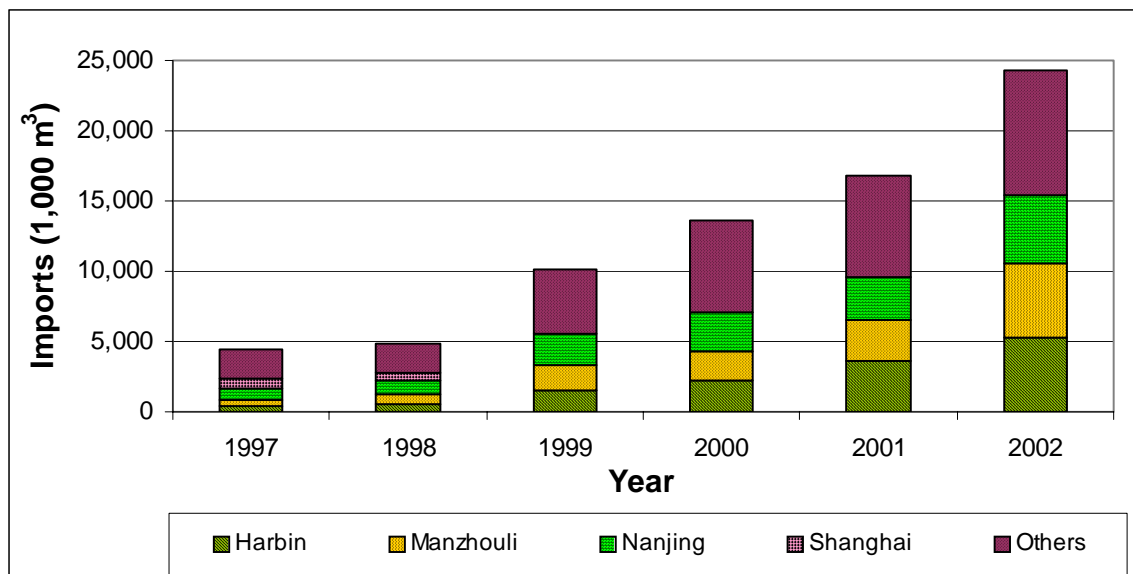


Figure 3.3. Leading log importing ports

Since 1997, expanding log imports mainly arrived through Nanjing, Harbin, and Manzhouli with the latter two ports showing the fastest growth due to burgeoning Russian imports. In 1997, log imports through the ports of Harbin and Manzhouli consisted of only 409,000 cubic meters and 382,000 cubic meters respectively. However, by 2002, China's log imports arriving at these two ports soared to 5.31 million cubic meters and 5.26 million cubic meters, respectively; increases of more than 10 times. Nanjing was the largest point of entry for log imports among all entry ports before 2000. However, by 2002, Harbin and Manzhouli had overtaken Nanjing (see Figure 3.3).

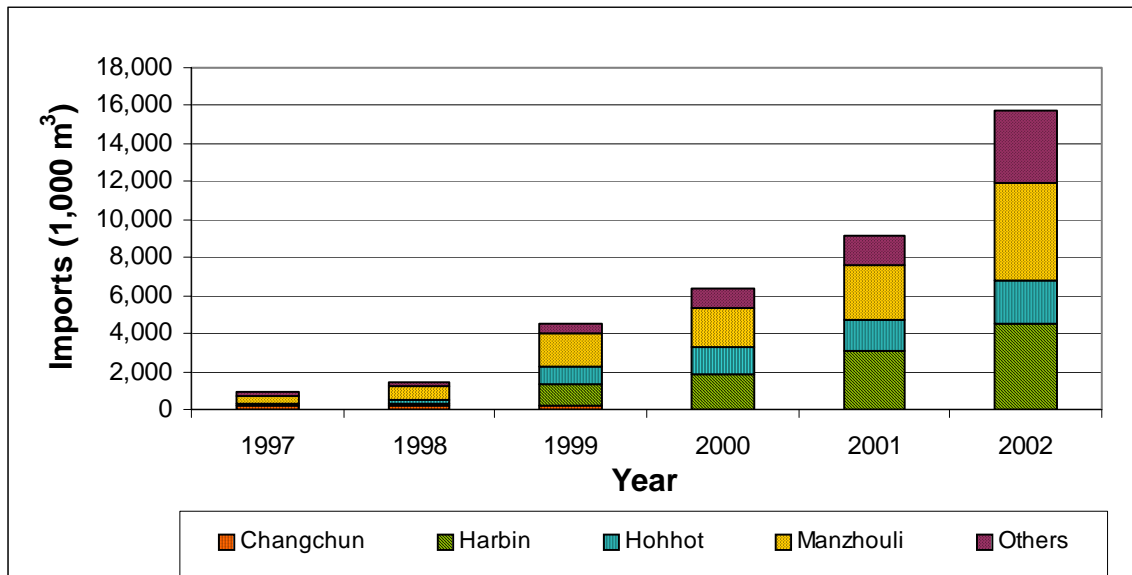


Figure 3.4. Leading softwood log importing ports

Figure 3.4 shows that the majority of China's imported softwood logs came through Manzhouli, Harbin, and Hohhot (see Annex V for specific gateways). The upward trend in softwood log imports through these ports is highlighted by the example of Manzhouli. Softwood log imports increased nearly 13 times from 382,000 cubic meters in 1997 to 5.185 million cubic meters in 2002.

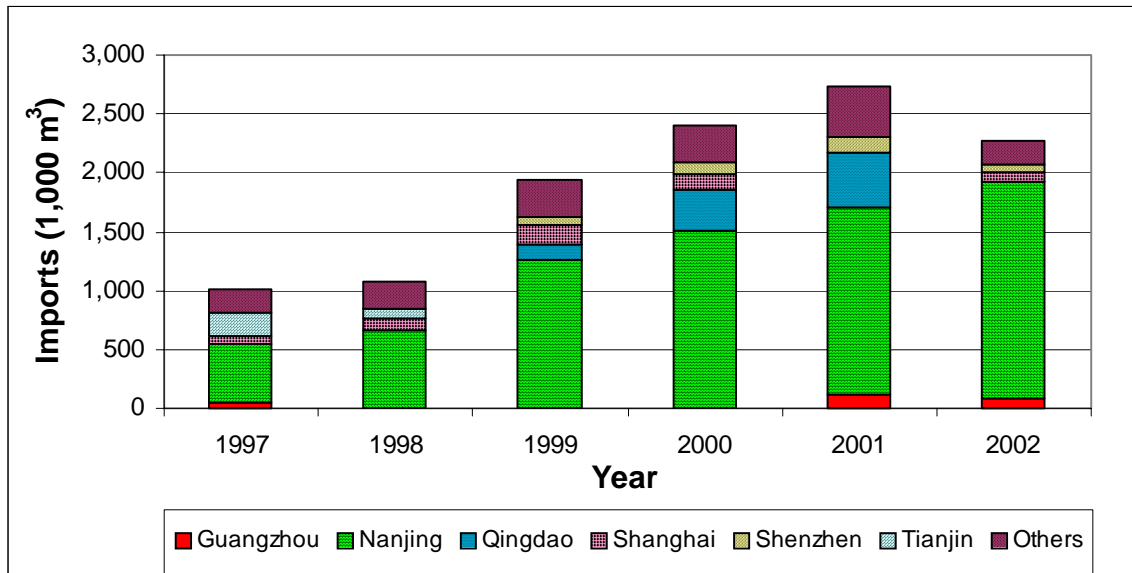


Figure 3.5. Leading tropical hardwood log importing ports

Since 1997, the port of Nanjing maintained the dominant position as China's major entry port for tropical hardwood log imports, as displayed in Figure 3.5.17 In 1997, China imported 500,000 cubic meters of tropical hardwood logs through Nanjing, accounting for nearly 50 percent of the Chinese total. By 2002, imported tropical hardwood logs through Nanjing reached 1.849 million cubic meters, accounting for 81 percent of the total. Nanjing is located in eastern China, where the demand for high-grade hardwood timber has been strong in the housing and interior decoration markets.

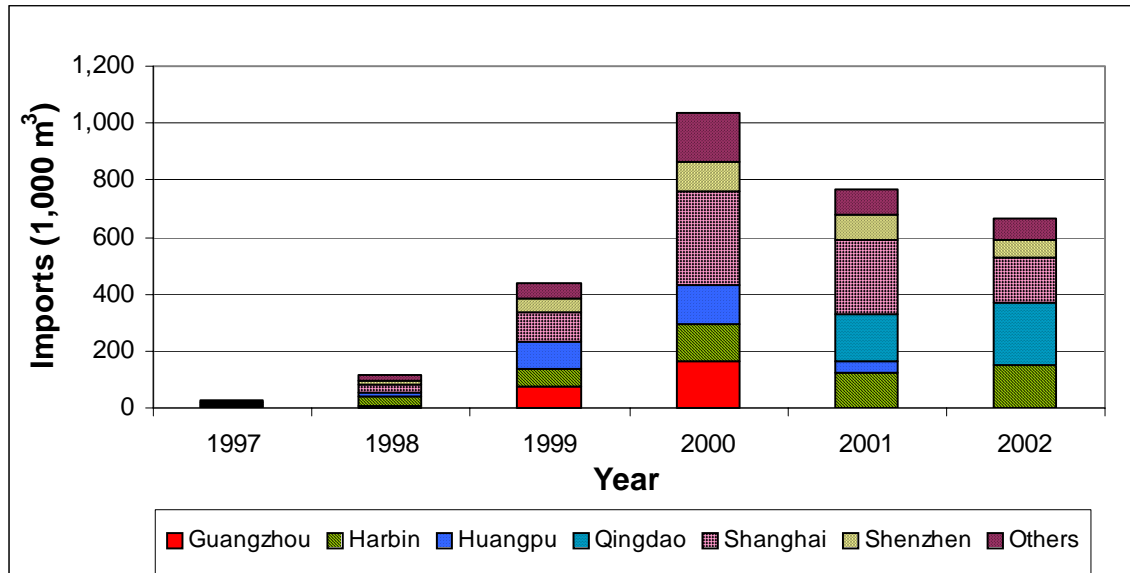


Figure 3.6. Leading temperate hardwood log importing ports

As shown in Figure 3.6, imports of temperate hardwood logs came mainly through Shanghai, Shenzhen, Guangzhou, Huangpu, Qingdao, and Harbin ports. Shanghai was the largest entry port for temperate hardwood logs until its import volume was surpassed by Qingdao in 2002.¹⁸ In 2000, imports of temperate hardwood logs through Shanghai peaked at 329,000 cubic meters, accounting for 32 percent of China's total imports of temperate hardwood logs. This surge was contributed to by large quantities of imported European beech logs and American hardwood logs. However, as imports of European beech diminished after 2000, Shanghai's share in China's total imports of temperate hardwood logs abated.

¹⁷ Estimates disaggregating the mixed hardwood log category and combining with the tropical hardwood log and mixed hardwood log categories also indicate that Nanjing was, overall, the leading port of entry for tropical hardwood logs.

¹⁸ Estimates disaggregating the mixed hardwood log category and combining with the tropical hardwood log and temperate hardwood log categories indicate that Harbin handled the greatest volume of temperate hardwood log imports in 2002, almost half of total volume.

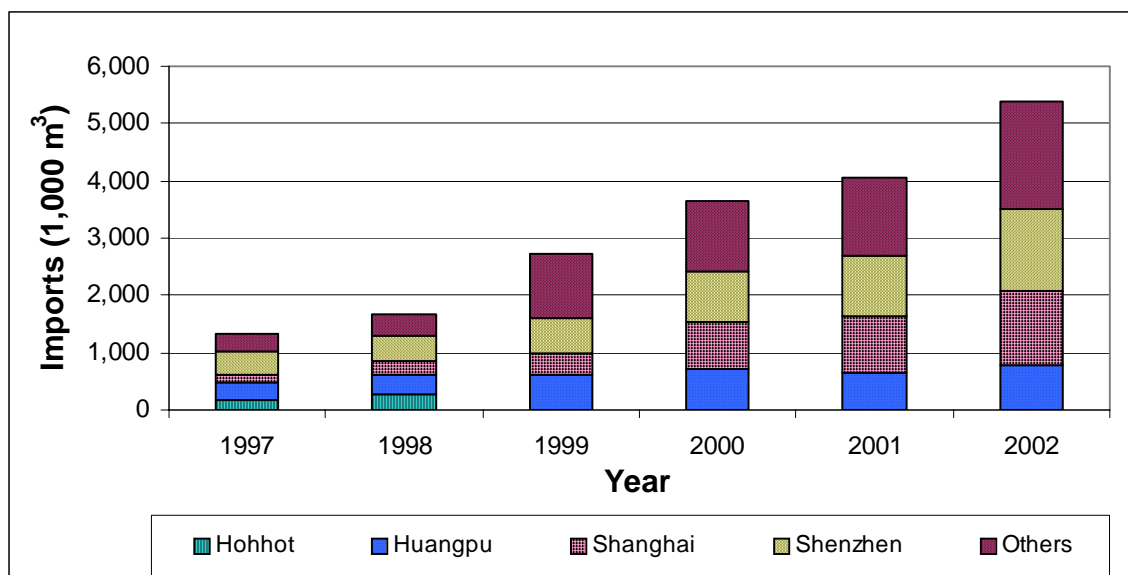


Figure 3.7. Leading lumber importing ports

Between 1997 and 2002, major entry ports for China's lumber imports were Shenzhen, Huangpu, Shanghai, and Guangzhou (see Figure 3.7). Since 1997, Shenzhen was the foremost entry port for lumber, with steady growth in the subsequent five years. In 1997, China imported 427,000 cubic meters of lumber through Shenzhen port. By 2002, this figure had more than tripled to 1.4 million cubic meters. Lumber imports through Shanghai have also grown dramatically, from merely 130,000 cubic meters in 1997 to 1.3 million cubic meters in 2002. The ports of Shanghai and Shenzhen (in Guangdong Province) are in China's two 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.

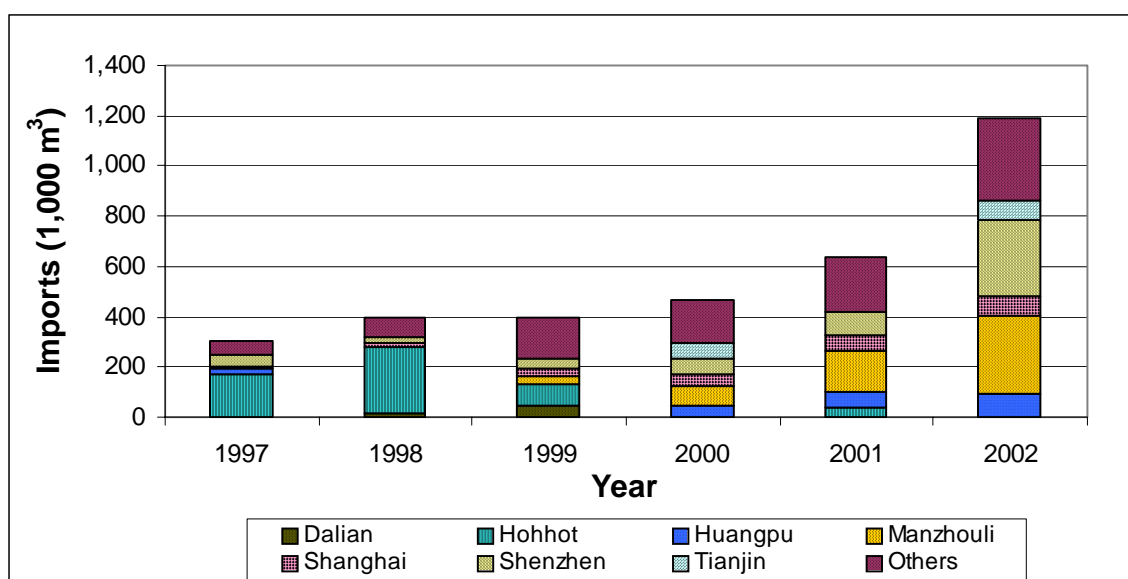


Figure 3.8. Leading softwood lumber importing ports

Figure 3.8 shows that Hohhot was the hub of China's softwood lumber imports before 1999. In 1998, the port of Hohhot imported 267,000 cubic meters of softwood lumber, accounting for 67 percent of the nation's total softwood lumber imports. However, by 2002, the majority of softwood lumber imports had shifted to the ports of Manzhouli and Shenzhen. In that year, Manzhouli and Shenzhen imported 313,000 cubic meters and 302,000 cubic meters of softwood lumber respectively, accounting for 26 percent and 25 percent of China's total softwood lumber imports.

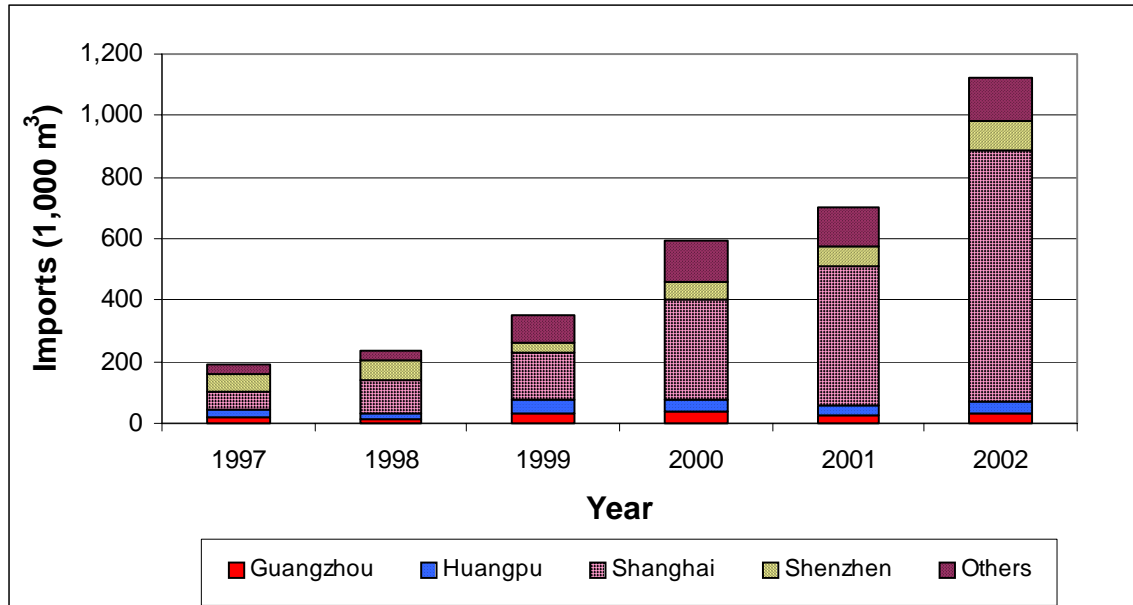


Figure 3.9. Leading tropical hardwood lumber importing ports

As exhibited in Figure 3.9, Shanghai dominated as the leading port in the growing imports of tropical hardwood lumber.¹⁹ In 1997, tropical hardwood lumber imported through Shanghai was much less than 100,000 cubic meters, but by 2002 this import volume had grown 13 times to more than 800,000 cubic meters.

¹⁹ Estimates disaggregating the mixed hardwood lumber category and combining with the tropical hardwood lumber and temperate hardwood lumber categories also indicate that Shanghai was the leading port of entry for tropical hardwood lumber, though with a lesser proportion of total volume (34 percent in 2002).

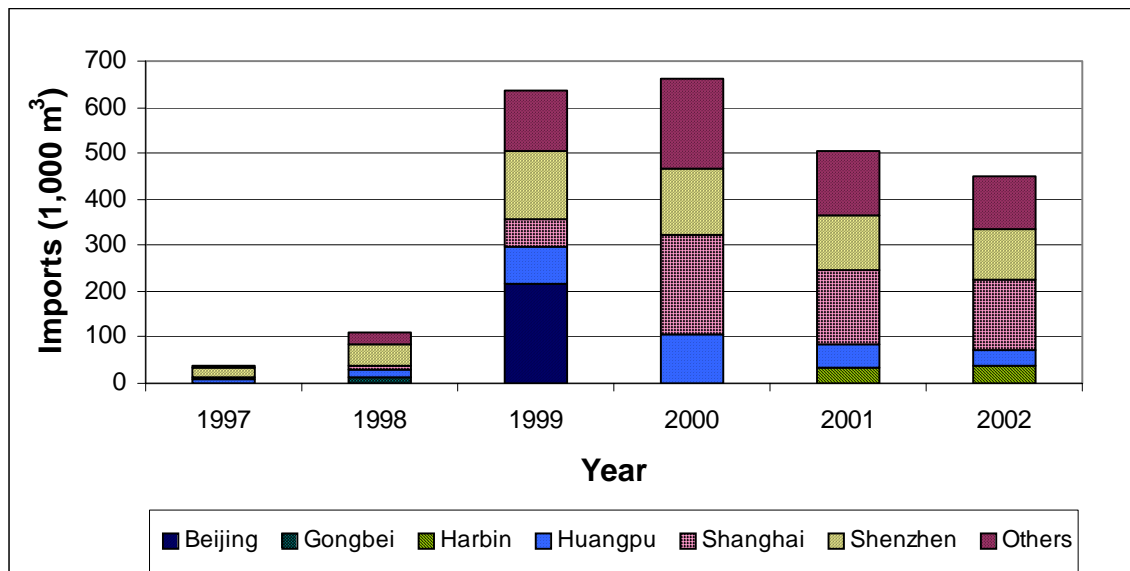


Figure 3.10. Leading temperate hardwood lumber importing ports

Figure 3.10 illustrates the five largest entry ports of Chinese temperate hardwood lumber imports between 1997 and 2002. Annual imports through Shenzhen, Shanghai, and Huangpu were generally higher than those through other ports, except for in 1999 when imports through Beijing anomalously led all other ports.²⁰ Also, the importance of Harbin as a port for temperate hardwood lumber imports increased towards the end of the period studied, making it the fourth largest entry port in 2001 and the third largest in 2002. This reflects the increase of Russian hardwood lumber imports. In contrast, imports of temperate hardwood lumber through Shenzhen, Shanghai, and Huangpu dropped after 2000.

²⁰ Estimates disaggregating the mixed hardwood lumber category and combining with the tropical hardwood lumber and temperate hardwood lumber categories indicate that Shenzhen has been the leading port of entry for temperate hardwood lumber since 1998, accounting for 42 percent of volume in 2002.

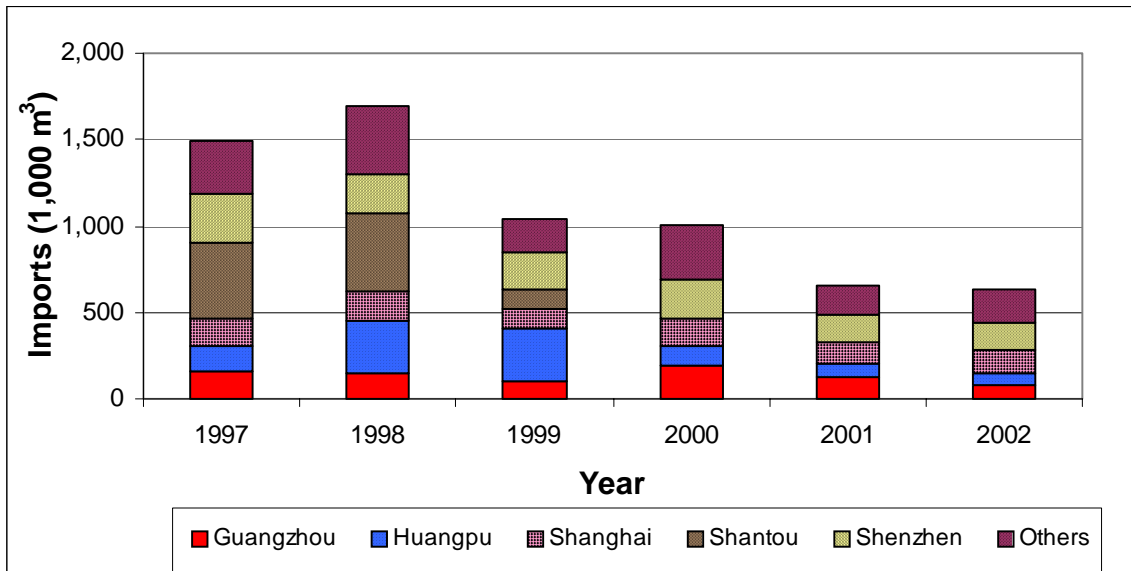


Figure 3.11. Leading plywood importing ports

The majority of China's plywood imports arrived in the ports of Shantou, Shenzhen, Huangpu, Shanghai, and Guangzhou over the years studied (see Figure 3.11). The overall trend in plywood imports is one of decline as China's manufacturing sector has begun supplying the national demand for plywood.

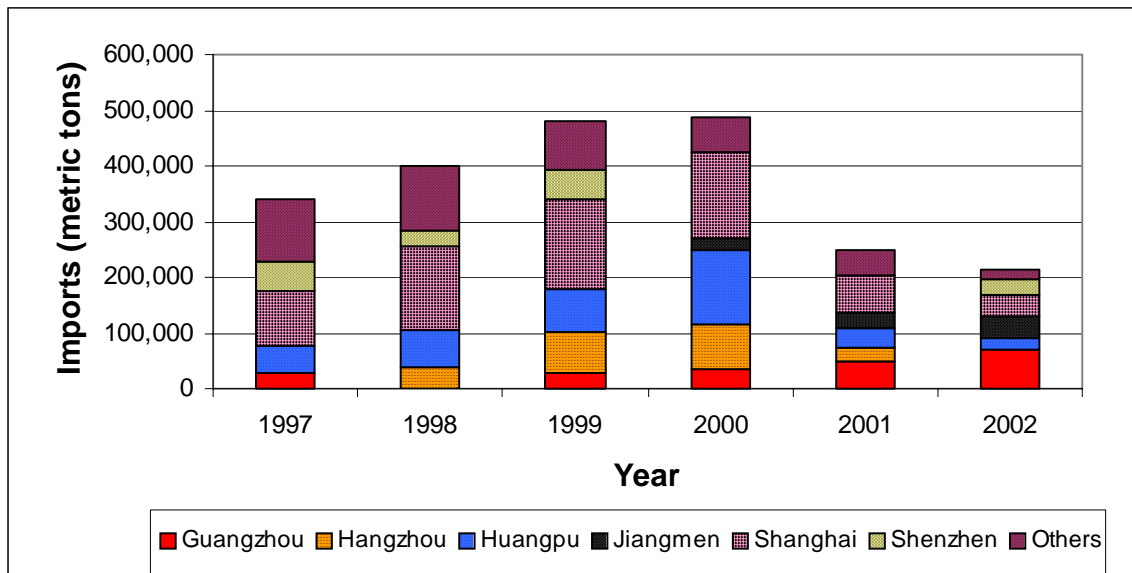


Figure 3.12. Leading veneer importing ports

Figure 3.12 shows the top five entry ports of China's veneer imports. Before 2000, the amount of veneer imported through Shanghai was considerably greater than that through other ports. For example, in 1999 Shanghai imported 162,000 tons of veneer, accounting for 34 percent of total

national veneer imports. Imports through the port of Huangpu demonstrated consistent growth up through 2000, with a 28 percent share of the market that year. Although veneer imported through Shanghai and Huangpu dropped significantly after 2000, imports into Guangzhou and Jiangmen increased. Overall, the general trend for veneer imports has been downward.

