



## 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

## FOREST PRODUCTS TRADE BETWEEN RUSSIA & CHINA:

POTENTIAL PRODUCTION, PROCESSING,  
CONSUMPTION AND TRADE SCENARIOS

---

STEVEN NORTHWAY  
GARY Q. BULL



## **COORDINATING INSTITUTIONS**

**Forest Trends** (<http://www.forest-trends.org>): Forest Trends is a non-profit organization that advances sustainable forestry and forestry's contribution to community livelihoods worldwide. It aims to expand the focus of forestry beyond timber, and promotes markets for ecosystem services provided by forests such as watershed protection, biodiversity and carbon storage. Forest Trends analyzes strategic market and policy issues, catalyzes connections between forward-looking producers, communities, and investors, and develops new financial tools to help markets work for conservation and people. It was created in 1999 by an international group of leaders from forest industry, environmental NGOs and investment institutions.

**University of British Columbia, Faculty of Forestry** (<http://www.forestry.ubc.ca/>): The Faculty of Forestry is home to a dynamic and diverse group of researchers who educate and communicate how forests and the products that are created from them contribute to the wellbeing of all living things. UBC Forestry is the largest forestry faculty in Canada and is internationally renowned for its forest-related education and research. With a research-intensive unit and a healthy and expanding graduate program, UBC Forestry's three departments cover a wide and comprehensive range of specialties and disciplines that encompass forestry, broadly defined. The Faculty is also the administrative home for the Centre for Applied Conservation Research (CACR), the Centre for Advanced Wood Processing (CAWP) and other groups that include Forestry faculty members and additional UBC or outside colleagues as integral parts of their operations. Through their three research forests, the Faculty of Forestry is also connected to people throughout British Columbia from Greater Vancouver to Prince George.

**Rights and Resources Initiative** (<http://www.rightsandresources.org>): Rights and Resources is dedicated to raising global awareness of the critical need for forest policy and land tenure reform to achieve global poverty alleviation, biodiversity conservation and forest-based economic growth. The Rights and Resources Initiative works with communities, governments and the private forest industry to advance tenure, policy and market reforms. The Rights and Resources Group coordinates the Initiative on behalf of the partners and supporters. In addition, the Group conducts strategic global analyses, collaborates with local partners to advance domestic reforms, strengthens community networks and convenes global and regional dialogues. The Group connects partner institutions to global, regional and community actors to advance the goals, targets and missions of the Initiative.

# **FOREST PRODUCTS TRADE BETWEEN RUSSIA & CHINA: POTENTIAL PRODUCTION, PROCESSING, CONSUMPTION AND TRADE SCENARIOS**

## **SYNTHESIS REPORT**

*Steven Northway & Gary Q. Bull  
University of British Columbia*

July 2007



Forest Products Trade between Russia & China Synthesis Report: Potential Production, Processing, Consumption and Trade Scenarios © 2007 Forest Trends. Reproduction permitted with attribution.

ISBN 978-1-932928-25-9

Cover photo by Charlie Pye-Smith.

This synthesis was produced in cooperation with Forest Trends, and is based on a report by the authors, entitled, "International Forest and Forest Products Trade Model: Scenarios for China and Eastern Russia Forest Supply, Forest Products Processing, Consumption and Trade." For copies of the original report, please contact Steven Northway at [northway@interchange.ubc.ca](mailto:northway@interchange.ubc.ca).

## **ACKNOWLEDGEMENTS**

The authors would like to thank Marian Mabel for drafting this report, based on a 2007 paper by Steven Northway and Gary Q. Bull entitled “International Forest and Forest Products Trade Model: Scenarios for China and Eastern Russia Forest Supply, Forest Products Processing, Consumption, and Trade.” Kerstin Canby and Lucas Bailey, Forest Trends, also assisted in editing this document.

The authors also acknowledge the Canadian Forest Service (CFS) for their financial support of this project. CFS is in no way responsible for the content of this publication, nor do the findings and views presented herein necessarily represent Canadian government policy.

## SUMMARY

This synthesis report depicts future trends in the forest products<sup>1</sup> processing, consumption and trade between China and its main suppliers, with a particular focus on Siberia and the Russian Far East. It is based on the findings of the International Forest and Forest Products (IFFP) trade model analysis completed by Northway & Bull 2007. The first part of the analysis examines a status quo scenario for forest products supply, processing, consumption and trade, extrapolating to 2030, based on the current trends in China, Eastern Russia, Indonesia and the rest of the world. The authors then consider the implications of three different investment policy scenarios, which each represent an important policy goal of the current Russian national and provincial governments. These three key objectives are:

- Investment in Eastern Russia's domestic harvest transportation infrastructure.
- Investment in Eastern Russia's domestic sawmilling capacity.
- Simultaneous investment in transport and milling capacity.

Given the large and growing role of China in the global timber market, these regional trends will have ever greater ramifications for forests, forest livelihoods and the structure of forest industry around the world.

Northway & Bull then examine some of the limitations facing China and its trade partners for realizing long term, sustainable and legal trade in the forest products sector, and offer recommendations for next steps. Future development of this research and analysis will focus on the implications of the log export taxes announced by the Russian government in 2006 – a policy that will likely have direct implications for the investment policy scenarios examined here.

The main findings of the Northway & Bull (2007) analysis are:

- Under each scenario, China's forests supply an ever-shrinking amount of industrial roundwood to meet domestic consumption, and the country does not reach self-sufficiency. The forecasted increase in domestic forest product consumption outpaces the increase in domestic supply, leading to increased trade over the next 25 years, especially in sawlogs.
- None of the forecast scenarios show Russia and Indonesia being able to significantly help China bridge the anticipated gap between domestic supply and total consumption (domestic plus export consumption).
- Even if Russia can supply 36 percent of China's sawlog imports by 2030 (under a scenario of investment in harvest transportation), China will still need considerably greater volumes, alternate

---

<sup>1</sup> h "Forest products" includes timber products plus pulp and paper products. The term "timber products" is used to refer to logs, sawnwood, panels and other wooden goods. It does not include non-timber and non-wood products such as mushrooms, botanicals, and wildlife. Industrial Roundwood (IRW) is defined as including sawlogs or veneer logs, pulpwood, other unprocessed industrial roundwood consumed at the mill gate. In the case of trade-- chips, particles, and wood residues are also included. (See the Statistical Database of the Food and Agriculture Organization of the United Nations (<http://faostat.fao.org>)). Current and forecast data for forest products (pulplogs, sawlogs, panels, plywood, sawnwood, fiber, and pulp products (including recycled material, newsprint, and paper) for China, Eastern Russia, and Indonesia are presented in Northway & Bull (2007), Appendices 1, 2, 3 and 4.

sources, and revised public policies to meet its explosive consumption projected across the forest products industry.

