

Carrie Miller

Sharing the Blame

Editorial Assistant: Jennifer L. Johnson; Design: Michael J. Kowalski





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Authors Tamara Stark, Sze Pang Cheung

Translators Piera Chen, Yao Luo

Cover Design Xing Zhonghao

Design and Layout Xu Yongsong

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SHARING THE BLAME

Global Consumption and China's Role in Ancient Forest Destruction

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Abbreviations

- ATIBT** • International Technical Tropical Timber Association
- CBD** • United Nations Convention on Biological Diversity
- CTI** • China Trade Information
- CUM** • Cubic metre
- EIA** • Environmental Investigation Agency
- EU** • European Union
- EUR** • Euro
- FAO** • United Nations Food and Agriculture Organization
- FLEG** • Forest Law Enforcement and Governance
- FSC** • Forest Stewardship Council
- ITTO** • International Tropical Timber Organization
- IUCN** • World Conservation Union
- MTC** • Malaysian Timber Council
- PNG** • Papua New Guinea
- RWE** • Roundwood equivalent
- SEPA** • State Environmental Protection Administration
- SFA** • State Forestry Administration
- UK** • United Kingdom
- USA** • United States of America
- USD** • United States dollar
- USDA** • United States Department of Agriculture
- VDP** • Verband Deutscher Papierfabriken
- WRI** • World Resources Institute

Glossary

Intact forest landscapes	Intact forest landscapes refer to areas larger than 50,000 hectares in size. Many smaller areas of ancient forest of high conservation value will not be included in this definition: these are also ecologically significant and warrant protection.
HS code	Harmonized System (HS) codes are number codes used internationally to categorize all commodities. For example, HS 4403 indicates “wood in the rough, whether or not stripped of bark or sapwood, or roughly squared”. They are internationally standardized up to the first 6 digits, with the remaining 2-4 digits depending on national standards.
Roundwood equivalent (RWE)	In order to compare and aggregate volumes of timber products and pulp and paper, various types of forest products can be converted to roundwood equivalent volumes (RWE). That is the volume theoretically needed to produce the given volume of product. A conversion factor is used to convert a product's physical volume in units of cubic meters or weight in tons to its RWE volume in cubic meters. For example, 1 cubic metre of plywood = 2.53 cubic metres RWE of log.
Industrial roundwood	Roundwood that will be used in the production of other goods and service. This category excludes roundwood used as fuel wood.
Sawnwood	Wood that has been produced either by sawing lengthways or by a profile-chipping process and that, with a few exceptions, exceeds 5 mm in thickness.
Wood-based panels	Represents the sum of veneer, plywood, particle board, and fiberboard.
Veneer	Thin sheets of wood of uniform thickness, rotary cut (i.e. peeled), sliced or sawn, usually not exceeding 6mm in thickness
Face veneer	Face veneer sheet of plywood, blockboard or other panels
Plywood	A panel consisting of an assembly of veneer sheets bonded together with the direction of the grain in alternate plies, generally at right angles.
Fibreboard	A panel manufactured from fibres of wood or other ligno-cellulosic materials with the primary bond deriving from the fitting of the fibres and their inherent adhesive properties.
Joinery	Builders' joinery and carpentry of wood, including windows, doors, assembled parquet panels, cellular wood panels, etc.

Wood pulp	Fibrous material prepared from pulpwood, wood chips, particles, residues or recovered paper by mechanical and/or chemical process for further manufacture into paper, paperboard, fibreboard or other cellulose products.
Paper and paperboard	Represents the sum of: newsprint, printing and writing paper, paperboard and other paper, excludes manufactured paper products such as boxes, cartons, books and magazines etc.
Wood chips	Wood that has been deliberately reduced to small pieces during the manufacture of other wood products and is suitable for pulping, for particle board and fibreboard production, for use as a fuel, or for other purposes.
Solid wood flooring	Flooring manufactured from 100% wood.
Timber products	Products manufactured from wood, including all products in chapter 44 of HS code list, e.g. log, veneer, sawnwood, plywood.
Merbau	Latin name: <i>Intsia bijuga</i> , <i>I. palembanica</i> ; common name: Merbau, Kwila, Ipil; origin: throughout South East Asia and Oceania. Commercial stands left mainly on the island of New Guinea.
Bintangor	Latin name: <i>Calophyllum spp.</i> ; common name: Bintangor, Calophyllum, Penaga; origin: global. Commercial stands mainly in Papua New Guinea and Solomon Islands.
Meranti	Latin name: <i>Shorea spp.</i> ; common name: Luau, Meranti, Philippine Mahogany; origin: Indonesia, Malaysia and the Philippines.
Jatoba	Latin name: <i>Hymenaea courbaril</i> ; common name: Jatoba, Courbaril; origin: Brazil, Mexico and Cuba.
Okoume	Latin name: <i>Aucoumea klaineana</i> ; common name: Okoume; origin: mainly Gabon, but also Congo, Equatorial Guinea and Cameroon.
Keruing	Latin name: <i>Dipterocarpus spp.</i> ; common name: Keruing; origin: Indonesia, Malaysia, Burma, Thailand and the Philippines.
Kempas	Latin name: <i>Koompassia malaccensis</i> ; common name: Kempas; origin: Indonesia and Malaysia.
Kapur	Latin name: <i>Dryobalanops spp.</i> ; common name: Kapur; origin: Indonesia and Malaysia.
Teak	Latin name: <i>Tectona grandis</i> ; common name: Teak, Jati; origin: Indonesia (plantations), Malaysia, Burma and Thailand.
Mersawa	Latin name: <i>Anisoptera spp.</i> ; common name: Mersawa, Anisoptera; origin: Burma, Indonesia, Malaysia, the Philippines and Papua New Guinea.