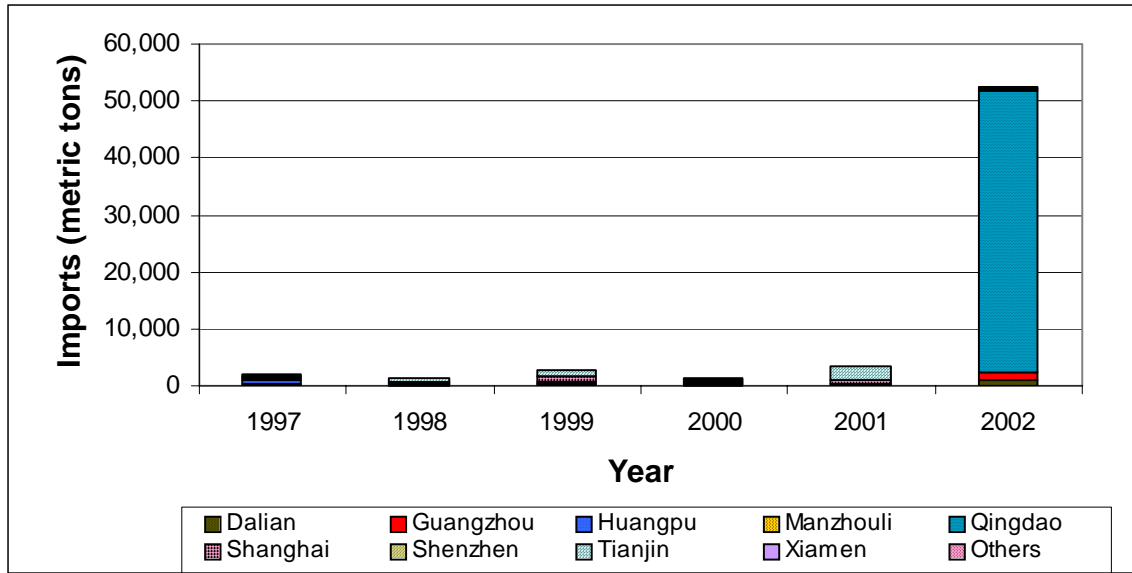


Figure 3.13. Leading wood chip importing ports

The small quantity of wood chip imports between 1997 and 2001, along with the surge in these imports in 2002, is again illustrated in Figure 3.13. Port data indicates that Qingdao was the largest recipient by far for the significant influx of wood chips that arrived from Australia in 2002.

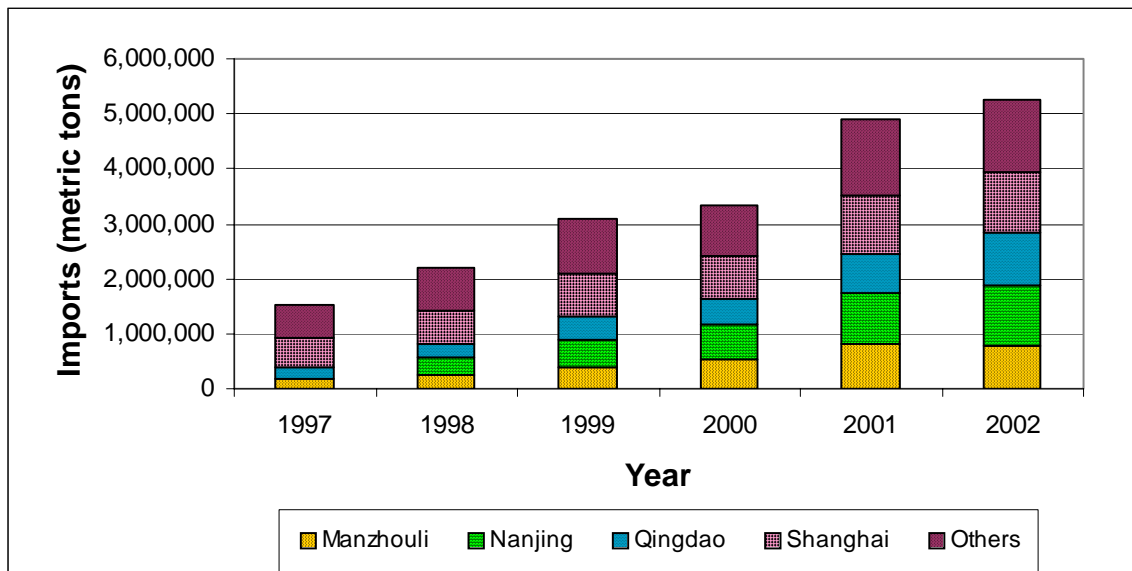


Figure 3.14. Leading wood pulp importing ports

From 1997 to 2002, China's wood pulp imports principally came through the ports of Shanghai, Qingdao, Manzhouli, and Nanjing (see Figure 3.14). In 2002, the combined imports of wood pulp through these four ports accounted for 75 percent of the national total. An upward trend of wood pulp imports has been evident since 1997. Shanghai maintained its position as the largest entry port for China's wood pulp imports between 1997 and 2001. However, in 2002, Nanjing surpassed Shanghai as the leading entry port for wood pulp.

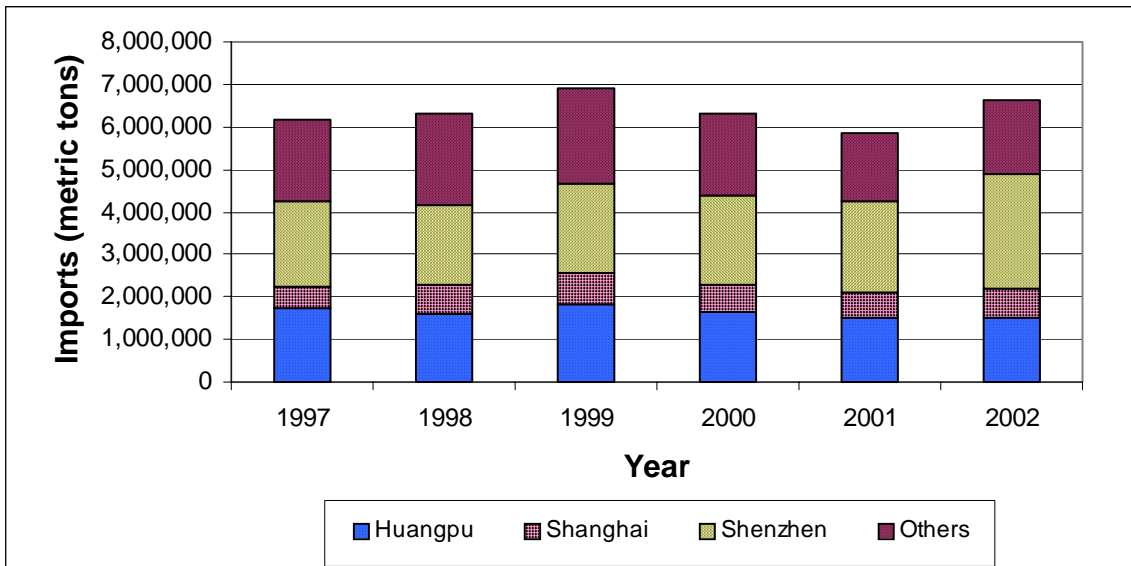


Figure 3.15. Leading paper and paperboard importing ports

As shown in Figure 3.15, there were few changes in the major ports of entry for China's paper imports over the six years studied. Additionally, import quantities of paper and paperboard through these ports were relatively stable. Shenzhen and Huangpu are the largest entry ports for China's paper imports. In 2002, paper imports admitted into Shenzhen and Huangpu equaled 2.7 million tons (41 percent of total) and 1.5 million tons (23 percent of total) respectively.

COUNTRY PROFILES

RUSSIA

Major Products

Since 1997, Russia has maintained a dominant role as a supplier of forest products to China, particularly in the case of timber products. Chinese imports of Russian timber products grew at an average annual rate of 75 percent, much faster than pulp (39 percent) and paper (20 percent) as illustrated in Figure 4.1, so that timber products now make up the majority of Russian forest product imports. The figure also shows increasing imports of Russian pulp and paper since 1997, with pulp

imports growing at a faster rate than paper. In 1997, China imported 706,000 cubic meters (RWE) of pulp and 336,000 cubic meters (RWE) of paper from Russia. By 2002, however, China imported 3.6 million cubic meters (RWE) of pulp and 0.8 million cubic meters (RWE) of paper, representing rises since 1997 of 4.1 times and 1.4 times, respectively.

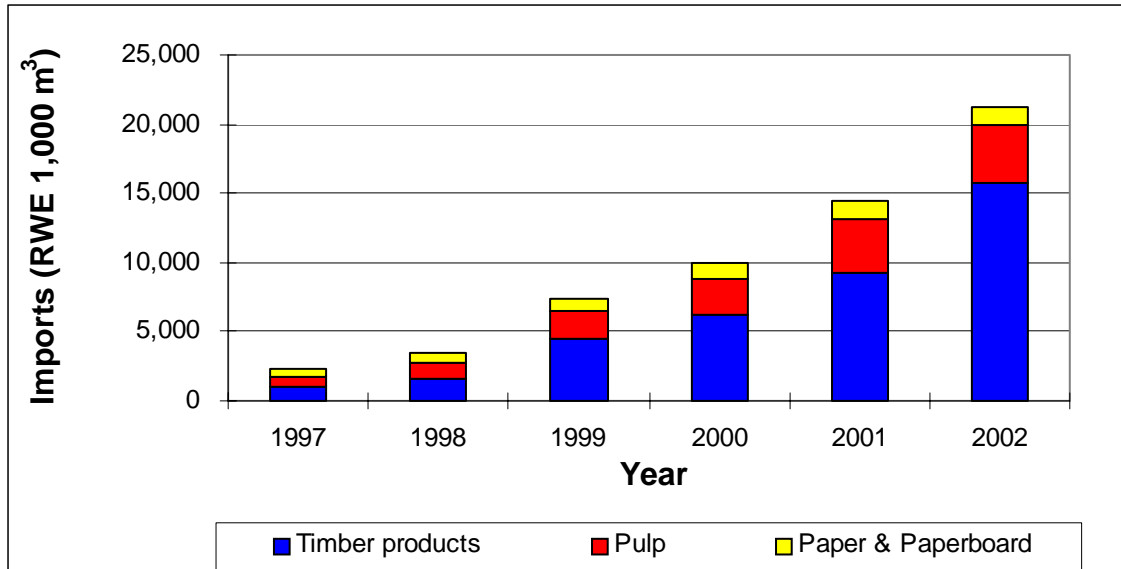


Figure 4.1. Forest product imports from Russia

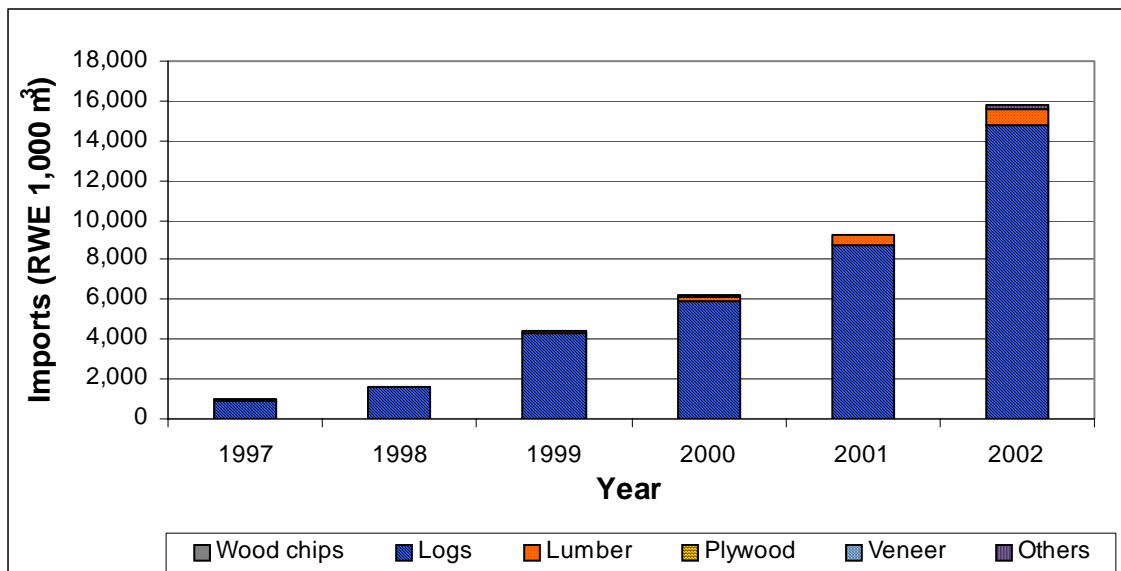


Figure 4.2. Timber product imports from Russia

As illustrated by Figure 4.2, logs were the predominant timber product imported from Russia. In 2002, logs accounted for over 90 percent of China's total timber product imports originating in Russia. Russian log imports that year reached 14.8 million cubic meters, up by 69 percent from the previous year and 1460 percent since 1997. The proportion of Russian logs out of China's total log imports increased from 21 percent in 1997 to 61 percent in 2002. Lumber imports from Russia also grew rapidly, but the total import volume remained small when compared with log volumes. The import of other Russian timber products, including plywood, veneer, and wood chips, was negligible over the six years studied.

Several factors contribute to Russia's importance as a trading partner: (1) A similarity of wood species in the Russian Far East and northeast China facilitates the substitution of Chinese wood by wood coming from Russia. Further enhancing their desirability, Russian logs are high in quality and large in diameter as compared with their Chinese counterparts. Thus, as timber harvests have been largely reduced in China's northeast region by the implementation of China's Natural Forest Protection Program (NFPP), Russian timber serves as a good alternative for timber from this region. (2) Convenience in border trade between Russia and the neighboring Chinese provinces of Heilongjiang and Inner Mongolia also contributes to Russia's importance as a trading partner. Most imported Russian logs are transported through inland borders, mainly by railway (see Annex V). (3) Favorable tax policies encourage Sino-Russian cross-border trade. China has adopted a policy that reduces the VAT (Value Added Tax) by half at the Russian border for small-scale enterprises, including small-scale timber traders. (4) In addition, Russia's resumption in 2001 of maritime shipping of forest products facilitates trade between the nations. Statistics show that 570,000 cubic meters of Russian logs reached China by ship in 2001. This volume jumped to 2 million cubic meters in 2002. To this end, Russian timber now easily reaches not only northeast China, but also all major timber consuming regions along the eastern seaboard.

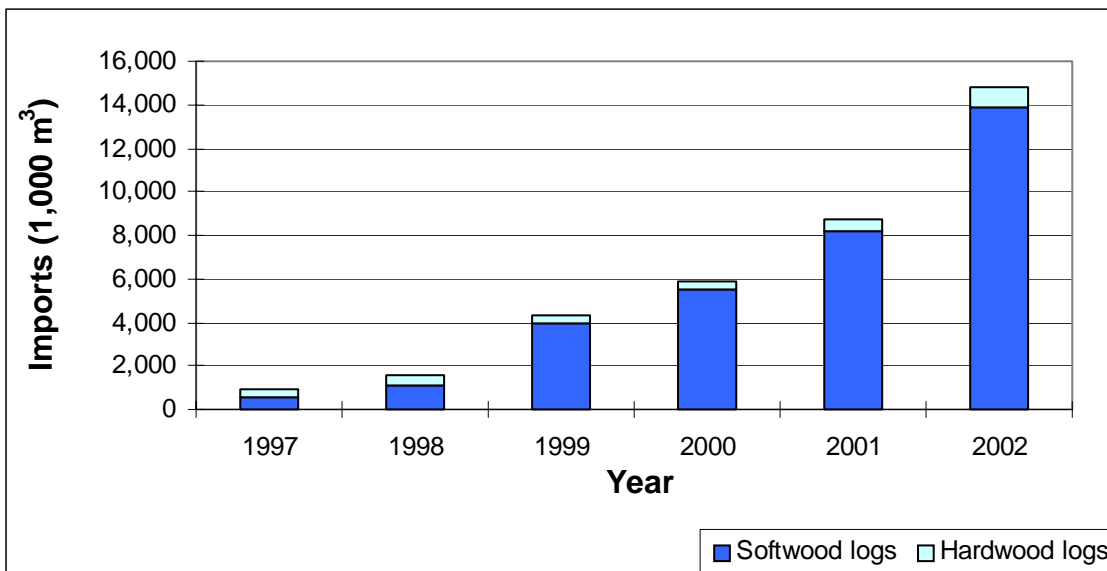


Figure 4.3. Log imports from Russia

Figure 4.3 exhibits that China imported considerably more softwood logs than hardwood logs from Russia throughout the period studied. The growth of Russian softwood log imports was significantly faster than that of hardwood logs, particularly after 1998. In 1997, China imported 532,000 cubic meters of softwood logs from Russia and nearly the same quantity of hardwood logs. However, by 2002 China imported approximately 13.8 million cubic meters of softwood logs and less than 1 million cubic meters of hardwood logs.

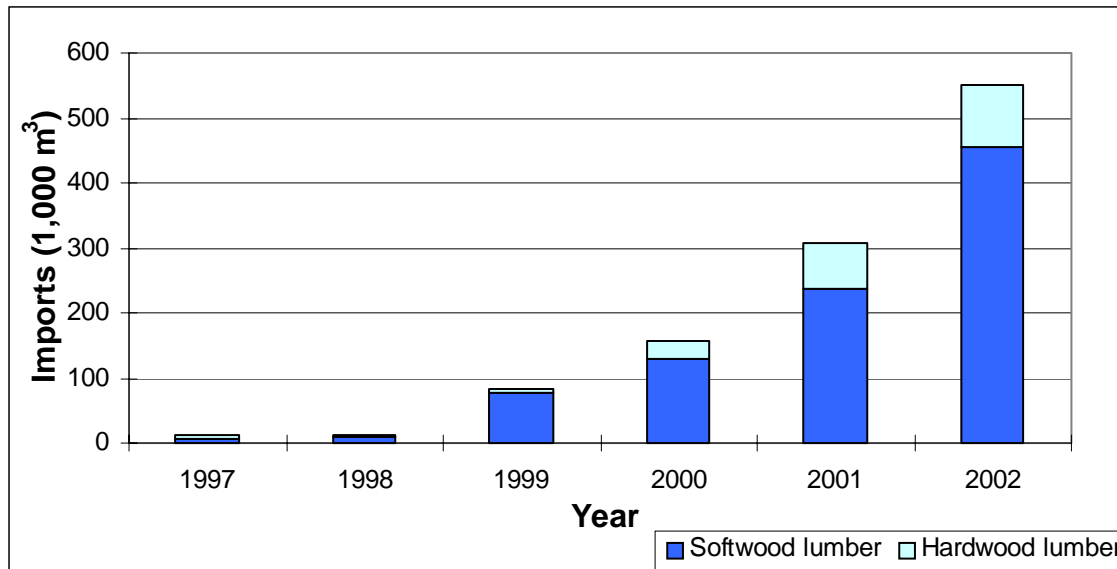


Figure 4.4. Lumber imports from Russia

Russian lumber imports display a similar trend to those of log imports. As shown in Figure 4.4, since 1998, China imported substantially more softwood than hardwood lumber from Russia. The growth rate of softwood lumber imports was also higher than that of hardwood lumber. The imports of Russian softwood lumber increased 67 times from 6,700 cubic meters in 1997 to 457,000 cubic meters in 2002. Hardwood lumber imports grew by 20 times during the same period.

Major entry ports

As shown in Figure 4.5, growing Russian log imports predominately arrived through the ports of Harbin, Manzhouli, and Hohhot since 1997. For example, imports through Harbin grew from around 400,000 cubic meters in 1997 to more than 5 million cubic meters in 2002. Notably, the last several years have marked the rising importance of Dalian and Nanjing as port cities. This is due to Russia's renewal of maritime shipping of timber products in 2001.

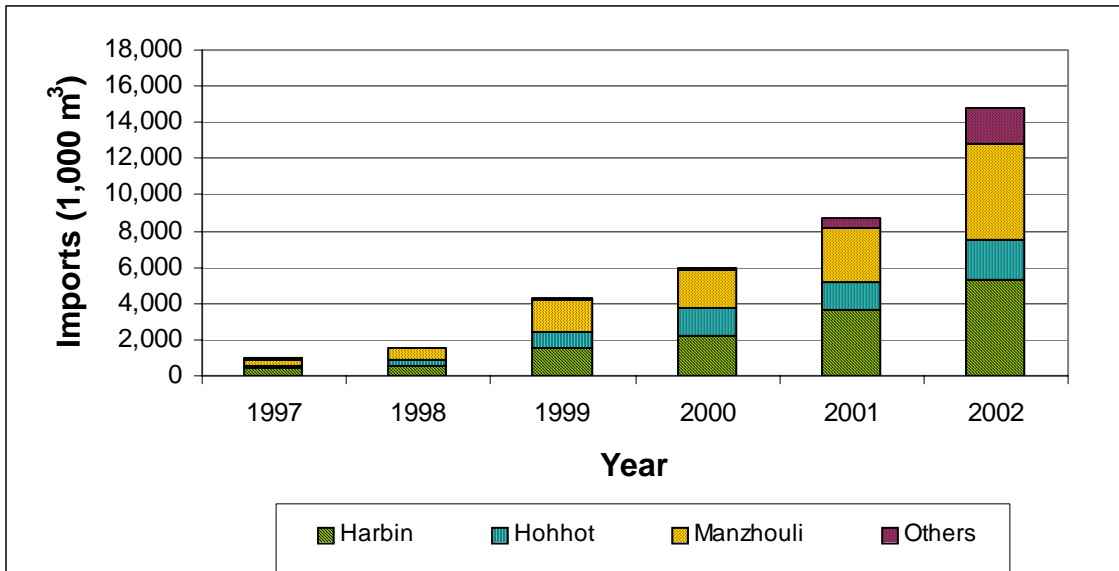


Figure 4.5. Leading entry ports of Russian logs

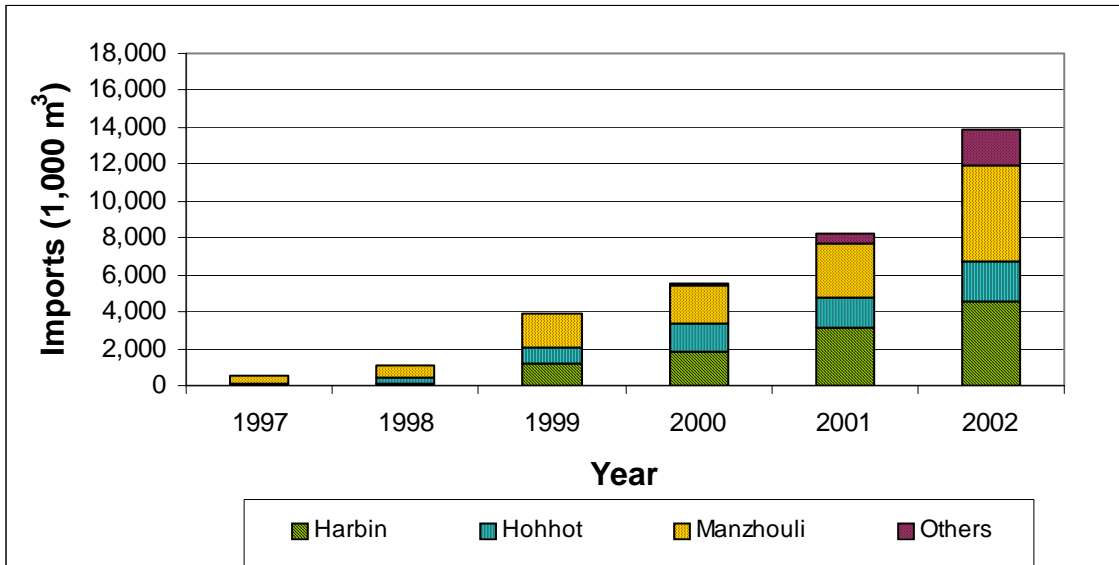


Figure 4.6. Leading entry ports of Russian softwood logs

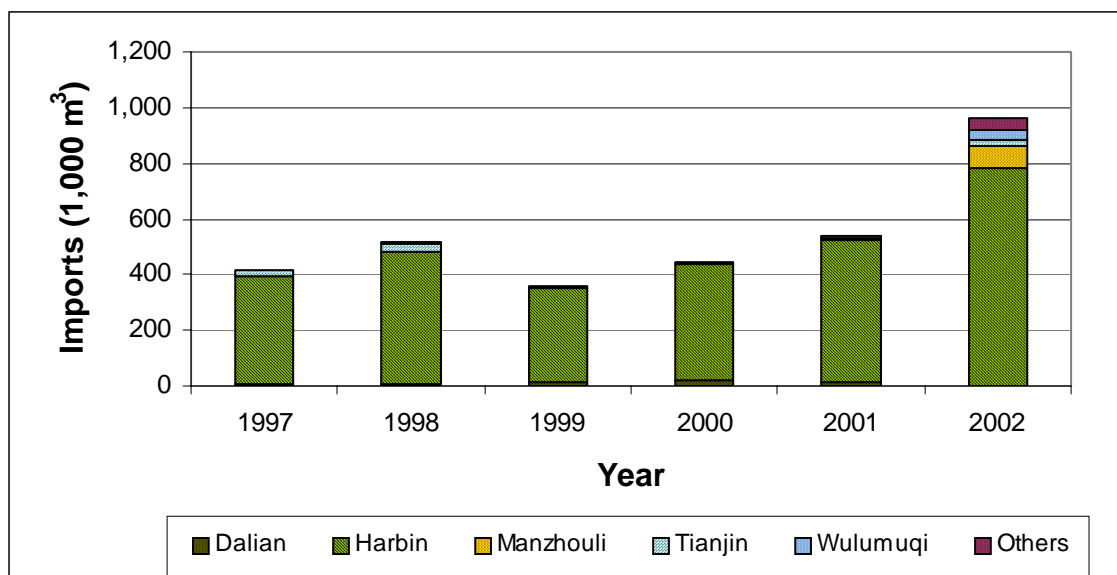


Figure 4.7. Leading entry ports of Russian hardwood logs

Figures 4.6 and 4.7 show the major entry ports of Russian softwood logs and hardwood logs. As softwood logs accounted for the majority of imported Russian logs, the trend for total log imports is similar to the softwood component. However, the data for hardwood log imports show Harbin to be the port of entry handling the vast majority of Russian hardwood logs. In 2002, imports of Russian hardwood logs through the port of Harbin constituted 82 percent of total Russian hardwood logs.