- Investment in harvest transportation infrastructure and sawmilling capacity in Eastern Russia could expand export volumes of both sawlogs and sawnwood for Chinese markets.

As with any quantitative analysis, the accuracy of the data affects the quality of the output. It is broadly accepted that the data on Chinese and Russian forest trade are not a perfect representation of actual levels of economic activity. For example, production and trade volumes could be understated to avoid taxes. Other potential causes of statistical discrepancies include illegal logging, insufficient resources for information management, bartered trade and unrecorded exports at minor border crossings.

Accordingly, the authors recognize the potentially serious data discrepancies and conflicting analyses in reported forest sector statistics. Therefore, the statistics used for the purpose of the IFFP model present one of many possible interpretations of the available information. Participants in the global timber market should recognize that trade modeling is contingent on their own data collection efforts. To improve future economic projections, individual countries must look to improve their own information management systems.

**TABLE OF CONTENTS**

**INTRODUCTION ..... 1**

**CURRENT CONTEXT ..... 2**

    China: Demand, Harvest & Import Volumes ..... 2

    Russia & Indonesia: Main Suppliers To China ..... 5

**FOREST PRODUCTS TRADE IMPLICATIONS OF THREE INVESTMENT**

**SCENARIOS ..... 8**

    Scenario 1: Potential Impact of Increased Investment In Eastern Russian Harvest  
    Transport Infrastructure ..... 9

    Scenario 2: Potential Impact of Increased Investment in Eastern Russian Sawmilling  
    Capacity ..... 10

    Scenario 3: Potential Impact of Increased Investment in Both Eastern Russian Harvest  
    Transport Infrastructure & Sawmilling Capacity ..... 10

**CONCLUSIONS ..... 11**

    Constraints to Meeting China’s Industrial Roundwood Gap ..... 11

    Bridging the Gap ..... 13

**SOURCES ..... 14**

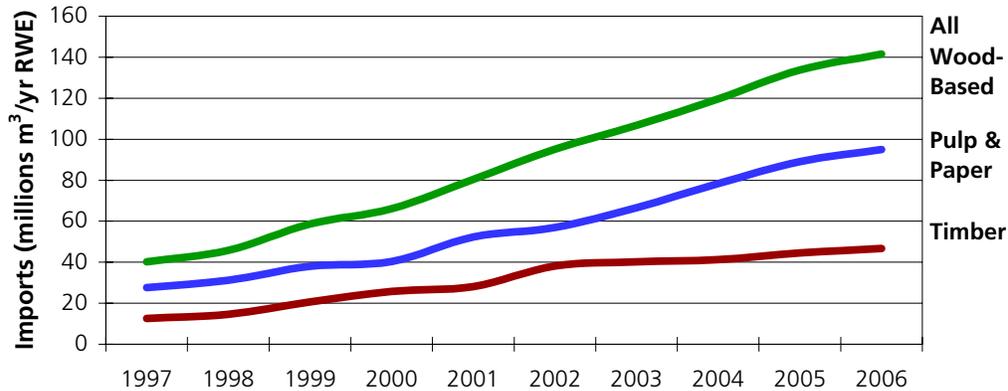
## LIST OF FIGURES

Figure 1: China’s Forest Product Imports By Product Type .....	1
Figure 2: China As A Fraction Of World IRW Consumption .....	3
Figure 3: China’s IRW Consumption, Production & Imports - Status Quo Scenario .....	3
Figure 4: China's Forest Products Trade, By Product - Status Quo Scenario .....	4
Figure 5: China’s Domestic Production Of Forest Products - Status Quo Scenario .....	4
Figure 6: Eastern Russian Domestic Production Of Forest Products – Status Quo Scenario .	6
Figure 7: Eastern Russian IRW Consumption and Production - Status Quo Scenario .....	6
Figure 8: Indonesian Domestic Production Of Forest Products .....	7
Figure 9: Indonesian IRW Consumption, Production, & Imports - Status Quo Scenario .....	8
Figure 10: Potential Impact Of Investment In Harvest Transportation Infrastructure On Eastern Russian Harvest, Sawlog & Sawnwood Production & Exports To China .....	9
Figure 11: Potential Impact Of Investment In Sawmilling Capacity On Eastern Russian Harvest, Sawlog & Sawnwood Production & Exports To China .....	10
Figure 12: Potential Impact Of Investment In Both Transport & Milling Capacity On Eastern Russian Harvest, Sawlog & Sawnwood Production & Exports To China .....	11

## INTRODUCTION

In the past decade, China has become the most dynamic developing economy in the Asia-Pacific region, with implications for forest trade across the globe. As shown in Figure 1, the volume of China's total forest product imports more than tripled between 1997 and 2006, rising from 40 million to 141 million m<sup>3</sup> roundwood equivalent (RWE). During this same period, the import value rose from US\$6.4 billion to US\$17.9 billion. This trend is expected to continue into the near future.

**Figure 1: China's Forest Product Imports by Product Type**



Source: *Forest Trends/Chinese Customs data.*<sup>2</sup>

While there are many reasons behind China's burgeoning demand for forest products, perhaps the most important is its extraordinary economic growth: the country has experienced 9 percent annual growth in GDP since 1990, with 6-8 percent growth expected for the coming years. The concomitant domestic consumption of wood and paper products along with a growing housing demand by an increasingly wealthy society has created an enormous domestic demand for forest products in a country with limited per capita forest resources.

Beyond Chinese borders, a growing global demand for low-cost forest products has transformed China into the world's largest wood workshop. China has now captured more than one third of the global trade in furniture. Between 1997 and 2006, the volume of manufactured wood product exports—mainly plywood and furniture—skyrocketed over eight-fold from 5.1 to 43.0 million m<sup>3</sup> RWE.<sup>3</sup> Over the same time period, the value of these wood exports jumped nearly 570 percent from US\$2.6 to US\$17.4 billion.<sup>4</sup> Feeding this expansion was a 600-700 percent increase in U.S. and EU imports of Chinese finished wood products.<sup>5</sup>

<sup>2</sup> With the exception of Figure 4 (which displays market share by percent), all charts depict annual volume traded and are not cumulative.

<sup>3</sup> Forest Trends analysis of Chinese Customs statistics, 1997-2006, unpublished.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.* Forest products included in this calculation represent finished wood products, including veneer sheet (HS4408), floorings and moldings (HS4409), particleboard (4410), fiberboard (4411), plywood (4412), other assorted wooden goods (HS4414-4421) and wooden furniture (HS94).

China's domestic supply of industrial wood is unlikely to keep pace with this growing domestic and external consumption. According to Northway & Bull (2007), China's domestic harvest accounted for only 24 percent of its domestic industrial roundwood consumption in 2005 -- a share that may not change substantially over the next 25 years. In early 2006, China's National Development Reform Committee forecast an annual shortfall of more than 150 million m<sup>3</sup> of industrial roundwood by 2010.