Key Findings

Globally ancient forests are in crisis and the Paradise Forests of the Asia Pacific region are suffering some of the worst rates of destruction:

1. Less than 10 per cent of the Earth's land area remains as intact forest landscapes, and 82 out of 148 countries lying within the forest zone have lost all their intact forest landscapes.
2. The Earth's forest area is shrinking at a minimum rate of 7.3 million hectares per year, according to the United Nations.
3. In the last 15 years, Indonesia and Papua New Guinea have been steadily losing an average of 2 million hectares of forest every year.
4. The World Bank predicts that if the current level of logging continues in Indonesia, all remaining lowland rainforests will be gone by 2010.
5. As of the end of 2004, scientists from the World Conservation Union estimated that 23 per cent of the world's mammals are at risk of extinction, with 12 per cent of birds, 61 per cent of reptiles and 31 per cent of amphibians similarly at risk. Many of these species will not survive without large, intact forests.
6. As of the end of 2002, scientists estimate that only 3,500 orangutans survived in Sumatra, Indonesia, making them one of the most endangered mammals in the world.
7. According to estimates for 2004, between 76 and 80 per cent of the logging carried out in Indonesia is illegal, while over 90 per cent of the logging in Papua New Guinea is in violation of the country's Constitution and forestry laws.
8. Scientific expeditions have been discovering new animal species in Papua Province in Indonesia as recently as December 2005, including 20 new species of frog; scientists have said that "it's as close to the Garden of Eden as you're going to find on Earth."

Trends within the Chinese wood market are fuelling the ancient forest crisis:

9. Over the last 10 years, the import of wood products into China has increased by 4.5 fold.
10. Over the same period of time, China's exports of wood products to the world have increased 3.5 fold. In 2004 alone, China's wood product exports grew by 10 million cubic metres. This is the equivalent of almost double Indonesia's legal log harvest in natural forests for a year, or that of Papua New Guinea for five.
11. China is the major market for wood products from Indonesia and Papua New Guinea, purchasing 29 per cent of Indonesia's wood products (2002, by value), and 84 per cent of Papua New Guinea's logs from natural forests.

12. In the last 10 years, the rise in global consumption of wood products required the logging of an additional 108 million cubic metres, over half of which was consumed in China. This means that for every two of these trees felled on Earth, one is felled to satisfy China's growth in consumption.
13. China is now the world's largest importer of tropical timber: of every 10 tropical trees traded in the world in 2004, five were destined for China. Illegal logging in many of these tropical countries is believed to have reached rampant levels.
14. Discrepancies in log trade data between Chinese and Malaysian authorities reveal massive smuggling of illegal logs coming out of Indonesia which are being declared as Malaysian, when entering China. In 2004, China Customs recorded 2.7 million cubic metres of log imports arriving from Malaysia, while Malaysia recorded only 1.2 million cubic metres of exports to China. In other words, 58 per cent of China's log imports from Malaysia are of "unidentified origin" and most likely coming from Indonesia.

Escalating global consumption of Chinese wood products is helping to drive destruction of our ancient forests:

15. In the last 10 years, the USA increased its imports of Chinese timber products by more than 8 times in terms of value, and imports of Chinese plywood alone increased 97 fold.
16. In the last 10 years, the EU increased its imports of Chinese timber products by almost 5 times in terms of value, and imports of Chinese plywood alone increased more than 100 fold.
17. Greenpeace investigations identified more than a dozen major European timber traders and retailers who were shown to be purchasing Chinese plywood made with illegal timber. Some of these companies, although not all, have committed to stop purchasing Chinese plywood made with timber originating from the Paradise Forests region.
18. China's per capita paper consumption is currently one-eighth that of the average American's, at 36 kg per person compared to 301 kg. If China increased its paper consumption level to that of the USA, it would necessitate the logging of nearly 1.6 billion additional cubic metres of timber - the equivalent of the world's entire annual harvest. The world's forests cannot support either the level of consumption of developed countries, or the aspiration of developing countries to attain a similar level.

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Executive Summary: Sharing Blame, Sharing Responsibility

China's hunger for wood consumption is reshaping the global wood market and trade. In less than 10 years unprecedented economic growth, coupled with a shortage of domestic forest resources, has driven China to become the world's largest importer of unprocessed logs and tropical timber and the world's second largest importer of wood products. China is becoming the world's factory for plywood, furniture and paper, and its export of wood products is growing at a faster rate than domestic consumption. Much of the wood China imports to produce these products are shipped in from countries which are plagued with severe illegal logging and deforestation: in many cases, this illegal timber is imported, processed, and exported as "laundered" products. "Made in China" products are flooding ports and stores in the USA, Europe and Japan as consumers are lured by low costs, regardless of whether the products are made with illegal timber or not.

This report gives a comprehensive picture of the major trends in the Chinese wood market and

consumption, and analyzes their implications for the world's remaining ancient forests. Special attention is given to impact on the Paradise Forests, the largest intact rainforests in the Asia Pacific region, which stretch from South East Asia, across the islands of Indonesia and on towards Papua New Guinea and the Solomon Islands in the Pacific.

This report concludes that China's hunger for wood products is fueling ancient forest destruction, and demand from developed countries for inexpensive yet high-quality wood products is helping to drive this destruction. It also warns that the world's shrinking forests cannot sustain the consumption patterns of developed countries, and it will not sustain China's aspiration to attain that same level of consumption. Unless the world reverses the trend of unsustainable consumption, the remaining ancient forests will disappear within decades.

The world's forest resources and area are shrinking as a result of industrial logging and other factors. According to a report by the United Nations Food and Agriculture Organization (FAO), the world's forest area is shrinking at a minimum rate of 7.3 million hectares per year¹. China's staggering demand for wood products is an additional burden on these forest resources. To satisfy the country's dramatically increasing demand, countries that are supplying China are intensifying their logging activities. Calculations made in this report show that of every two extra trees felled on earth to meet the world's rising consumption levels, one is felled to satisfy China's growth in wood product demand.

Illegal and destructive logging activities are arguably the biggest threat to the Paradise Forests. According to estimates for 2004, 76-80 per cent of logging carried out in Indonesia is illegal², while over 90 per cent of logging activities in Papua New Guinea are in violation of the country's Constitution and forest laws³. Between them, Indonesia and Papua New Guinea are losing 2 million hectares of forest every year. Illegal logging not only inflicts irreparable damage on forests and their ecological systems, it is also a threat to indigenous people whose livelihoods depend on these forest resources. As the major wood product market for these two countries, China plays a decisive role in determining the future of the Paradise Forests, including the species and people that depend upon it.