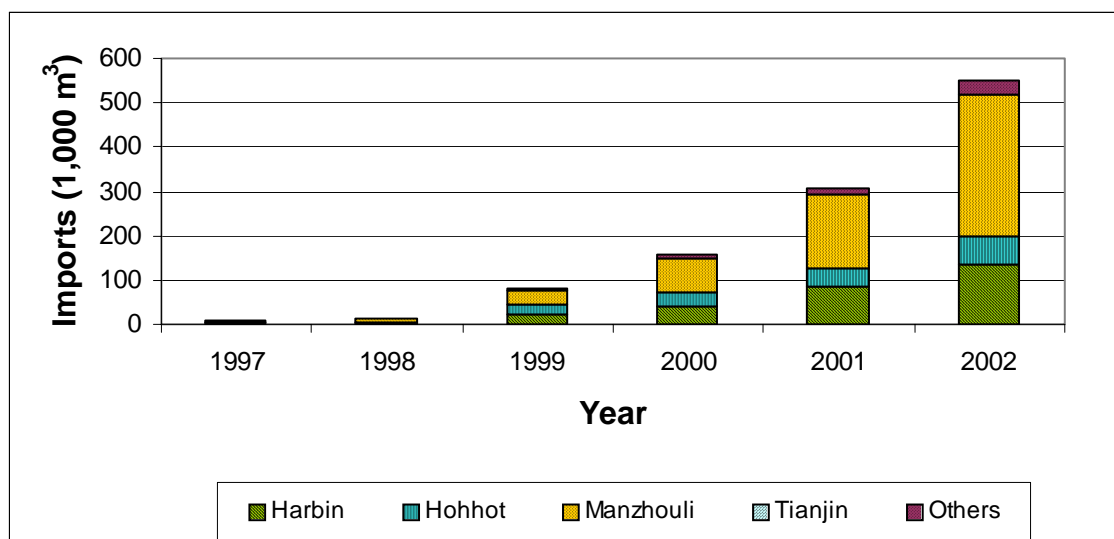


Figure 4.8. Leading entry ports of Russian lumber

Figure 4.8 shows major entry ports for Russian lumber from 1997 to 2002. Manzhouli was the largest port of entry for Russian lumber in 2002, followed by Harbin and Hohhot. Russian lumber imports entering the port of Manzhouli increased quickly after 1997. China imported 5,700 cubic meters of

Russian lumber through the port of Manzhouli in 1997. By 2002, the volume had multiplied 55 times to 319,000 cubic meters. The volume of Russian lumber passing through the ports of Harbin and Hohhot also grew during the period studied.

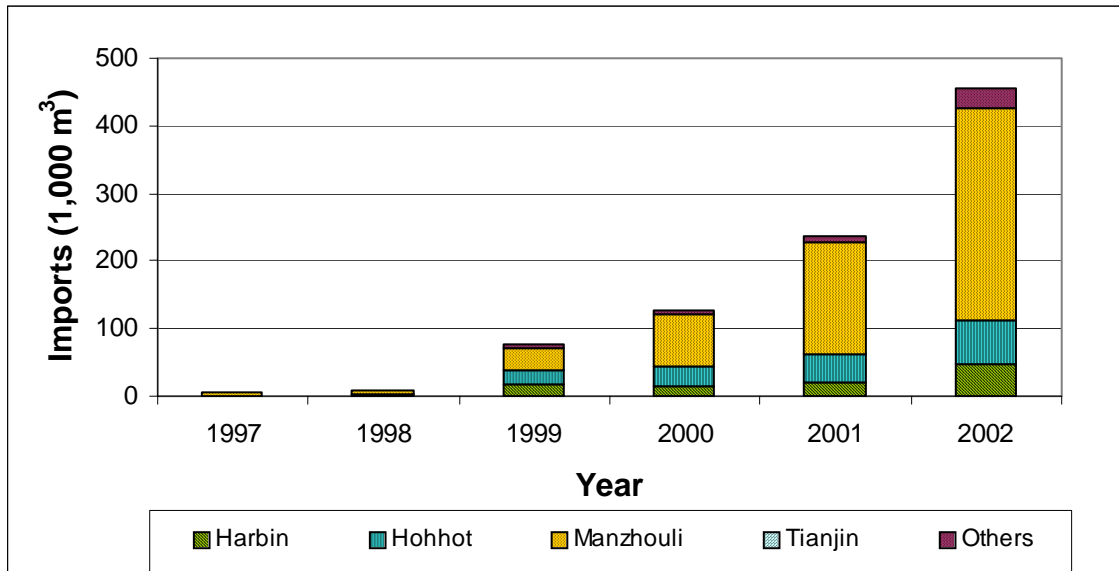


Figure 4.9. Leading entry ports of Russian softwood lumber

The three ports processing the largest volume of Russian softwood lumber were Manzhouli, Hohot, and Harbin (see Figure 4.9), with Manzhouli again experiencing the most rapid rate of growth. By 2002, Russian softwood lumber imports through Manzhouli reached 313,000 cubic meters, accounting for 69 percent of total Russian softwood lumber imports.

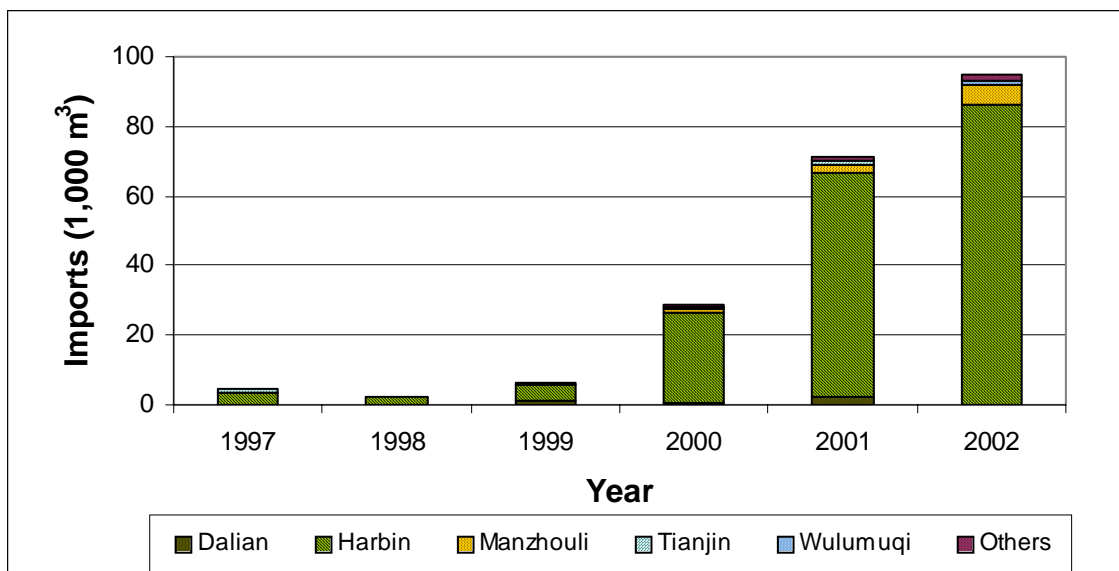


Figure 4.10. Leading entry ports of Russian hardwood lumber

As shown in Figure 4.10, Harbin as port of entry accounted for the vast majority of Russian hardwood lumber imports, with strong annual increases in volume. In 1997, 3,500 cubic meters of Russian hardwood lumber came into Harbin and accounted for 80 percent of Russian hardwood lumber imports to China. By 2002, imports of Russian hardwood logs through the port of Harbin grew to 86,000 cubic meters and 91 percent of total Russian hardwood lumber imports.

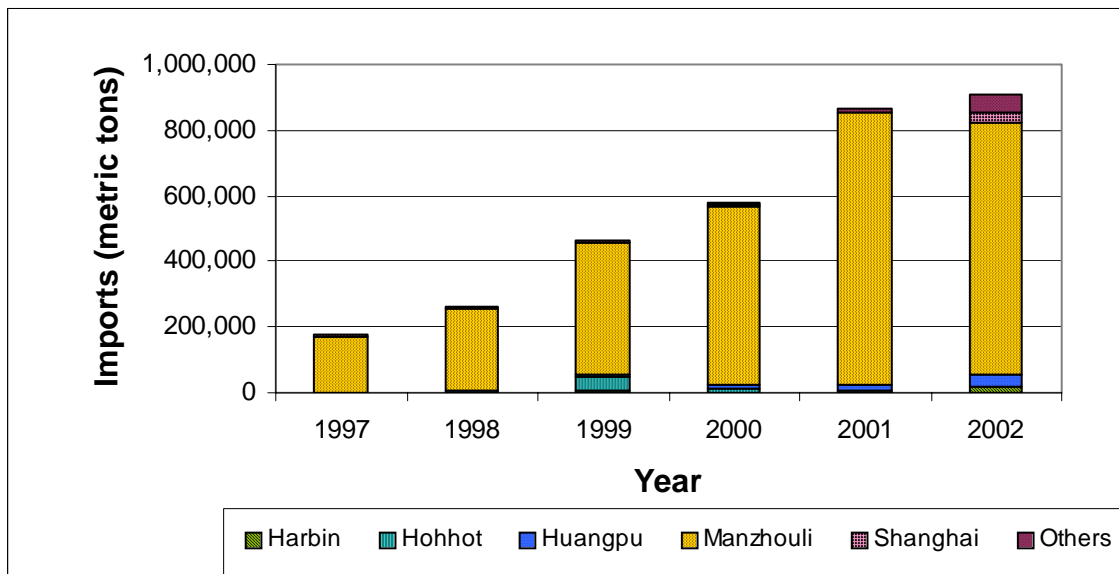


Figure 4.11. Leading entry ports of Russian wood pulp

As shown in Figure 4.11, Manzhouli as port of entry accounted for the vast majority of China's Russian wood pulp imports from 1997 to 2002. In 2002, 84% percent of Russia's wood pulp exports to China arrived in Manzhouli. Imports of Russian pulp into Manzhouli grew rapidly over the period studied. In 1997, 169,000 tons of Russian wood pulp came through the port of Manzhouli. This figure jumped to 768,000 tons in 2002, about 4.5 times the 1997 amount.

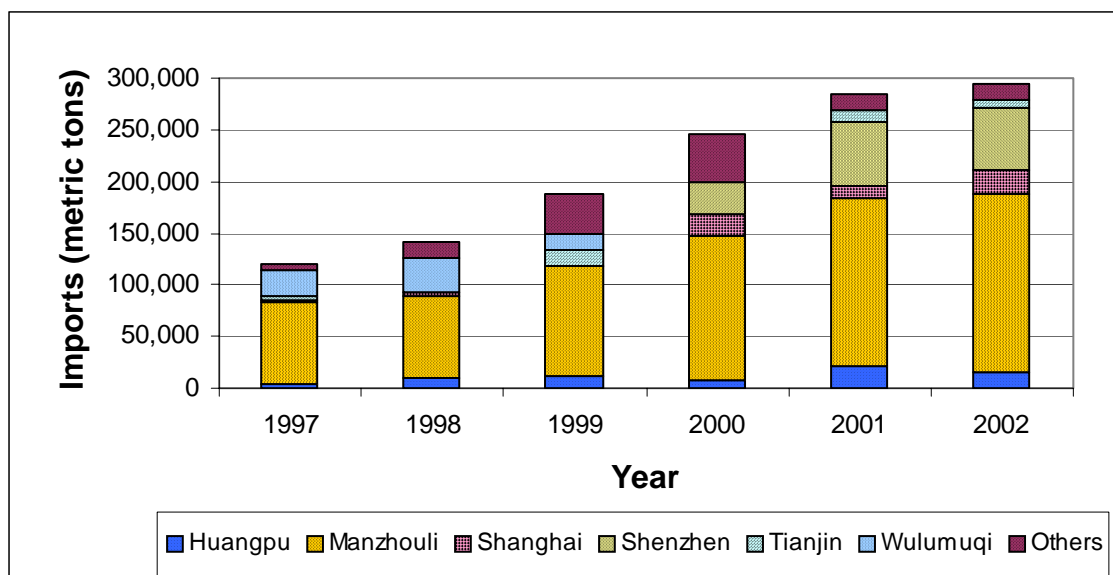


Figure 4.12. Leading entry ports of Russian paper and paperboard

Again, as shown in Figure 4.12, Manzhouli also received the largest quantity of Russian paper and paperboard imports. The figure displays steady growth of Russian paper and paperboard imports through Manzhouli during the six years studied. In 1997, 78,000 tons of Russian paper and paperboard arrived in China through the port of Manzhouli, accounting for 65 percent of China's total paper and paperboard imports from Russia that year. By 2002, China's imports of Russian paper and paperboard through Manzhouli increased to 171,000 tons, accounting for 58 percent of total imports of Russian paper and paperboard that year. Considerable growth of Russian paper and paperboard imports into Shenzhen began in 2000.

INDONESIA

Major products

Indonesia has been one of China's major supplying countries of forest products since 1997. Imports of forest products from Indonesia accounted for 12 percent of China's total forest product imports in 1997 and 10 percent in 2002. Figure 4.13 shows the steady growth of Chinese imports of pulp from Indonesia over the six years studied. In 1997, China imported 1.3 million cubic meters (RWE) of Indonesian pulp. By 2002, Chinese imports of Indonesian pulp increased to 4.5 million cubic meters (RWE), more than tripling since 1997. Despite general rising trends, China's timber product and paper imports from Indonesia show different dynamics. As depicted in Figure 4.13, imports of Indonesian paper and paperboard reached 2.8 million cubic meters (RWE) in 1999, before dropping to 1.4 million cubic meters (RWE) in 2001, and subsequently rising again to nearly 2 million cubic meters (RWE) in 2002. China's imports of timber products from Indonesia have generally increased, though slight decreases occurred in 1999 and 2002.

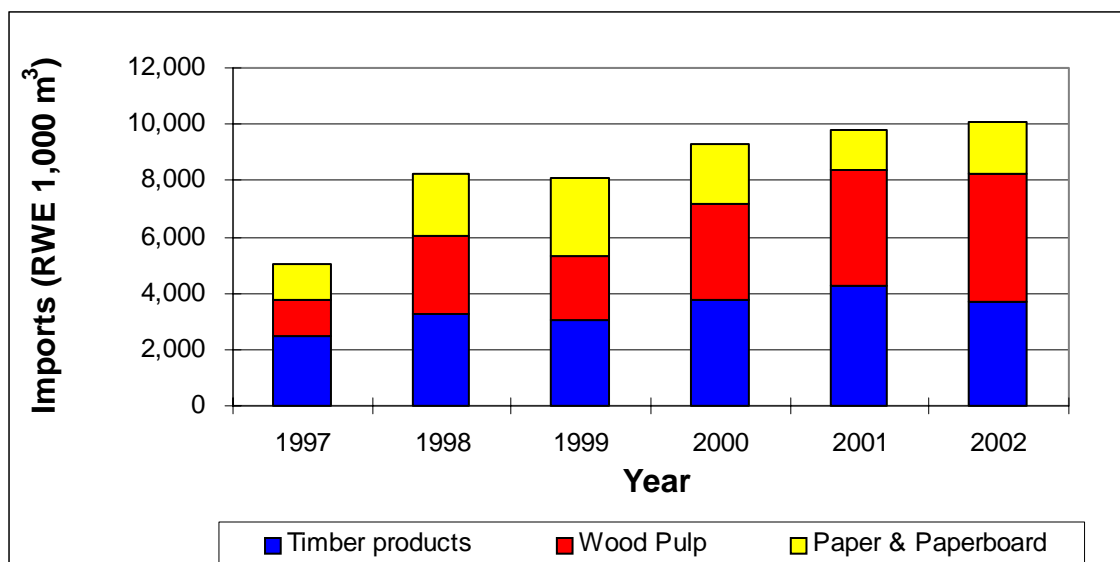


Figure 4.13. Forest product imports from Indonesia 1997-2002

China's timber product imports from Indonesia, organized by product type, are exhibited in Figure 4.14. Plywood, lumber and logs were the top three products in terms of import RWE volume. China's lumber imports from Indonesia increased nearly five times from 355,000 cubic meters (RWE) in 1997 to over 2 million cubic meters (RWE) in 2002. As a result, the share of imported Indonesian lumber in China's total lumber imports rose from 19 percent in 1997 to 26 percent in 2002. In contrast, China's imports of Indonesian plywood decreased after 1998. In 1997, China imported 1.8 million cubic meters (RWE) of plywood from Indonesia. However, by 2002 China's plywood imports from Indonesia dropped to 1.1 million cubic meters (RWE). Nonetheless, Indonesia's share of China's plywood imports increased from 48 percent in 1997 to 71 percent in 2002. From 1997 to 2001, Indonesia's log exports to China grew; however, in 2002 log exports slumped, possibly linked to the enforcement of Indonesia's log exporting ban in 2001.

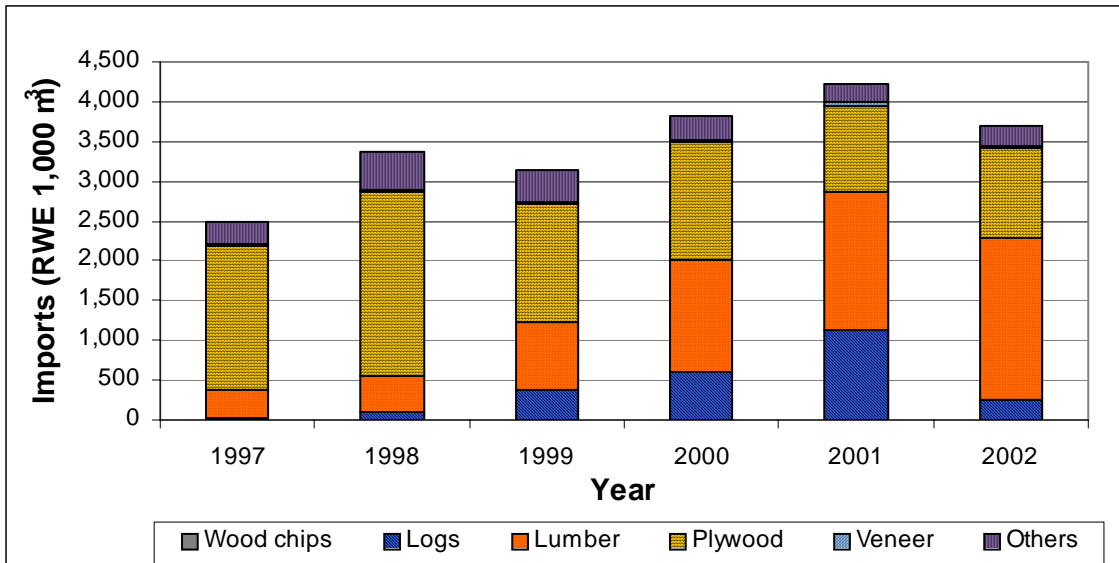


Figure 4.14. Timber product imports from Indonesia 1997-2002

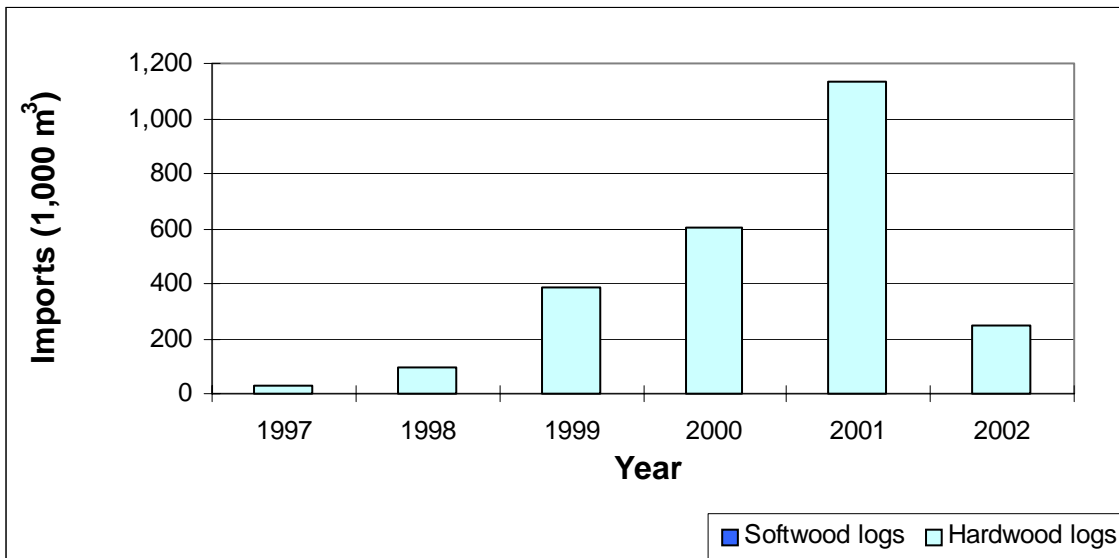


Figure 4.15. Log imports from Indonesia 1997-2002

As displayed in Figure 4.15, the vast majority of logs China imported from Indonesia throughout the period studied were hardwood logs. The volume of Indonesian log imports increased until 2001 when it peaked at 1.1 million cubic meters, before plummeting to 248,000 cubic meters in 2002.

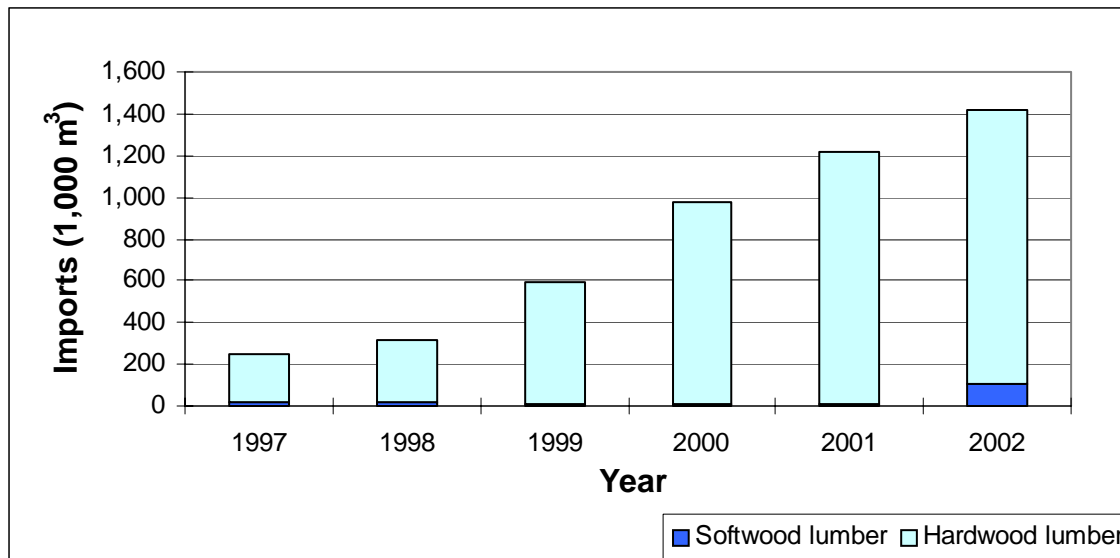


Figure 4.16. Lumber imports from Indonesia 1997-2002

As with logs, hardwood dominated Chinese imports of Indonesian lumber during the period studied. Figure 4.16 above illustrates the rapid rate at which China's hardwood lumber imports from Indonesia grew between 1997 and 2002. In 1997, China imported 231,000 cubic meters of hardwood lumber from Indonesia. This volume enlarged 470 percent to 1.3 million cubic meters by 2002. While much smaller in overall volume, Indonesian softwood lumber exports to China grew substantially in 2002.

Major entry ports

Figure 4.17 shows Shenzhen and Nanjing as the two leading entry ports for China's log (mainly hardwood logs) imports from Indonesia since 2000. There was an upward trend in China's imports of Indonesian logs from the Shenzhen and Nanjing up through 2001. In 2001, China's import of Indonesian logs through Shenzhen and Nanjing neared 250,000 cubic meters and 497,000 cubic meters, an increase of 102 percent and 830 percent, respectively, since 1999. Indonesia's export of logs to China through all major ports dropped in 2002.

