



CHINA AND THE GLOBAL MARKET FOR FOREST PRODUCTS

Transforming Trade to Benefit Forests and Livelihoods

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AUTHORS

**Andy White, Xiufang Sun, Kerstin Canby,
Jintao Xu, Christopher Barr, Eugenia Katsigris,
Gary Bull, Christian Cossalter and Sten Nilsson**

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Preface

China's spectacular economic growth over the last decade is having a dramatic impact throughout the world. It has become a leading nation in terms of its demand for forest products, and its influence is being felt as far afield as Cameroon and Cambodia, Indonesia and the United States.¹ Burgeoning domestic consumption, in a nation with very limited per capita forest resources, has fueled the rapid rise in China's imports of forest products. Growing demand in the US, Europe and elsewhere for low-cost wood products manufactured in China has also contributed to the country's ever-increasing demand for foreign timber. China has rapidly become the wood workshop of the world, capturing almost a third of the global trade in furniture over the last eight years.

In many supplier countries, particularly those with weak governance records, the increasing trade flows into China are associated with unsustainable harvesting, illegal logging and the abuse of forest communities' rights. However, China's growing demand also creates the possibility that millions of low-income forest producers can benefit from this new market. Trees and forests are the primary asset of millions of the world's poorest people and when governments enable the poor to use them wisely, they can be an important instrument of rural development.

China is now in the world's spotlight, with governments, industry and development agencies eager to learn more about the global impact the country is having on forests and forest industries. Until recently, they have been hampered by a scarcity of reliable information and a lack of rigorous, publicly accessible analysis of macro-level trends. The primary source of market information to date has been proprietary analysis, the costs of which have precluded their use by all but the largest international investors and trade associations.

This paper and the body of research it represents aims to help fill the knowledge gap. It is an overview of the key findings of many research studies conducted by Forest Trends, the Center for Chinese Agricultural Policy (CCAP), the Center for International Forestry Research (CIFOR) and their many partners in China and the Asia-Pacific region. As an overview, it necessarily focuses on broader and more globally critical issues. We encourage readers interested in this topic to consult the background documents that are the basis for this report. They are listed in the annex and available on the Forest Trends website (www.forest-trends.org).

The synthesis of this research presents a wake-up call for the global forestry community. One of our key findings is that domestic and export demand for Chinese manufactured wood products will continue to grow dramatically, at least over the medium term and probably well beyond. So, in turn, will the demand for both home-grown and imported timber. Furthermore, China should be seen as the harbinger of even greater change, as India and other populous developing countries increase their demand for forest products.

It is now clear that the global forest market is undergoing dramatic changes, and that these changes have important implications for forests, forest people and industry globally. We hope this paper helps governments; industry and civil society gain a clearer understanding of their respective roles in the global timber market. It is also hoped that it will help them to take an important leadership role in helping to transform the forest products market to one that not only ensures sustainable forestry and conservation, but to one that provides satisfactory livelihood opportunities for forest dependent communities, and promotes sustainable economic development for all nations.

Michael Jenkins, President, Forest Trends

David Kaimowitz, Director General, Center for International Forestry Research

¹ In this paper, the term "forest products" is used to refer to timber products (which includes logs, panels and sawnwood) plus pulp and paper. The term "forest products" is often used more broadly to cover non-timber and non-wood products such as mushrooms, botanicals and wildlife.

THE MIDDLE KINGDOM IN THE MIDDLE OF THE GLOBAL MARKET

It is difficult to overstate China's impact on the world's economy and environment. Since 2000, its contribution to global growth in terms of gross domestic product (GDP) has been almost double that of India, Brazil and Russia combined—the next three largest emerging economies. China has experienced annual GDP growth of over 9 percent since 1990, and the International Monetary Fund² projects that its economy will continue to expand by 6-8 percent a year. China has become a leading exporter of manufactured products, ranging from clothes to wooden furniture to electronic goods, as well as a major importer of raw materials such as minerals, timber and oil. Its trading activities are having a significant impact on both developed and developing countries.

China is now the world's largest consumer of many natural resources and a dominant player in the global timber market. In just ten years, it moved from a ranking of seventh to second among all nations in terms of the total value of its forest products imports, and it is now the leading importer of industrial roundwood. Between 1997 and 2005, the value of its forest product imports rose from \$6.4 billion to \$16.4 billion, and the volume more than tripled (see Figure 1).

A variety of factors lie behind China's burgeoning demand for forest products. The most obvious is the country's remarkable economic growth. China has had considerable success in reducing poverty—the number of people living on less than US\$1 a day halved during the last decade of the 20th century—and disposable income has steadily increased.³ Even in rural areas, incomes have risen five-fold during the post-Mao era. All of this has stimulated a sharp increase in the domestic demand for forest products.

Environmental and economic factors have both played a part in the dramatic increase of wood pulp imports to supply China's paper industry. In the past, most literate Chinese used poor-quality paper manufactured from rice straw and other agricultural residues, produced in small mills scattered across the countryside. However, concern about water pollution, and a rising demand for high-quality paper and packaging material, led the government to close down over 4,000 small-scale pulp mills and promote a modern paper industry based on high-tech processing plants and fast-growing pulpwood plantations. The demand for paper and paperboard grew by an average of 9.6 percent a year between 1990 and 2003, and China is now the second largest producer of paper and paperboard in the world after the US, with most of its production being for domestic consumption.

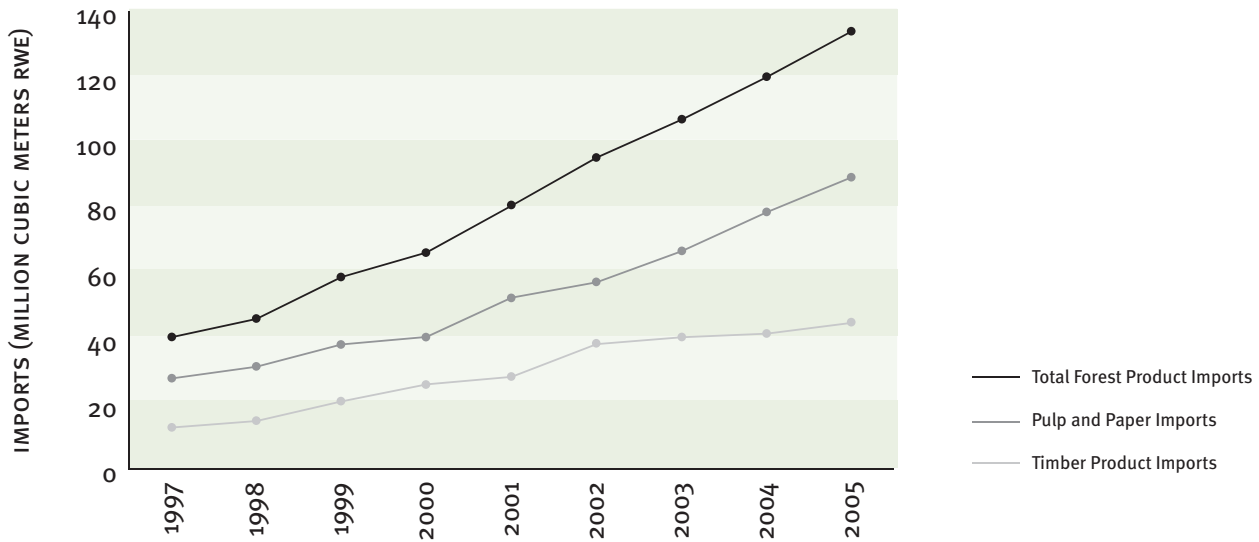
China has also become the world's largest wood workshop, responding to a growing demand for furniture, plywood, wood moldings and flooring, particularly in the developed world. The quantity of timber which is processed and exported is equivalent, in terms of volume, to over 70 percent of the timber imported by China. In a period of just eight years, China's timber product exports tripled in volume and quadrupled in value, with approximately one-third of its furniture output going for export. Major markets such as the US and EU increased imports of Chinese manufactured wood products by 700-900 percent between 1997 and 2005.

Domestic supply of industrial wood has failed to keep up with China's growing demand. This is a reflection of the spectacular increase in growth in domestic consumption and the demand for exports on the one hand, and the government's decision to protect the country's forests on the other. The Natural Forest Protection Program (often referred as the logging ban), introduced in 1998 after floods devastated the middle reaches of the Yangtze River—deforestation in the upper reaches of the Yangtze River was thought to be partly responsible—led to a dramatic decrease in domestic production.

² The Economist, quoting the International Monetary Fund (IMF), July 30th 2005

³ UNDP, 2003, Human Development Report

fig.1 RECENT TRENDS IN CHINESE FOREST PRODUCTS IMPORTS⁴



Source: Chinese customs statistics

The following pages explore what all this means for China and for the many countries which supply China with forest products and which import Chinese furniture and other manufactured wood products since 1997. Chapter 1 focuses on the scale and trends of China’s forest product imports. Some 75 percent of timber products and over 60 percent of forest products overall come from Asia-Pacific countries, but China is also having a major influence in Africa and Latin America. While the Chinese market is obviously growing in global importance, it is useful to realize that China is just one, albeit critical, link in a global commodity chain. In Chapter 2, we examine the nature of the country’s forest product export industry, and show how demand in the United States and the

European Union (EU) in particular is driving China’s rising demand for forest products. The increasing trade flows have frequently been associated with unsustainable harvesting, illegal logging and other abuses. These and related issues are discussed in Chapter 3.

This is followed by a chapter which explores China’s domestic forest production and the urgent need for reform if the country is to meet its wood production targets, reduce its reliance on imports, alleviate rural poverty, and at the same time maintain or expand the environmental services that forests provide. Chapter 5 provides an analysis of the strategic options facing China and the world, followed by a framework for action.

⁴ In order to compare and aggregate volumes of timber products and pulp and paper, various types of wood products are converted to roundwood equivalent volumes (RWE). A conversion factor is used to convert a product’s physical volume in unit of cubic meters to its RWE volume in cubic meters (e.g. one cubic meter of lumber equals 1.43 RWE cubic meters). A complete list of conversion factors used can be found in Sun et al. 2004 “China’s Forest Product Import Trends, 1997-2002: Analysis of Customs Data with Emphasis on Asia-Pacific Supplier Countries.”