Illegal logging often goes hand in hand with illegal trade in wood products. For example, in 2004 Malaysia recorded only 1.15 million cubic metres (cum) of log exports to China, whereas China's corresponding import figure was 2.72 million cum - a massive difference of 1.57 million cum. Most, if not all, of this huge volume of Indonesian logs coming into China are smuggled under forged Malaysian origin documents, in violation of Indonesia's log export ban. This illegal log trade is equivalent to almost 30 per cent of Indonesia's legal harvest from natural forests in that year.

In reality, other countries besides China are also responsible for driving ancient forest destruction globally. While some of China's timber imports are domestically consumed, many are exported to developed markets in

Europe, the USA and Japan after being processed in China. China's export volume of wood products increased 3.5 fold in the last 10 years. It has in effect become the world's factory for wood products, and the world's desire for cheap timber products is driving China to import more timber to meet the demand.

If China is a major importer of illegal timber, then the countries it exports its wood products to are also importing products made from illegal timber. The two detailed case studies in this report reveal how tree species from the Paradise Forests, such as Merbau and Bintangor, are being illegally extracted and exported to China where they are processed into flooring or plywood, and how they are subsequently exported to overseas markets.

This report also concludes that widespread illegal logging in the Paradise Forests is the result not only of market demand, but also of regulatory failures of national governments. In fact, in many cases, government officials or law enforcement officials are directly or indirectly involved in the criminal activities of illegal logging and its associated trade.

The title of this report is "Sharing the Blame". China, Europe, the USA, Japan and other consuming and timber supplying countries must equally share the blame for ancient forest destruction. We propose that the governments and corporations of producing, importing, and consuming countries urgently take relevant measures to eliminate illegal logging and its associated trade.

The problem is not simply about illegal logging, however: the sheer level of consumption of wood products in North America, Europe, Japan and other developed countries must be dramatically reduced. Our remaining forest resources cannot support the wood consumption rate of developed countries, and neither can they sustain the incessant growth of wood consumption in China and other developing countries. For example, if China was to lift its current per capita consumption of paper (36kg) to that of the USA (301kg)⁴, it would require almost an additional 1.6 billion cum of timber, or the equivalent of the world's total timber harvest for one full year⁵. If developed countries do not curb their wood consumption and, similarly, if China does not slow down the growth of its wood consumption, future generations will be living on a planet without ancient forests.

Today, China needs to demonstrate political determination and resources in fighting illegal logging and forest destruction which are associated with its wood trade. China has made commitments internationally, through multilateral and bilateral agreements, to do so in cooperation with other governments, but has yet to take concrete action to tackle illegal logging. China's response to the global forest crisis is a test of global citizenship for a country which is seen as a regional and increasingly a global leader.

Ancient forests provide habitat to two-thirds of the Earth's land animal and plant species. They have a vital function in maintaining climatic stability and ecological balance. Today less than 10 per cent of the Earth's land area remains as intact forest landscapes. Whether the remaining forests and the plants and animals they shelter can continue to survive is a question left in the hands of humanity to decide.



Every two seconds, we are losing an area of forest the size of a football field.

Part 1

The Global Forest Crisis and the Paradise Forests

• The Global Forest Crisis

The world's ancient forests have evolved untouched by major human disturbances over thousands of years, providing habitat for millions of plant and animal species, and giving shelter and sustenance to indigenous peoples who depend upon forest resources for their survival. But in the late 1990s the World Resources Institute (WRI) proved with satellite mapping what conservationists had been claiming for years - that very little remained of the world's ancient forests and the vast majority of these forests were under siege and threatened by industrial development⁶.

Today the crisis facing the world's ancient forests is even more extreme. For the past three years Greenpeace has been working with scientists and mapping experts internationally, utilizing the latest available satellite imagery, to develop a global assessment of the world's forests⁷. The findings of the assessment, released in March 2006, are alarming. Less than 10 per cent of the Earth's land area remains as intact forest landscapes, and 82 out of 148 countries lying within the forest zone have already lost all their intact forest landscapes.

These ancient forests provide habitat for endangered species such as gorillas, orangutans and grizzly bears, and literally thousands of plant, amphibian and bird species. The world's forests

contain as much as two-thirds of the planet's land-based species and the sad reality is that many of these species will not survive without large areas of intact forests⁸. However, the future of these forests and the species that depend upon them is uncertain.

According to the World Conservation Union's (IUCN) chief scientist Jeffery McNeely, "If forest clearing continues at 1990s rates, the forests will lose many of their remaining species by the middle of the 21st century."⁹ In evaluating the level of risk associated with the remaining large tracts of ancient forests, WRI concluded that "Commercial logging poses by far the greatest danger to frontier forests... affecting more than 70 % of the world's threatened frontiers."¹⁰

And yet we have yet to slow the rate of destruction, with very little remaining of the world's temperate ancient forests and with the tropical and boreal forests now a primary focus for large-scale extraction. Much of what has now been cleared in the tropics was logged in the last 50 years. For example, between 1960 and 1990, the world lost over 450 million hectares of tropical forest - one-fifth of the world's entire tropical forest cover¹¹. Millions more hectares have been degraded by the impacts of logging and mining.

Every two seconds, we are losing an area of forest the size of a football field.

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The world's ancient forests are highly diverse and found almost everywhere on Earth. They include the boreal forests of Russia and Canada, temperate forests such as those found in China, and tropical rainforests such as in the Amazon, Africa, Papua New Guinea and Indonesia. Russia, Canada and the Amazon contain the largest contiguous tracts of ancient forest in the world, but due to the high levels of biodiversity found in areas of Africa, Papua New Guinea and Indonesia these intact ancient forests are of comparable importance.

Around the world, people are aware that certain animals such as the gorilla or the giant panda are regarded as endangered species and are at risk of extinction, but in fact the world is losing species at an unprecedented rate. Scientists estimate the current rate of species extinction to be the largest wave of extinction since the dinosaurs 65 million years ago, occurring at up to 1,000 times the rate expected if human influence were absent¹².

More frightening is the fact that the rate of extinction is not slowing, but accelerating¹³. Habitat loss and degradation of forest ecosystems

are cited as the leading causes of species becoming at risk.

As of the end of 2004, IUCN scientists estimated that 23 per cent of the world's mammals are at risk, 12 per cent of birds, a shocking 61 per cent of reptiles, 31 per cent of amphibians and 46 per cent of fish species are also threatened¹⁴. These figures have not even taken into account the millions of plant and insect species that contribute to the functioning of intricate and complex forest ecosystems.