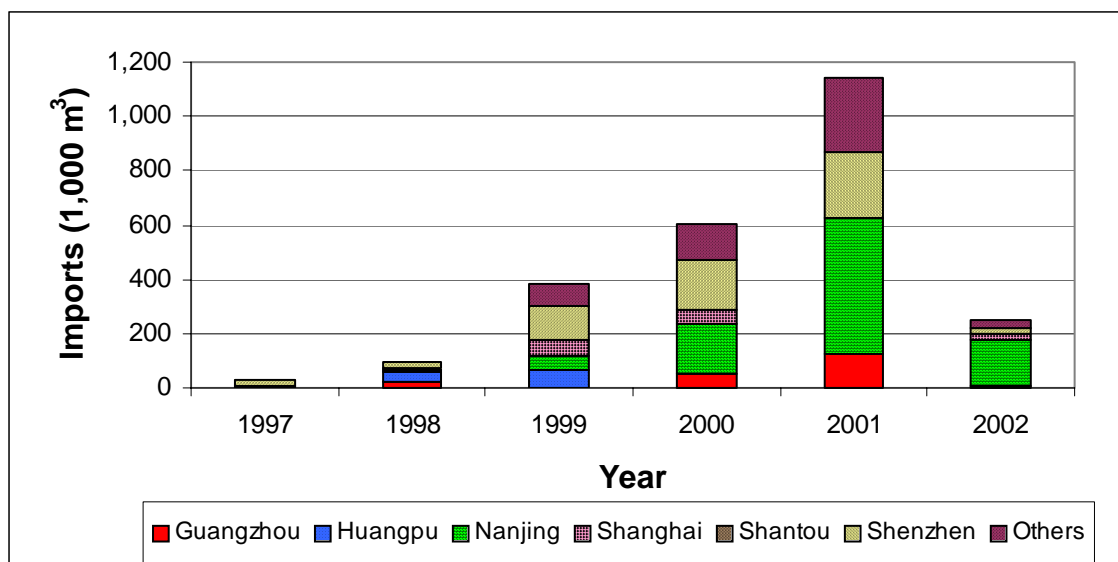


Figure 4.17. Leading entry ports of Indonesian logs

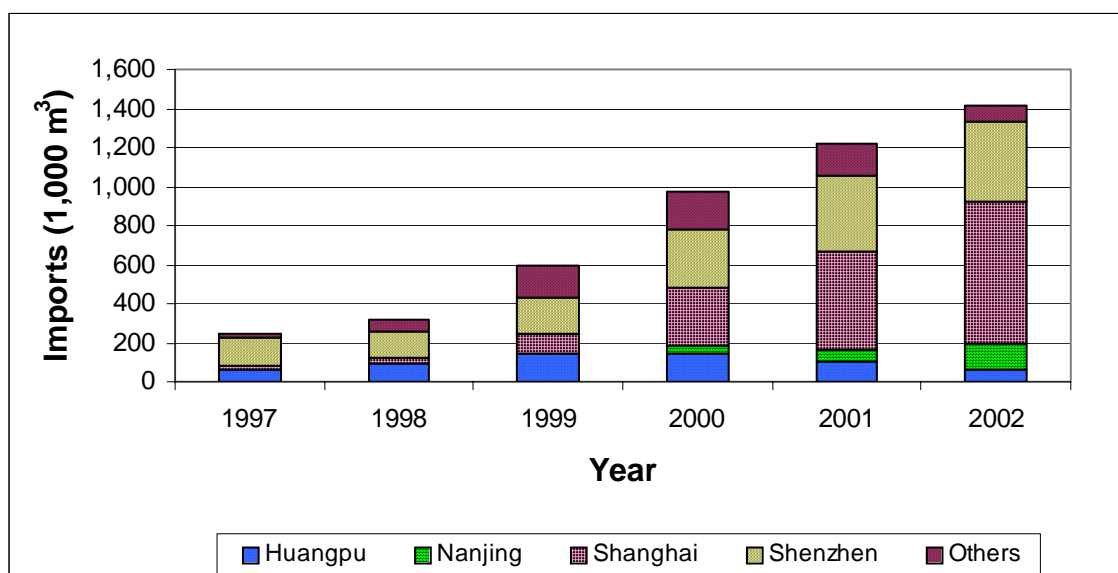


Figure 4.18. Leading entry ports of Indonesian lumber

Since 1997, China's lumber imports (primarily hardwood lumber) from Indonesia were mainly through the ports of Shenzhen, Huangpu, Shanghai and Nanjing, as shown in Figure 4.18. Lumber imports through Shenzhen and Shanghai grew rapidly. From 1997 to 2002, lumber imported through Shenzhen grew by 192 percent, while imports through Shanghai experienced an even greater growth of 3,866 percent. Since 2000, Nanjing has expanded its role as an entry point for Indonesian lumber, becoming the third largest port for this product in 2002. Before 1999, Huangpu was the second largest entry port for Indonesian lumber, but its importance has continually declined; and it was overtaken by Shanghai in 2000 and by Nanjing in 2002.

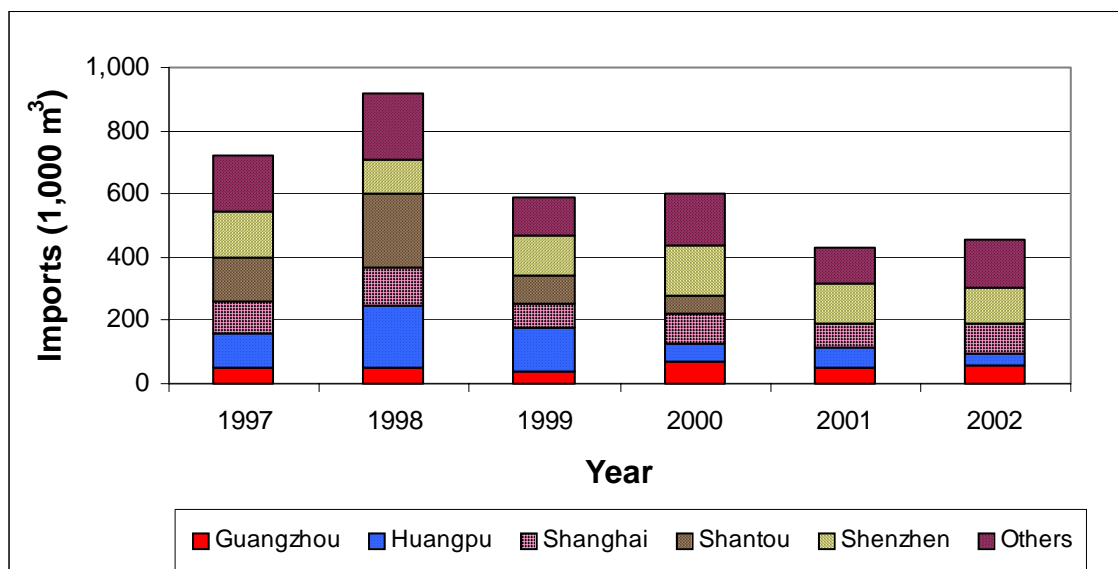


Figure 4.19. Leading entry ports of Indonesian plywood

Figure 4.19 shows the leading Chinese entry ports for Indonesian plywood between 1997 and 2002. Shenzhen, Huangpu, Shanghai, Guangzhou, and Shantou remained the top five ports of entry for Indonesian plywood for four years beginning in 1997. In 1998, imports of Indonesian plywood through Shantou peaked, accounting for 25 percent of China's total plywood imports from Indonesia. After 2001, however, plywood imports through Shantou plunged; and the port was surpassed by Tianjin and Nanjing in Indonesian plywood volumes.

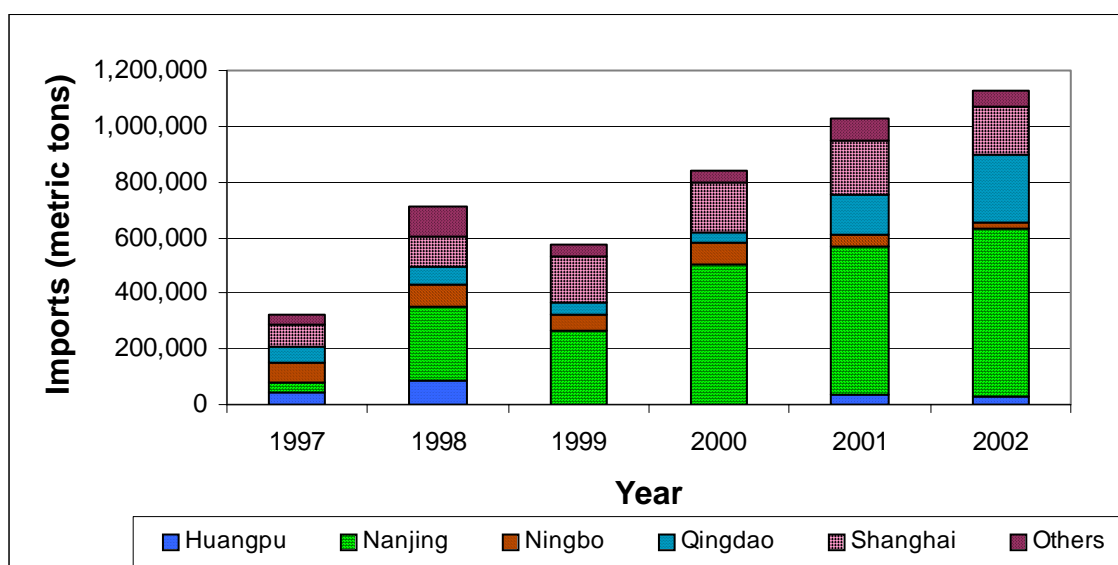


Figure 4.20. Leading entry ports of Indonesian wood pulp

Figure 4.20 shows that since 1999, the majority of China's imports of Indonesian wood pulp have been through Nanjing and Shanghai. Import quantities through Shanghai between 1999 and 2002 were relatively stable, whereas Nanjing's Indonesian pulp imports grew over this period, maintaining Nanjing's position as leading entry port for Indonesian wood pulp between 1998 and 2002. In 1997, the port of Nanjing imported less than 36,000 tons of Indonesian wood pulp; accounting for 11 percent of China's total Indonesian wood pulp imports. By 2002, imported Indonesian wood pulp arriving through Nanjing reached 610,000 tons and constituted 54 percent of China's total Indonesian wood pulp imports.

Since 1997, Indonesian paper and paperboard mainly arrived in Huangpu, Shenzhen, Shantou, Shanghai, and Nanjing (see Figure 4.21). In 2002, China's combined imports of Indonesian paper and paperboard through the top five entry ports constituted 84 percent of the total paper and paperboard imports from Indonesia. Shenzhen and Huangpu were the two largest entry ports with respective shares of 30 percent and 26 percent in 2002.

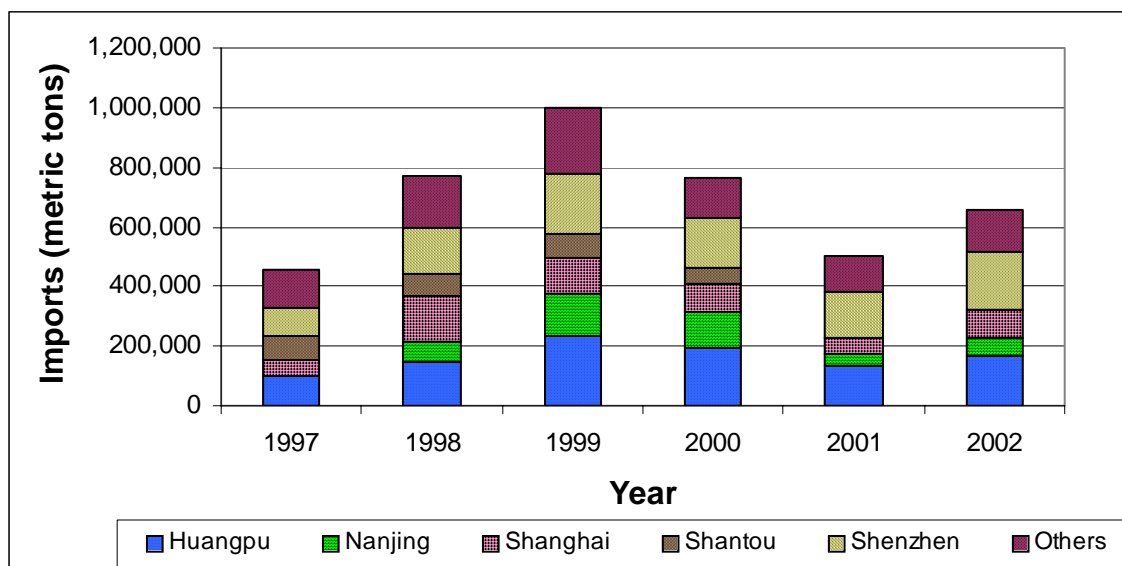


Figure 4.21. Leading entry ports of Indonesian paper and paperboard

MALAYSIA

Major products

For all of the years studied, timber products dominated Malaysian forest product exports to China, with paper and paperboard following as a distant second (see Figure 4.22). China has not imported wood pulp from Malaysia since 1999. China's imports of Malaysian timber products showed steady growth up through 1999. In 2001, however, imports of Malaysian timber products dropped sharply.

As a consequence of this and much stronger growth of imports from other countries, the share of Malaysian product in China's total timber product imports dropped from 30 percent in 1997 to 11 percent in 2002.

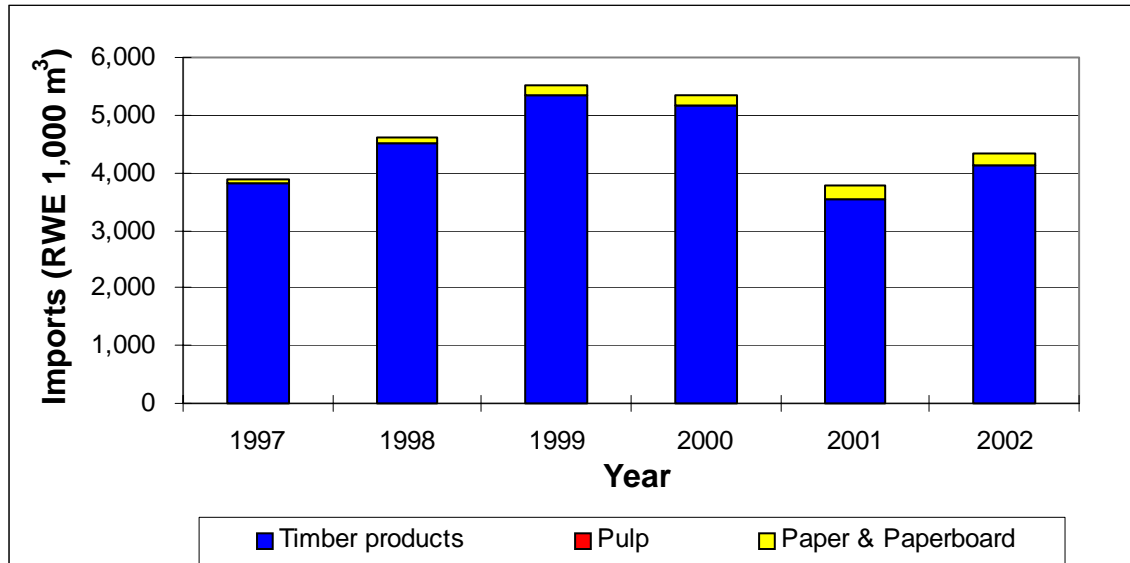


Figure 4.22. Forest product imports from Malaysia

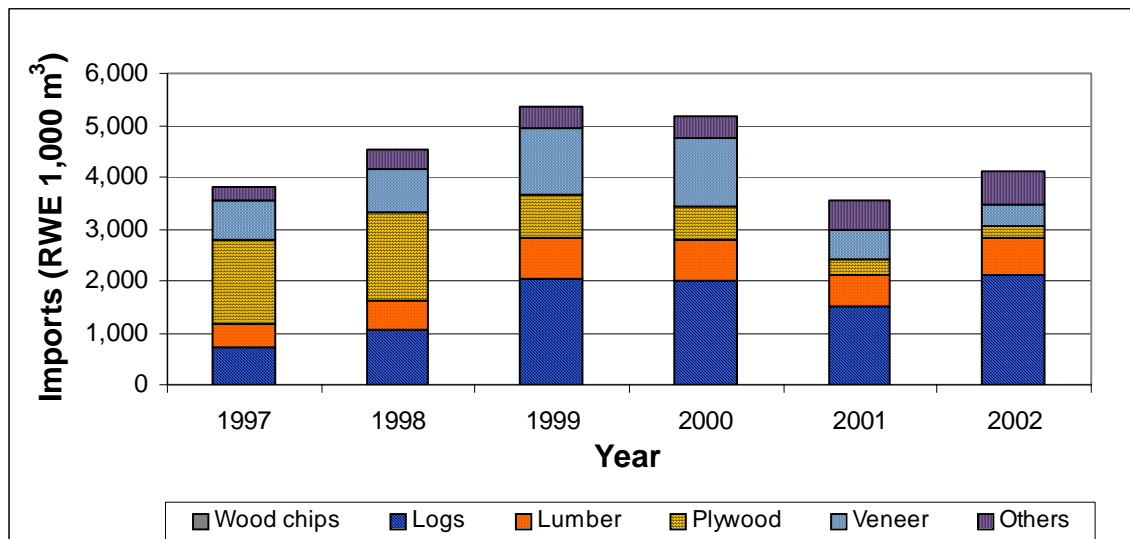
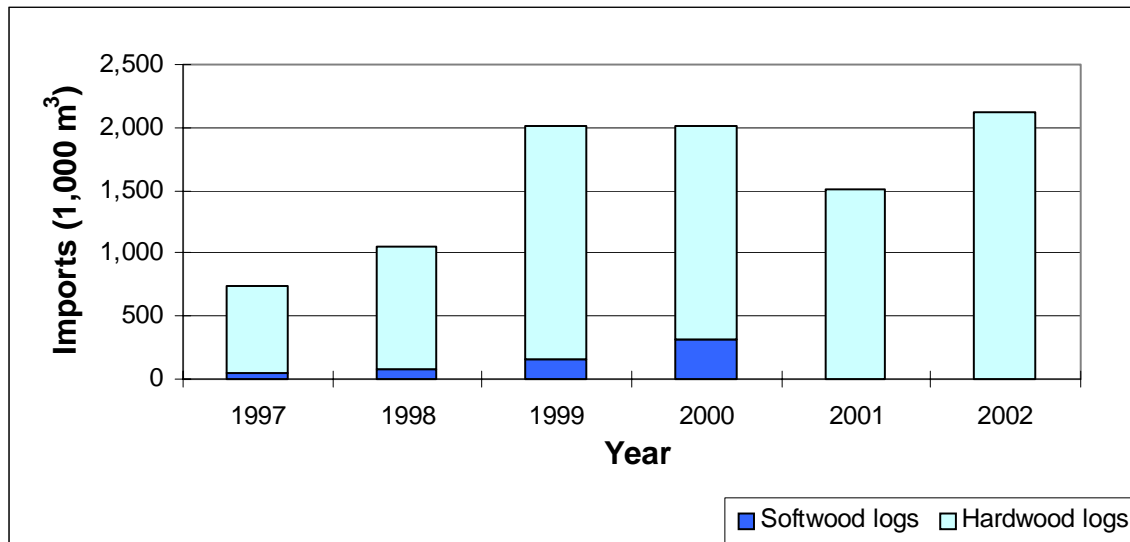


Figure 4.23. Timber product imports from Malaysia

Figure 4.23 exhibits China's timber product imports from Malaysia by product type. Logs, lumber, plywood, and veneer are the major timber products that Malaysia exported to China between 1997 and 2002. Annual Malaysian log imports were roughly in the one to two million cubic meter range during the six years studied. Annual imports of Malaysian lumber also exhibited relative stability from 1997 to 2002. Plywood and veneer, however, both showed a declining trend. In 1997 and 1998, China

imported large quantities of plywood from Malaysia. In 1998, the volume of Malaysian plywood imports to China was 1.7 million cubic meters (RWE). By 2002, however, the imported volume dropped to 248,000 cubic meters (RWE). At the same time, the share of plywood in China's total Malaysian timber product imports decreased from 37 percent in 1998 to 6 percent in 2002. China's Malaysian veneer imports dropped after 2000. Veneer imported from Malaysia reached 1.3 million



cubic meters (RWE) in 2000, but by 2002 was only 370,000 cubic meters (RWE).

Figure 4.24. Log imports from Malaysia

Throughout the period studied, the quantity of hardwood logs imported from Malaysia was far greater than that of softwood logs, as shown in Figure 4.24. The share of Malaysian hardwood logs out of China's total hardwood log imports fluctuated between 20 and 30 percent from 1997 to 2002, achieving a high of 33 percent in 1999. Overall, the volume of Malaysian hardwood logs imported into China demonstrated an increasing trend over the six years studied. In 2002, China imported 2.1 million cubic meters of hardwood logs from Malaysia, a 200 percent expansion since 1997. Imports of softwood logs from Malaysia grew between 1997 and 2000, before sharply abating in 2001. By 2002, China imported only 664 cubic meters of softwood logs from Malaysia, a tremendous decline from greater than 300,000 cubic meters in 2000.

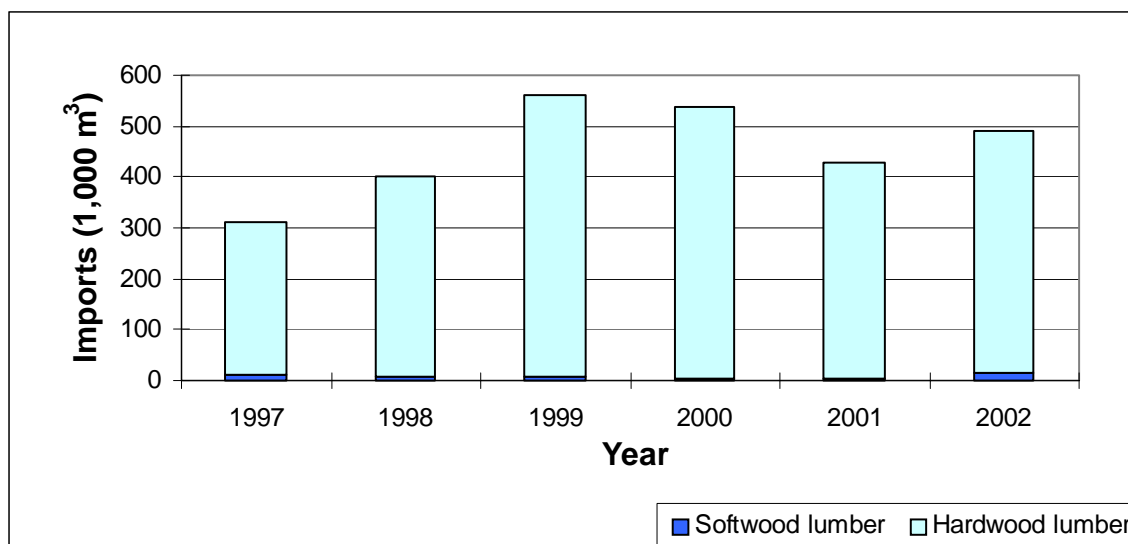


Figure 4.25. Lumber imports from Malaysia

Malaysia is one of China's major suppliers of lumber. Large volumes of Malaysian lumber, of which hardwood composes the majority, have entered China since 1997 (see Figure 4.25). Malaysian hardwood lumber imports reached a peak of 552,000 cubic meters in 1999, accounting for 24 percent of total Chinese hardwood lumber imports that year. Malaysia's share of Chinese hardwood lumber imports, however, actually declined over the period studied. In 1997, Malaysian hardwood lumber accounted for 30 percent of China's total imports of hardwood lumber. By 2002, the Malaysian share had dropped to 11 percent.

Major entry ports

Figure 4.26 shows China's leading entry ports for Malaysian log imports between 1997 and 2002. Guangzhou and Nanjing were the primary entry ports for Malaysian log imports from 1998 and on. From 1997 to 2002, imports of Malaysian logs into Guangzhou multiplied eight times to 675,000 cubic meters. Similarly, China's imports of Malaysian logs through Nanjing greatly increased from 1998. By 2002, combined imports of Malaysian logs through the ports of Guangzhou and Nanjing totaled 1.5 million cubic meters and made up 71 percent of China's total Malaysian log imports.