Given the expected swell in demand and comparatively slow-growing domestic supply, China's imports of wood products are nearly certain to continue rising for several decades. This increasing dependence on external sources leaves China vulnerable to supply fluctuations from its various trade partners. Many of the historically important suppliers of wood products to China (e.g., Indonesia, Papua New Guinea) face dwindling natural forests and ambitious plantation programs that are not yet on-line. Recent crackdowns on illegal logging in Papua New Guinea, Indonesia and Myanmar have further reduced the availability of tropical roundwood, which raises prices and forces traders to look for substitute species in other countries such as Russia.

However, according to the Stakeholder Statement of the Baikal Economic Forum (2006), a great deal of the forest in the Russian Far East (RFE) is economically inaccessible, environmentally sensitive, or largely degraded. If current harvesting rates and practice in the RFE continue, existing stocks of economically accessible wood products could be depleted in 20 years. Such a "boom-bust" scenario would lead to a further deepening of rural poverty and decline now common in the RFE. The decline would also negatively impact China, as this Russian region supplied China with 50 percent of its overall imported timber products in 2005.

## **CURRENT CONTEXT**

### **CHINA: DEMAND, HARVEST & IMPORT VOLUMES**

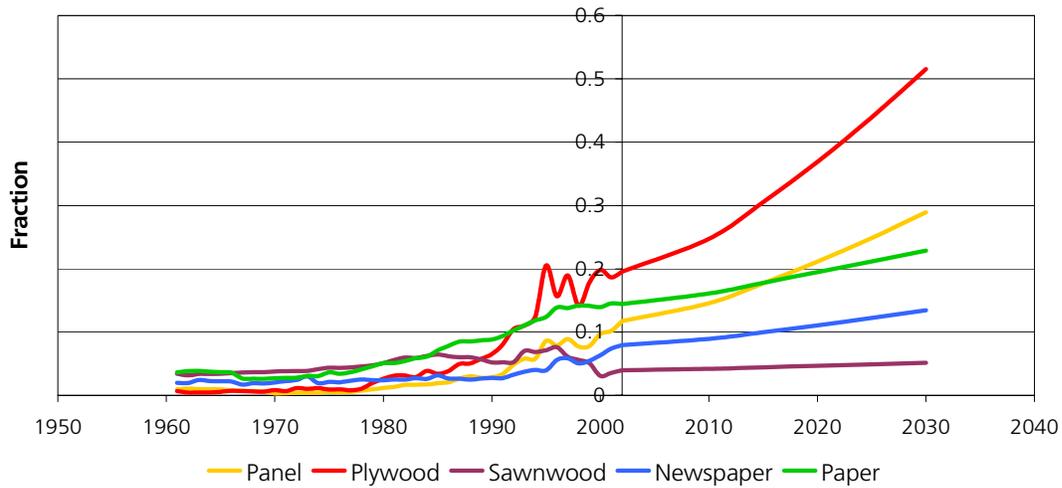
Extrapolating recent trends, China's share of global demand for manufactured forest products (counting both Chinese domestic use and export demand) would rise in nearly every category, with the exception of sawnwood (Figure 2)<sup>6</sup> By this reckoning, China's plywood demand could comprise more than half of global demand by 2030; its shares of global panel and paper demand would reach 30 percent and 23 percent, respectively.<sup>7</sup>

---

<sup>6</sup> The IFFP Trade Model analysis was based on a forest estate generally consistent with production forecasts of the Global Fibre Supply Model (Bull et al. 1998) and falls within the range of surveyed projections in Nilsson (1996) and Weiner and Victor 2000.

<sup>7</sup> Data presented hereafter is from Northway & Bull (2007), unless otherwise cited.

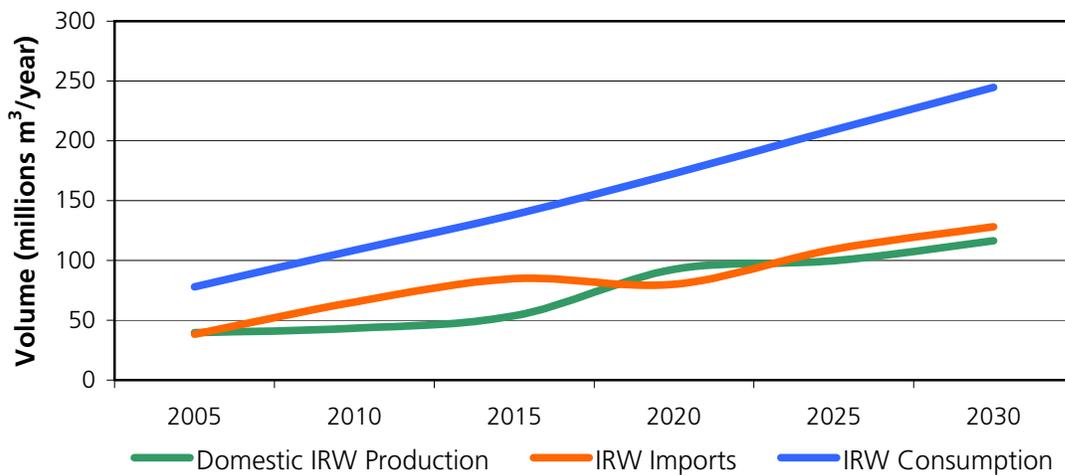
**Figure 2: China as a Fraction of World IRW Consumption**



Source: Northway & Bull, 2007: Figure 5.

If these indications hold true, China’s total industrial roundwood demand will outstrip its domestic supply in the foreseeable future. One Northway and Bull (2007) scenario suggests that over the next 25 years China’s demand for industrial roundwood (pulplog and sawlog) could reach 245 million m<sup>3</sup>, triple the volumes recorded in 2005. However, as Figure 3 shows, China’s domestic production of industrial roundwood is expected to meet less than half of this total demand in 2030, as imports surpass domestic production to cover the balance of China’s demand in 2030.