Ancient forests also play a critical role in filtering and maintaining clean flows of water supply and in stabilizing the world's climate. Large intact forests store tremendous amounts of carbon - approximately 433 billion tonnes, or more than all the carbon that we will release over the next 45 years from burning fossil fuels and manufacturing cement, based on current global emission rates¹⁵. When these forests are destroyed, the carbon they release will dramatically speed up climate change. According to the FAO, forest destruction at present rates accounts for between 10 to 25 per cent of all carbon emissions into the atmosphere¹⁶.



The Paradise Forests stretch from South East Asia, across the islands of Indonesia and on towards Papua New Guinea and the Solomon Islands in the Pacific.

2. The Paradise Forests

A region suffering one of the highest rates of ancient forest loss in the world (Figure 1.1) is the richly diverse tropical forests of Indonesia and Papua New Guinea, located in the Paradise Forests of Asia Pacific¹⁷.

Much of Indonesia's frontier forest areas have already been logged out, with relatively small intact regions remaining in Kalimantan and Sumatra, and larger areas only in the province of Papua on the island of New Guinea.

But according to the World Bank, the remaining lowland rainforests of Indonesia will be gone by 2010 unless the logging industry can be brought under control¹⁹. Indonesia has already lost 72 per cent of its large intact ancient forests. These forests are home to 50 million indigenous peoples who have lived and maintained them for thousands of years without irreparably damaging them, but in just a few decades industrial activity has now removed or severely degraded these rich rainforests.

Figure 1.1 Average Annual Change in Absolute Forest Area in Indonesia and Papua New Guinea 1990-2005¹⁸



The Rich Abundance of the Paradise Forests

An astonishing 10 to 15 per cent of the planet's known species of plants, animals and birds are found in Indonesia²⁰. Orangutans, elephants, tigers, rhinoceros, more than 1,500 species of birds and thousands of plant species are all a part of the natural legacy of Indonesia²¹. Primarily mountainous terrain houses dense, lush areas of rainforest containing the greatest diversity of trees and vines on the planet. Rainfall can be extremely heavy in this generally hot, wet climate, with some areas of Indonesia receiving more than 400 centimeters of rain each year.

Orangutan

Industrial logging and deforestation poses the highest threat to the orangutan, although it is not only logging that is pushing the species over the edge. Even today, the hunting of young orangutans for the pet trade continues²².

Scientists generally estimate that in the last century, orangutan populations across the whole range have suffered a 10 fold decrease, dropping from approximately 315,000 in 1900 to about 27,000 in 1997²³. In Sumatra they are disappearing at a rate of 1,000 individual apes a year, and in Borneo the estimates are even higher. The crisis is so profound that in 2000, the IUCN raised the status of the Sumatran orangutan to “critically endangered” and the Borneo orangutan to “endangered” from “vulnerable”.

The orangutan is the only Great Ape found in Asia and can be called an umbrella species: a species that serves as an indicator of the overall ecological health of its environment.

The last sanctuary for the endangered orangutan is the rapidly disappearing forests of Indonesia, which are home to the vast majority of the world’s remaining wild orangutans. Yet with these forests under siege, implications for the survival of one of humankind’s closest relatives are extremely poor.

Sumatran Tiger

Of the eight tiger species that once roamed in the world’s forests, only five still remain today. One of these is the smallest of the species, the Sumatran Tiger, whose survival is now threatened by large-scale logging which affects its home.

Animals like the Sumatran Tiger are significantly impacted by habitat loss and degradation, since they require large areas of forest in which to hunt: studies have found that only four to five adult tigers will co-exist within 100 square kilometers²⁴. However, it is not only habitat loss from logging that has put the Sumatran Tiger on the critically endangered list. Poaching of this

“It is as close to the Garden of Eden as you’re going to find on Earth. We found dozens, if not hundreds, of new species in what is probably the most pristine ecosystem in the whole Asian-Pacific region. There were so many new things it was almost overwhelming. And we have only scratched the surface of what is there.”²⁷

Dr Bruce Beehler, co-leader of a 2005 expedition to New Guinea that discovered dozens of species previously unknown to western science.



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magnificent animal, particularly for international trade in tiger body parts used as traditional Chinese medicine, has also played a large part in its decline. IUCN estimates that today there are likely to be between 400-500 tigers left in the wild²⁵. Many scientists believe that unless the poaching and destruction of their habitat stops, it is likely that the species will be extinct within 10 years²⁶.



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Long-Beaked Echidna and the Tree Kangaroo

New Guinea's landmass was separated from the Australian mainland around 7,000 years ago, when what is now known as the Torres Strait flooded. Yet it still shares certain rare mammal species with that much larger island. One of these is the Long-Beaked Echidna, one of only two egg-laying mammals in the world. A somewhat clumsy animal that has protective spines on its back interspersed with its fur, the echidna walks with a rolling gait and is slow-moving, leaving it vulnerable to attack. Its sole defense when threatened is to roll into a ball, stiffening its spines to ward off its attacker. The echidna is now also categorized as endangered by IUCN and, like the tree kangaroo, this is due to both habitat destruction and over-hunting.

Queen Alexandra Birdwing Butterfly

There are many mammalian species that are unique to the island, but perhaps it is the bird and butterfly populations that are most stunning. Even with over 800



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individual species of butterflies, there is one that manages to stand out: this is the world's largest butterfly, the Queen Alexandra's Birdwing Butterfly.

The Queen Alexandra, found only in New Guinea, has a wingspan of 25 centimeters or more, and is dependent on a specific genus of rainforest vine on which it lays its eggs. Although it flies well, it tends to stay within a very small range of valleys, which makes it even more susceptible to habitat loss due to logging and agricultural expansion. Today, the Queen Alexandra is listed as an endangered species on IUCN's Red List.



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Island of New Guinea

The island of New Guinea comprises the independent nation of Papua New Guinea and Papua Province in Indonesia, and must by any account be considered one of the world's most important regions for biodiversity.

In an area roughly the size of Sichuan Province or the state of California, and larger than Germany, Belgium and the Netherlands combined, Papua New Guinea alone houses almost five per cent of the world's biodiversity, including hundreds of species that are found nowhere else on the planet.