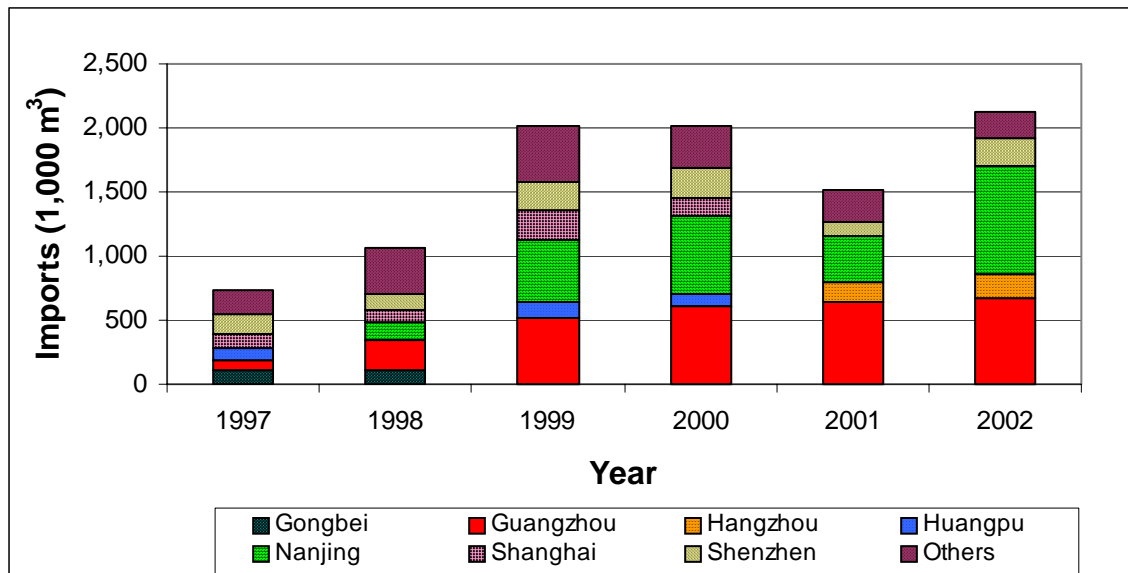


Figure 4.26. Leading entry ports of Malaysian logs

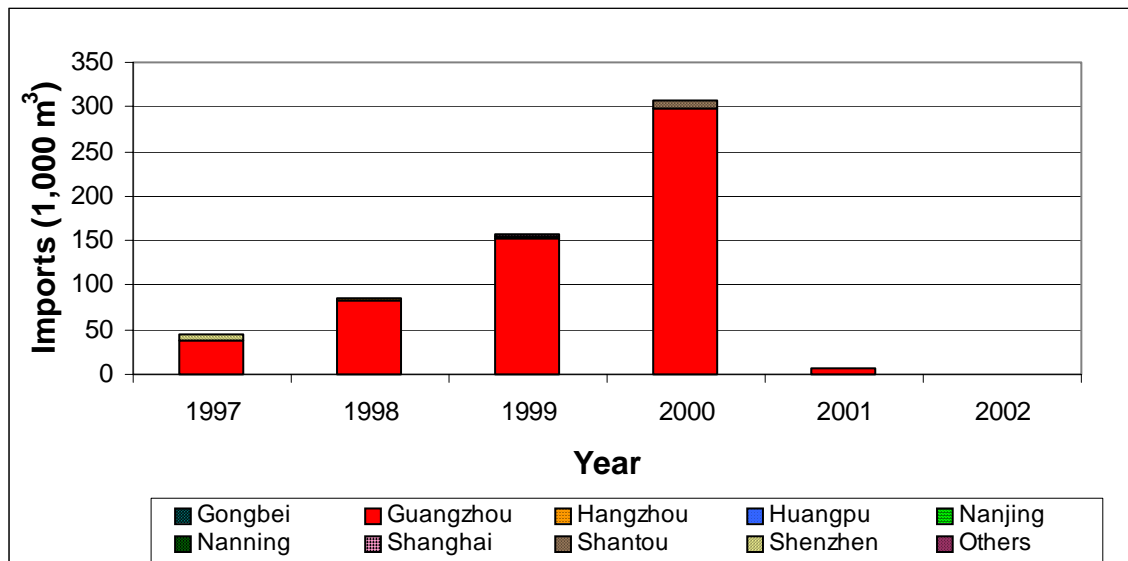


Figure 4.27. Leading entry ports of Malaysian softwood logs

Up through 2000, the single largest entry port for Malaysian softwood logs was Guangzhou, as shown in Figure 4.27. In 2000, China imported just over 300,000 cubic meters of Malaysian softwood logs, roughly seven times as much as in 1997. Imports of Malaysian softwood logs through Guangzhou accounted for over 90% of China's total imports of Malaysian softwood logs each year since 1998. However, in 2001, imports of Malaysian softwood logs all but ceased.

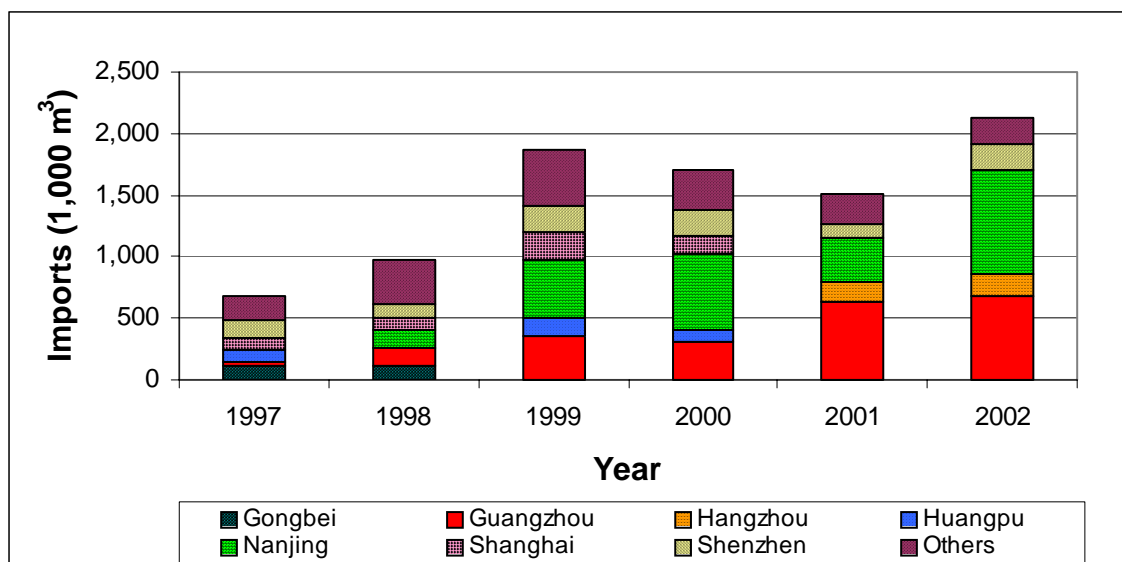


Figure 4.28. Leading entry ports of Malaysian hardwood logs

Figure 4.28 displays the principal entry ports for China's Malaysian hardwood log imports from 1997 to 2002. These ports were Nanjing, Guangzhou, Shenzhen, Shanghai, and Hangzhou. Import volumes through Nanjing and Guangzhou expanded quickly, particularly after 1998, propelling them to lead imports of Malaysian hardwood logs from 1999 and on. Hangzhou's Malaysian hardwood log imports also grew after 2000. This may be linked to the expanding wood processing industries in Zhejiang Province and surrounding areas (FAS 2003⁸).

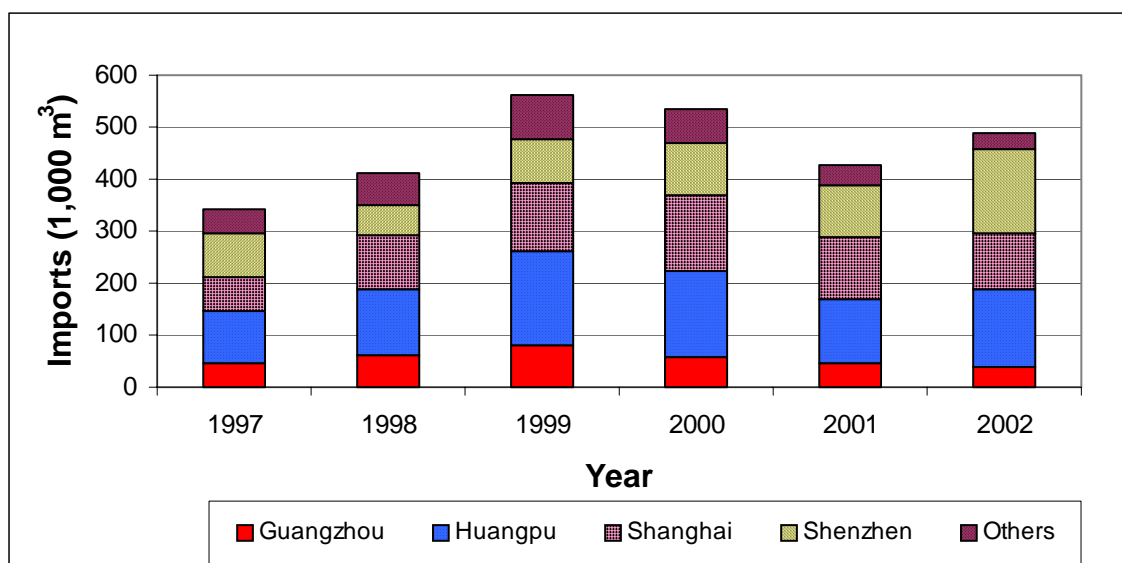


Figure 4.29. Leading entry ports of Malaysian lumber

⁸ FAS (Foreign Agricultural Service), 2003, "Solid Wood Products Annual Report 2003 – China," in *Gain Report*, #CH3118, Beijing.

The key entry ports for Malaysian lumber imports remained relatively static during the six years studied. As shown in Figure 4.29, Huangpu, Shenzhen, Shanghai and Guangzhou were the four leading entry ports throughout. Combined imports through these four ports accounted for over 90 percent of China's total lumber imports from Malaysia each year.

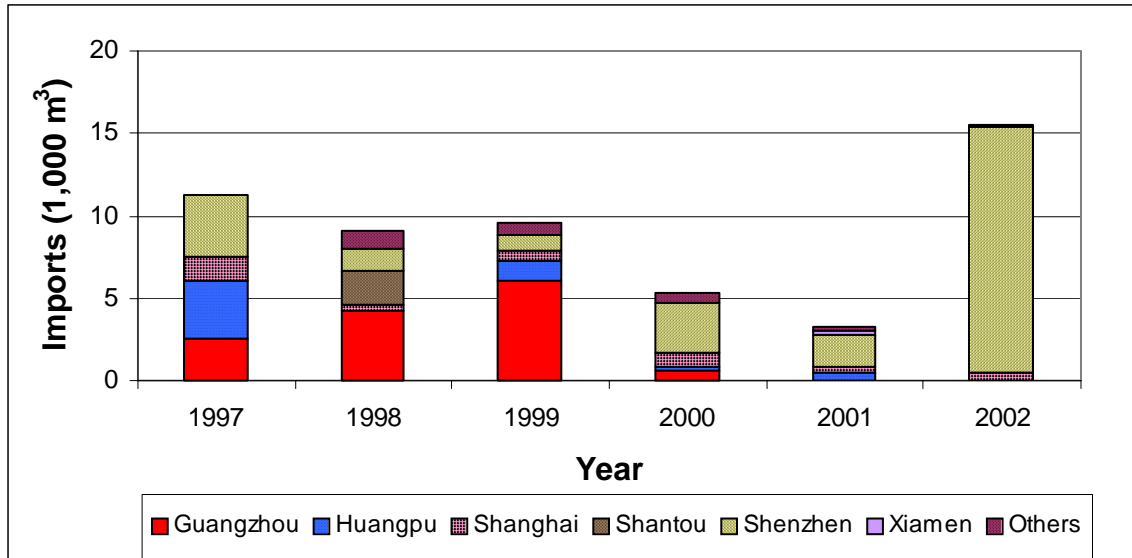


Figure 4.30. Leading entry ports of Malaysian softwood lumber

China's Malaysian softwood lumber imports were small in volume. Major entry ports included Shenzhen, Guangzhou, Huangpu, Shanghai, and Shantou (see Figure 4.30). Starting in 2000, Shenzhen was the primary port for Malaysian softwood lumber imports. In 2002, imports into Shenzhen spiked and made up nearly 96 percent of China's Malaysian softwood lumber imports.

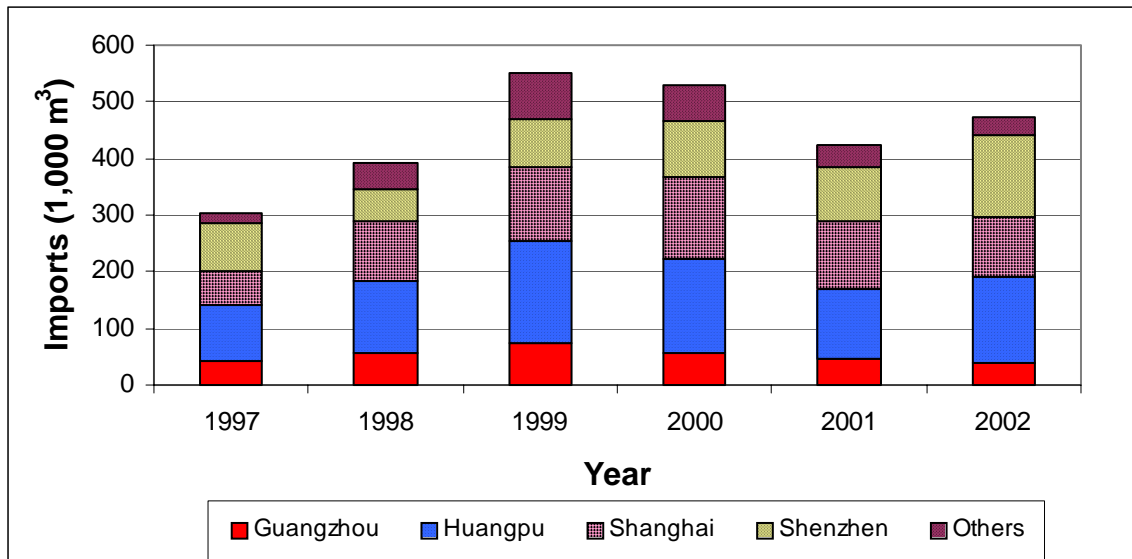


Figure 4.31. Leading entry ports of Malaysian hardwood lumber

Figure 4.31 demonstrates that, from 1997, the majority of China's hardwood lumber imports from Malaysia came into Huangpu, Shenzhen, Shanghai, and Guangzhou. Combined imports through these four ports accounted for more than 90 percent of China's total Malaysian hardwood lumber imports each year. Huangpu accounted for the largest volumes of Malaysian hardwood lumber imports each year between 1997 and 2002.

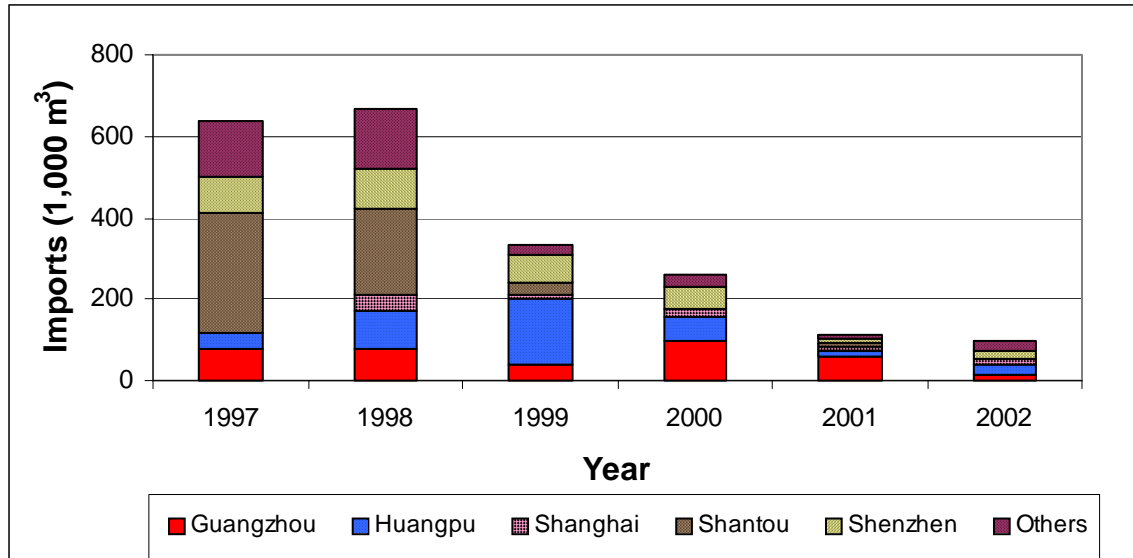


Figure 4.32. Leading entry ports of Malaysian plywood

The quantity of Malaysian plywood entering China declined after 1998. Imports through each entry port generally demonstrate the same trend. Figure 4.32 shows that, before 1999, the leading entry ports were Shantou, Shenzhen, Guangzhou and Huangpu. Imports through Shantou, the leading port in 1997 and 1998, however, dropped sharply in 1999, so that its position deteriorated.

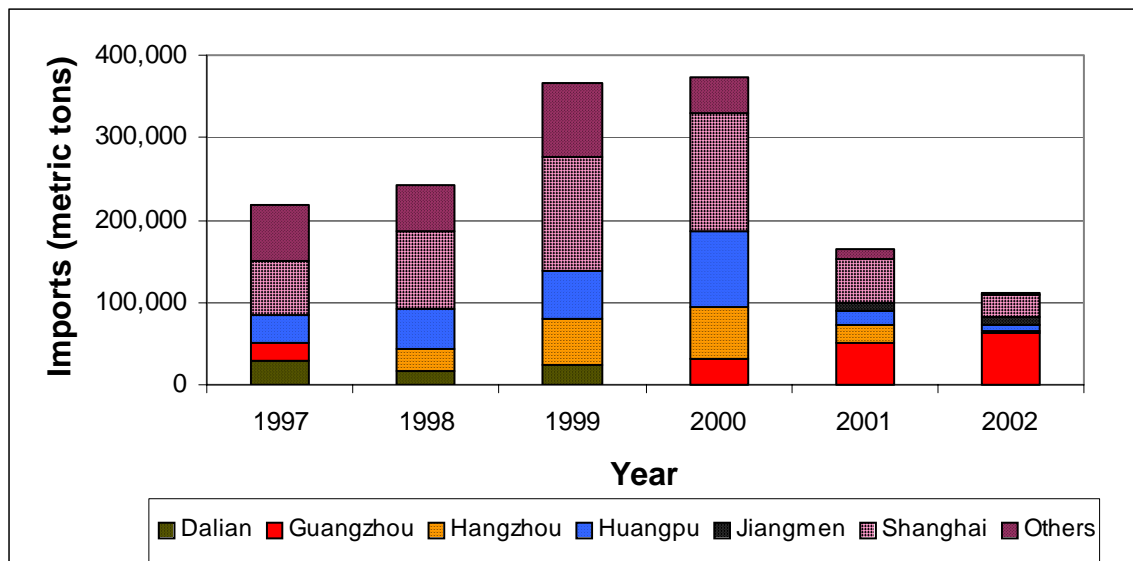


Figure 4.33. Leading entry ports of Malaysian veneer

Figure 4.33 illustrates China's chief ports that handled Malaysian veneer imports from 1997 to 2002. The ports of Shanghai and Huangpu dominated China's imports of Malaysian veneer, with respective shares of 38 percent and 25 percent in 2000. Veneer imports to these ports had increased up through 2000. In 1997, China imported 67,000 tons and 33,000 tons of Malaysian veneer through the ports of Shanghai and Huangpu, respectively. By 2000, imports through these two ports leapt to 142,000 tons (112 percent increase) and 93,000 tons (179 percent increase), respectively. However, China's decreasing demand for imported veneer products resulted in dramatic reductions in volume of Malaysian veneer products after 2000.

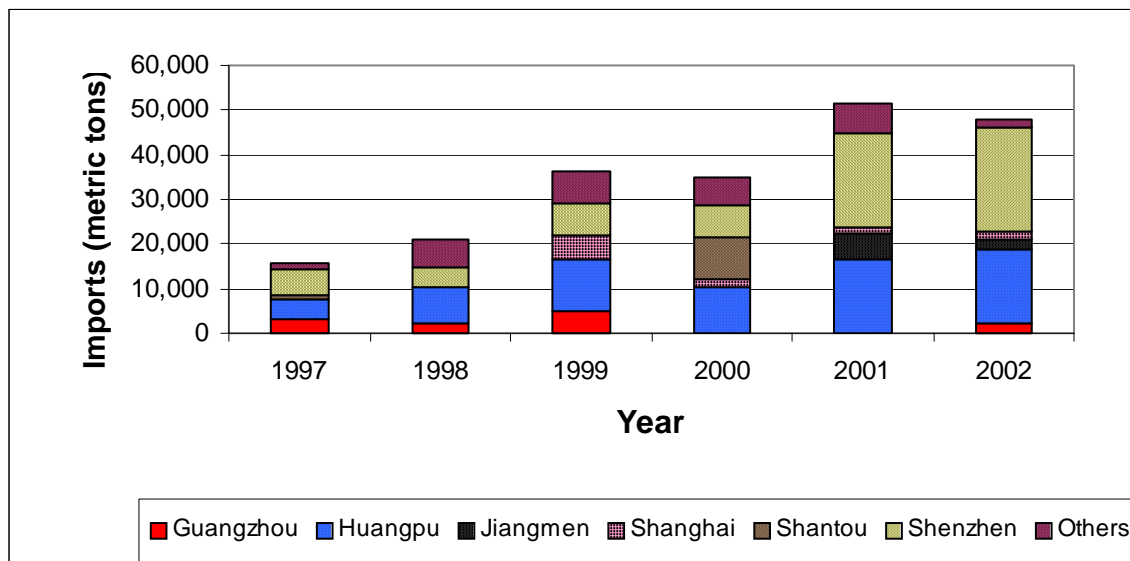


Figure 4.34. Leading entry ports of Malaysian paper and paperboard

For the period studied, Shenzhen and Huangpu were the two chief entry ports for China's paper and paperboard imports from Malaysia, as shown in Figure 4.34. In 2002, combined imports of Malaysian paper and paperboard through these two ports were roughly 40,000 tons, making up 84 percent of China's total imports of Malaysian paper and paperboard. Paper and paperboard imports coming from Malaysia and arriving in Shenzhen and Huangpu rose annually. In 1997, imports through these two ports were 5,600 tons and 4,600 tons, respectively. By 2002, China imported 23,000 tons of Malaysian paper and paperboard through Shenzhen and 17,000 tons through Huangpu, increases of 319 percent and 259 percent, respectively.

PAPUA NEW GUINEA

Major products

From 1997 to 2002, China's forest product imports from Papua New Guinea (PNG) were essentially all timber products. Figure 4.35 shows a strong upward trend in timber products imported from PNG

during the period. In 1997, China imported only 184,000 cubic meters (RWE) of timber products from PNG. However, by 2002 China's imports of timber products from PNG multiplied more than six times to 1.2 million cubic meters (RWE).

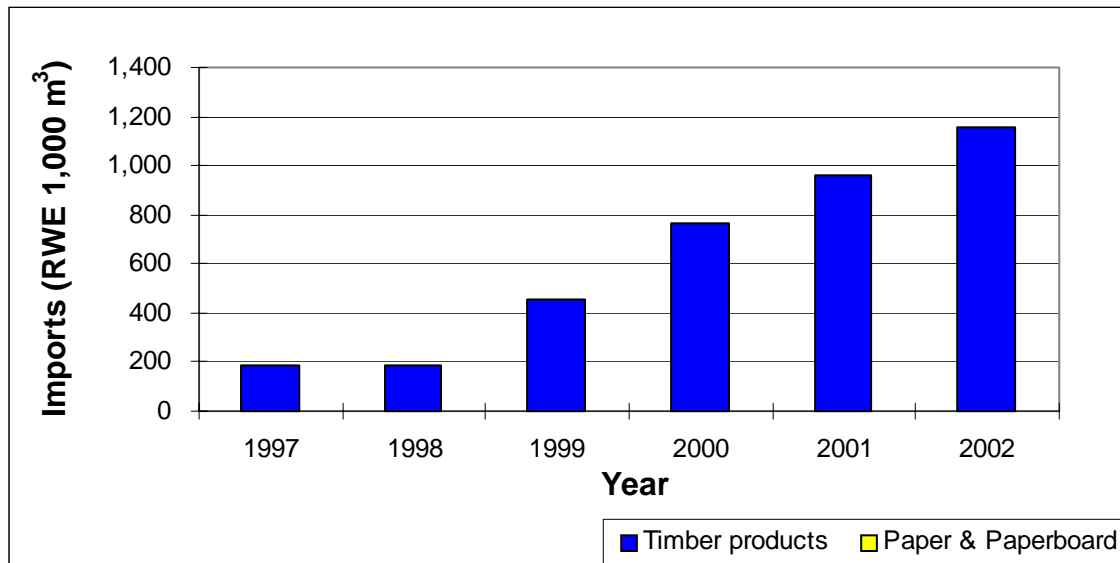


Figure 4.35. Forest product imports from Papua New Guinea

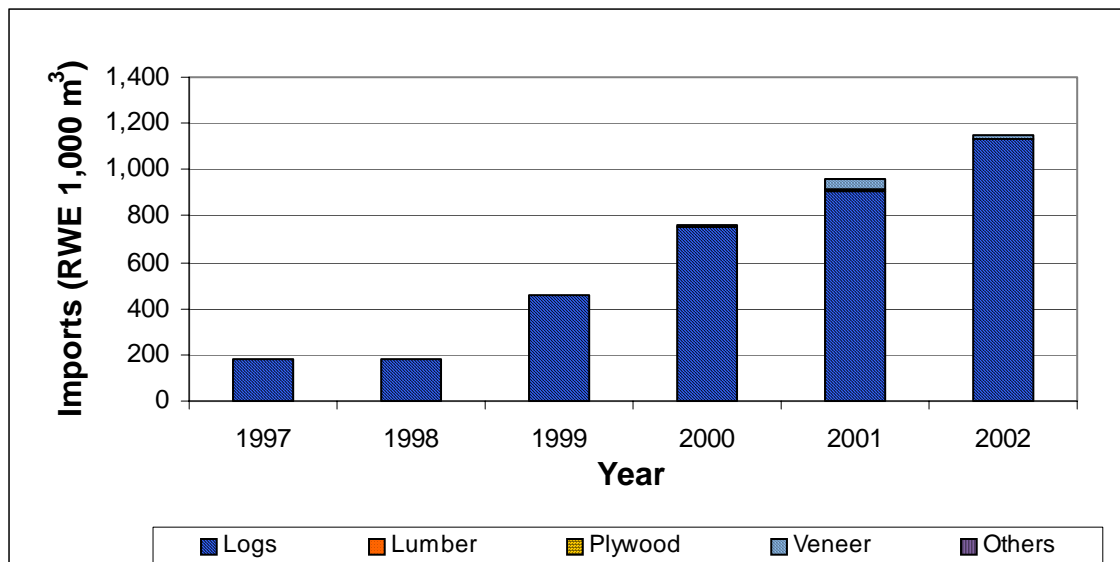


Figure 4.36. Timber product imports from Papua New Guinea

Figure 4.36 represents timber product imports from PNG by category, showing product dominance and increasing quantities of logs. In 1997, China imported 183,000 cubic meters of logs from PNG. By 2002, China imported 1.1 million cubic meters of logs from PNG, an increase of 516 percent since 1997. Interestingly, China has exclusively imported hardwood logs from PNG since 1998.

Major entry ports

As documented in Figure 4.37, Nanjing has been the foremost entry port for PNG logs since 1998. The growing volume of logs arriving in Nanjing corresponds with China's overall growing demand for logs from Papua New Guinea. In 1998, imports of PNG logs through the port of Nanjing were merely 56,000 cubic meters. Increasing by 16 times, 965,000 cubic meters of PNG logs were admitted into Nanjing in 2002. Reflecting this very strong growth, the share of PNG log imports through Nanjing in China's total imports of PNG logs increased from 30 percent in 1997 to 86 percent in 2002.