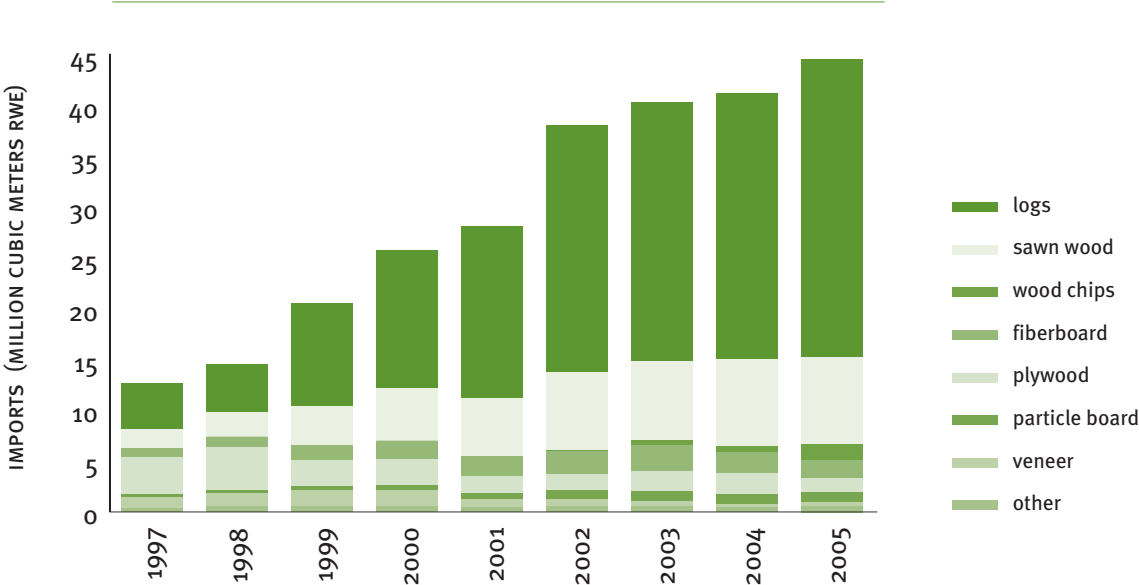
THE RAPID GROWTH OF CHINA'S IMPORTS

Between 1997 and 2005, China's total forest product imports more than tripled in volume (roundwood equivalent) from 40 million to 134 million m³, and more than doubled in value. This was a reflection of three things: the country's own increasing consumption of forest products; the rising international demand for low-cost forest products manufactured in China; and China's inability to meet rising demand through production from its own forests.

During recent years, the nature of Chinese forest product imports has changed, as China is able to increasingly capture more value in its own manufacturing process. Figure 2 shows the trends of timber

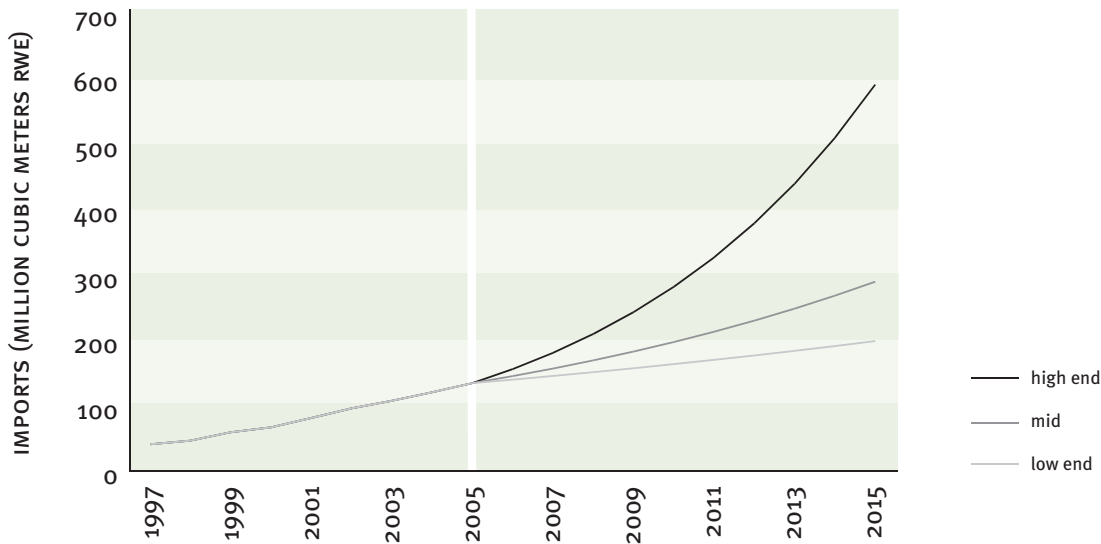
product imports. Through the late 1990s, for example, China imported large quantities of plywood. Today, however, China imports large quantities of raw logs, or barely processed wood products, to feed its own thriving plywood industry. Between 1994 and 2004, plywood production rocketed from 2.6 to 21.0 million cubic meters, with the country becoming a net exporter of plywood in 2001.⁵ This has had a serious impact on plywood manufacturers globally, who are not only losing their share of Chinese markets, but also being out-competed in other markets by cheaper Chinese plywood. Indeed, over the last few years China has established a panel production capacity equivalent to that of the United States. Similarly, in 1997, China imported 70 percent more paper than pulp by roundwood equivalent volume. However, pulp imports grew so fast that by 1999 China imported as much pulp as paper, and by 2005 pulp imports far exceeded those of paper.

fig.2 CHINA'S TIMBER PRODUCT IMPORTS BY PRODUCT TYPE



⁵ It is worth noting that China continues to import relatively high value plywood, mostly made of tropical wood, while the plywood exported from China is of lower value.

**fig.3 CHINESE IMPORTS OF FOREST PRODUCTS:
Actual and Potential Trends (1997-2015)**



Source: Chinese customs statistics and FT projections

Our research indicates that the trends of rising imports will almost certainly continue, possibly for several decades. We estimate that forest product imports are likely to double in the next 10 years alone. Figure 3 provides a graphic illustration of three possible scenarios for China’s forest product import trends through 2015. The high-end projection assumes a continuation of the 16 percent average rate between 1997 and 2005; the mid-range projection assumes half this growth; and the low-end projection assumes a quarter of this growth.

If annual GDP growth rates exceed 6-8 percent, demand for imports could be correspondingly higher. Although it is hard to imagine imports continuing to grow at 16 percent per year in the future, it is worth recalling that US demand for all products manufactured in China grew by 24 percent between July 2004 and July 2005.⁶ Such high growth in demand may continue for some time, but eventually the point may be

reached when limited supplies, coupled with rising prices for raw materials, will mitigate against further increases in demand.

Likewise, domestic demand for paper and packaging materials also means that China’s imports of both wood pulp and recycled paper will rise rapidly during the coming years. China’s economic expansion has led to greater consumption of all types of paper and paperboard, from high-quality products used for writing, magazines and photocopying to cardboard boxes, paper bags and toilet paper. China’s consumption of printing and writing paper has also doubled since 1995 to reach approximately 13.5 million tons per year. Indeed, a recent survey found that the residents of Shanghai now use twice as much tissue and toilet paper as the international average.⁷ The aspirations of people throughout the rest of China will be much the same as those of the people who live in Shanghai and

⁶ US Commerce Department, August, 2005

⁷ China Daily, February 15, 2005

other urban centers. Other populous countries—the most obvious being India—are also likely to follow similar consumption patterns to China (see Box 1).

China's overall paper demand is projected to grow from approximately 50 to 69 million tons by 2010. Our projections indicate that wastepaper, collected from both domestic and international sources, will supply most of China's new paper and paperboard capacity, and will account for approximately 58 percent of the industry's fiber mix by 2010.

Can China's Domestic Production Offset Imports?

China's growing dependence on imports—both to feed domestic demand and supply international markets with manufactured products—is unlikely to wane unless domestic production grows as quickly as demand. By 2005, the volume of imports (134 million cubic meters measured in RWE) had already caught up with the official levels of domestic industrial roundwood removals. Figure 4 presents the actual and potential trends in industrial roundwood removal, compared with government targets for 2015. The Chinese government has been investing heavily in new plantation projects, with the aim of dramatically increasing home production. However, the State Forestry

Administration's (SFA) projections for roundwood production far exceed even our most optimistic scenario.

Our research demonstrates that instead of harvesting 328 million cubic meters of industrial roundwood by 2015, as the SFA projects, China is unlikely to harvest more than 200 million cubic meters. The reasons for this are discussed more fully in Chapter 4. The government has initiated a heavily subsidized plantation program, but a combination of factors—including poor soils, low quality stock, sub-optimal silvicultural management and high transport costs associated with remoteness—means that targets are not currently being met, and output is highly unlikely to meet official projections by 2015.

In addition to the low levels of production from the plantation sector, the large level of unreported, or illegal, logging is diminishing the stock available for exploitation in the future, rendering optimistic projections even less likely. The leadership of the State Forest Administration has estimated that unreported logging has averaged 75 million cubic meters a year.⁸ Our research suggests a higher level, in the range of 100–116 million cubic meters a year. This high amount of unreported logging means that even our own high-end scenario is most probably unrealistically high.

Box 1 INDIA AS THE NEXT CHINA?