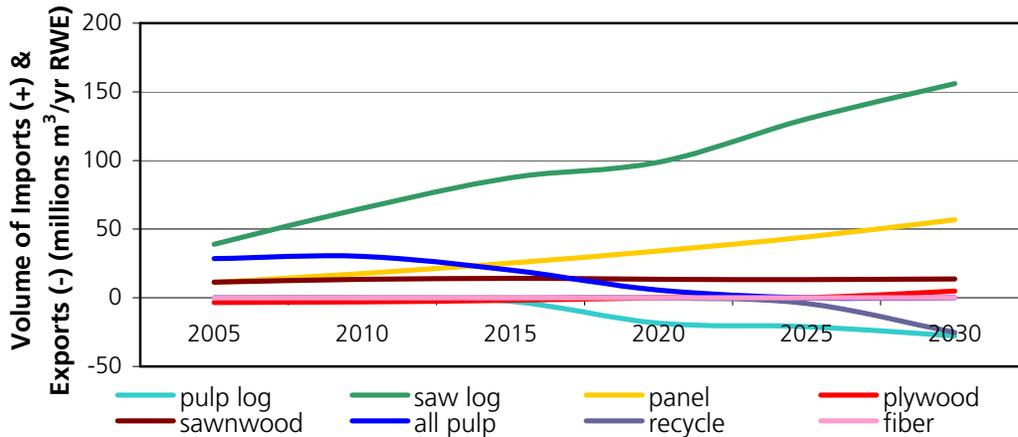
**Figure 3: China’s IRW Consumption, Production & Imports - Status Quo Scenario**



Note: Industrial Roundwood (IRW) is comprised of sawlog and pulplog volumes at the mill gate.  
 Source: Northway & Bull, 2007: Appendix 1a (Status quo).

Figure 4 shows a breakdown of the volume and composition of China's total forest products trade over the 25 years from 2005 to 2030. Under a status quo scenario, China's sawlog imports are expected to triple and its panel imports to quadruple in the next 25 years, even as China becomes a net exporter of pulplogs and recycled wood products, destined mainly for Indonesia.

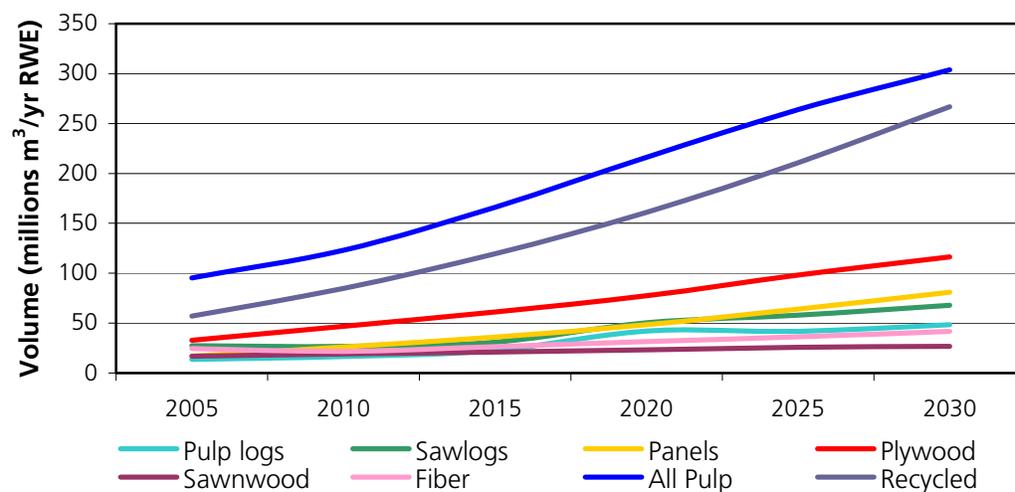
**Figure 4: China's Forest Products Trade, by Product - Status Quo Scenario**



*Note: Exports (pulp logs, recycled paper, plywood until 2020) are given as negative numbers; imports are positive.  
Source: Northway & Bull, 2007: Appendices 1a, 2a, 3a.*

Figure 5 shows a breakdown of the volume and composition of China's domestic production of forest products over the same period. The total volume of Chinese forest products could reach 952.8 million m<sup>3</sup> RWE by 2030, including a particularly robust rise in the production of pulp and recycled paper. Some of this domestic production will be re-exported to other nations trading with China.

**Figure 5: China's Domestic Production of Forest Products - Status Quo Scenario**



*Source: Northway & Bull, 2007: Appendices 1a, 2a, 3a.*

## **RUSSIA & INDONESIA: MAIN SUPPLIERS TO CHINA**

Though China imports forest products from around the world, Russia and Indonesia are currently among China's main suppliers of industrial forest products, by volume. In 2006, just over half of China's overall timber products imports came from Russia, including 68 percent of China's log imports.<sup>8</sup> Russia is also one of China's top five suppliers of lumber, pulp and paper. Indonesia is currently China's fourth largest timber supplier, supplying 54 percent of plywood imports in 2006, in addition to smaller shares of lumber, wood pulp, and paper.

### ***Russia***

Forest products trade between Russia and China flourished in the 1980s and early 1990s, as China began looking across its northeastern border to cover its domestic timber deficit. The end of state support for the RFE forest industry in the mid-1990s resulted in the near-complete collapse of primary forest production and manufacturing operations in the RFE, forcing a concentration on the harvest and export of unprocessed logs. Additional reasons for historically significant forest products trade between the two countries include:

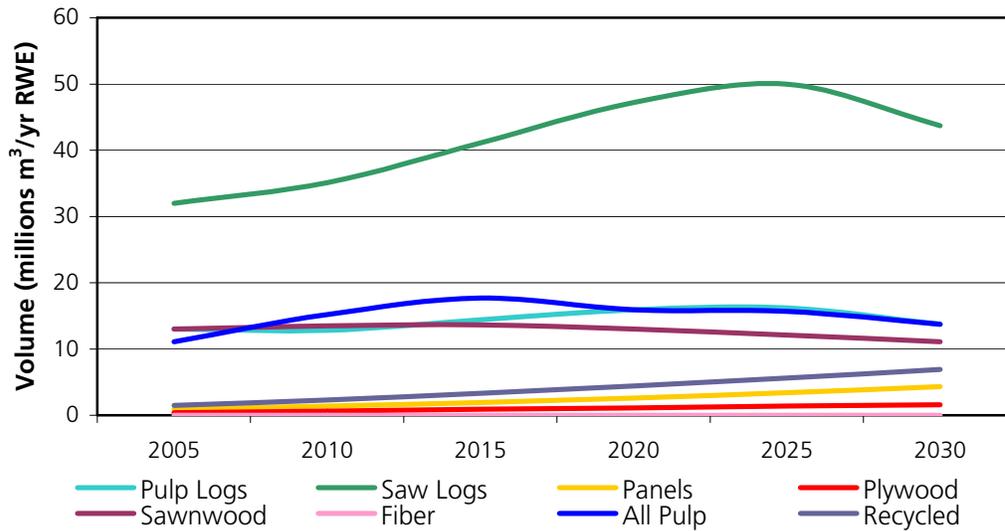
- Similar wood species in the RFE and northeast China (the traditional timber base of China);
- China's decision to eliminate its log import tariffs;
- Well-established border trade and rail links between Russia and the neighboring Chinese provinces;
- China's favorable tax policies for border trade; and
- Russia's resumption of maritime shipping of timber products in 2001, enabling Russia's timber to be directly shipped to the major timber consuming regions on China's eastern coast.