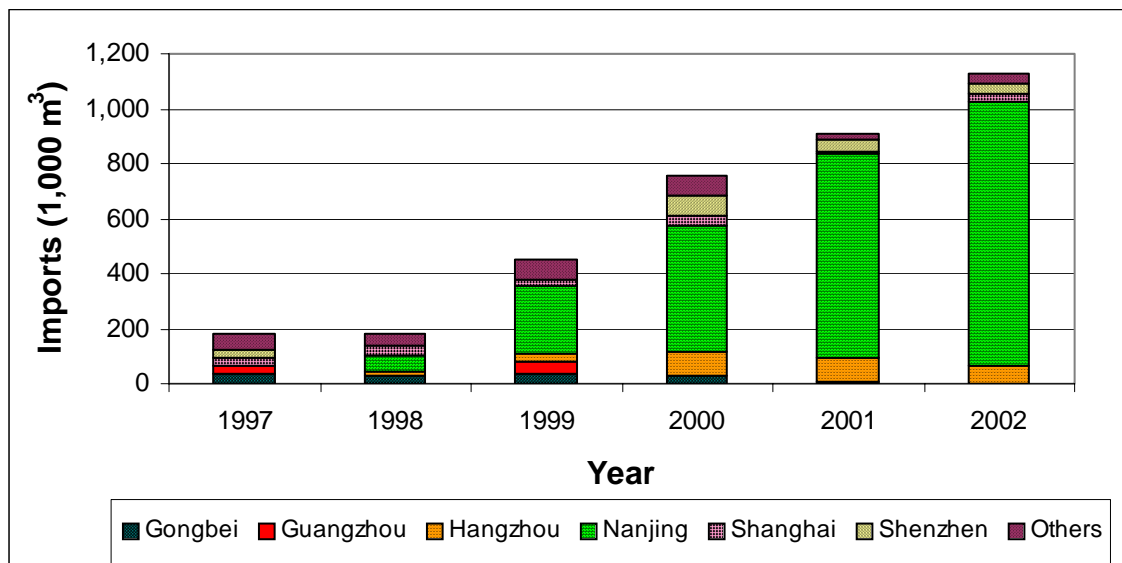


Figure 4.37. Leading entry ports of PNG logs

MYANMAR

Major products

During the years, studied, Chinese timber product imports from Myanmar were substantial, while imports of pulp and paper products from Myanmar were minimal (see Figure 4.38).

As with several of the other supplying countries reviewed, timber product imports from Myanmar grew substantially during the period. In 1997, China imported 296,000 cubic meters (RWE) of timber products from Myanmar. By 2002, timber products imports more than tripled, reaching 948,000 cubic meters (RWE). The increase reflects two possibilities: (1) Exports of timber products from Myanmar to China increased, or (2) a greater proportion of the timber product trade between Myanmar and China was officially documented.

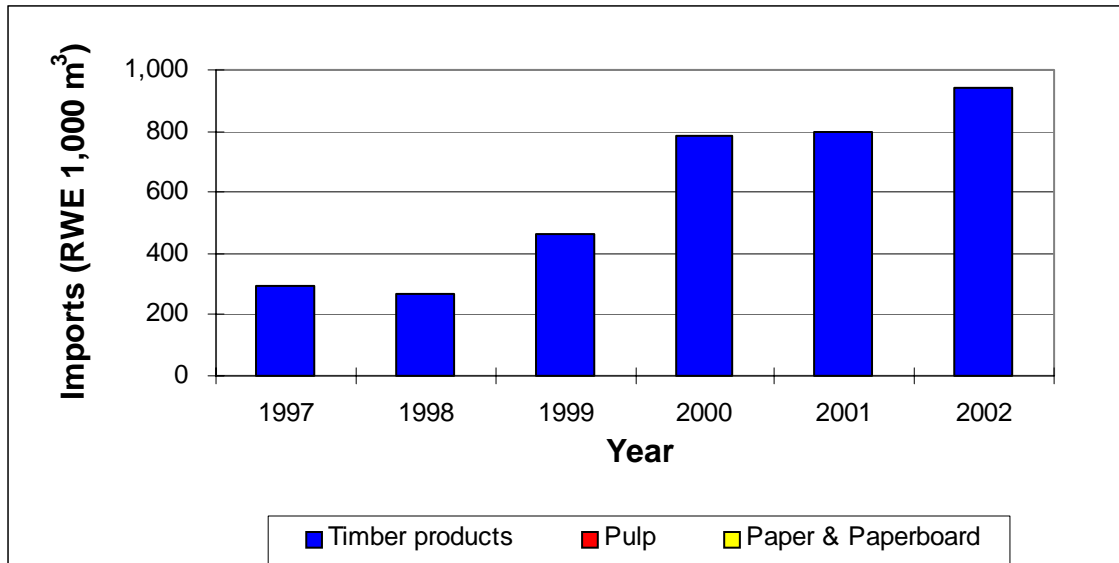


Figure 4.38. Forest product imports from Myanmar

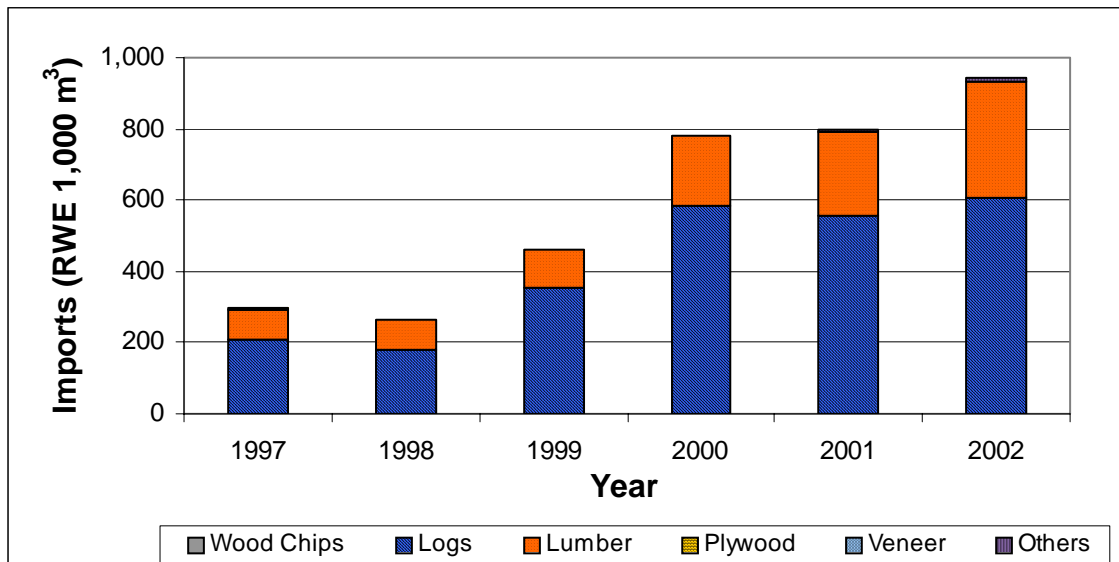


Figure 4.39. Timber product imports from Myanmar

Figure 4.39 shows China's timber product imports from Myanmar by product type. Logs and lumber constituted the vast majority of Myanmar's timber product exports to China from 1997 to 2002. China's log imports from Myanmar increased 194 percent from 206,000 cubic meters in 1997 to 605,000 cubic meters in 2002. Imports of lumber rose 278 percent from 90,000 cubic meters in 1997 to 329,000 cubic meters in 2002.

Major entry ports

Figures 4.40, 4.41, and 4.42 show that Kunming was the key entry port for both hardwood and softwood log imports from Myanmar. The majority of forest product trade between China and Myanmar was overland trade along their shared border. Kunming is the capital city of Yunnan Province, which borders Myanmar.

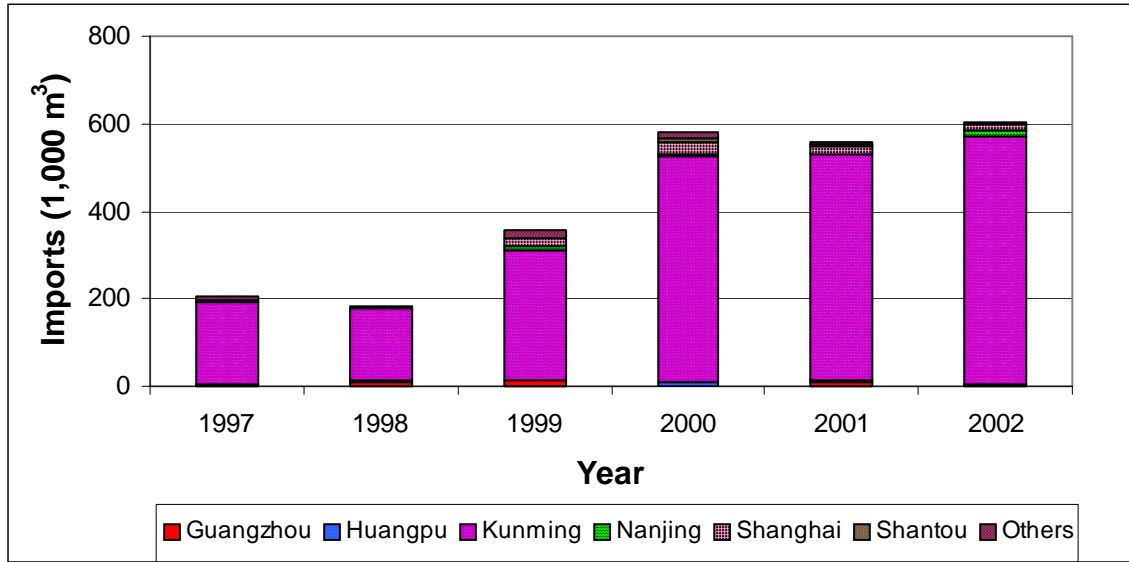


Figure 4.40. Leading entry ports of logs from Myanmar

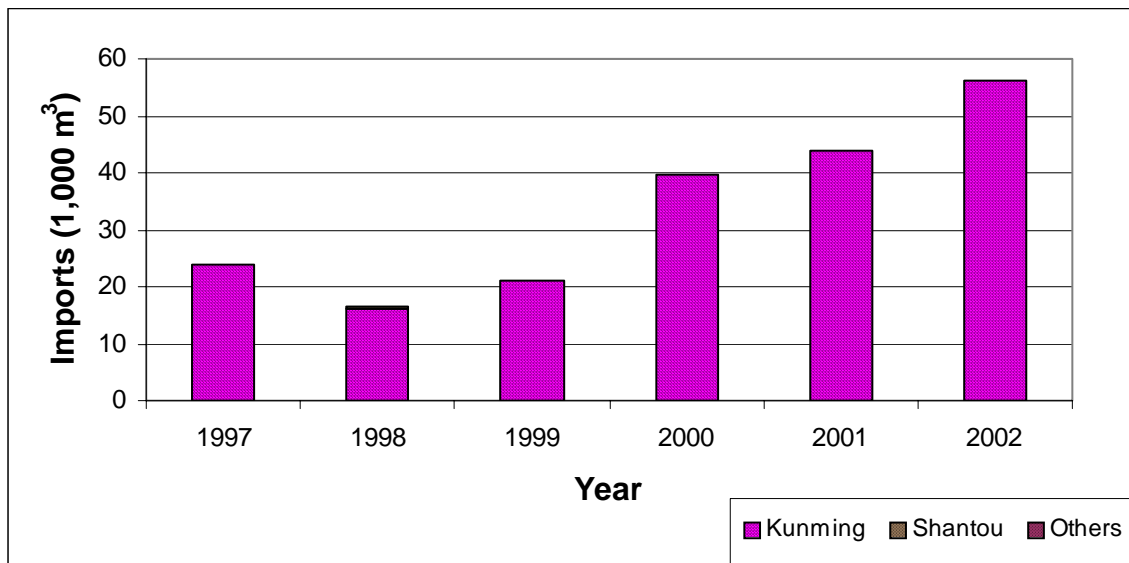


Figure 4.41. Leading entry ports of softwood logs from Myanmar

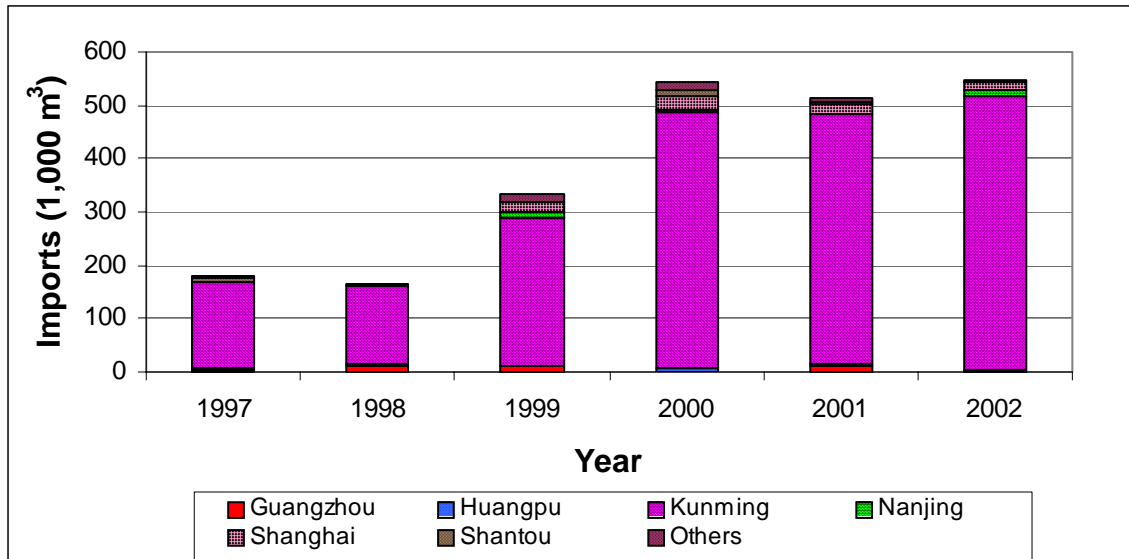


Figure 4.42. Leading entry ports of hardwood logs from Myanmar

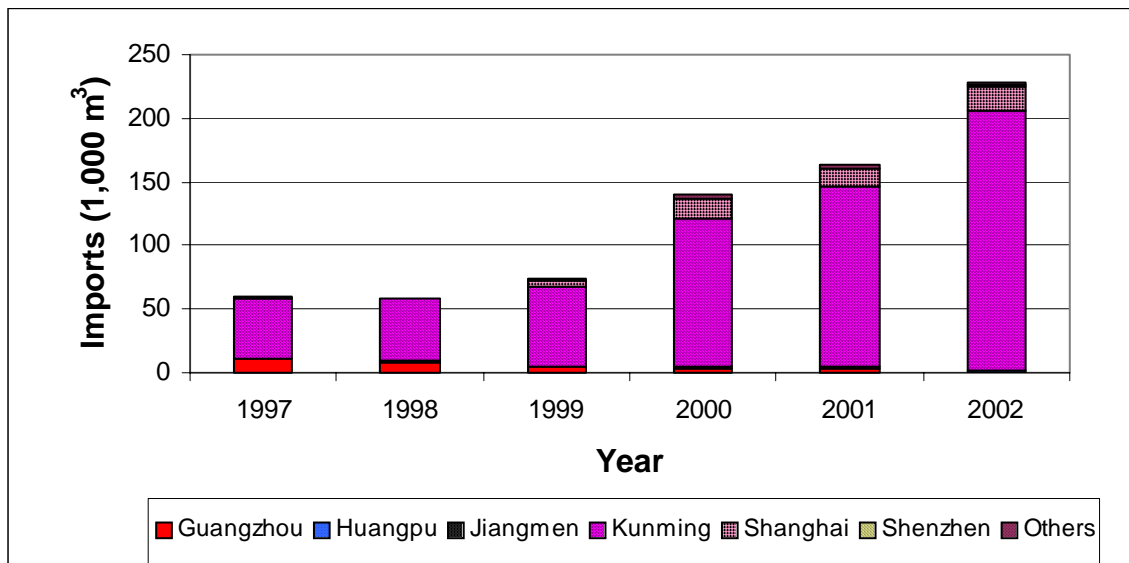


Figure 4.43. Leading entry ports of lumber from Myanmar

Figure 4.43 presents the major entry points for Myanmar's lumber. Kunming received more than 80 percent of this lumber each year, distantly followed by Shanghai and Guangzhou. Lumber imports into Kunming more than quadrupled from 46,000 cubic meters in 1997 to 204,000 cubic meters in 2002.

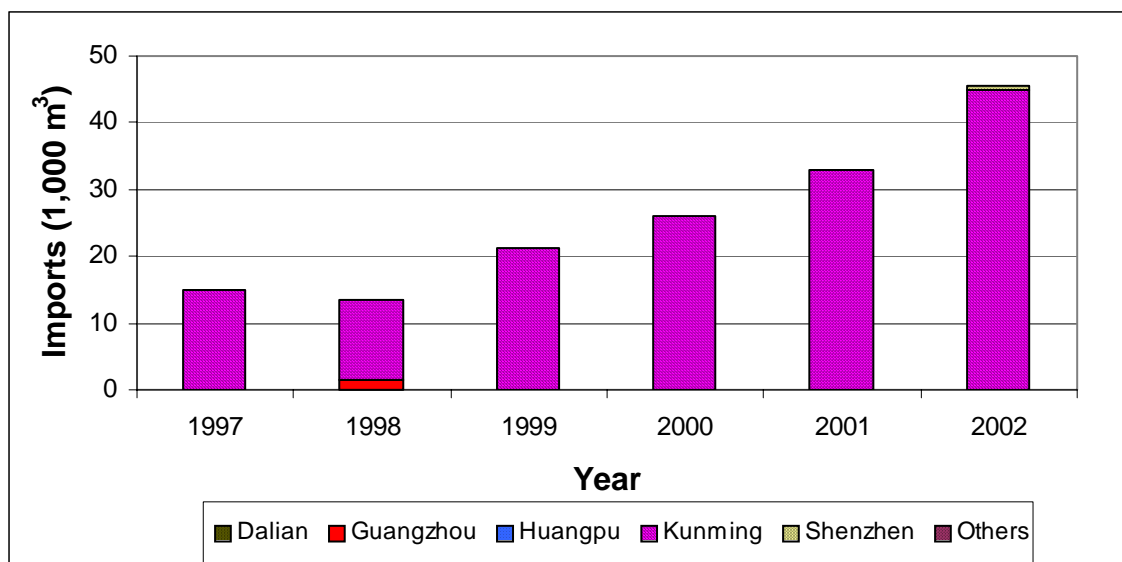


Figure 4.44. Leading entry ports of softwood lumber from Myanmar

Figure 4.44 again shows Kunming's dominant role, in this case as the leading port of entry for growing softwood lumber imports from Myanmar. The annual increase in trade of softwood lumber through Kunming averaged over 5,000 cubic meters.

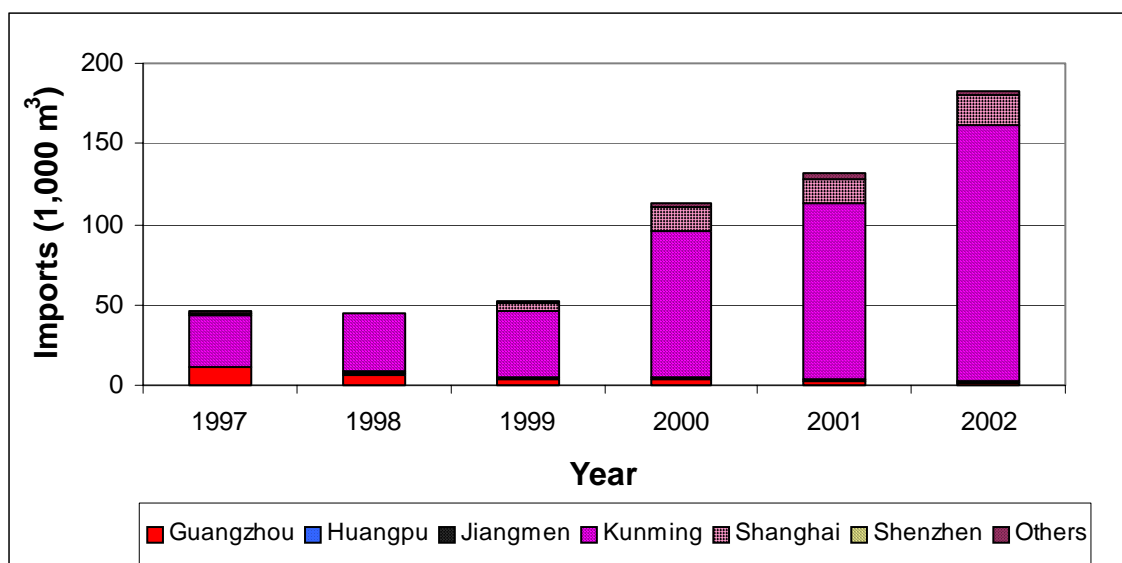


Figure 4.45. Leading entry ports of hardwood lumber from Myanmar

The imports of Myanmar's hardwood lumber followed a similar course to that of softwood lumber. Imports increased over the period; and Kunming was the foremost entry point. Guangzhou was the second most significant port for Myanmar's hardwood lumber until 1999, when it was replaced in this role by Shanghai. Imports of Myanmar's hardwood lumber into Kunming more than quintupled from 31,000 cubic meters in 1997 to 159,000 cubic meters in 2002.

THAILAND

Major products

Before 2000, China's annual imports of paper and paperboard from Thailand greatly exceeded imports of pulp and timber products (see Figure 4.46) from the country. In 1999, China's imports of paper and paperboard from Thailand peaked at 1.0 million cubic meters (RWE), accounting for more than half of China's total forest products imported from Thailand. Although Thai paper and paperboard imports decreased after 2000, the volume remained around three quarters of a million cubic meters (RWE) for the rest of the period. Thai timber product imports to China increased steadily between 1997 and 2002. In 1997, China imported 147,000 cubic meters (RWE) of timber products from Thailand. By 2002, this volume climbed to greater than 1.4 million cubic meters (RWE), nearly ten times the 1997 amount. Thai pulp exports also increased, albeit at a lower rate than timber products.

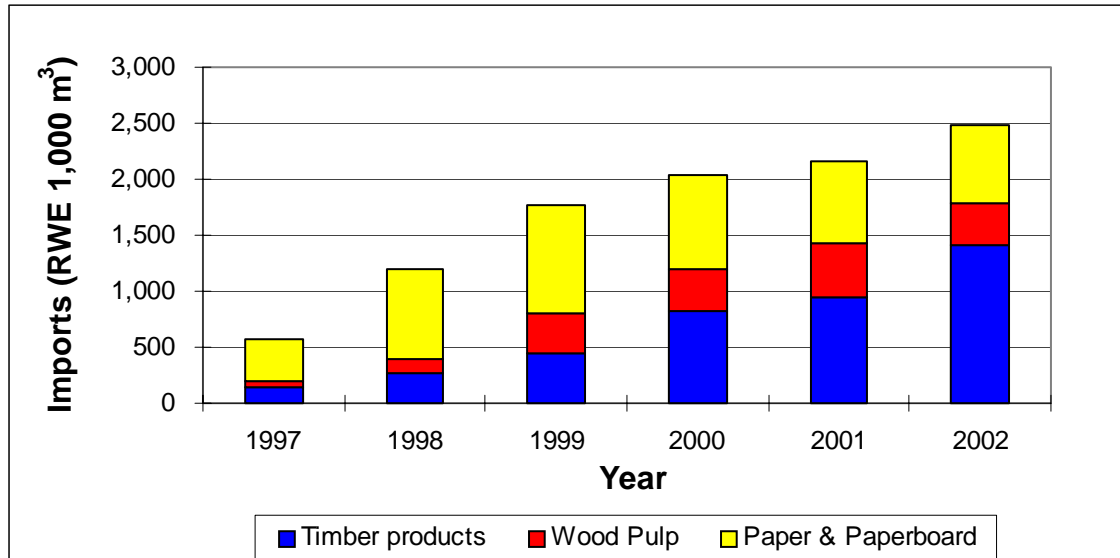


Figure 4.46. Forest product imports from Thailand

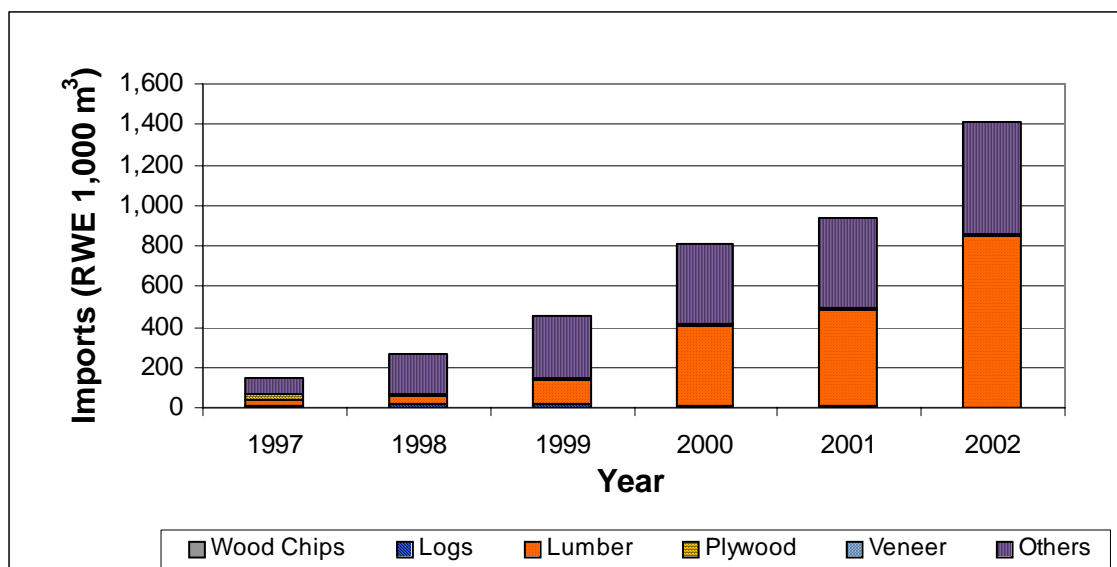


Figure 4.47. Timber product imports from Thailand

As shown in Figure 4.47, lumber has been Thailand's largest timber product import to China since 2000.²¹ Imports of Thai lumber grew sharply over the six years studied. By 2002, China imported 846,000 cubic meters (RWE) of lumber from Thailand, 27 times as much as in 1997.