Around 2020, India's population will reach some 1.25 billion people, of which nearly 70 percent will be in the age range of 16-65 years. It will have the world's largest working and consuming population. The outlook for economic growth is in the range of 6 to 7 percent a year. Combining these forecasts with the predicted continued rise in per capita income and the growth of the middle class, one can expect to see significant increases in consumption. Within the next 20 years, India will probably overtake China in growth status, as its workforce continues to expand.⁹ It is estimated that industrial log consumption is currently 50 million cubic meters and could grow to 90-120 million cubic meters by 2020.¹⁰ Given the available information on the domestic wood supply, which is admittedly uncertain, there could be a deficit in India of 20-70 million cubic meters by 2020.¹¹

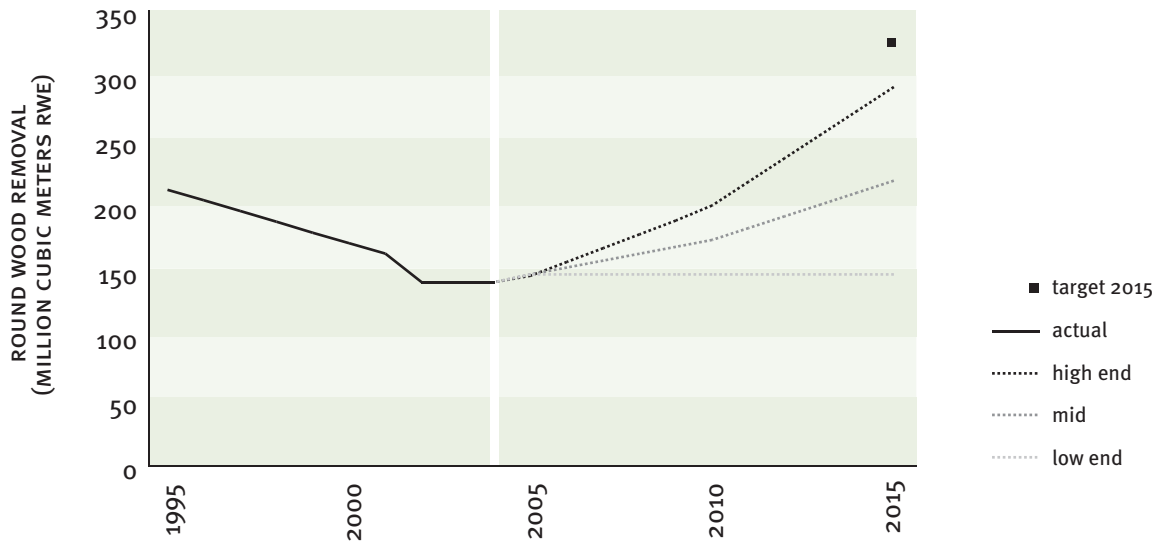
⁸ Vice Head of Chinese State Forest Administration, as cited in AFP, January 18, 2006.

⁹ The Economist (2004). The Dragon and the Eagle. 2 October, London, UK.

¹⁰ Muthoo, M.J. (2004). Review of the Indian Timber Market. PPD 49/02, International Tropical Timber Organization (ITTO), Yokohama, Japan.

¹¹ Nilsson, S. and G. Bull (2005). Global Wood Supply Analysis. Paper presented at 46th Session of the FAO Advisory Committee on Paper and Wood Products, May 2005, Vancouver, Canada.

fig.4 **DOMESTIC INDUSTRIAL ROUNDWOOD REMOVAL: Actual and Potential Trends Compared with Government Targets for 2015**



THE EXPORT BOOM

Responding to Growing Global Demand

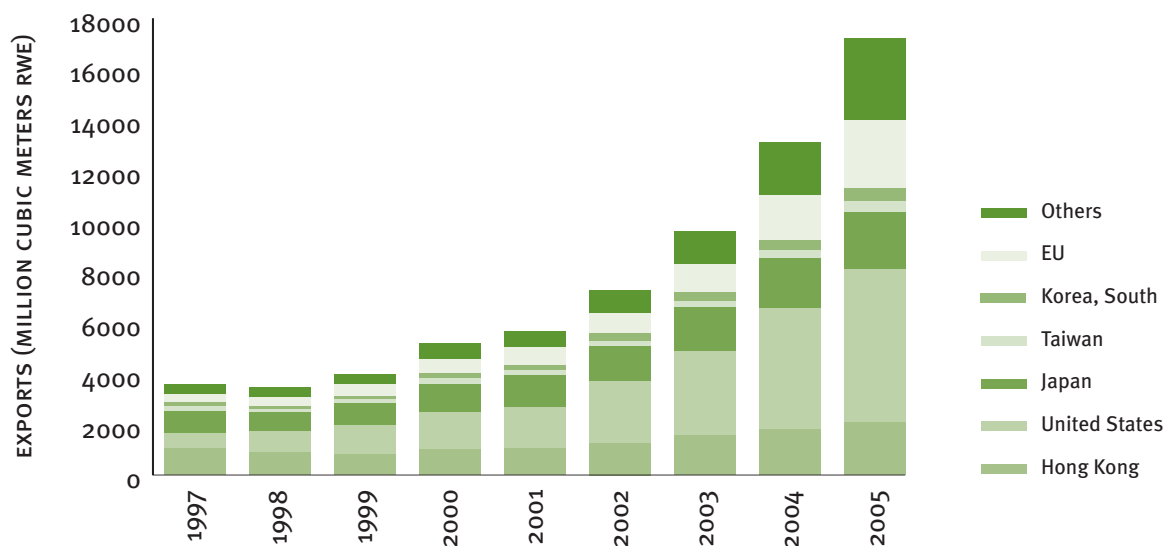
Evidence which suggests that Chinese demand for timber is linked to an increase in unsustainable harvesting, illegal logging and the abuse of human rights has led some international organizations to rail against China's role in the timber trade. However, China is only one link in a global commodity chain. Consumers and retailers in the US, EU and Japan who buy Chinese furniture and plywood made from illegally harvested hardwoods from Papua New Guinea—to give just one example—are an integral part of the story.

China's massive reservoir of cheap labor and unusually open economy¹² has helped to transform the country into a leading supplier of many consumer

goods. China now makes 30 percent of all the world's televisions, 50 percent of the world's cameras and 70 percent of the world's photocopiers. Furthermore, it accounts for over 30 percent of the world's furniture trade.¹³ As far as forest products are concerned, China is now a key link in a vast global commodity chain, with tens of thousands of Chinese businesses responding to the growing demand for cheap wood-based products, especially furniture, in the developed world.

Between 1997 and 2005, exports value of forest products rose from US\$3.6 billion to US\$17.2 billion. Exports of timber products accounted for more than 75 percent of China's total exports of forest products over the last eight years, significantly more than pulp and paper, although exports of the latter have also experienced steady growth, almost doubling in value since 1997. The main timber products exported by China are furniture, wood-based panels and, to a lesser extent, wood chips. In 2005, these accounted for over

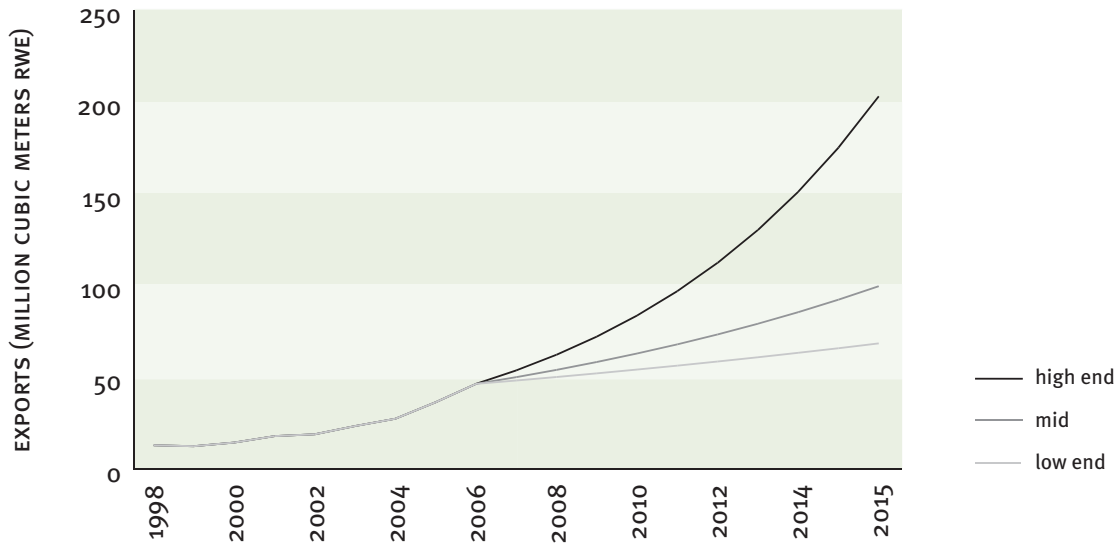
fig.5 CHINA'S CUSTOMERS (EXPORTS IN US\$ MILLION)



¹² Total imports and exports of goods and services amount to 75 percent of China's GDP, compared to 25-30 percent in Brazil and Japan.

¹³ The Economist, July 30th 2005; Gordon Brown MP, speech to Labour Party Conference, Brighton, UK, October 2005.

fig. 6 **BOOMING EXPORTS IN FOREST PRODUCTS—
ACTUAL AND POTENTIAL TRENDS, 1997-2015**



80 percent of China’s total timber product exports. China’s exports of wood furniture have increased at an average annual rate of 19 percent, from 3.2 to 12.7 million cubic meters RWE between 1997 and 2005. During the same period China’s plywood exports increased ten-fold—to over 10 million cubic meters RWE—making China the largest exporter of plywood in the world.

While the number of countries importing forest products from China has steadily increased, a relatively small number take the lion’s share of China’s exports. The US, Japan and Hong Kong have long been the major destinations of Chinese exports, with the EU member countries playing an important, but less substantial role. But imports by the US and EU, in particular, have exploded since 1997. US imports have increased almost 1000 percent since 1997. The US has been the single largest importer since 2000 and its share of total imports reached 35 percent of total export value by 2005. Imports by the EU have grown dramatically as well since 1997, almost 800 percent, with the UK the top

importer and accounting for approximately one-third of all EU imports (See Figure 5). Germany and the Netherlands follow the UK in imports from China with 16 percent and 10 percent respectively. Imports of Chinese forest products by Hong Kong and Japan have roughly doubled during this same period. The main destinations for China’s rapidly growing plywood exports are the US, South Korea, Hong Kong, Taiwan and the EU.

There is every indication that China’s exports of manufactured wood products will continue to grow, and within a decade they will far exceed the already considerable volume leaving the country today. Figure 6 gives three possible scenarios. Were the highest of these to become a reality, then China’s exports would increase by more than five times over the next 10 years.