Although the island of New Guinea has over 700 individual species of birds, it is the Birds of

Paradise which are amongst the most treasured: 38 out of the 42 known species are found in New Guinea, 36 of which are found only there²⁸. The country is also home to almost all known species of tree kangaroo, a small marsupial mammal that is now endangered because of damage to its habitat from destructive logging and due to dwindling populations caused by over-hunting.

Indigenous peoples

Papua New Guinea still has large intact areas of ancient forest that provide homes for over 5 million people²⁹, most of whom still depend on the forest for their daily subsistence. However, with 60



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per cent of Papua New Guinea's ancient forests already gone or highly fragmented, and with 84 per cent of what remains under medium to high threat from logging and other industrial activities, the situation in Papua New Guinea for the forests and the survival of the people who depend on them is dire³⁰.

As much as the entire island is a veritable treasure trove of biodiversity, it boasts an extraordinarily rich cultural landscape, with 820 languages being spoken in PNG alone, and approximately one-sixth of all languages known on earth³¹ being spoken on the island of New Guinea. Anthropologists believe that various Melanesian peoples came to New Guinea from different islands

approximately 50,000 years ago and, because of the imposing mountains and extremely rugged terrain, different population groups developed in virtual isolation. With each group developing its own language, this gives New Guinea the distinction of being one of the most culturally diverse areas on the planet.

In Papua New Guinea, it is these customary social groups who own 97 per cent of all the land, which is recognized by the legal system in the country. This is not the case in Papua Province, as the Indonesian government does not afford indigenous peoples the same recognition of traditional rights. However, whether Papua New Guinea's government acknowledges in law the rights of local landowners, in reality these rights are generally ignored, and in both regions illegal logging is rampant and there are systemic abuses of human rights.

The Paradise Forests embody all the magnificent beauty, diversity and ecological importance of the world's remaining ancient forests. Intensive industrial activities, especially commercial logging, are threatening the survival of these large intact forests. For decades the ancient forests have been logged and turned into industrial products for consumption in developed countries. The global forest crisis is hardly a new issue, but the crisis has intensified and globalized in the last decade, as China increasingly becomes one of the most important destinations of timber from the world's threatened forests. China's hunger for wood is driven by the country's spectacular economic growth and rising consumption, as well as its rapidly growing export-oriented wood industry. Increasingly, timber coming from ancient forest destruction is imported, laundered in China before being exported to developed countries. Such an unprecedented crisis can only be solved by a response which is as dramatic and global in scope.

A large pile of cut logs lies in a forest clearing. The logs are piled high, with many smaller branches and twigs scattered around the base. The surrounding trees are tall and dense, creating a dark, wooded background.

China is considered to be one of the largest buyers and millers of illegal logs.

Part 2

China Buying and Exporting Ancient Forest Destruction

China's wood market and consumption have experienced tremendous growth in the last 10 years. According to the FAO³², China is the world's:

1. second largest consumer of wood products, of which its consumption of industrial logs is the third largest, sawn wood the fifth, wood-based panels the second, paper and paperboard the second, and pulp the fourth;
2. second largest importer of wood products, of which its import of industrial logs and pulp is the world's largest, paper and paperboard the second largest, and sawn wood the fifth;
3. largest producer of wood-based panels, and second largest producer of paper and paperboard; and the
4. largest exporter of plywood and second largest exporter of furniture.

China's consumption of wood products is growing at an alarming rate, yet the country has a relative shortage of forest resources available domestically. To meet the huge demand for raw

materials, China imports industrial logs or primary wood products from regions with richer forest resources - many of which are countries that are home to the last large tracts of ancient forest in the world. China's rising demand is a growing burden on the world's dwindling forest resources, especially those in the Asia Pacific region, which account for 70 per cent of China's wood product imports³³.

Due to China's sheer market scale, developments in China's wood market have brought about profound changes in global wood production and trade. China's emergence in the global wood market has changed production and trade flow patterns dramatically. Many developed countries no longer import directly from forest regions but via China, often using this route to "launder" timber that has been illegally harvested.

1. The 1998 Watershed

- China Protects Its Own Forests

After decades of over logging, China introduced a stringent policy in 1998 to restrict domestic logging.

While the policy has given China's endangered natural forests a chance to regenerate, it drove the country's industry to import timber from other countries to meet the supply gap. Ironically, China intensified its destructive impact on the world's forests when protection of domestic forests became a top political issue.

In 1998, China was plagued by floods in the Yangtze, Songhua and Nen Rivers, which left over 3,000 people dead and caused serious economic losses. An official investigation team sent to the flooded areas soon recognized that excessive extraction of China's natural forests had resulted in ecological deterioration and soil erosion that led to the massive flooding. After the disaster, the State Council declared that the problem could only be solved by introducing a policy of "closing off hills to grow wood and withdrawing farmland from the forests"; in particular, the logging of natural forests around the Yangtze River and Yellow River had to stop.

In September 1998, areas in Sichuan Province spearheaded a trial of the Natural Forest Protection Programme, which was soon extended to other regions. This involved 68 million hectares, of which 56 million hectares were natural forests, accounting for 53 per cent of the country's gross natural forest

area³⁴. The programme was aimed at banning the logging of designated forests in the upstream and midstream areas of the Yangtze and Yellow Rivers, and significantly reducing industrial logging in the above regions, the Northeast and Inner Mongolia.

By maintaining strict control over logging of domestic forests, the government hoped to enable natural forests to recuperate and resume growth. Before the programme, China's forest resources had been suffering from over-harvesting due to years of large-scale logging. In 1998, the country's total forest area was 130 million hectares and forest coverage was 13.29 per cent of the landbase³⁵. The average forest coverage per capita was 0.11 hectares—only 17.2 per cent of the world average per capita.

The logging restriction brought about a reduction in domestic timber production. Figure 2.1 shows that industrial log production in China has been declining since 1995, indicating that China's shrinking forest resources could not sustain the original logging volume even before the logging restriction. The declining trend was accentuated after the logging restriction was introduced. Domestic log production fell steadily after 1998, to only 75 million cum in 2002 - a 16 per cent drop from 1998. It has only been in the last two years that China's log production has gradually picked up.