Eastern Russia (Siberia and the RFE) is now seeing the nascent recovery of domestic forest products manufacturing, with the greatest growth expected from panel, plywood, and pulp production in the coming years. Yet the bulk of RFE forest production remains unprocessed roundwood. Figure 6 shows that while Eastern Russian sawlog production volumes are currently double that of sawnwood, this disparity is forecast to increase over 400 percent by the year 2025.

---

<sup>8</sup> Forest Trends analysis of Chinese Customs statistics, 1997-2006, unpublished.

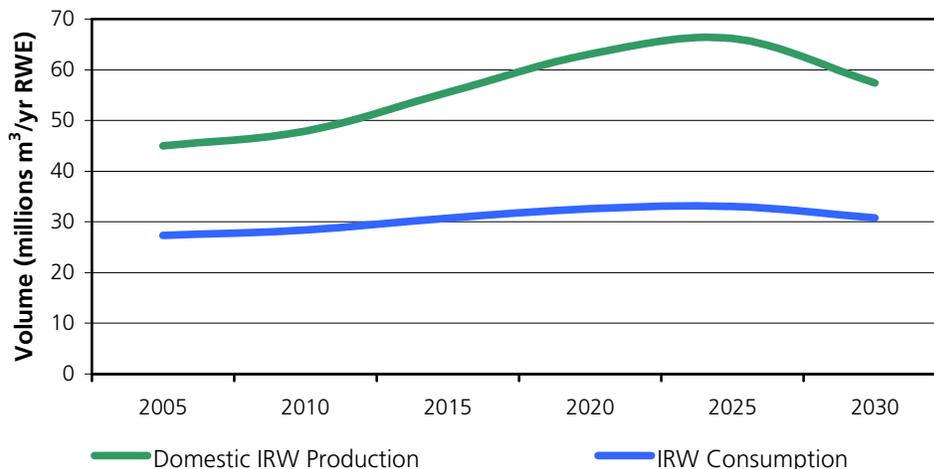
**Figure 6: Eastern Russian Domestic Production of Forest Products – Status Quo Scenario**



Source: Northway & Bull, 2007: Appendices 1c, 2c, 3c.

As Sheingauz (2004) notes, Chinese imports presently capture almost all of the timber production potential of the RFE as well as a significant portion of timber production potential in Siberia. Figure 7 shows that in 2005, Eastern Russian IRW production of pulplogs and sawlogs significantly exceeded domestic IRW consumption. In that year, 39 percent of Eastern Russian IRW production volumes were exported to China. Over the next 25 years, this share of Eastern Russian industrial roundwood exported to China is expected to approach half (46 percent) of Eastern Russian domestic industrial roundwood production.

**Figure 7: Eastern Russian IRW Consumption and Production - Status Quo Scenario**

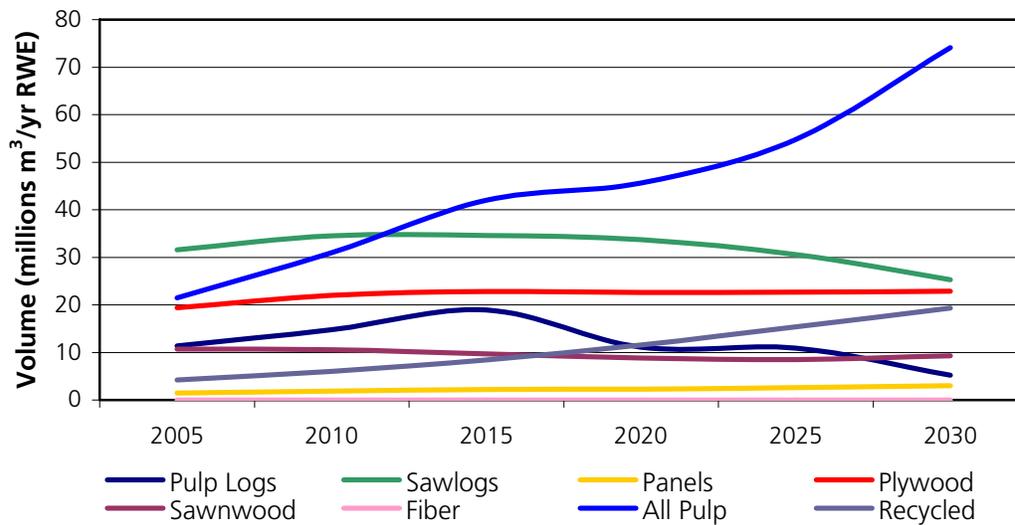


Note: Industrial Roundwood (IRW) is comprised of sawlog and pulplog volumes at the mill gate.  
Source: Northway & Bull, 2007: Appendix 1c.

## Indonesia

For nearly all forest products, Indonesian production is expected to remain largely stable over the next 25 years. Notable exceptions to this include panel and pulp production. Given its generally stable domestic production, Indonesia's share of world consumption for plywood, paper, and newspaper is projected to increase over the next 25 years; significantly so for plywood and paper. To feed its expanding pulping capacity, Indonesia is expected to begin importing pulp logs from China, processing up to 24 million RWE m<sup>3</sup> per year by 2030. Figure 8 presents current and forecast volumes of Indonesian domestically produced forest products. Among the trends expected are a 245 percent rise in forecast pulp production volumes and more than 300 percent rise in recycled wood products volumes.

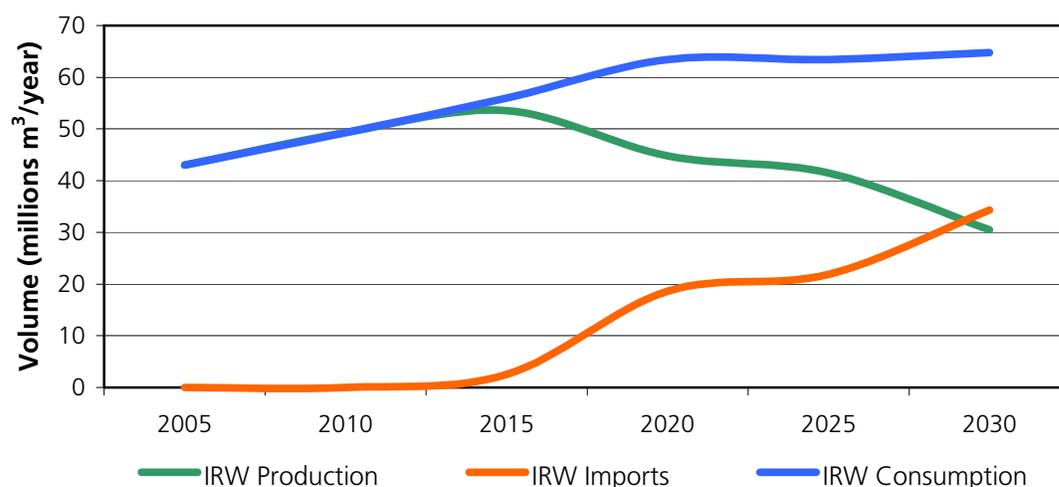
**Figure 8: Indonesian Domestic Production of Forest Products**



Source: Northway & Bull, 2007: Appendices 1b, 2b, 3b.