In three of its largest markets (US, Japan and EU), China is becoming increasingly vulnerable to changing buyer preferences, as these markets rapidly become more environmentally sensitive—in particular to the issue of illegally sourced wood products. Most

table 1 TOP SUPPLIERS OF CHINA'S IMPORTS (2005)

TIMBER PRODUCTS OVERALL	LOGS	LUMBER
1 Russia 48.8%	Russia 68.2%	Russia 17.7%
2 Malaysia 8.3% ¹⁵	Malaysia 6.3%	USA 14.3%
3 Indonesia 5.7%	PNG 6.3%	Thailand 12.8%
4 Thailand 4.6%	Myanmar 3.9%	Indonesia 12.1%
5 PNG 4.2%	Gabon 2.7%	Malaysia 8.0%
PLYWOOD	WOOD PULP	PAPER
1 Indonesia 65.0%	Canada 26.7%	Taiwan 16.0%
2 Malaysia 21.2%	Indonesia 18.2%	USA 12.5%
3 Russia 3.1%	Russia 12.9%	S. Korea 11.6%
4 Japan 2.4%	Chile 10.3%	Japan 8.0%
5 Taiwan 1.4%	USA 9.5%	Indonesia 6.9%

Note: Listed in order of ranking by volume of 2005 exports to China. Percentages indicate proportion volume of China's total imports in the product category.

Source: Chinese customs; also see Sun et al. 2004.

European countries—with Japan likely to soon follow—are now drafting or implementing policies requiring public projects to procure only legally verified or certified forest products. In the UK, where a procurement policy has been in place the longest, significant spill-over effects are being reported in private sector construction and new evidence indicates that there is a price premium for legally verified and certified forest products. In November, 2005, in response to environmental campaigns near Parliament in London, several UK

timber traders canceled several millions of dollars worth of contracts of Chinese plywood with alleged illegally-sourced veneer facing. While to date the US government has had an ambivalent approach to addressing illegal logging and trade,¹⁴ US producers are beginning to recognize that they are being undercut by illegally sourced and traded wood. US exporters are also facing the need to demonstrate the legal source of their products for their EU markets.

¹⁴US agencies have, in general, promoted work to address illegal logging within producer countries themselves, but otherwise have generally discouraged certification and “demand” side approaches by consumer countries in international forums.

¹⁵ Many Malaysian wood products are thought to actually be “re-exported” but originating in Indonesia and other Asian countries.

IMPACTS AND IMPLICATIONS OF THE TRADE ON FORESTS AND FOREST PEOPLE

There is a dark side to this story. China is now importing forest products from many more countries than in the past, and this trade is exacerbating the problems of deforestation, unsustainable harvesting practices, illegal logging, marginalization of the indigenous and other poor communities, and the abuse of human rights in supplier countries. Of course, China is not the only importing country, but it accounts for over half the log exports from Papua New Guinea (PNG), Myanmar and Indonesia, and some 40 percent of log exports from Russia (primarily the Far East).

The number of countries supplying China with forest products has steadily risen, with the number of countries exporting over a half million US dollars in value to China from 54 in 1997 to 84 in 2005. Nonetheless, some two thirds of total forest product imports, when measured by volume, still come from the Asia-Pacific region. The rise in Russian log imports has been particularly dramatic, increasing by a factor of 21 during the period 1997-2005, from 0.95 to 20 million cubic meters.

However, it is not just the Asia-Pacific countries that are heavily dependent on the Chinese market

(see Table 1). Take, for example, Africa's Congo Basin. A decade ago, most of the exported timber went to Europe, but China has now become a major destination. Between 1998 and 2003, Chinese log imports from West Africa increased from 25 percent to 42 percent of all exports from the region.

Declining Forests, Declining Supply

There are serious concerns about the rapid decline of natural forests in countries that export forest products to China, and their ability to supply products in the future, both for local needs and export. While many countries in East Asia have ambitious plantation programs, many plantations are under-performing or are not expected to come on-line for many years. It is estimated that at present cutting rates, the natural forests in PNG will be logged out in 13-16 years. The equivalent figure for Indonesia is 10 years. The situation in Myanmar is no better, and may be even worse, and the Philippines and Thailand have already logged out most of their natural forests. (See Table 2)

One of the countries dramatically affected by the trade with China is PNG. The intensity of logging has been rapidly increasing, with concessionaires frequently exploiting areas of forest that are topographically unsuited to logging. The average concession life between 1993 and 2000 was just 11 years, a fraction of the 40-year cutting cycle required by law, implying that cutting rates are far in excess of a sustainable harvest. As most of PNG's logs are exported, the

**table 2 ESTIMATE OF YEARS OF ECONOMICALLY ACCESSIBLE MATURE
NATURAL FOREST REMAINING AT CURRENT CUTTING RATES**

COUNTRY OR REGION	YEARS (ESTIMATE)
Russian Far East	>20
Indonesia	10
PNG	13-16
Myanmar	10-15
Cambodia	4-9

Source: E. Katsigris et al. 2005. The China Forest Products Trade: Overview of Asia-Pacific Supplying Countries, Impacts, and Implications.

box 2 THE EFFECT ON WOOD PRODUCT PRICES:

The Illegal Wood Trade and Impacts of Anti-Illegal Logging Campaigns

World timber prices are estimated to have been depressed by 7-16 percent by the flooding of the marketplace with illegal timber and wood products (AF&PA, 2005). At the regional level, the crackdown on illegal logging in Papua, Indonesia, in early 2005 shows how illegal logging depresses prices. During a two-month period, 400,000 cubic meters of illegally harvested logs were seized by the authorities—equivalent to three percent of the annual global tropical log trade. The quantity of merbau logs arriving in China subsequently fell by 83 percent. This led to a doubling in log prices and a 42 percent increase in sawn timber prices at the ports in China. A late 2005 crack-down in Kachin State led to significant decreases in log availability to Chinese industry at the Myanmar–Yunnan border.

Source: Environmental Investigative Agency, 2005 and Global Witness, 2006

export trade represents a direct threat to the nation's forests, and is, a misuse of natural assets that, well-managed, could contribute to economic development in the longer run.

The situation in the Russian Far East may appear healthier than in some other supplier countries, not least because its resources are so vast. However, even here, there are both social and environmental problems. Although there are over 20 years' worth of natural forest remaining at current cutting rates, the extraction of the best and most valuable timber—a practice known as high-grading—is causing significant degradation. Catastrophic fires recently consumed an area equivalent to approximately four times the area harvested each year. Although fires are a natural phenomenon, these were made worse by poor forestry practices.

The over-exploitation of tropical forests is eliminating assets that could provide long-term employment, and contribute towards sustained economic growth in rural areas. Instead, the rapidly declining supply of timber, particularly in tropical countries, means that local people will soon lose their forests, which represent an important source of revenue, fuelwood and non-timber forest products. It also means

that Chinese importers will need to shop elsewhere for forest products. Already, China has begun to increase its imports from North America, where supplies are more sustainable.

Accelerating Illegal Logging

There is no doubt that global demand for forest products has worsened the problem of illegal logging¹⁶ in many countries. Illegal logging deprives governments of tax revenues, depresses prices, frequently leads to unsustainable harvesting, undermines the rule of law and sometimes generates funds to support and perpetuate armed conflicts. Although local people are frequently involved in the illegal trade, far greater numbers of forest-dependent people suffer as their forest resources dwindle.

Across East Asia, there is evidence to suggest that large quantities of illegally-sourced forest products are heading for China. In Indonesia, 80 percent of the timber harvest is thought to be illegal. Illegal logging is also rife in the Russian Far East and south-east Siberia, and in some places is said to account for up to two-thirds of the harvest. The highest levels of illegal logging in Russia tend to occur in districts which provide timber for export. Due to the sheer size of Russia's

¹⁶ The definition of "illegal logging" is usually accepted as the violation of relevant national legislation (including ratified international treaties and conventions).

forests and their remoteness, the total output of both legal and illegal logging is still below the official annual allowable cut. However, forest degradation is a serious problem, and illegal logging is leading to over-harvesting in many of the more accessible areas.

In Cambodia, the process by which economic (forest) concessions are allocated has been considered by a recent report from the United Nations High Commission on Refugees (UNHCR) to be a violation of basic human rights. Illegal logging is also a major concern in many of the African countries that supply China with hardwoods, including Equatorial Guinea, Gabon and Cameroon. Illegal logging often involves local politicians and government officials who frequently aid and abet the harvest and trade of illegal timber. The extent and scale of their involvement varies from place to place, but it clearly has a negative impact on the political process and undermines the rule of law.

Only a handful of countries in Asia have taken significant steps to curtail illegal logging in their countries, including Indonesia, Malaysia, the Philippines and starting in the fall of 2005, northern Myanmar. Indonesia and the Philippines have officially requested assistance from all consumer countries to help them to eliminate this problem between their trading partners. Illegal logging campaigns in some of China's major supplying countries could have significant impacts on the stability of prices and volumes of forest products available to Chinese industry (see Box 2).

In other countries governments are tackling the problem less forcefully. In PNG, there is overwhelming evidence that the foreign-owned logging industry is a major contributor to corruption at the highest levels of government and throughout the bureaucracy. Conglomerates with logging and export interests—an obvious example is Rimbunan Hijau—are reported to provide funds for political parties and individual politicians, and they own major interests in local media and communications sectors. In return for funds, companies are able to “buy” the right to log particular

concessions and they are virtually exempt from the rule of law. Official inspections at export only verify the quantity and description of the timber to ensure export taxes are paid; there is no connection between the unlawful nature of operations in the forest and the legal documentation that PNG wood products carry. Official export documentation is therefore likely to be laundering the “unlawful” timber into legitimately-produced exports.

Impacting Local Livelihoods

The increased trade in forest products in supplying countries has undoubtedly benefited some of the forest poor, but evidence suggests that most often, poor communities which are most closely tied to the forests, and dependent on them for their survival, lose out as local elites, logging companies and migrant workers capture most of the benefits. Even in PNG, where the land traditionally belongs to local communities, and where local communities must consent to any major resource use, local elites benefit disproportionately when they bring logging companies into the area. In early 2005, there were reports of widespread human rights abuses associated with illegal logging in PNG.