Figure 2.1 Industrial Log Production in China 1995-2004³⁶



Meanwhile, China's economic growth has caused a steady rise in wood product demand³⁷. Both domestic consumption and exports grew significantly, especially after 2000. The drop in domestic log production and mounting demand created a huge supply gap. Part of this gap was filled by undeclared domestic log production, which includes timber harvested illegally in China, but even more so by increasing wood imports. After 1998, China quickly became one of the world's most important importers and consumers of wood; its production of wood products also became increasingly dependent on global forest resources. In 2004, more than half of China's consumption of wood products (for domestic consumption and export) came from imports.

2. China's Phenomenal Growth in Wood Consumption and Trade

Alarming Growth in Wood Consumption and Imports

According to Figure 2.2, China's total consumption of industrial wood products has increased by 70 per cent in the last 10 years. The growth is driven by both domestic consumption and

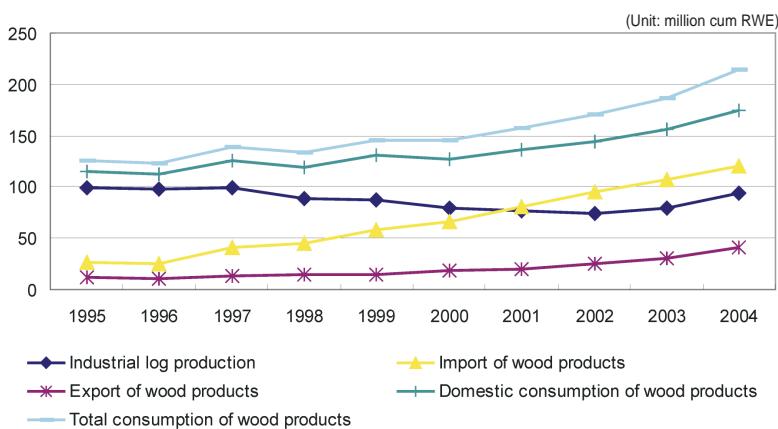
exports of wood products. Domestic consumption of industrial wood products has grown by 52 per cent in the same period, while exports have grown 3.5 fold.

In order to meet the growing demand, Chinese wood industry turned to other countries to satisfy its hunger for raw materials. China's wood imports have skyrocketed 4.5 fold in the last 10 years, reaching 121 million cum RWE in 2004. This means China is increasingly reliant on imports to meet its demand for wood. In 1995, imports accounted for only 21 per cent of the materials used for China's wood consumption, but in 2004 they accounted for 56 per cent.

Demand for Cheap Chinese Products Is Driving Forest Destruction

Undoubtedly the large discrepancy between supply and demand has led to more wood products being imported, but is the rising demand triggered mainly by domestic consumption or by export to foreign markets? This is an important question because China's mounting wood imports is taking its toll on the world's ancient forests. Yet is this brought about by China's domestic demand or because developed countries are importing more cheap processed products from China?

Figure 2.2 Trends of Industrial Wood Consumption, Imports and Exports in China 1995-2004³⁸



“A lot of wood is exported shortly after being imported, remaining in China just long enough to be processed. Our wood processing industry earns only the processing fee. China’s large volume of wood imports is only a superficial phenomenon. To date, the largest importer of wood is still the USA.”³⁹

Mr. Su Ming, Division Director, Department of International Cooperation,
State Forestry Administration

From 2000 to 2004, domestic consumption rose by 48 million cum RWE compared to 21 million cum RWE for exports. Therefore, in terms of absolute increase, domestic consumption has played a larger role in driving the import of wood products into China.

But one should not underestimate the importance of wood product production for export in driving deforestation elsewhere in the world. In the last decade, China’s wood exports have a much higher average annual growth rate (16 per cent) than that of domestic consumption (5 per cent). Particularly in recent years, wood exports have registered even more significant growth, both in terms of growth rate and absolute increase in volume. In 2004, exports rose by 10 million cum RWE from the previous year. This volume of growth translates into almost double Indonesia’s allowable harvest from natural forests for one year or that of log production in Papua New Guinea for five years.

As most of China’s wood products are exported to developed regions including Europe, the USA and Japan, its exports consist of a larger portion, compared to domestic consumption, of imported wood from high-quality tropical hardwood. These

include hardwood flooring and furniture made of Merbau, Jatoba, and Teak, and plywood made from Bintangor, Okoume and Meranti. These are either tree species endangered by over-logging or wood from tropical countries where illegal and destructive logging is still rampant.

However, the fact that Europe, the USA and Japan are importing more wood products from China does not necessarily mean that they are consuming more wood products. China may have simply replaced local sources or those from other countries. Due to low production costs, China’s wood products make up a growing share of the imports of important consumer markets⁴⁰. Companies from developed countries, moreover, are moving their production lines to China where they can process imported wood at lower costs. This means that developed markets in Europe, the USA and Japan are not only consuming wood products from endangered forests, they are also enjoying the benefits of China’s cheap production costs. Moreover, instead of importing illegal timber directly from countries where the crime is committed, companies in developed countries now import from China where illegal timber is processed and “laundered.”

Offers of cheap plywood fill e-commerce website such as alibaba.com.



Unsustainable Consumption Level and Growth

"If China consumes paper at the same rate we do, it will consume twice as much paper as the world is now producing. There go the world's forests.

The point of these conclusions is simply to demonstrate that the western economic model is not going to work for China. All they're doing is what we've already done, so you can't criticize them for that. But what you can say is, it's not going to work.

And in some way it will not work for the industrialized countries either...The bottom line of this analysis is that we're going to have to develop a new economic model. If we want civilization to survive, we will have to have that. Otherwise civilization will collapse."⁴¹

Lester Brown of the Earth Policy Institute

Having said that, we must not ignore the enormous burden imposed on global forest resources by China's rising consumption of wood products. In 1995 - 2004, its domestic wood consumption rose by 60 million cum RWE; in the same period, the world

consumed an additional 108 million cum RWE⁴². This means that for every two additional trees felled on earth, one is felled to satisfy China's consumption growth. China is now the world's second largest consumer of wood products, and clearly its demand for wood is driving the increase in global timber harvest.