Major entry ports

Figure 4.48 shows China's main entry ports for Thai lumber from 1997 to 2002. Lumber imports increased most substantially in Guangzhou, Shenzhen, and Huangpu. By 2002, China's lumber imports from Thailand through Huangpu and Shenzhen reached 160,000 and 139,000 cubic meters, respectively, both over 14 times 1997 volumes. In Guangzhou, Thai lumber imports swelled from 21,000 cubic meters in 1999 to 215,000 cubic meters in 2002.

²¹ Over the period studied, China has also been importing substantial volumes of particleboard and fiberboard from Thailand. Particleboard and fiberboard together accounted for over 95% of volume within the "other" category depicted in Figure 4.47 for each year during the period studied. Prior to 2000, import volumes of both particleboard and fiberboard exceeded that of lumber.

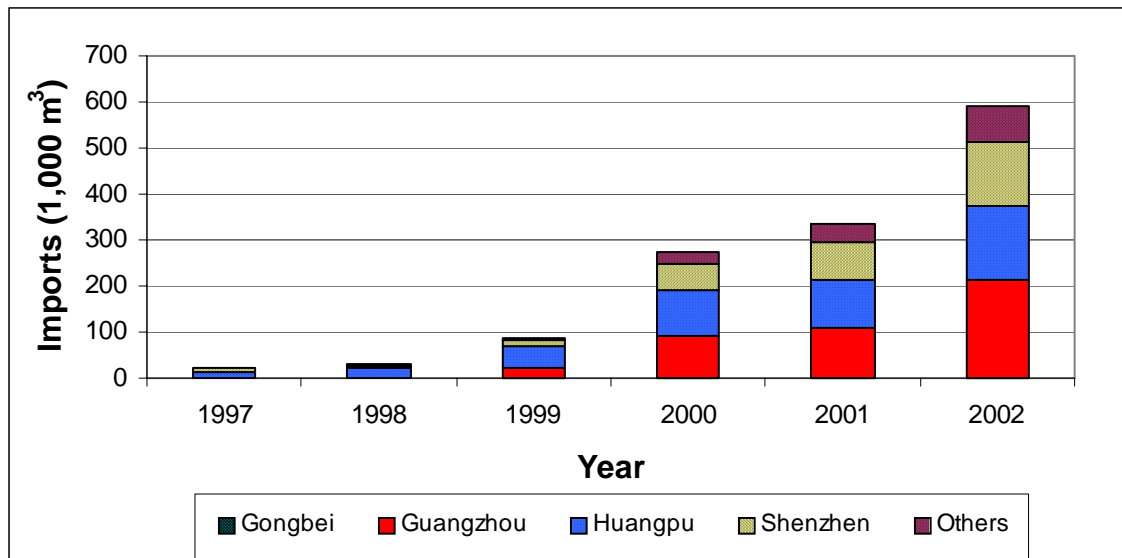


Figure 4.48. Leading entry ports of Thai lumber

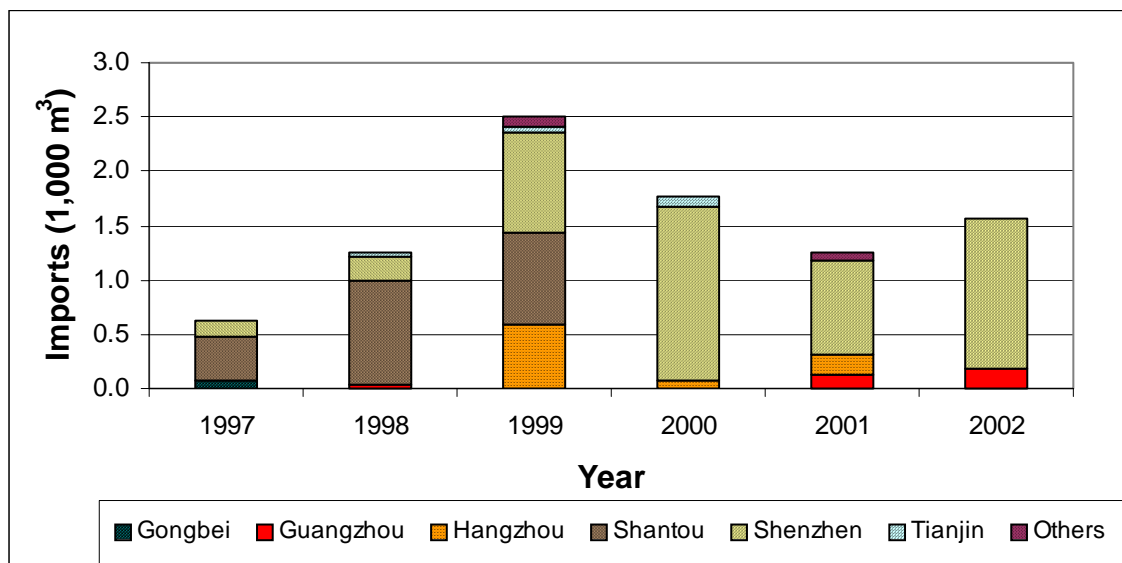


Figure 4.49. Leading entry ports of Thai softwood lumber

Prior to 2000, a large component of China's imported Thai softwood lumber arrived in the port of Shantou. By 2000, however, Shenzhen appears to have secured a large majority of incoming Thai softwood lumber. In 2002, the quantity of this product received by Shenzhen reached nearly 1,400 cubic meters and accounted for 88 percent of Thailand's softwood lumber exports to China.

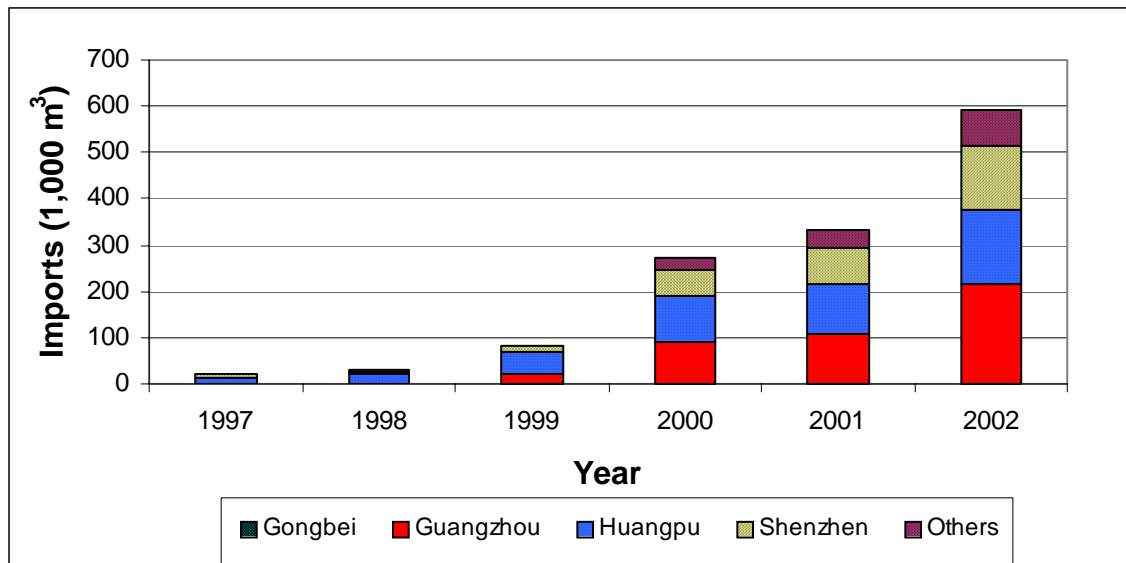


Figure 4.50. Leading entry ports of Thai hardwood lumber

During the period studied, Huangpu, Shenzhen, and Guangzhou served as the main ports for China's growing Thai hardwood lumber imports (see Figure 4.50). Imports through Guangzhou experienced the fastest growth among all ports, rising from only 189 cubic meters in 1997 to 215,000 cubic meters in 2002 and making it the leading entry port. Haikou emerged during the period studied as an import destination for Thai hardwood lumber, although quantities through this port remained small in comparison with those of the three foremost ports.

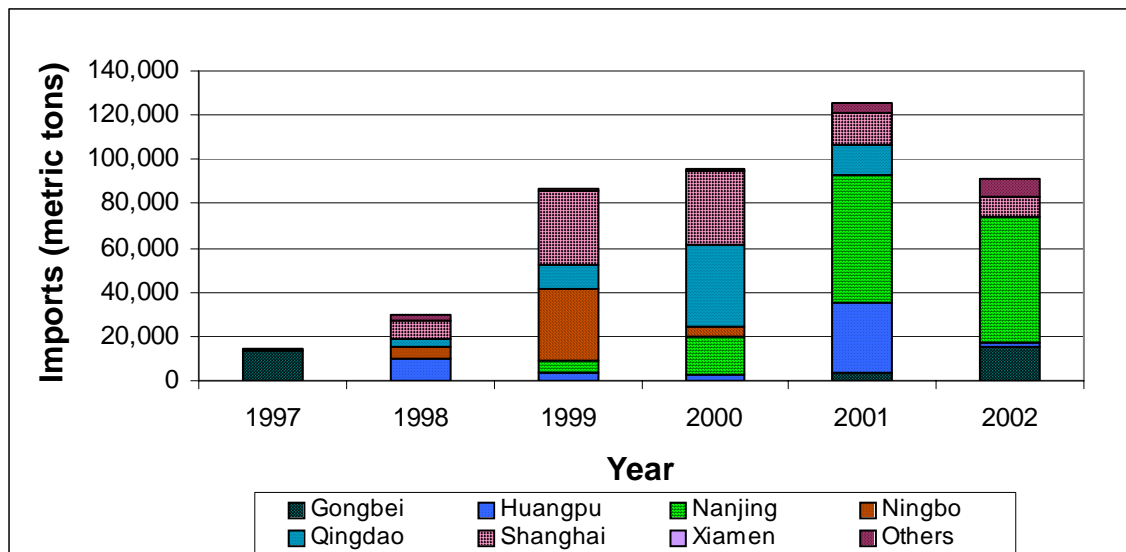


Figure 4.51. Leading entry ports of Thai wood pulp

Figure 4.51 displays the entry ports of China's Thai wood pulp imports during the six-year period. Shanghai's annual Thai wood pulp imports dropped after 2000. In 1999, imports through Shanghai exceeded 30,000 tons. By 2002, Shanghai imported less than 10,000 tons. Meanwhile, Thai wood pulp imports through Nanjing soared from 5,962 tons in 1999 to 57,000 tons in 2002.

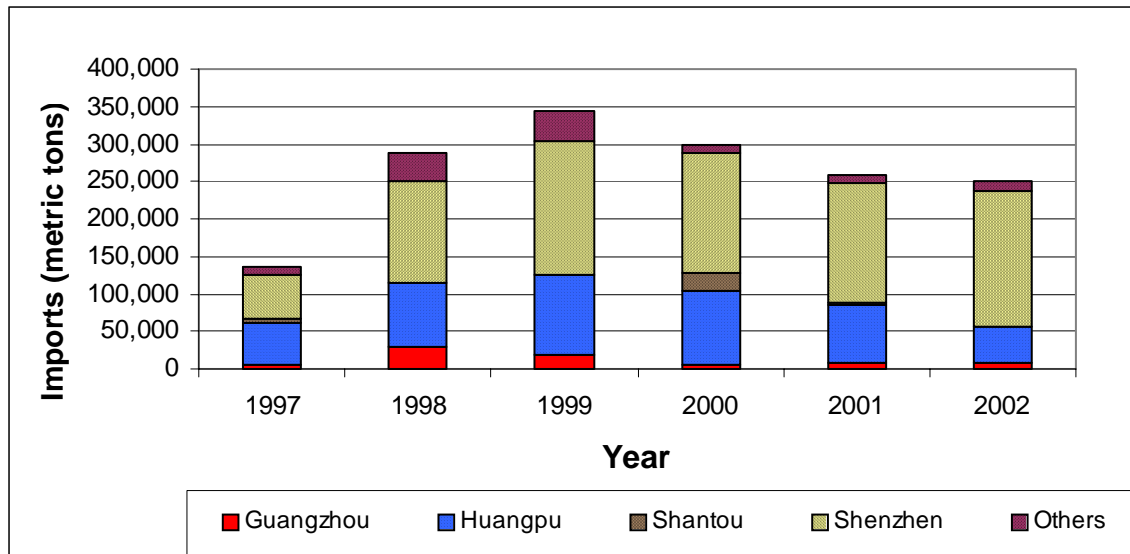


Figure 4.52. Leading entry ports of Thai paper and paperboard

As shown in Figure 4.52, Shenzhen and Huangpu were the two largest entry ports for Chinese imports of paper and paperboard from Thailand throughout the period. The combined share of paper and paperboard imports through Shenzhen and Huangpu accounted for 92 percent of China's total Thai paper and paperboard imports in 2002. Imports through the port of Shenzhen were relatively stable, ranging from about 140,000 to 180,000 tons annually after 1997. In Huangpu, imports peaked in 1999 and gradually declined through 2002.

CAMBODIA

Major products

Cambodia was not a major supplier of China's forest product imports. Figure 4.53 depicts the volume of forest products exported to China from Cambodia between 1997 and 2002. As shown, all forest product imports from Cambodia were timber products. The volume of imports remained relatively stable, hovering around 300,000 cubic meters (RWE) for the four years from 1997 to 2000. In 2001, however, Cambodian forest product exports to China began declining, so that in 2002 China imported only 129,000 cubic meters (RWE) of Cambodian product.

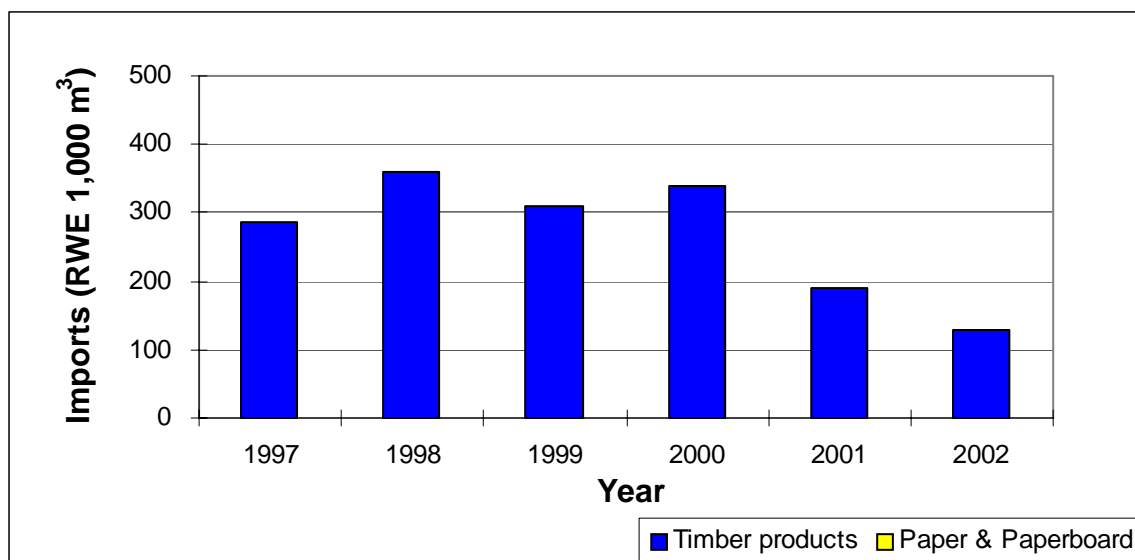


Figure 4.53. Forest product imports from Cambodia

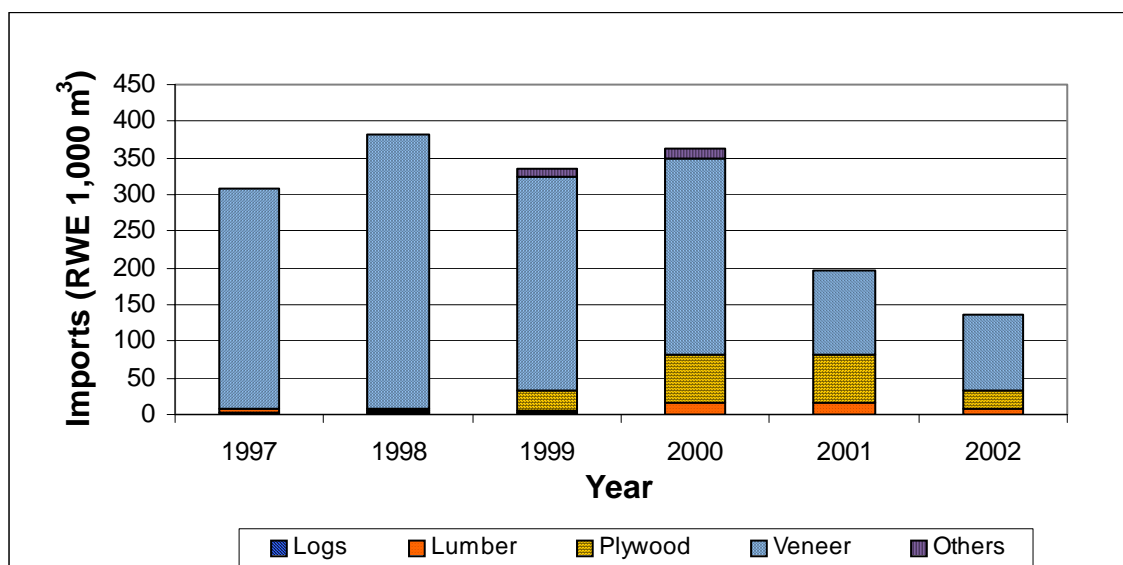


Figure 4.54. Timber product imports from Cambodia

Figure 4.54 presents Chinese imports of forest products from Cambodia by category. Veneer was China's largest Cambodian forest product import in terms of RWE volume, although imports dropped after 2000. In 1998, China imported 348,000 cubic meters (RWE) of veneer from Cambodia, accounting for 97 percent of China's total imports of timber products from Cambodia. However, by 2002 these imports dropped to 97,000 cubic meters (RWE). Plywood was Cambodia's second largest export product in terms of RWE volume. In 2000, China imported 67,000 cubic meters (RWE) of plywood from Cambodia, constituting 20 percent of China's total imports of Cambodian timber products.

Major entry ports

The primary entry ports for Cambodian plywood are shown in Figure 4.55. Import volumes continued to grow in Shanghai up through 2001. In 2001, more than 16,000 cubic meters of Cambodian plywood entered China through the port of Shanghai, accounting for 64 percent of all Cambodian plywood exports to China. In 2002, however, a dramatic decline occurred, in which import volumes plummeted across China.

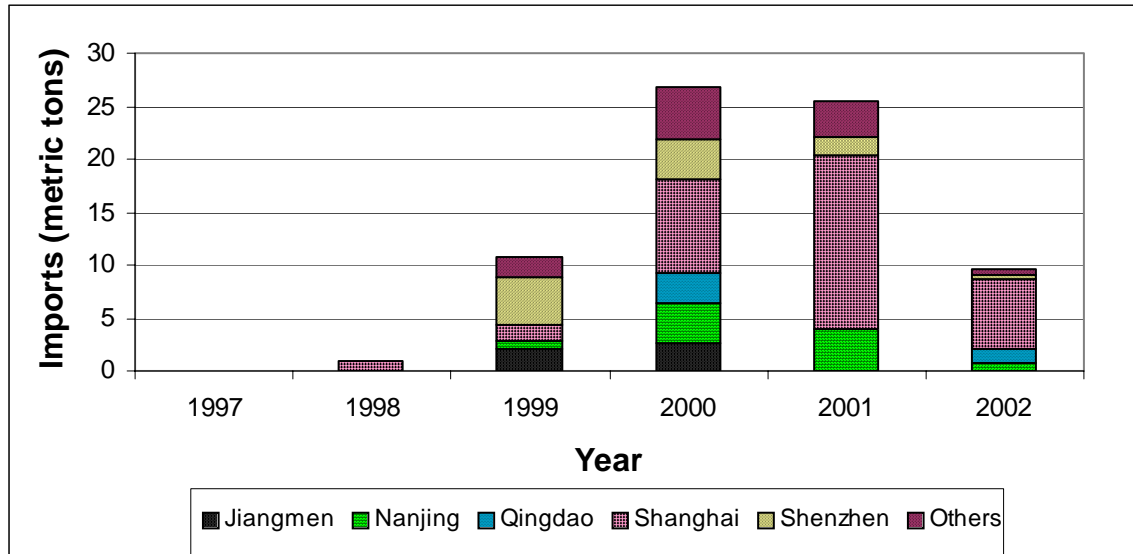


Figure 4.55. Leading entry ports of Cambodian plywood

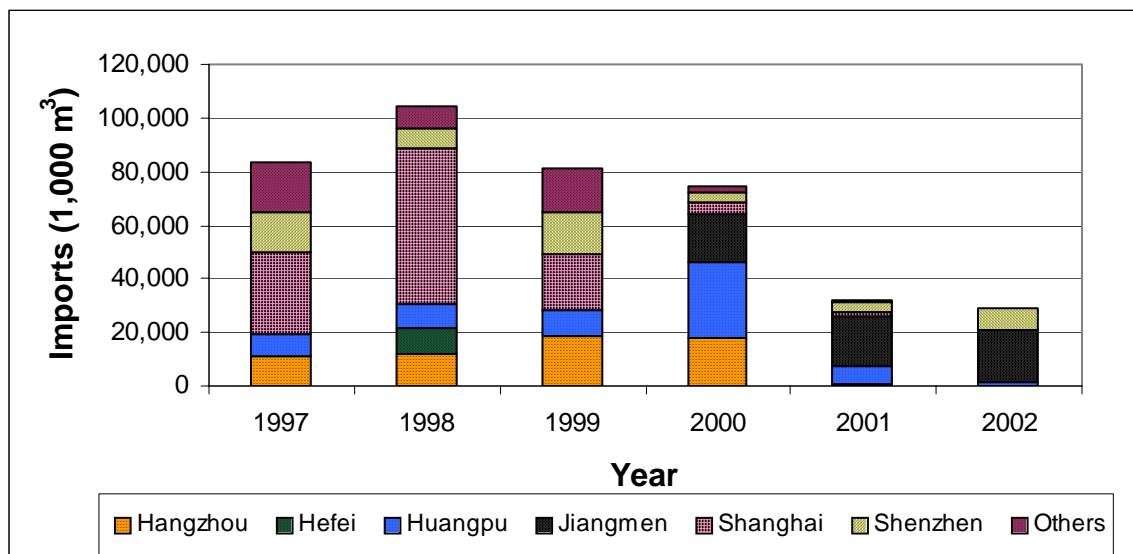


Figure 4.56. Leading entry ports of Cambodian veneer

Before 2000, Shanghai was the leading entry port for Chinese imports of Cambodian veneer products. In 1998, imports of veneer into Shanghai reached 58,000 tons and were 55 percent of China's total

Cambodian veneer imports. After 1998, veneer imports to Shanghai dropped sharply in. Meanwhile, despite overall reductions in Cambodian veneer imports, the port of Jiangmen began handling increasing volumes of this product in 2000 and was the leading entry port for Cambodian veneer in 2001 and 2002.

LAOS

Major products

China did not import large quantities of forest products from Laos between 1997 and 2002. As shown in Figure 4.57, China's paper and paperboard imports from Laos were negligible as compared with timber product imports. The data does indicate a general increase in demand for Laotian timber products over the period. In 1999, timber product imports from Laos rose uncharacteristically to over 30,000 cubic meters (RWE) before dropping in 2000 and then returning to a more gradual rate of increase.