In Russia, too, there are also many more losers than winners. For example, in Khabarovskiy Krai, one of the key regions supplying forest products to China, 30,000 people, a fifth of the Krai's population, are almost entirely dependent on the forest sector for their livelihoods.¹⁷ Yet the forests are rapidly disappearing as a result of over-harvesting and poor logging practices. While a relatively small number of operators have got rich quick, the vast majority face the loss of both forests and livelihoods.

Similarly, in Myanmar the benefits from forest product exports accrue to a small number of people. Logging and the drug trade have created an elite class among insurgent groups controlling border areas, while local people within Kachin State—a key timber supplier to China—still lack roads, electricity and other basic infrastructure. In Thailand, insecure land tenure has

¹⁷ Sheingauz, Alexander, Anatoly Lebedev, and Natalia Antonva, Russian Far East-China Softwood Log Commodity Chain and Livelihood Analysis (Russian Portion), Forest Trends, 2005.

box 3 **WINNERS AND LOSERS ALONG THE COMMODITY CHAIN**

Establishing precisely who benefits along the commodity chain is far from easy, requiring detailed research at every step, from the forest floor to the logging pound, from the ports of exit and entry to the sawmills, furniture workshops and ultimately the retailers. However, our research suggests that the benefits are seldom evenly spread. For example, a local community in Papua receives approximately US\$11 for a cubic meter of hardwood. By this time the same cubic meter arrives in China, it is worth US\$240. The manufactured product derived from this cubic meter and sold to consumers in the US or EU is worth 10 times that much. It is not easy to draw conclusions from these figures, but it seems that the people who benefit least are the local people whose forests are being exploited.

Research by the Bureau for Regional Outreach Campaigns in the Russian Far East shows just how complex a commodity chain can be when it comes to illegal logging. The Vladivostok-based NGO has provided a breakdown of the costs involved in the production and transport of a cubic meter of illegally harvest timber in Primorskiy Krai. By the time it reaches the Chinese border it is worth US\$140. US\$5 goes to the environmental inspector, to make sure that the timber can be removed from the forest without incident. US\$18 is shared between the loggers, the truckers and the security personnel, with a further US\$5 going on gasoline. US\$5 goes to the forest leaser to retain the right to log in future, and US\$10 goes on documentation at timber depots. US\$10 goes on bribes to customs officials, US\$5 to the militia and US\$3 to forestry officials. Another US\$5 goes to municipal administrators and a further US\$4 to regional administrators. The remaining US\$70—half the value—goes to just one person, the Chinese wholesaler in the border town of Suifenhe.

led to the displacement of local people and the loss of farmland to plantation development. Forest-dependent people in Thailand are frequently denied access to their traditional resources as a result of forestry policy, and much the same has occurred in Cambodia, where conflicts between villagers and plantation companies are becoming increasingly common.

Frequently, the profits from logging either leave the producer country, or accrue to foreigners involved in the local logging trade. For example, in Myanmar the logging operations which serve the Chinese market are conducted by Chinese companies staffed almost exclusively by Chinese citizens. In PNG, foreign concessionaires employ relatively few local people, and rely instead on workers from Malaysia, Indonesia, China and the Philippines. Even in Russia, Chinese

companies are making inroads into the processing industry, and low-cost Chinese labor is often favored over more expensive Russian labor in Russian enterprises.

Both legal and illegal logging has been associated with the abuse of human rights and conflict. A clear example comes from Liberia. By 2002 China had become the country's largest buyer of timber. Most of the logs sourced from Liberia come through the Oriental Timber Company (OTC), which has been accused of intimidation and harassment of local communities. OTC was given unrestricted access to the nation's forests by Charles Taylor, former rebel leader and later president, who relied heavily on timber revenues to support his military campaigns and fund mercenaries in neighboring countries.¹⁸

¹⁸ EIA President Alan Thornton's testimony to the United States House of Representatives, 2005.

box 4 **INTERNATIONAL RESPONSE TO TRADE IN ILLEGALLY SOURCED FOREST PRODUCTS**

Growing concern about illegal logging, associated trade and corruption, has led to the development of new national, regional and international initiatives over the past few years. Combating illegal logging and the associated corruption has been on the agenda of the G7/G8 summit since 1997. The G8 Action Programme on Forests, launched in 1998, was the first major public commitment to address illegal logging. Illegal logging remained a priority for the G8 in 2005. Many governments are also taking steps to improve governance, and they are encouraging countries that import timber, and the international community as a whole, to clamp down on the trade in illegal logs. For example, in July 2005 the Indonesian Vice-President called for sanctions against countries that purchased illegally logged wood. Indonesia has also developed bilateral agreements with a number of countries to combat illegal logging, China being one of them. However, analysts report that these agreements have yet to have any palpable impact.

At the regional level, political commitment has been expressed through the Forest Law Enforcement and Governance (FLEG) ministerial process, which resulted in the Bali Declaration in 2001 and the St. Petersburg Declaration in 2005. Consumer governments, donor organizations, non-governmental organizations and the private sector, including financial institutions, increasingly recognize that they have a role to play in combating the problem of illegal logging.

THE NEED TO BOOST PRODUCTION AND IMPROVE LIVELIHOODS IN CHINA

All the evidence indicates that China will continue to rely on imports of forest products for decades. Nevertheless, China now has the opportunity to boost domestic forest production, and by so doing, diminish pressure on some of the supplying countries while helping to alleviate rural poverty in China and reduce the growing income disparity within the country.

Since 1998 the Government of China has undertaken a remarkable, and most probably historically unprecedented, set of initiatives aimed at restoring its forest base. The central government has allotted US \$1.7 billion in subsidies for fast-growing plantations to be distributed by 2015,¹⁹ and between 1998 and 2004 government funding for forest restoration and protection programs has increased from US \$358 million to US \$3.7 billion a year.²⁰ These are astonishing levels of commitment. These initiatives have focused on banning or reducing production from natural forests, most of which are owned by low-income rural people, and establishing fast-growing plantations, primarily on publicly-owned land. Unfortunately, the results have been mixed and there is a growing realization among Chinese government officials and researchers that this approach to forestry development has its limits. There are serious doubts about whether China can continue to subsidize both ecosystem restoration and plantations, or meet its plantations targets, while simultaneously maintaining policies that discourage or deny production from low-income forest owners (See Box 5).

There are insufficient government funds to pay, or compensate, all landholders to achieve national forestry development goals, and budgets for forest planting and restoration are now declining. Given these

financial constraints, there is also a growing recognition that the government should address the policy and institutional constraints that currently discourage landowners and private companies from investing their resources in forests and forestry.

Tensions and Trends in the Collective Forest Sector

Nearly 60 percent of China's forests are collectively owned and they play a critical role in the lives of both their owners and the nation, currently providing half the domestic timber supply and most non-timber forest products. Investment and production has increased from these forests since the policy reforms of the early 1980s. Reforms that strengthened household property rights were particularly important. However, the forest regulations and taxes enacted in the late 1980s continue to constrain production and new protection-oriented programs have further reduced the incentive to plant and manage forests.

The most important domestic regulation is the log-harvesting quota, which requires forest owners to obtain a permit from the forestry authority. This has had a profoundly negative impact on many communities' incentive to plant or manage trees. Households are frequently unable to obtain permits when management and market conditions favor harvesting, and case studies demonstrate that the quota often becomes a tool for corruption by local elites and officials. Numerous case studies have also found that local people who fail to get harvesting permits frequently clear their forest to plant either tree crops or bamboo. The authorities are clearly aware that the quota system has its defects and are beginning to allow some exemptions. Unfortunately, these have primarily benefited industrial-scale plantation owners. A new government forest policy, entitled "Resolution on Accelerating Forest Development" promulgated in 2003 by the Central Committee and the State Council (simply called Policy No. 9),

¹⁹ American Forest & Paper Association. "China's Subsidization of its Forest Products Industry" July 2004.

²⁰ China Forestry Development Report 2005, SFA. China Forestry Publishing House. Almost 90 percent of this expenditure is for the two largest programs, the "Sloping land Conversion Program" which focuses on planting trees and grasses on degraded agricultural lands and the "Natural Forest Protection Program."

box 5 **CHINA'S PULPWOOD CHALLENGE**

China's rapidly growing pulp and paper sector is placing heavy pressure on natural forests, both in China and the region. Since 1990, China has accounted for over 50 percent of the world's overall growth in paper and paperboard production. To meet growing domestic demand, the government is promoting a new industry based on large, high-tech mills which process wood pulp into paper. China's demand for wood pulp is projected to increase from approximately 9 million in 2003 to 15 million tons by 2010. The government has provided significant capital investment to 13 high-priority pulp and paper projects, and it is subsidizing the development of up to 5.8 million hectares of fast-growing pulpwood plantations. These, it is hoped, will provide the new mills with a sustainable supply of fiber.

But will they? Despite the massive investments, the industry faces a number of serious challenges. First, establishing plantations can be a slow and complex business as most of the suitable land is held by households and communities. Second, the cost of growing wood in China is considerably higher than in key competitor countries like Indonesia and Brazil—thus reducing the incentive for private-sector investment. There are concerns about the way in which pulp producers in some parts of China are developing large-scale mills before securing a sustainable supply of fiber. This rapid expansion is partially driven by subsidies. It is also a matter for concern that the risks and social impacts associated with fast-growing plantation development in China have yet to be fully evaluated.

In short, the demand for wood pulp is currently being met by imports, mostly from neighboring countries, some of which have limited control over the use of their forests and poor governance records. In these countries, China's rapidly expanding demand for wood pulp is leading to an increase in unsustainable harvesting. This, in turn, has negative impacts on the environment and local communities. Given the domestic constraints to production, this troubling state of affairs could continue for many years.

proposes greater respect for collective forest rights and a general relaxation of regulations. However, concrete plans, regulations and transition strategies have yet to be developed.

The new generation of ecological protection programs has added another layer of discouragement to local forest management. Most significantly, the logging ban component of the National Forest Protection Program has not only deprived collective forest owners of their rights to commercially use some 30 million hectares of forest, it has failed to compensate them for

the economic losses which the ban has entailed. This ban has been deemed illegal by Chinese researchers, in that it contradicts land and forest laws which require the respect of owner harvesting rights, due process and compensation.