However, despite China's phenomenal growth, it still has a much lower per capita consumption rate than many developed countries (Table 2.1). Take paper, for instance. China's per capita paper consumption is still only 12 per cent of what the average American consumes, or 15 per cent of what the average person in Japan consumes (Table 2.2).

Table 2.1 Comparison of Per Capita Consumption of Forest Area in China and Selected Countries 2001⁴³

Country	Per Capita Consumption of Forest Area (ha)
China	0.08
New Zealand	1.45
USA	1.35
Australia	0.77
UK	0.44
Japan	0.33
Korea Rep.	0.24
Indonesia	0.05
India	0.01
World average	0.18

Table 2.2 Comparison of Per Capita Paper Consumption in China and Selected Countries 2003⁴⁴

Country	Per Capita Paper Consumption (kg)
China	36
USA	301
Japan	242
Germany	228
Canada	221
UK	207
Italy	190
France	180
World average	53

As China's per capita wood consumption is lower than the global average, and much lower than consumption rate in many developed countries, it is hard to claim that China is more responsible for the destruction of the world's forests than other countries. However, China and other developing countries must confront one issue - how long could the world's dwindling forests allow China to sustain the same level of per capita wood consumption as developed countries? The answer is clear: not long at all. For example, if an average Chinese person consumed as much paper as an average American does, this would require the world to produce almost another 1.6 billion cum of timber, or a doubling of the annual global timber harvest⁴⁵. Quite clearly, the world's forests cannot sustain such growth.

"Consumption lifestyles in North America and Europe, largely based on cheap fuel and exporting environmental costs, cannot be maintained nor extended worldwide without causing additional life-threatening damage to the global environment and increasing social inequality."⁴⁶

Professor Emil Salim, former Indonesian Minister of State

3. Analysis of China's Wood Imports

"China's domestic wood market does not and will not depend on the forest resources of neighbouring countries to satisfy its demand."⁴⁷

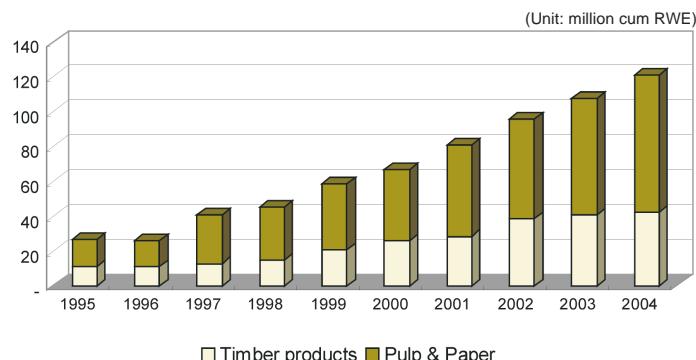
Xiao Xingwei, Head, Department of Forest Resources, State Forestry Administration

Trends of Wood Imports

The growth of China's wood imports is phenomenal. In the last decade, China's wood imports grew 4.5 fold, reaching 121 million cum RWE in 2004 (Figure 2.3). China is now the world's second largest importer of wood products, and the largest importer of logs and pulp⁴⁸. If China's demand for wood continues to grow, as many predict, imports of wood products will persist in its upward trend, and the impact on the world's remaining forests will be devastating.

Wood imports can be categorized into timber products (Figure 2.4) and pulp and paper products (Figure 2.5) for analysis. Of the former, the growth in log imports into China is the most significant. Log imports had increased more than 10 fold in a span of 10 years. In 2004, China imported 26 million cum of logs, accounting for 62 per cent of total timber imports. According to FAO statistics, the world's

Figure 2.3 Trends of China's Wood Imports 1995-2004



total log imports in 2004 were 122 million cum, which means one in every five logs traded in the world was destined for China. Sawn wood imports also showed rapid growth with a seven-fold increase in 10 years. On the other hand, the import of processed timber products dropped significantly.

In the last decade, the growth in paper product imports (pulp, paper and paperboard) was even higher (five-fold) than that for timber products (close to four-fold), and it, too, was triggered by the import of primary or semi-processed products. Pulp imports increased by 77 per cent in the last decade, reaching 61 million cum RWE in 2004. By contrast, the import of paper and paperboard has remained stable since 1997.

China's massive growth in wood imports was

driven by the lack of domestic timber to satisfy soaring overseas and domestic demand. After the launch of the Natural Forest Protection Programme, the government made tariff adjustments in order to stimulate the import of unprocessed and semi-processed wood products. From January 1999, a zero-tariff policy was imposed on the import of logs, sawn wood, fuel wood, wood chips, waste paper and other products. It also banned the export of logs and restricted that of sawn wood to encourage domestic processing, while promoting the export of high value-added processed products. This tariff structure has encouraged wood processing industries to move from wood-producing countries to China thereby facilitating wood imports to feed the growing processing industry⁴⁹.

Figure 2.4 Trends of China's Timber Imports 1995-2004

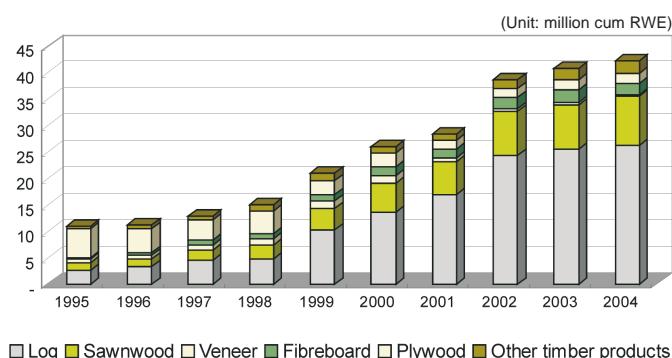
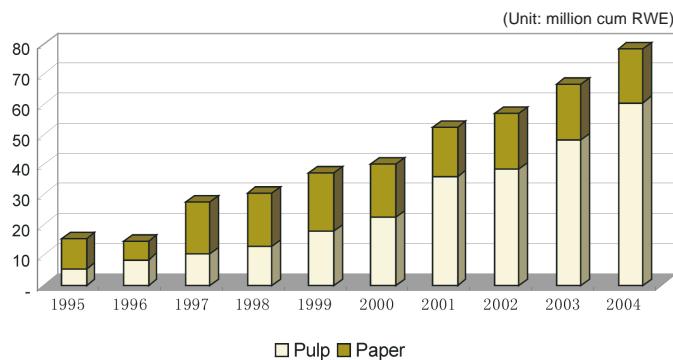


Figure 2.5 Trends of China's Imports of Paper Products 1995-2004



Supplying Countries and Regions of Wood Imports

China's major timber product suppliers are Russia, Malaysia and Indonesia (Figure 2.6). In 2004, imports from these three countries accounted for 62 per cent of total timber product imports. Thailand, New Zealand, Burma, the USA, and Papua New Guinea are China's second-tier suppliers of timber products, with each supplying 3-5 per cent of total timber imports.