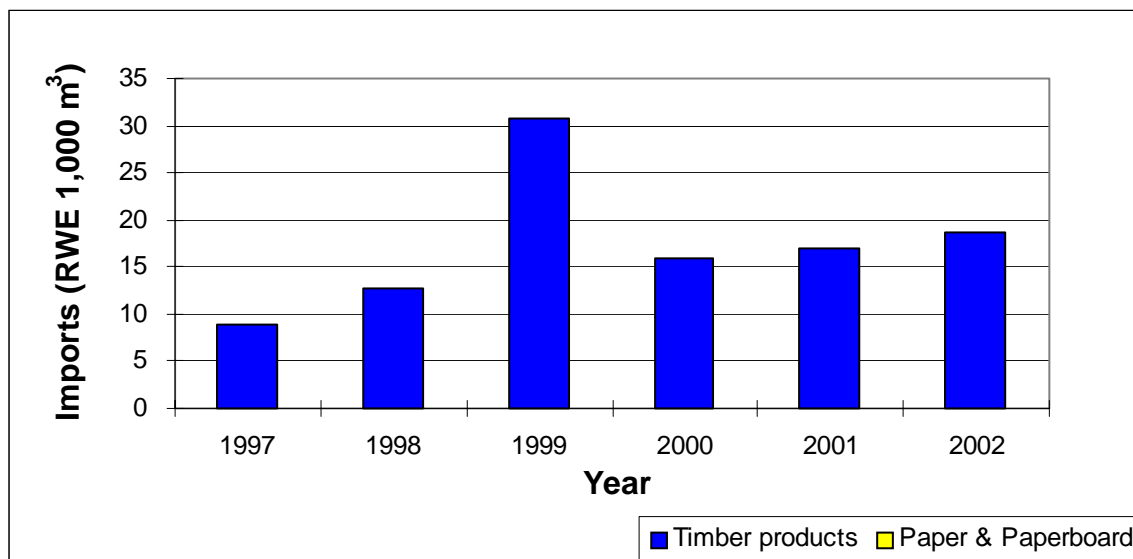


Figure 4.57. Forest product imports from Laos

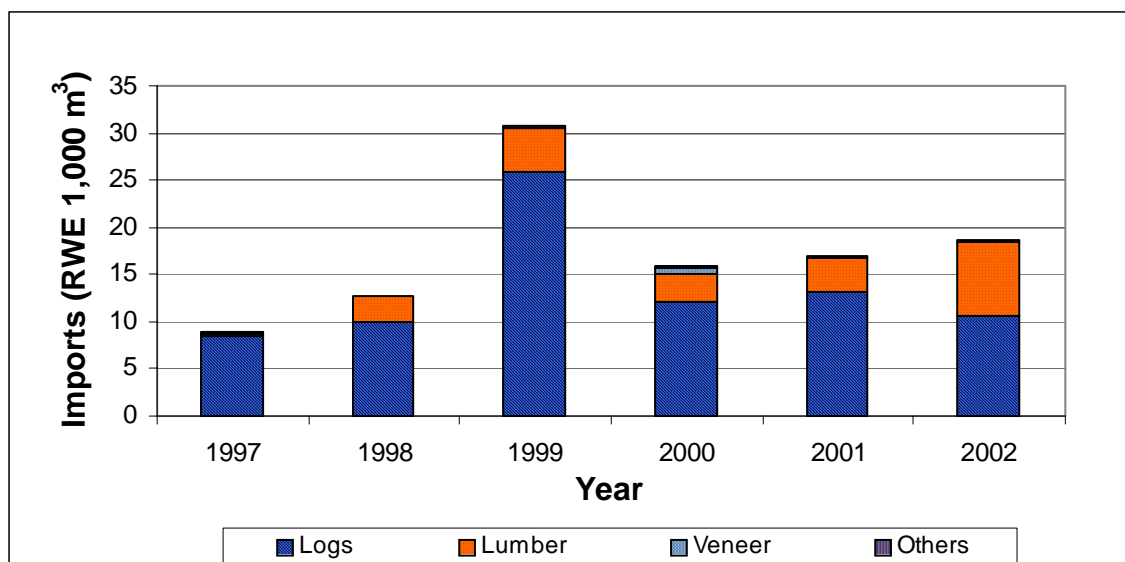


Figure 4.58. Timber product imports from Laos

Figure 4.58 groups China's Laotian timber product imports by product type. During the six-year period, Chinese log import volumes were the largest among all timber product imports originating in Laos. In 1999, China imported nearly 26,000 cubic meters of logs, accounting for 84 percent of China's total imports of Laotian timber products. Nearly all logs imported from Laos between 1997 and 2002 were hardwood logs. Laotian lumber imports, also mainly hardwood, grew steadily throughout the period. By 2002, China imported nearly 8,000 cubic meters (RWE) of lumber from Laos, an increase of 22 times over the 1997 volume.

Major entry ports

Figure 4.59 shows the major entry ports of Laotian logs (almost all hardwood) from 1997 to 2002. From 1998, Kunming was the leading entry port. In 2000, logs imported through Kunming reached 11,000 cubic meters, accounting for 96 percent of China's total Laotian log imports. Laotian log imports through Kunming peaked that year and declined thereafter.

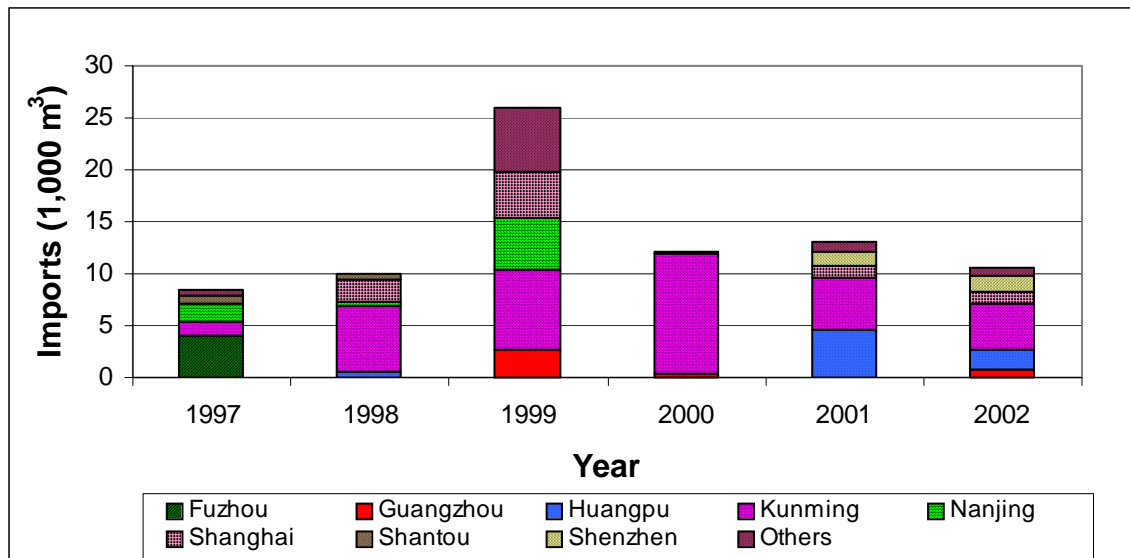


Figure 4.59. Leading entry ports of Laotian logs

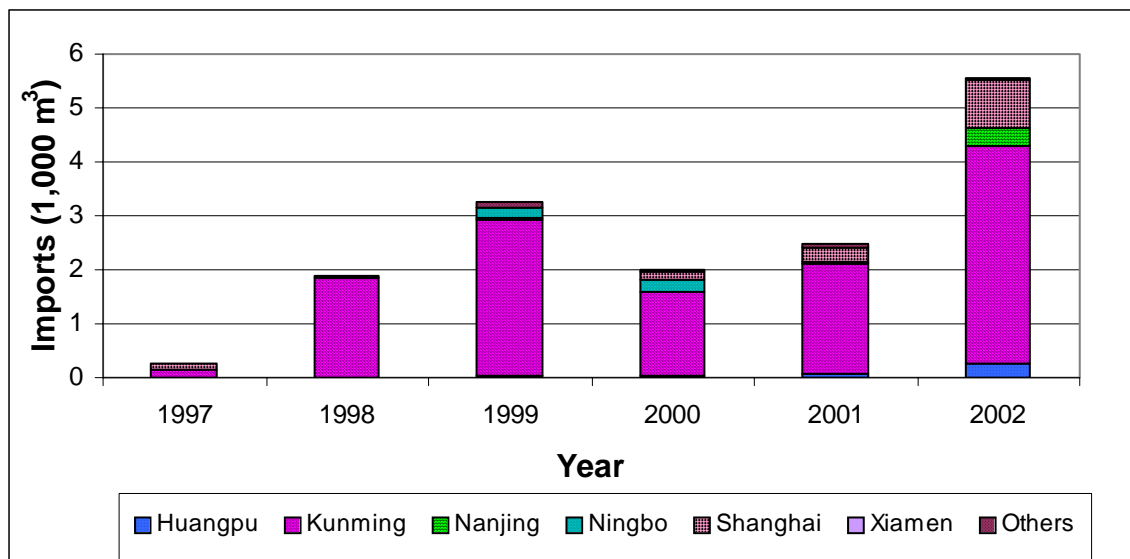


Figure 4.60. Leading entry ports of Laotian lumber

Figure 4.60 illustrates that Kunming was again the leading entry port for Laotian (mainly hardwood) lumber imports. Imports of lumber from Laos through Kunming in 2002 were 4,000 cubic meters, making up 72 percent of China's total Laotian lumber imports. Kunming remained the dominant port for lumber from Laos throughout the period studied.

SUMMARY FINDINGS

China's total imports of forest products grew dramatically between 1997 and 2002.

- China's imports of forest products have increased substantially since the mid-1990s. Currently, China imports more pulp and paper than timber products, both in value and RWE volume. China's timber product imports, however, are growing swiftly. Between 1997 and 2002, the annual import value of timber product imports more than doubled; and volume tripled. Logs and to a lesser extent lumber led the increase in volume.
- From 1997 to 2002, China's softwood log imports grew much faster than those of hardwood logs. Imports of tropical hardwood logs showed steady growth between 1997 and 2001, but slumped by 2002, partially driven by the enforcement of export bans in major supplying countries.
- China's imports of hardwood lumber made up a greater proportion and played a greater role in growth than did softwood lumber. Imports of tropical hardwood lumber experienced particularly strong growth, jumping by 590 percent from 1997 to 2002. Due to sharply increasing imports of Russian softwood lumber, the proportion of softwood lumber in China's total lumber imports increased over the past three years.
- Historically, China has imported more paper and paperboard than pulp. Pulp imports, however, experienced much faster growth than paper and paperboard between 1997 and 2002. As a result, by 2002 China was importing twice as much pulp as paper and paperboard.
- Demand from China's growing export-oriented wood-products manufacturing sector contributed to the expansion in timber product imports, while rising domestic demand and quality requirements have stimulated pulp and paper imports. Reductions in import tariffs may also account for some of the increases in import volumes. Insofar as these reductions have made smuggling less attractive, some of the apparent increase in imports, however, may merely be a reduction in undeclared imports.

Russia, Indonesia and Malaysia were the three largest suppliers of timber to China. Canada, Indonesia, Russia, Chile, and the United States were the major suppliers of China's wood pulp imports. South Korea, the United States, Taiwan, Japan, and Indonesia were the leading countries or regions supplying paper and paperboard to China.

- Total imports of timber products from Russia, Indonesia, and Malaysia accounted for more than 50 percent of China's grand total each year. In 2002, China's combined timber imports from these countries totalled 23.6 million cubic meters (RWE) and were valued at \$2.1 billion. Between 1997 and 2002, wood pulp imports from Russia, Chile, and Indonesia increased by 4.2, 2.7, and 2.5 times, respectively. From 1997 to 2002, there was low growth in paper imports, as reflected by a sharp drop in imports from the United States.

- In 2002, the five principal countries supplying China with logs were Russia, Malaysia, New Zealand, Papua New Guinea, and Gabon. China's combined imports of logs from these nations totaled 3.4 million cubic meters in 1997 and 20.8 million cubic meters in 2002, accounting for 76 percent and 86 percent, respectively, of China's total log imports. Russia was the largest log supplier of China since 1998 with an average annual growth rate of 73 percent.
- Indonesia, Malaysia, the United States, Thailand, and Russia were the leading suppliers of China's lumber imports in 2002. Lumber imported from these five leading countries accounted for 67 percent of total Chinese lumber imports that year.
- Indonesia and Malaysia were the two leading suppliers of China's plywood imports from 1997 to 2002. Plywood imports decreased after 1998, with Malaysia's share diminishing most quickly. By 2002, China imported only 99,000 cubic meters from Malaysia, an 84 percent drop from 1997.
- Throughout the period, Malaysia was the single largest supplier of China's veneer imports, trailed distantly by Cambodia and the United States. China's veneer imports decreased suddenly after 2000, particularly those imports from Malaysia.
- Chinese imports of wood chips have been historically low. A substantial influx, however, was imported from Australia in 2002.

Shenzhen, Nanjing, Shanghai, Harbin, and Manzhouli were the leading ports of entry for timber products.

- Shenzhen, Shanghai, and Nanjing maintained this role throughout the period studied, while Harbin and Manzhouli emerged with rapid growth in timber product import values and volumes, especially after 2000. Major entry ports for imported wood pulp were Nanjing, Shanghai, Qingdao, Manzhouli, and Huangpu. The primary entry ports for paper were Shenzhen and Huangpu.
- Major ports of entry of China's timber product imports include Harbin, Manzhouli, Nanjing, Shanghai, Shenzhen, Huangpu, and Guangzhou. In 2002, combined imports of timber products through the five leading timber product ports (Shenzhen, Nanjing, Shanghai, Manzhouli, and Harbin) accounted for more than 65 percent of China's total timber product imports. Imports of Russian timber products mainly came through cross border trade with Harbin and Manzhouli. Combined imports of wood pulp through the major wood pulp ports (Nanjing, Shanghai, Qingdao, and Manzhouli) constituted 75 percent of the national total in 2002. Paper imports through Shenzhen and Huangpu in 2002 were 2.7 million tons and 1.5 million tons, accounting for 41 percent and 23 percent, respectively, of China's total paper imports.

ANNEXES

I. CHINA'S TARIFF CODES FOR MAJOR FOREST PRODUCTS

Item	Tariff codes
Wood chips	44012100, 44012200
Logs	4403
Softwood logs	44032000
Tropical hardwood logs	44034100, 44034910, 44034990, 44039910, 44039920, 44039930
Temperate hardwood logs	44039100, 44039200, 44039940, 44039950, 44039960, 44039980
Mixed hardwood logs	44039990
Lumber	4407
Softwood lumber	44071000
Tropical hardwood lumber	44072400, 44072500, 44072600, 44072910, 44072990, 44079910
Temperate hardwood lumber	44079100, 44079200, 44079920, 44079930, 44079980
Mixed hardwood lumber	44079990
Veneer	4408
Particleboard	4410
Fiberboard	4411
Plywood	4412
Pulp	All codes under chapter 47
Wood pulp	All 4-digit codes from 4701 to 4705
Paper and paperboard	All codes under chapter 48
Timber products	all 4-digit codes from 4401 to 4421
Forest products	All codes in Chapter 44, 47 & 48

Source: China Customs. (Tariff codes have been grouped into product category by the authors.)

II. CONVERSION FACTORS USED IN THE ANALYSIS

Product	HS Code	Conversion Factor
Fuel wood etc.	4401 (except 440121 & 440122)	1
Wood chips	440121, 440122	1.8
Wood charcoal	4402	6*
Logs	4403	1
Hoop wood etc.	4404	2
Wood wool	4405	1
Railway sleepers	4406	2
Lumber	4407	1.43
Veneer sheets	4408	2.5
Continuously shaped wood	4409	1.9
Particle board	4410	1.5
Fiberboard	4411	1.8
Plywood	4412	2.5
Densified wood	4413	2
Wood works	4414-4421	1.25
Mechanical pulp	4701	3
Chemical pulp	4702-4704	4
Semi-chemical pulp	4705	3.3
Other fiber pulp	4706	2.6
Recovered paper	4707	2.6
Paper & paperboard	48	2.8

Source: Conversion factors are based mainly on those provided by China's State Forestry Administration (SFA). SFA figures, in turn, generally correlate with those used by the FAO. The authors have also incorporated factors provided by the China Paper Industry Association to offer differentiation among the types of pulp.

**While all other conversion factors in the table are meant to convert physical m³ to RWE m³, the conversion factor for wood charcoal is to be applied to metric tons to yield RWE m³.*

The table above provides the conversion factors used by the authors in converting product volumes to RWE volumes. It should be noted that the conversion factors shown above are inherently inaccurate. That is, they may vary widely according to the technology and procedures used in converting the wood. Therefore, the RWE estimates calculated based on these factors should be regarded only as useful indicators.

Information on the methodology for obtaining product RWE volumes is given in the bullets below. It should be noted that estimating RWE volumes may first require the conversion of masses (e.g. kg) into volumes (m³) and the separation of pulp products into different groups.

- Round Wood Equivalent volume is obtained by multiplying product volume by the conversion factor given.
- If product volume is not given, but product weight or surface area is given, then a rough estimate of product volume can be derived by multiplying weight by a density factor, such as 1.3 cubic meters per ton. For veneer and plywood, one cubic meter = 750kg (density factor = 1.33 cubic meters per ton); for particleboard, one cubic meter = 650kg (density factor = 1.54 cubic meters per ton); and for fiberboard, one cubic meter = 700kg (density factor = 1.42 cubic meters per ton). For all other products such as wood chips, a density factor of 1.3 cubic meters per ton is used.
- For wood charcoal, industry sources indicate that one ton of wood can produce 0.25 tons of charcoal. The density of wood is 0.67 tons per cubic meter. Thus, to arrive at RWE volume in cubic meters, the mass of charcoal in tons should be multiplied by a factor of six ($0.67 \text{ tons/m}^3 \times 4.0$).
- For all wood articles (HS codes 4414-4421), one cubic meter = 800 kg (density factor = 1.25 cubic meters per ton).
- For pulp, different conversion factors are used for different categories of pulp. For mechanical wood pulp, 3 cubic meters are consumed to produce one ton of pulp (i.e. conversion factor of 3); for chemical wood pulp, 4 cubic meters; and for semi-chemical wood pulp, 3.3 cubic meters. These conversion factors are based on estimates from China's Paper Industry Association.

III. CHINA'S CUSTOMS SYSTEM

There are 42 secondary customs offices (or “ports” as referred to in this paper) under China’s central customs administration. These ports are distributed across all provinces of the country. In many cases, each port has several gateways under its supervision for the receipt of imported goods and distribution of exported goods. The following table lists the gateways under each of China’s 42 secondary customs offices.

Gateways Under the Supervision of Each of Chinese 42 Secondary Customs Offices

Province*	Port	Gateways
Anhui	Hefei	Wuhu, Fuyang, Anqing, Tongling, Maanshan, Bengfu
Beijing	Beijing	Beijing International Airport, Zhongguancun, Beijing Economic Development Zone
Chongqing	Chongqing	Wanxian, Chongqing Economic Development Zone
Fujian	Xiamen	Quanzhou, Shishi, Dongshan, Longyan, Zhangzhou, Xiangyu Free Trade Zone
	Fuzhou	Fuqing, Ningde, Nanping, Sanming, Putian, Mawei, Wuyishan, Fuzhou Free Trade Zone
Gansu	Lanzhou	Lanzhou
Guangdong	Shenzhen	Huidong, Sungang, Luohu, Dapeng, Shatoujiao, Wenjindu, Shekou, Nantou, Shawan, Buji, Huizhougang, Huanggang, Shenzhen Airport, Futian FTZ, Meilin, Tongle
	Huangpu	Huizhou, Heyuan, Dongguan, Xintang, Guangzhou Free Trade Zone
	Guangzhou	Yunfe, Luoding, Gaoming, Shaoguan, Conghua, Fanyu, Shunde, Sanshui, Feshan, Zhaoqing, Dachan, Qingyuan, Nanhai, Baiyun Airport, Tianhe Railway Station, Huadu
	Gongbei	Zhongshan, Hengqin, Jiuzhou, Wanzi, Gaolan, Wanshan, Doumen
	Shantou	Chaoyang, Shanwei, Meizhou, Rongcheng, Chaozhou, Guangao, Raoping, Waisha, Nanao, Shantou Free Trade Zone
	Jiangmen	Enping, Taishan, Sanfu, Xinhui, Heshan, Yangjiang
	Zhanjiang	Xiashan, Xuwen, Maoming

Guangxi	Nanning	Qinzhou, Beihai, Guilin, Pingxiang, Wuzhou, Dongxing, Fangcheng, Liuzhou, Shuikou, Guigang
Guizhou	Guiyang	Guiyang
Hainan	Haikou	Basuo, Yangpu, Sanya, Haikou Free Trade Zone, Yangpu Economic Development Zone
Hebei	Shijiazhuang	Baoding, Qinhuangdao, Tangshan
Heilongjiang	Harbin	Heihe, Xunke, Mohe, Suifenhe, Dongning, Raohe, Tongjiang, Hulin, Mudanjiang, Mishan, Jiamusi, Qiqihare, Fujin, Harbin Economic Development Zone
Henan	Zhengzhou	Nanyang, Luoyang
Hubei	Wuhan	Yichang, Jingzhou, Xiangfan, Huangshi, Wuhan Economic Deveopment Zone
Hunan	Changsha	Hengyang, Yueyang, Changde, Shaoshan, Zhangjiajie
Inner Mongolia	Manzhouli	Hailaer, Erguna
	Hohhot	Baotou, Erlianhot
Jiangsu	Nanjing	Changzhou, Jiangyin, Huaian, Xuzhou, Wuxi, Lianyungang, Zhangjiagang, Yancheng, Nantong, Zhenjiang, Xinchengyu, Yangzhou, Taizhou
Jiangxi	Nanchang	Jiujiang, Ganjiang, Jingdezhen, Jian
Jilin	Changchun	Changbai, Linjiang, Hunchun, Jian, Tumen, Jilin, Yanji
Liaoning	Shenyang	Huludao, Jinzhou, Shenyang Economic Development Zone
	Dalian	Dalian Free Trade Zone, Dandong, Yingkou, Dalianwan, Anshan, Dadonggang, Bayuquan, Dalian Economic Development Zone
Ningxia	Yinchuan	Yinchuan
Qinghai	Xining	Xining

Shaanxi	Xi'an	Baoji, Xian Xianyang airport
Shandong	Qingdao	Longkou, Weihai, Weifang, Zibo, Rizhao, Jinan, Yantai, Shidao, Jining, Taian, Linyi, Qianwangang, Liuting Airport, Qingdao Free Trade Zone
Shanghai	Shanghai	Pudong International Airport (Hongqiao airport), Pudong, Wusong (Baoshan), Songjiang, Fengxian, Qingpu, Zizhuang, Jinshan, Jiading, Shanghai Economic Development Zone
Shanxi	Taiyuan	Taiyuan
Sichuan	Chengdu	Panzhuhua, Leshan, Mianyang
Tianjin	Tianjin	Wuqing, Xingang, Jixian, Donggang, Tianjin Free Trade Zone, Tianjin Economic Development Zone
Tibet	Lhasa	Rikaze, Neilamu, Shiquanhe
Xinjiang	Urumqi	Alashankou, Kashi, Hongqilapu, Yergate, Huoerguosi, Tacheng, Aletai, Yining, Yerkeshitan
Yunnan	Kunming	Kunming Airport, Ruili, Mangshi, Mengla, Mengding, Wanding, Tengchong, Jinshuihe, Xishuangbanna, Simao, Tianbao, Dali, Daluo, Shilicun, Shanyao, Qiaotou, Dulong, Tianpeng
Zhejiang	Hangzhou	Wenzhou, Jinhua, Zhoushan, Chaozhou, Jiaying, Shaoxing, Taizhou, Hangzhou Economic Development Zone
	Ningbo	Xiangshan, Zhenhai, Daxie, Beicang, Ningbo Free Trade Zone

Source: China Customs website <http://www.customs.gov.cn/hgxtb/index.asp>

* Province here indicates province or one of China's provincial-level municipalities (i.e. Beijing, Shanghai, Tianjin, or Chongqing)

IV. HONG KONG RE-EXPORT OF FOREST PRODUCTS AND IMPACT ON CHINA'S IMPORT STATISTICS

Hong Kong Re-Exports of Major Forest Products 2000-2002			
Logs	- m ³ - 2000	- m ³ - 2001	- m ³ - 2002
--The World--	876997	669316	511859
China	871474	666693	509865
China's share	99%	99.6%	99.6%
Lumber	- m ³ - 2000	- m ³ - 2001	- m ³ - 2002
--The World--	1205599	1107901	1266224
China	1198335	1101045	1261202
China's share	99%	99%	99.6%
Veneer	- m ² - 2000	- m ² - 2001	- KG - 2002
--The World--	85912391	111075026	135316038
China	85386151	110907316	135018301
China's share	99%	99.8%	99.8%
Fiberboard	- m ² - 2000	- m ² - 2001	- KG - 2002
--The World--	49663952	42175326	126678573
China	49264619	42045281	123512348
China's share	99%	99.7%	98%
Particle board	- m ² - 2000	- m ² - 2001	- KG - 2002
--The World--	14572960	9604920	51693784
China	14486121	9487487	51623483
China's share	99%	99%	99.9%
Plywood	-m ² - 2000	-m ² - 2001	-m ² - 2002
--The World--	38446579	26439415	27403792
China	36628363	24367238	24567286
China's share	95%	92%	90%
Pulp	- Tons - 2000	- Tons - 2001	- KG - 2002
--The World--	220079	192894	2236665
China	215082	192759	2207873
China's share	98%	99.9%	99%
Paper & paperboard	2000	2001	- KG - 2002
--The World--	Na	Na	1493421025
China	Na	Na	1234535325
China's share			83%

Source of Data: World Trade Atlas

Statistics on Hong Kong re-exports show that Mainland China is the largest destination for the city's forest product re-exports (see table above). Congruent with these results, China's customs statistics show that a large quantity of Mainland Chinese imports of forest products are transshipped or processed and traded through Hong Kong each year. A 2003 study by Dai Guangcui shows that a large

portion of China's imports of tropical hardwood lumber, in particular, has been transshipped through Hong Kong. For example, in 2000, 73.7 percent of Thai lumber, 47.3 percent of Indonesian lumber, and 38.4 percent of Malaysian lumber were re-exported to China through Hong Kong.²²

In general, information on country of origin of products transshipped through Hong Kong is not obscured in Chinese customs data, unless the value-added in Hong Kong surpasses a certain level. In China's customs statistics, Hong Kong is identified as "origin of shipment," while the original producer country is identified as "country of origin." Indeed, it is required that shipping documentation of products re-exported through Hong Kong designate the original producer country. Thus, China's import statistics for producer countries include amounts that have been transshipped or processed and traded through Hong Kong, except for what is believed to be a very small minority of products with high Hong Kong value-added.

²² Dai, Guangcui. 2003, "Study on Discrepancy in Forest Products Trade Statistics – China case," part of *ITTO Trade Discrepancy Study*.

V. IMPORTS OF RUSSIAN LOGS BY MAJOR GATEWAYS

	Province	Gateway	Year					
			1996	1997	1998	1999	2000	2001
Inland	Inner Mongolia	Manzhouli	150	388	672	1824	2153	3115
		Erliahot*	12	118	262	956	1542	1676
	Heilongjiang**	Suifenhe	276	385	563	1355	2070	3144
		Heihe	3	0.2	4	106	60	71
		Other minor gateways	47	28	22	59	103	474
	Jilin**	Hunchun	0.6	0	1	11	9	31
Xinjiang**	Alashankou	0	0	0.3	8	7	16	
Coastal***			54	41	66	80	95	562
		Total****	542.6	960.2	1590.3	4399	6039	9089

Source: Masanobu Yamane and Wenming Lu, "Trends in China's Forest-related Policies, from the Perspective of the Growing Timber Trade," a Policy Trend Report 2002, for IGES Forest Conservation Project (March 2003).

Note: Figures are in 1000 cubic meters.

* Erliahot is one of two gateways under the port of Hohhot.

** Heilongjiang Province in this table is equivalent to the port of Harbin. Similarly, Jilin is equivalent to the port of Changchun, and Xinjiang is equivalent to the port of Urumqi

*** Coastal gateways include Dalian, Tianjin, Shanghai, Nanjin, and Qingdao

VI. MAP OF CUSTOMS BRANCHES