Similarly, the new Forest Ecosystem Compensation Program—which has the laudable goal of compensating forest owners for the public benefits generated by their forests—has also begun to inadvertently undermine forest conservation and poverty alleviation goals. To implement this project, provincial

forestry officials have initiated a process of zoning all forests, both those collectively and publicly owned, into two categories, “commercial,” or “public benefit” forests. The intent has been to limit timber production to the commercial forests and compensate owners of the “public benefit” for maintaining natural forests and providing ecosystem services. Since the payment is split between local forest agencies charged with implementing the program and forest owners, public officials have the incentive to increase the size of the area under “public benefit” status, reducing to about five dollars per hectare per year the average payment to local owners—far less than potential earnings from local forest management. In sum, the program has failed to provide collective forest owners with adequate compensation in return for losing the right to harvest timber for their own, household use, or sell bamboo, charcoal and timber commercially.

It is also instructive to compare the regulatory and tax regimes which apply to forests with the more permissive regimes which have enabled other sectors to expand rapidly in recent years. Unlike commercial timber, tree crops and bamboo are no longer subject to harvesting quotas or shipping restrictions, nor are growers penalized by high fees and taxes. Tree crop production jumped dramatically in the 1980s following the strengthening of property rights and deregulation, and the rate of bamboo production has rapidly outstripped commercial wood production. The area devoted to bamboo, a crop which requires similar use of land and labor to commercial timber, and competes in many of the same markets, increased from 3.2 million hectares in 1988 to 4.8 million hectares in 2004. Production increased during this period from 4.4 million tons to 28.9 million tons in 2004.²¹

Designing new regulatory and fiscal regimes for its collective forest sector and implementing the sort of reforms that have helped to transform the nation’s

agriculture and bamboo sectors will be a major, long-term challenge. At the same time there is a need to rethink the approach to conservation, recognizing that forest use and management by local people can be sustainable—and thereby help the government achieve its conservation, timber supply and rural development goals. One estimate indicates that policy reforms in the forest sector could result in the sustainable production of an additional 15-40 million cubic meters of roundwood a year—equal to or greater than all the illegal wood currently imported by China at present.²²

Innovations and Reforms in the Public Forest Sector

The current productivity of public forests—the other 40 percent of China’s forests—has also been constrained by a variety of factors, including over-harvesting in the past, the system of state-owned enterprises that combine responsibilities of public land management and product processing and marketing, the immaturity of some three-quarters of standing stock, and a lack of clarity over the ownership and overall purpose of public forest lands.

The state forest sector is now at an important turning point. The government faces important challenges in both separating the market enterprises from the public land management responsibilities, and in figuring out whether authority over public lands should be devolved to local governments and communities or kept at the central level. The long-term decline of public subsidies for the enterprises, diminishing forest resources, and limits on logging has led to numerous business and land tenure innovations—as the public enterprises that manage public forests have struggled to survive. The State Forest Administration (SFA) which has legal authority over the state-owned forest enterprises and public lands—has not remained aware of local innovations or the potential consequences.

²¹ Ruiz Peres 2001, cited in Hyde, Belcher & Xu. Data for bamboo area in 2004 is sourced from China’s Forest Inventory (1999-2003), and bamboo production in 2004 is sourced from China’s Forestry Statistics Yearbook 2004. A factor of 0.026 was used when converting bamboo production from pieces to metric tons.

²² EIA estimate.

The innovations have taken place in an ad hoc, even chaotic manner, and at least one enterprise, is known to have divested public lands in contradiction with official policy and law. For these reasons the SFA is understandably trying to slow down local initiatives and put into place a new framework policy to limit and guide reforms.

The privatization of processing facilities in state forest areas has been implemented fully over the past decade without much controversy. Controversy has mainly focused on the issue of the ownership and jurisdiction of public forest resources. The approach newly promoted by the State Forest Administration replaces the existing state forest management units with a more centralized resource management system, an approach that has been met with great resistance from local forest authorities, provincial and local governments.

The idea of decentralizing, at least a portion, of public forests to local jurisdictions nevertheless has gained increased support inside and outside of SFA. It is likely that this decentralization will gain momentum when the experiences of local innovations are more widely tested and understood.

Recent research by Xu Jintao and colleagues on public forest enterprises and management suggests a

two-fold approach to advance the SFA's conservation and increased wood production goals: developing a system of centrally-managed national forests in publicly-owned areas of national-level ecosystem value, and devolving other, more economically productive forest areas to local governments and communities. Such shifts would be part of a larger rethinking of the roles and responsibilities of the SFA, including a sharpening of its focus and decentralization of some of its traditionally-held authorities to provincial and local levels of government as well as the devolution of some of its powers to the private and civil sectors.

In summary, our research suggests that China's wood production and forest conservation targets will not be met unless farmers and local communities have greater incentives to plant and manage plantations on their collectively owned forest land and if forest ownership and management reforms are advanced on public lands. These are all major, but important, challenges. It is also clear that government investment banks and forest agencies need to ensure that sufficient sustainable and legal supplies of wood are available prior to the approval of public loans and the installation of new pulp processing capacity.

THE GLOBAL CHALLENGE

Steps Towards Sustainable Forests, Livelihoods and Trade

China, the current woodshop of the world situated in the middle of a global commodity chain, demonstrates the interconnectedness of the global forest trade, and its tremendous social and environmental impact. It also highlights the indifference of consumers, industry and government to the many problems associated with the trade. The ultimate consumers of forest products in the US and the EU have little or no understanding of the impact their purchasing has on forests and people in countries supplying China with raw materials. Few realize that the furniture, decorative moldings and plywood materials they buy are likely to be composed of wood or veneer from Gabon or Papua New Guinea and of logs from Burma or Cameroon; or that the cheap prices they pay are directly linked to the exploitation of some of the poorest people on Earth and the destruction of their forests.

This analysis also makes clear the fundamental lack of governance in much of the developing world's forests that are supplying the world with timber. Indigenous and other local people's rights are either not recognized or weak, forest tenure and laws are either inadequate or not enforced, or both, and logging is done in a boom and bust manner that does little to benefit local people, if at all.

Finally, this analysis makes it clear that China's rapid increase in consumption, augmented by the world's demand for China's exports, will continue to grow. Furthermore, China is the harbinger of a rapid increase in global demand for forest products, with India and other major middle-income countries destined to follow similar patterns of consumption and growth. This will put the world's forests and the world's poor under even greater pressure in the coming decades.

Clearly, action must be taken all along the commodity chain if these problems are to be successfully

tackled: in countries that supply China with forest products, in China itself, and in countries that import furniture and other manufactured products from China. Efforts to address issues such as weak governance and inadequate legislation, illegal logging and its associated trade will need to incorporate complementary initiatives at regional and international levels, involving producer, processing and consumer countries.

China, in particular, has a strong incentive to acknowledge its pivotal role in the global market and accelerate reforms of its forest sector. China faces a growing disparity between incomes in urban areas and those in rural areas, and forest-related reforms could help the country to achieve the objectives of its Rural Development Strategy. China's industry is also increasingly vulnerable to issues associated with obtaining secure and legal sources of imports, and to changes in buyer preferences, with buyers in major export markets increasingly demanding certified or verifiably legal products.

A Call for Action

1. Importing and Consumer Governments

All major consumer and importing nations—including China, the United States, member states of the European Union, Japan and others—are benefiting from low-cost imports which are often proven to come from illegal and unsustainable sources. While importing countries cannot directly do much about weak governance and illegal activities within sovereign supplying countries like PNG and Indonesia, many countries in Europe are exploring ways to discourage imports of illegally sourced wood, while at the same time promoting, through their development assistance programs, improved governance in supplier countries.

Importers and consumers are critical drivers of the global market and players in the global commodity chain. Governments are not only responsible for setting import rules and regulations, but are major consumers themselves. For these reasons governments of consuming countries should take important leadership roles. Their leverage can help to transform the forest products market to one that not only ensures sustainable forestry and

conservation, but to one that provides satisfactory livelihood opportunities for forest dependent communities, and promotes sustainable economic development for all nations.

Steps that all consumer and importing governments can take include:

1 *Developing and harmonizing public procurement policies.*

While the EU and Japan have already embarked on various forms of public procurement policies, other major importers, particularly the US and China, should develop similar programs. Expanding and harmonizing public procurement policies would increase the impact and leverage of forest markets, as well as reduce the transaction costs of industry to ensure that they are trading in legally-sourced products. China could start with a pilot program to ensure verified legal sourcing for construction related to the 2008 Beijing Olympics;

2 *Developing education programs to inform importers, retailers and consumers of the social, environmental and economic impacts of the forest-product trade.* Consumers and the forest products industry remain largely uninformed of the global implications of their purchasing—or of the impacts of illegal logging on their own businesses. Governments have an interest in encouraging their industry and consumers to understand these issues and to take steps necessary to shift away from illegal, socially harmful, and unsustainably produced products. The UK's government support to the Chatham House to cultivate dialogue and disseminate information and to support greater understanding and involvement of the UK Timber Trade Federation are examples of what can be done.

The Chinese Government could launch a campaign to educate government departments, industry, retailers and consumers of the social and environmental impacts of the forest trade and the implications for domestic industry and employment. This could include encouraging researchers from the State Forestry Administration (SFA), the Chinese Academy of Forestry (CAF) and other universities

to conduct research on the impact of China's imports in supplying countries and on the broader role of China's market in the global forest trade. The vast majority of research on these issues today is conducted by international organizations. Chinese researchers could contribute by investigating conditions in supplying countries from their perspective and relaying this information back to their domestic constituencies. The Government could also actively encourage the dissemination of existing research by national and international researchers and NGOs on the impacts of trade, implications for domestic industry, and actions to combat illegal logging and related issues. The Government should also support the establishment of codes of conduct for Chinese investments and operations overseas. These codes should be backed by new law and mechanisms to monitor compliance;

3 *Actively promote certification, log-tracking, supply-chain management approaches and adapt existing legislative approaches to tackle underlying problems in both consumer and supplying countries.* Certification, verification of legality, independent monitoring and other related tools are now well recognized as useful in addressing illegal logging. All consuming governments, particularly those of the largest consumers of end products—the US, members of the EU and Japan—should more actively encourage their trade, commerce and development assistance agencies to promote these instruments. In addition, these leading countries should encourage all international organizations and industry to embrace and encourage the adoption of these tools.