In 2005, Indonesian domestic industrial roundwood production met the country's domestic consumption, with no imports. As Figure 9 shows, if current trends continue, over the next 25 years domestic processing of pulplogs and sawlogs will supply a progressively smaller share of domestic industrial roundwood demand, with imports increasing to meet more than half of domestic demand by 2030. Given the steady rise in domestic demand for forest products and an internal supply that is both dwindling and not export-quality, Indonesia could switch from being a net exporter of industrial roundwood to a net importer by 2030. As such, Indonesia's place as a main supplier of industrial roundwood to China will likely be absorbed by Eastern Russia and China's other forest product trading partners. However, of Indonesian manufactured forest products, exports of newsprint and paper to China could more than triple by 2030.

**Figure 9: Indonesian IRW Consumption, Production, & Imports - Status Quo Scenario**



*Note: Industrial Roundwood (IRW) is comprised of sawlog and pulplog volumes at the mill gate.*

*Source: Northway & Bull, 2007: Appendix 1b.*

## **FOREST PRODUCTS TRADE IMPLICATIONS OF THREE INVESTMENT SCENARIOS**

Northway & Bull consider three scenarios for responding to China's growing need for forest products, noting their implications for the volume and composition of China's main forest products trading partners. As Indonesia is not expected to remain a main source of forest products for China, the analysis is largely directed at the scenarios' policy implications for Eastern Russian timber harvest, production, and trade with China. The three investment scenarios envisioned are:

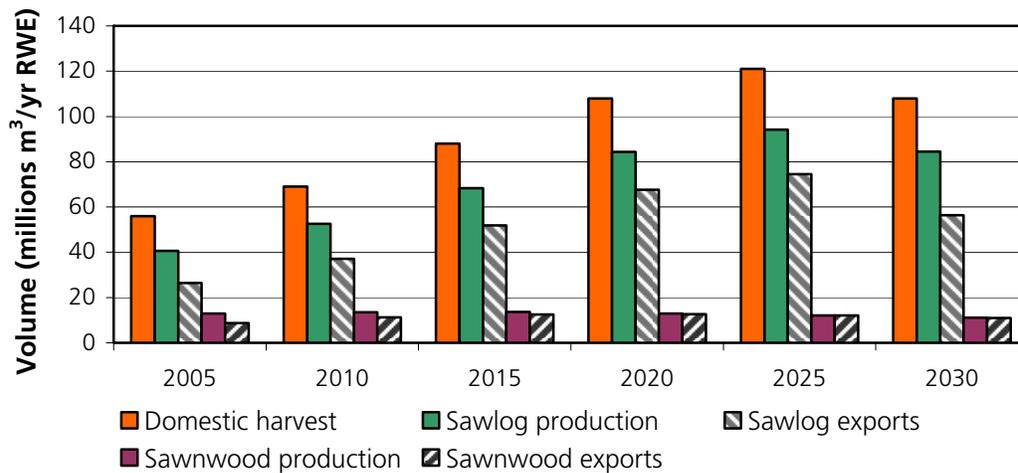
- Accelerated investment in the RFE's harvest transportation infrastructure. The investment would target improved efficiency and economy of access and transport of the raw material resources, developments which are assumed to increase harvest capacity by 1.25 over the prior year's harvest.
- Accelerated investment in Eastern Russia's sawmilling capacity to diversify and add value to Russian forest products exports. Such investing would presumably double milling capacity over the status quo.
- Accelerated investment in both harvest transport infrastructure and sawmilling capacity in the RFE.

Following is a brief discussion of the ramifications of each scenario for harvest, production and trade between China and Eastern Russia.

## SCENARIO 1: POTENTIAL IMPACT OF INCREASED INVESTMENT IN EASTERN RUSSIAN HARVEST TRANSPORT INFRASTRUCTURE

Currently, much of Siberia and the Russian Far East’s forest resources are economically inaccessible. Poor road and rail infrastructure in these remote regions makes transportation costs very high. Accelerated investment in Eastern Russian harvest transportation infrastructure will improve access to the raw materials in these areas as well as increase the efficiency of transport to and from harvest sites and eventually to market. One effect of such transportation infrastructure investment, which the Russian provincial governments currently envision, is a 90 percent increase in Eastern Russia’s harvest volumes over the next 25 years. The volume of sawlog processing and exports to China could double in the same time period.<sup>9</sup> Based on this scenario, Eastern Russia’s sawlog exports to China would account for 67 percent of its own total domestic production volumes and 36 percent of China’s total sawlog imports by 2030. However, Figure 10 shows that investment in the harvest transport infrastructure could take financial resources from the manufacturing sector, dampening Eastern Russia’s sawnwood production and exports to China, which would be expected to contract by 15 and 26 percent, respectively. The differential effects of transportation investment on logs and sawnwood may be mitigated by Russia’s new policy of graduated log export taxes. This tax, introduced in 2006, is discussed below.

**Figure 10: Potential Impact of Investment in Harvest Transportation Infrastructure on Eastern Russian Harvest, Sawlog & Sawnwood Production & Exports to China**



*Source: Northway & Bull, 2007.*

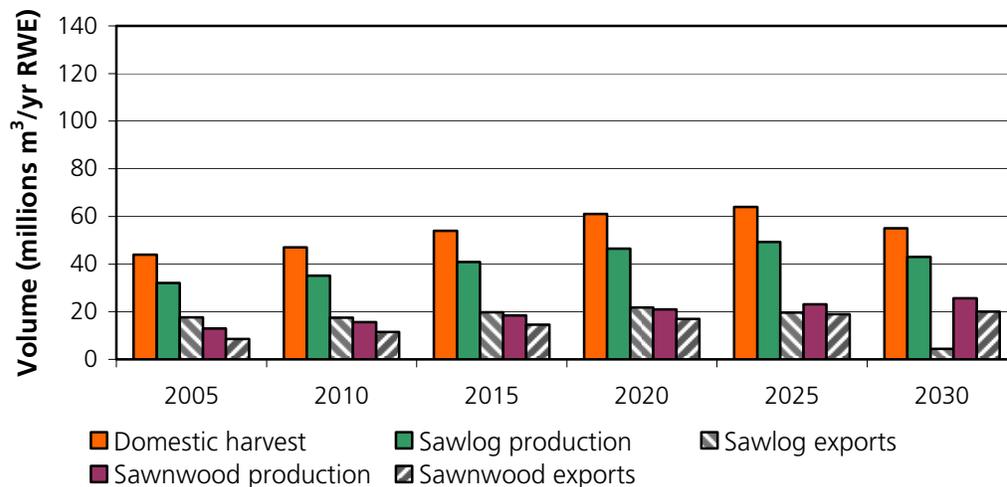
<sup>9</sup> Analysis does not include discussion of Eastern Russian pulplog harvest and trade, as we assumed no pulplog exports to China under any of the three Eastern Russian investment scenarios.

## SCENARIO 2: POTENTIAL IMPACT OF INCREASED INVESTMENT IN EASTERN RUSSIAN SAWMILLING CAPACITY

Accelerated investment in Eastern Russian sawmilling capacity would shift Eastern Russian forest products production and exports to China from sawlogs to sawnwood. With increased processing capacity, domestic sawlog production could rise by 34 percent from 2005 to 2030. Sawnwood production volumes are anticipated to increase by 98 percent over the same period. Accordingly, Eastern Russia’s forest products trade with China could also shift from sawlogs to sawnwood, with sawlog exports volumes falling by 75 percent and sawnwood exports increasing by 136 percent, as shown in Figure 11.

Though China’s sawnwood imports from Indonesia were expected to be relatively small under the status quo (2.3 million m<sup>3</sup> per year in 2030, down from 2.8 million m<sup>3</sup> per year in 2005), with Eastern Russia’s investment in harvest transportation infrastructure, China’s expected sawnwood imports from Indonesia could fall to zero.

**Figure 11: Potential Impact of Investment in Sawmilling Capacity on Eastern Russian Harvest, Sawlog & Sawnwood Production & Exports to China**



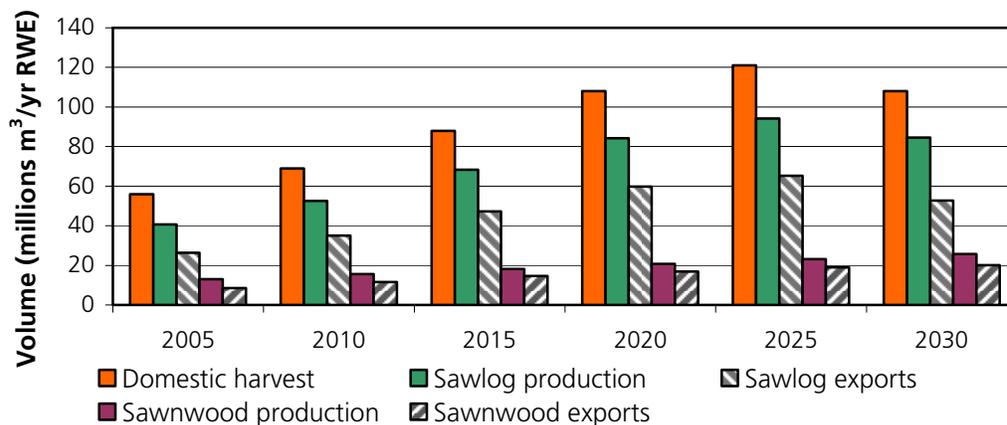
Source: Northway & Bull, 2007: Table 6, Appendices 1c, 2c.

## SCENARIO 3: POTENTIAL IMPACT OF INCREASED INVESTMENT IN BOTH EASTERN RUSSIAN HARVEST TRANSPORT INFRASTRUCTURE & SAWMILLING CAPACITY

The IFFP trade model allows us to evaluate the simultaneous investment in both harvest transportation and milling capacity in Eastern Russia. Under this scenario there could be comparable increases in the relative volumes of both sawlogs and sawnwood production and exports to China. However, the volumes of sawlogs produced would remain nearly double those of sawnwood.

Despite the dramatic implications of improved milling capacity for Eastern Russia’s sawnwood production and trade to China, this increased capacity does not cancel out the implications of improved harvest transport when the policies are implemented simultaneously. Eastern Russia’s timber harvest, domestic sawlog production, and exports to China could double from 2005 to 2030, as could the volumes of sawnwood and exports to China over the same period. Despite the proportional increase, however, Figure 12 shows that the sheer volume of sawlog production and export is still considerably more than that of sawnwood.

**Figure 12: Potential Impact of Investment in Both Transport & Milling Capacity on Eastern Russian Harvest, Sawlog & Sawnwood Production & Exports to China**



Source: Northway & Bull, 2007. Table 6, Appendices 1c, 2c.

## CONCLUSIONS

### CONSTRAINTS TO MEETING CHINA’S INDUSTRIAL ROUNDWOOD GAP

Among the many constraints to meeting China’s growing demand for industrial roundwood are the recent changes to the Russian Forest Code and the corollary effects of this new legislation on manufacturing capacity and illegal logging in Russia. Given that the revised Forest Code’s bylaws are expected to be drafted in 2007, its precise consequences remain undetermined. Russia’s forestry sector is entering a period of dynamic change, creating complex and significant impacts on Russia’s industrial roundwood supply.

#### **Eastern Russia Forest Policy**

While it may be biologically and economically possible for Eastern Russia to increase its production and export of industrial roundwood to China, the Russian government has set certain forest sector priorities. In particular, the government wants to shift Russian forest products exports away from industrial raw materials to value-added processed forest products. To this end, in 2006 the government announced its plans to reduce import taxes on high-technology wood processing equipment and the removal of export duties on certain

types of paper and cardboard. Such forest sector policy targets are likely to effect the profitability of Chinese manufacturing centers, which are dependent on unprocessed Russian logs.

Perhaps a greater impact on Russia's trade of raw industrial forest resources will be the introduction of graduated export taxes on logs. Announced in early 2006, the tax started at 6.5 percent, and is set to rise to 20 percent in July 2007, then 25 percent in April 2008, and finally 80 percent in January 2009. The implications of this graduated export tax could be significant for the Eastern Russian forest sector production and trade – as well as the Chinese and global log markets. Though not assessed here, the tax and its implications will be central in determining the extent and nature of an Eastern Russian role in Chinese forest products trade; this issue will be addressed more completely in future policy analyses.

### ***Eastern Russian Manufacturing Capacity***

Russian production of logs, lumber, and other processed wood products is expected to increase by 7 to 10 percent from 2007 to 2008, boosted by export demand from China and Finland, a steady increase in the production of panel products, as well as a domestic housing boom (IHB FORDAQ 2007). Yet, without investment in transportation and forest products processing infrastructure, the production of solid wood products in Russia will remain constrained by its own manufacturing capacity and harvest limitations. Outdated machinery will continue to limit production volumes and quality, and an incomplete and degraded harvest transportation system will limit access to remote forest resource supplies. At the same time, high energy and oil prices and the Russian government's cancellation of transportation subsidies still make forest products production costly. Moreover, there is uncertainty about the impact of the new Russia Forest Code on investment, manufacturing, trade, and regulation in the forest sector. Since the new code has yet to be implemented, its precise impacts on regional conservation and livelihoods remain to be seen; the upcoming transition is expected to be fraught with uncertainty (Laletin 2007).