Adapting and extending existing money laundering and anti-bribery legislation is another priority. For example, Indonesia has already facilitated the application of its money-laundering laws to the forest trade. The US should more aggressively explore how to apply the Lacey Act to the import of illegally sourced wood products, and how to use anti-bribery legislation covering nationals engaged in illegal activities abroad. OECD guidelines on these matters could also be more aggressively put to use by country

governments. Within the US, the President's Initiative on Illegal Logging is an opportunity to more actively engage on these issues and aggressively promote substantive steps to deal with illegal logging and trade.

- 4 *Increase bilateral cooperation on governance, illegal logging and trade.* Bilateral cooperation on illegal logging and trade issues has increased in recent years, yet except with notable exceptions, has remained at the diplomatic level. There are good examples of active bilateral cooperation between importing and exporting countries in the Asian region—such as the Indonesia-UK collaboration to identify and deal with illegal and unsustainable logging and trade. Indonesia and Malaysia have recently agreed to combat illegal logging, and are seeking ways to fight illegal logging in their border regions. Similar and expanded cooperation could facilitate donor and trade relations between China and its major trade partners.

While there has been some progress on bilateral cooperation on illegal logging, there has been less progress in terms of countries assisting each other with the underlying governance problems in the forestry sector. Many forest countries are now reconsidering their forest ownership and rethinking their forest policies and regulations. There are important opportunities for countries to learn from each other, and from the forest history of the more developed countries, as they face these challenges and try to devise sound paths forward.

New country-to-country assistance could include:

- > technical assistance to develop and implement public procurement policies, customs harmonization, and other trade regulation issues of joint interest;
- > exchanging lessons between governments on experiences in government decentralization, forest tenure, policy and regulatory reforms;
- > working with supplier governments (notably Indonesia and Malaysia) to establish customs information

exchanges that enable prior notification of legally exported shipments;

- > exchanging lessons and best practices on legal and regulatory mechanisms to ensure that domestically registered companies comply with the law and adhere to international best practices when operating internationally.

2. Supplier Countries

Steps forward for many developing countries should prioritize strengthening efforts to address the underlying institutional problems with the forest sector, such as inadequate recognition of indigenous and other local rights, insufficient community participation in policy preparation and monitoring and the lack of transparency and accountability in formal decision-making all of which facilitate illegal logging. These problems are a “microcosm” of broader governance problems within a country. But cleaning up the forest sector alone will remain very challenging if the governance problems across other key sectors (e.g. judiciary, law enforcement, etc.) are not simultaneously addressed. If positioned well, forest concerns can act as a catalyst for broader governance reforms within a country.

Reforms in supplier countries will need to be led by local civil society, industry and governments. Specific recommendations for governments to ensure effective governance for its forest sector include:

- 1 *Promoting just, appropriate and well-defined property and resource rights.* Ownership of the forest estate and rights of access and use in many supplying countries remains contested—with disputes between government and local communities, and between different levels of government, the rule rather than the exception. In some countries, including Indonesia, hundreds of millions of hectares of traditionally-managed agricultural land remains claimed by the government as public forest. Sorting out forest ownership and use rights is a complicated, and contentious political issue that will require dedicated effort and political courage over decades, yet it will

remain difficult to advance sustainable forestry, and forestry's contribution to local livelihoods unless substantive progress is made on these fronts. Fortunately, a number of Asian countries, including the Philippines and Vietnam, are taking bolder steps on this front—and there are many opportunities for countries to learn from each other regarding the direction of the reforms and how to best go about implementing them.

2 *Reviewing and updating the forest law and related legislation and regulations to be fair, effective and enforceable and build appropriate capacity to effectively implement and enforce such legislation.* Governments will need to ensure that the rights of rural populations to use and trade are respected, and these people, especially the poor, have full opportunity to benefit from the use of their forest assets. Policy makers should ensure that regulatory frameworks ensure a “level-playing field” for all producers and do not privilege large or export-oriented enterprises. They should also consider the risks of introducing perverse incentives by making “legal” forest products more expensive.

3 *Establishing and implementing codes of conduct and anti-corruption tools in the forest industry, including codes of ethics and professional responsibility.* Corporate initiatives for better governance in the forest sector are relatively recent, with some enterprises adopting codes while others are part of an industry association's code covering hundreds of members. Examples include the American Forest and Paper Association, the Confederation of European Paper Industries, the Interafrican Forest Industries Association (IFIA), as well as the Japanese Federation of Wood Industry Associations. The UK Timber Trade Federation (TTF) has been used as a model for similar initiatives in Italy, Japan and the Netherlands. These companies and industrial groups together comprise the vast majority of the world's large forest corporations. Developing and following codes of conduct which promote law

compliance may increase efficiency and therefore strengthen a firm's comparative advantage in the long term, as well as promote a better corporate image. Other guidelines, such as Transparency International's adaptation of its anti-corruption tools for the forest sector, offer examples of the way forward.

4 *Encouraging independent verification and certification of production and trade—including log tracking, supply chain management, and linking forest control monitoring to the export customs process.* These tools, along with prior notification between the customs agencies of trading parties, are now well recognized as useful in addressing the trade in illegally sourced forest products. For those countries with Voluntary Partnership Agreements with the EU, implementation of these types of systems will offer direct and preferential access to many European markets.

5 *Promoting initiatives that support small and community-owned enterprise and forest-related livelihood opportunities.* Small-scale forest enterprises contribute disproportionately to employment and local livelihoods, but are usually underserved by government support programs. Government programs should assist small-scale producers to build their capacity and better understand the markets in which they are operating and identify and enter local and niche markets where they have a comparative advantage. Such strategies would enable them to avoid participating in the export market, dominated by well-financed, large-scale industry.²³

3. The Government of China

China's most pressing task is to improve the productivity of its own forestry sector and reduce its reliance on imports from countries with limited capacity to manage their own forests effectively. It will need to do so in a way that alleviates rural poverty and does not impose significant costs on the industry. This will require a number of measures, including regulatory reforms, the strengthening of property rights in rural areas, a

²³ Sara Scherr, Andy White, and David Kaimowitz, *A New Agenda for Forest Conservation and Poverty Reduction: Making Markets Work for Low Income Producers*, Forest Trends, 2004.

new approach to allocating subsidies and reforming the public forest sector. Specific actions could include:

- 1 *Rethinking the forestry development agenda and accelerating reforms.* This should involve the removal of the policy and regulatory barriers to production from collective forests and the reform of the public forest sector. The existing approach of subsidizing forest restoration and plantation schemes is not producing anticipated results. There is an urgent need to establish an alternative regulatory approach before the logging ban is lifted in 2010. Replacing the harvest quota with a requirement to prepare management plans has been recommended by some. Unfortunately, the global experience with management plans has not been positive, and governments are shifting towards more innovative ways to encourage voluntary compliance with best practice. China could engage with other governments to explore new options to achieve the twin goals of ecosystem protection and timber production on the same land. Finally, it is clear that government efforts to begin to reform the public forest sector are well justified. Further steps to sharpen the focus of the SFA providing national-level public goods, such as national-level valued forests, strategic research and education—and decentralizing other responsibilities, such as the regulation of collective forest lands and the ownership of economically valuable public forests will pay off, both in terms of conservation and production.
- 2 *Reviewing the costs and benefits of programs that promote large-scale pulp and paper industries.* There is an urgent need to rethink the whole approach to encouraging large-scale industries in the pulp and paper sector. Our research indicates a serious imbalance between production capacity and planned local supply—putting greater pressure on remaining natural forests in the region.

Global and Chinese Forest Industry

Illegal logging and trade penalizes good forest stewardship and the legal industry. It also diminishes the credibility of the industry, perpetuating the sense

that it is anti-environment, if not wholly corrupt. By placing itself in the middle of the global commodity chain, China's industry in particular has become increasingly vulnerable to the problems associated with the supply of raw materials, on one hand, and to changing buyer preferences and trade regulations on the other. Global industry has long been too complacent and needs to become much more engaged, or risk further loss of its social license to operate. Steps by the World Business Council for Sustainable Development and the Forest Dialogue go in the right direction, but much more needs to be done. Two steps, in particular, should be prioritized:

- 1 *Establishing systems to track wood all along the supply chain.* Industry, possibly supported by governmental programs, should be aware of where its supplies of forest products come from and develop appropriate wood-tracking systems. Importers and processing enterprises in China could gain a better understanding about where the wood in their products comes from, and take steps to ensure that it is certified through credible programs or can be legally verified at every step along the supply chain. Several international initiatives such as Tropical Forest Trust (TFT) and the Global Forest Trade Network (GFTN) are already providing advice and technical assistance to producers, suppliers and retailers, thus helping them and their customers gain confidence in the supply chain.
- 2 *Developing and adopting rigorous codes of conduct, and mechanisms to self-enforce.* Other sectors, including mining, and energy, have developed increasingly stronger industry standards and self-enforcement mechanisms to enhance compliance. To strengthen, if not regain, international credibility, the forestry sector, led by its industry associations, should develop robust codes of conduct and strong mechanisms to monitor and punish inappropriate behavior. These groups should also more actively encourage governments to adopt procurement policies, support certification and expand the application of money laundering and anti-corruption tools to the forest sector.

PUBLICATIONS:

China and the Asia-Pacific—Markets for Sustainable Livelihoods and Forests

SUMMARY OVERVIEWS OF KEY PUBLICATIONS²⁴

Meeting China's demand for forest products: An overview of import trends, ports of entry, and supplying countries, with emphasis on the Asia-Pacific region

X. Sun, E. Katsigris, and A. White

This study analyzes trends of China's forest product imports between 1997 and 2004 by both product segment and ports of entry, as well as for each of the main Asia-Pacific countries supplying China. (Available in English and Chinese).