### ***Illegal Logging & Trade***

A major obstacle to fulfilling China's increasing forest products demand is the enduring problem of poor forest governance in many of China's major supplying countries. In Eastern Russia, estimates of the extent of illegal logging run from 15 to 70 percent of Russia's forest sector output, depending on the definition and methodology used (Baikal Stakeholder Statement 2006). Each step in the domestic process of timber production and sales has long offered loopholes for illegal logging. The trade in forest products touches all areas of the forest sector--from permits for access, harvest, and transport, to timber warehousing and pre-sale sorting, to customs clearance prior to export.

With growing wealth in China and the logging ban imposed in the late 1990s, the flow of raw industrial roundwood from Russia to China increased from 1.5 million m<sup>3</sup> in 1999 to almost 15 million m<sup>3</sup> in 2002 (Sheingauz 2004, p. 38). The attractive returns made from the export of unprocessed logs created a significant incentive for illegal harvest, with many Chinese traders purchasing raw timber directly from harvest sites in Russia, paying in cash to avoid taxation and detection, and even establishing their own warehouses on the Russian side of the border.

President Vladimir Putin recently announced that illegal logging costs the Russian Federation over RUR 5 billion— or about US \$197 million— each year.<sup>10</sup> Illegal harvesting rates are thought to run highest in the Russian Far East along the northeast Chinese border (Sheingauz 2004: 24). In response, Russia has made illegal logging a high priority. In 2006 President Putin mandated the creation of a National Action Plan (NAP) to prevent illegal logging and related crimes. The NAP aims to reduce illegal logging by 20-30 percent within the first two years through an array of activities targeting legislation, governance, forestry management, industrial capabilities, and international support. FFA estimates that this initiative will in turn boost government revenues by up to RUR 2 billion a year (US\$74 million) through payments for licenses and fees. Greater illegal logging enforcement could also significantly decrease the overall wood supply to China and raise prices.

### ***Indonesia & Other Major Suppliers***

The shifting situation in Russian only emphasizes Northway & Bull's (2007) findings that China cannot rely on Russian supply to bridge the gap between China's domestic supply and total industrial roundwood demand. As Russia is currently the source of 50 percent of China's timber imports, this emerging reality will necessitate changes to China's import structure. For example, the next four largest suppliers to China (Malaysia, PNG, Indonesia and Thailand) provide tropical hardwood, which is not a likely substitute for the temperate softwood that composes the majority of Russia's timber exports. As Indonesia's own domestic supply dwindles in quantity and quality, and crack-downs on illegal logging constrain Indonesian supply, the country is expected to supply less and less of China's forest products imports.

## **BRIDGING THE GAP**

As Northway & Bull (2007) make clear, changes in Eastern Russia's forest policy can partially boost both unprocessed and processed forest products exports to China. Regardless of the investment decision in Eastern Russia, the possible gap between Chinese imports and domestic demand (both for domestic consumption and re-export of products) could continue to grow without forest and trade policy changes.

The scenarios indicate that neither Russia nor Indonesia will be able to significantly help China bridge this anticipated gap. In the highest-supply scenarios, Russian sawlog imports could only fill about 36 percent of China's total imports of industrial roundwood by 2030. Given the remaining disparity, China will need to reassess its own domestic timber forecasts, its manufacturing strategy and its import sources diversity. Only then can reasonable trade and investment policies that foster a sustainable forest sector be developed.

---

<sup>10</sup> Putin, Vladimir. 2006. Opening Remarks at Meeting on Forestry Sector and Timber Industry Development, Syktyvkar, Komi Republic, April 6, 2006.

## SOURCES

- Bull, G., W. Mabee, et al. 1998. *Global fibre supply model*. Rome: Food and Agriculture Organization (FAO) of the United Nations.
- CBIC World Markets. 2007. *Russia plans to dramatically increase its export tax on logs*. Toronto.
- Chinese Customs statistics, 1997-2006. Unpublished.
- IHB FORDAQ Network. 2007. *Russian production of solid wood products to increase in 2007 and 2008*. Market Info. [http://www.ihb.de/fordaq/news/Russian\\_production\\_solid\\_wood\\_14504.html](http://www.ihb.de/fordaq/news/Russian_production_solid_wood_14504.html). Posted February 20<sup>th</sup> 2007 (accessed February 20<sup>th</sup> 2007).
- Lankin, Alexey. 2005. *Forest product exports from the Russian Far East and Eastern Siberia to China: Status and trends*. Washington D.C.: Forest Trends.
- Laletin, Andrei. 2007. *Russian timber & forests: A story of decentralization, uncertainty, and change*. Presentation given at the US Forest Service Office of International Programs on April 20, 2007, Washington D.C.
- Nilsson, Sten. 1996. *Do we have enough forests?* Vienna, Austria: IUFRO Secretariat.
- Northway, Steven, and Gary Q. Bull. 2007. *International forest and forest products trade model: Scenarios for China and Eastern Russia forest supply, forest products processing, consumption, and trade*. University of British Columbia, Vancouver, British Columbia, Canada.
- Putin, Vladimir. 2006. Opening Remarks at Meeting on Forestry Sector and Timber Industry Development, Syktyvkar, Komi Republic, April 6, 2006. Transcript available online at: [http://www.kremlin.ru/eng/text/speeches/2006/04/06/2344\\_type82913\\_104294.shtml](http://www.kremlin.ru/eng/text/speeches/2006/04/06/2344_type82913_104294.shtml)
- Sheingauz, Alexander. 2004. *Overview of the forest sector in the Russian Far East: Production, industry, and the problem of illegal logging*. Washington D.C.: Forest Trends.
- Stakeholder statement to the Baikal Economic Forum. 2006. *Towards harmonious forest sector development and trade between Russia and China*. Washington D.C.: Forest Trends.
- Weiner, R.U. and D.G. Victor. 2000. *Industrial roundwood demand projections to 2050: A brief review of the literature*. Paper presented at "The Great Restoration: The Potentials for Forest Protection to 2050," a meeting convened by the Council on Foreign Relations and the World Bank/WWF Alliance, January 20-21 2000, Washington D.C. <http://greatrestoration.rockefeller.edu/21Jan2000/WeinerVictor.htm>. Accessed July 18, 2006.
- White, Andy, Xiufang Sun, Kerstin Canby, Jintao Xu, Christopher Barr, Eugenia Katsigris, Gary Bull, Christian Cossalter, Sten Nilsson. 2006. *China and global market for forest products: Transforming trade to benefit forests and livelihoods*. Washington D.C.: Forest Trends.