China's forest product exports: An overview of trends by segment and destinations

X. Sun, N. Cheng, and K. Canby

This paper provides an overview of these forest product export trends, analyzing both product categories and major destination countries. This analysis reveals the critical role of developed countries—in particular the US and the EU and their growing demand for forest products—as key “drivers” in this global forest product commodity chain.

The China forest products trade: Impacts and implications for Asia-Pacific supplying countries*

E. Katsigris, G. Bull, A. White, C. Barr, K. Barney, Y. Bun, F. Kahrl, T. King, A. Lankin, A. Lebedev, P. Shearman, A. Sheingauz, Y. Su, and H. Weyerhaeuser

Unsustainable harvesting practices, illegal logging and negative impacts on forest community livelihoods plague Asia-Pacific supplying countries. Aside from Russia, China's top Asia-Pacific log suppliers could at best maintain current supply, with resources being depleted in less than 20 years. Resource limits also constrain expansion and long-term continuation of processed product export to China. (Available in English and Chinese).

A brief overview of China's timber market*

X. Sun, L. Wang, and Z. Gu

This paper provides an overview of China's timber market, which has undergone dramatic changes in recent decades and continues to change rapidly. It documents the gradual transition from state allocation to market liberalization during the late 1980s and early 1990s, although timber harvest and transport remain heavily regulated by the government.

²⁴ All papers are available at www.forest-trends.org/programs/pacific_rim.htm. Titles marked with an * asterisk were part of a special issue of the International Forestry Review in December 2004.

CHINA MARKET AND LIVELIHOOD STUDIES

China's forest product import trends 1997-2002: Analysis of customs data with emphasis on Asia-Pacific supplying countries

X. Sun, N. Cheng, A. White, R.A. West, and E. Katsigris

This report describes China's import trends by product, by country of origin and by port of entry for the last 5 years. It also includes analysis of trends in key countries supplying China, including Papua New Guinea, Burma, the Russian Far East, Indonesia and the Mekong region.

Chinese collective forests: Contributions and constraints*

Anders West and G. Miao

This paper describes the distribution of collective forests, their key policy and institutional dimensions and how collective forest property rights are defined in both law and in practice. The paper assesses the impacts and implications of critical national policies and concludes with policy reform recommendations that would increase the contribution of the collective forests to poverty alleviation, rural development and sustainable forests.

China's pulp and paper sector: Supply-demand trends and medium term projections*

D. He and C. Barr

This study summarizes recent trends in China's paper and paperboard sector and estimates supply and demand for each of the major grades through 2010. With domestic production projected to reach 62.4 million tons per year, China is expected to dominate global capacity expansion for most major grades. In addition to providing both threats and potential income opportunities for smallholder tree growers, it will place new strains on China's domestic wood supply and may exacerbate forest conversion and illegal logging in key supplier countries.

An assessment of China's forest resources*

G. Q. Bull and S. Nilsson

Given the forecasted constraint on its domestic fiber supply for at least two decades, there could be a significant increase in demand for logs and forest products from China's trading partners. Yet, it is challenging to draw specific conclusions on China's forest resources, since there are serious data discrepancies in all major statistical areas. These discrepancies must be addressed before a clear set of land and sustainable development policies can be created.

China's development of a plantation-based wood pulp industry: Government policies, financial incentives, and investment trends*

C. Barr and C. Cossalter

The Chinese government is aggressively promoting development of a domestic wood pulp industry that is integrated with a plantation-based fiber supply and downstream paper production. This article examines the development of bleached hardwood pulp (BHKP) mills in South China, which generally face fiber shortfalls over the medium term and require significant new investments in plantation development to provide a sustainable fiber supply at the mills' projected capacity levels. However, there are few sites in southern coastal China where fiber can be grown at internationally competitive costs.

China's forest sector markets: Policy issues and recommendations*

S. Nilsson, G. Bull, A. White, and J. Xu

Given that China's forest market has quickly become the dominant driver of investment and industry transition, this paper provides a pertinent analysis of the major policy issues facing the Chinese forest sector—from stump to final products' markets. The discussion centers on the identified large and growing gap in the demand/supply balance of forest products.

China's Sloping Land Conversion Program four years on: current situation, pending issues*

Z. Xu, M. T. Bennett, R. Tao and J. Xu

With a budget of RMB 337 billion (over US\$40 billion), the Sloping Land Conversion Program (SLCP) is not only one of China's most ambitious environmental initiatives, but is also one of the world's largest land-conservation programs. The four-year-old program is in danger of failing to reach its goals due to flaws in design and implementation.

REGIONAL TRADE AND LIVELIHOOD STUDIES

Navigating the border: An analysis of the China-Myanmar timber trade

F. Kahrl, H. Weyerhaeuser, and S. Yufang

This study documents forest trade between Myanmar and China, including gateways, flows and key actors on both sides of the border. Timber trade has done little to promote sustained economic growth along the China-Myanmar border as profits, by and large, have not been redirected into local economies. While political reform in northern Myanmar is a precondition for improved regulation and management of Myanmar's forests, the Chinese government has a series of economic, trade, security and environmental policy options that it could pursue to ensure its own ecological security and enhance the socio-economic benefits of trade.

An overview of the market chain of China's timber product imports from Myanmar

F. Kahrl, H. Weyerhaeuser, and S. Yufang

While Myanmar is a small overall supplier to China and indeed a small player in the global market, its trade with China has major implications for the livelihoods and forests of Myanmar and for livelihoods and industry in China. The analysis maps out the path that Myanmar timber takes in China as it moves through the commodity chain from the border through processing to product and traces the livelihood dimensions along the way.

Overview of the forest sector in the Russian Far East: Production, industry, problem of illegal logging

A. S. Sheingauz

This paper provides extensive information and insights on the current state of the Russian Far East's (RFE's) forest sector. It includes a data-rich discussion of the RFE's natural forest resource base and reviews forest policy at the federal and provincial levels. It also surveys and quantifies the large range of illegal activities in the RFE's forest sector and assesses potential impacts as compared to legal activity. (Available in English and Russian)

China's impact on Papua New Guinea's forestry industry

P. Shearman, Y. Bun, and T. King

This paper provides an in-depth view of the state of Papua New Guinea's (PNG) forest sector and the role of exports to China in that sector. It reviews the current status of PNG's forest resource base, describes the nation's extensive concession system and provides detailed data on log and processed product production and export as well as an analysis of policy and livelihood implications of the PNG-China log trade.

Forest products exports from the Russian Far East and Eastern Siberia to China: Status and trends

A. Lankin

This study focuses on the status and trends of Russian forest product exports to China, in particular those from the Russian Far East and Eastern Siberia. It includes a description of, and summary statistics on, the volumes and values of forest product exports to China. Lankin concludes that the short and medium term outlook for Russian timber exports is dim, as exports continue to grow faster in volume than in value. (Available in English and Russian)

Siberian and RFE timber market for China: Criminal and official technologies, players and trends

A. Lebedev

Under the pressure of growing Chinese and domestic demand, the Russian forest industry is launching a "last attack" on already exhausted and burnt forests and is aggressively pursuing the intact ones, leading to a reduction of timber quality and price. This analysis reveals the low accuracy of official statistics and the ease with which major timber market players can avoid any administrative, economic and fiscal measures and barriers. Another important insight from this analysis is the awareness that some of what is termed "illegal logging" should not be convicted—but rather supported as selective community-based operations—because they are less destructive and more sustainable than much legal and large scale logging. (Available in English and Russian)

China softwood log commodity chain and livelihood analysis: From the Russian Far East to China (Russian Portion)

A. S. Sheingauz, A. V. Lebedev, and N. Y. Antonova

This paper provides an overall picture of the commodity chain that supplies China's timber market with RFE softwood logs. It also examines how the market is structured and how local communities are affected along each link of this forest product chain. The central, forest-rich municipalities of Primorskiy Krai were selected as model areas to study the livelihood-based commodity chain in the illegal timber business.

At the supply edge: Thailand's forest policies, plantation sector and commodity export links with China

K. Barney

This report on forest resource production trends in Thailand shows how the country is responding to China's rapidly expanding market for forest products, in particular wood chips, pulp and paper. A detailed picture emerged of national production and consumption trends

and regional trading relationships, both in terms of legal and illegal trade. It analyzes policies, practices, and capacity and production statistics as well as resource conflicts involving states, companies and communities.

Customs, concessionaries and conflicts: Tracking Cambodia's forest commodity chains and export links with China

K. Barney

The Cambodian forest sector is a paradigmatic example of the links between vast resource wealth on the one hand, and structural conflict and rural violence on the other. Traditional institutions have been seriously undermined, and the coerce-and-extract strategies of logging firms have placed further pressure upon community governance systems. While there are many promising efforts under a new Land Law, land titling program and at least a partial political commitment to rein in the timber concessionaries, by the time effective forestry management institutions are established, there will be little valuable forest remaining.

Central plans and global exports: Tracking Vietnam's forest commodity chains and export links with China

K. Barney

Vietnam is currently undergoing major policy changes in its forestland management and plantation development programs. China may play a key role in reshaping Vietnamese plantation production and trade networks in the future. A number of regionally and globally competitive wood industries, including wood-chip production, pulp and paper and furniture manufacturing, are expanding rapidly, and Vietnam is said to offer opportunities for fast-growing tree plantations in mainland Southeast Asia. The extent of trade flows to China remain largely undocumented, however, and research suggests that it may be more important to focus on Vietnam's role as a regional importer of forest products, including imports of log and sawn timber from Laos and Cambodia.

Strengthening forest management in Indonesia through land tenure reform: Issues and framework for action

A. Contreras-Hermosilla and C. Fay

This paper examines opportunities and challenges for addressing the tenure and land management questions that emerge from the skewed classification and management of the Forest Zone in Indonesia, and recommends a course of action to the Indonesian government.

Russia-China forest product trade: An overview of import trends, ports of entry and supplying countries

X. Sun, N. Cheng, A. White, R.A. West, and E. Katsigris

This report describes China's import trends from the Russian Far East and Siberia by product and by port of entry for the last 5 years.