Figure 2.7 shows the major supplying countries of logs to China in 2004. Russia is China's largest log supplying country, constituting 65 per cent of China's total log imports. In the next few years,

Russian log imports are expected to lead the supply of softwood logs to China.

For tropical logs, China relies mainly on Malaysia, Papua New Guinea, Burma and Gabon, with other countries supplying a smaller proportion. Most logs from Malaysia, however, are in fact illegal logs from Indonesia which are smuggled to China using forged Malaysian documents (see Part 3). According to International Tropical Timber Organization (ITTO), Papua New Guinea's log exports to China increased 40% in 2005, and Papua New Guinea "is poised to overtake Malaysia as China's largest tropical log supplier."⁵⁰

China is now the world's largest importer of

Figure 2.6 Major Supplying Countries of Timber Products to China 2004

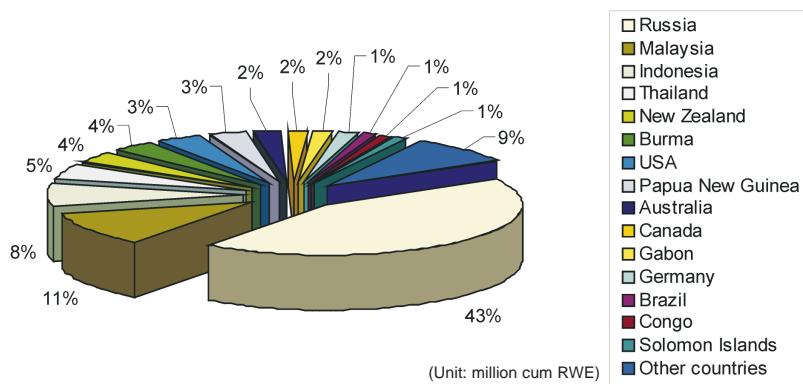


Figure 2.7 Major Supplying Countries of Logs to China 2004

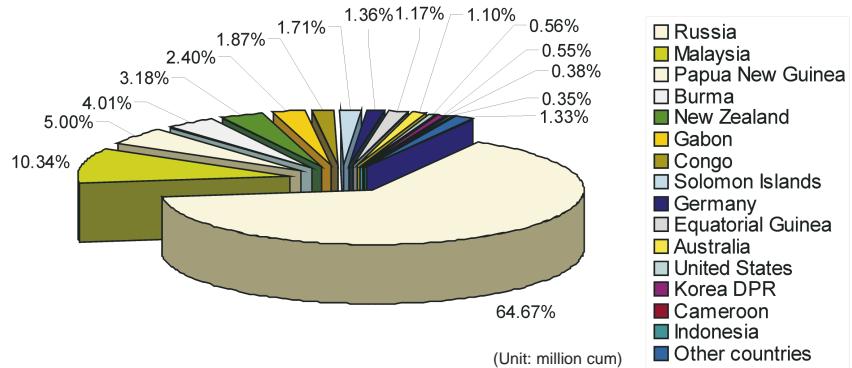
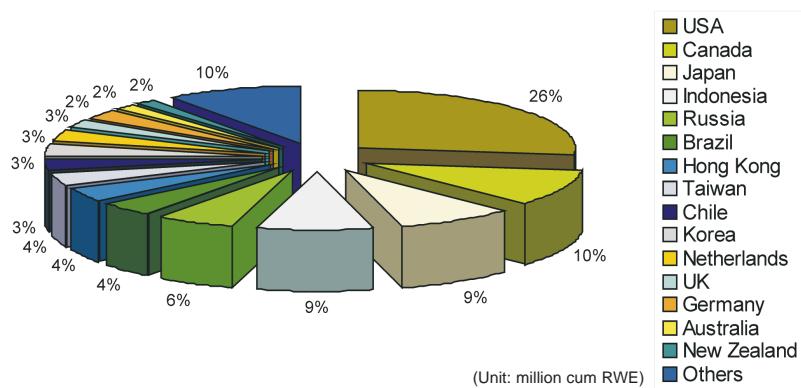




Figure 2.8 Major Supplying Countries and Regions of Paper Products to China 2004



tropical timber. China imported 7.3 million cum of tropical logs in 2004 - over half of the world's total tropical log imports⁵¹.

China's paper and pulp imports have a more balanced supplying structure than its timber imports. The USA is China's largest paper product supplier (26 per cent of total imports), with other major players including Canada, Japan, Indonesia, and Russia (Figure 2.8).

4. Analysis of China's Wood Exports

China's wood exports increased 3.5 fold in the last 10 years, making it one of the most important exporters of processed wood products globally. China is currently the world's largest plywood exporter and is likely to soon overtake Italy to become the world's largest furniture exporter.

Figure 2.9 shows China's wood exports have been increasing since 1996 and its growth rate has accelerated in the last five years. Exports doubled in 2000-2004, and the annual growth rate in 2004 was a record-breaking 35 per cent, as wood exports reached 40.4 million cum RWE. The most

Figure 2.9 Trends of China's Wood Exports 1995-2004

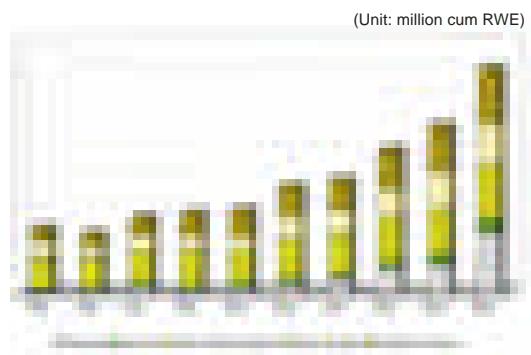
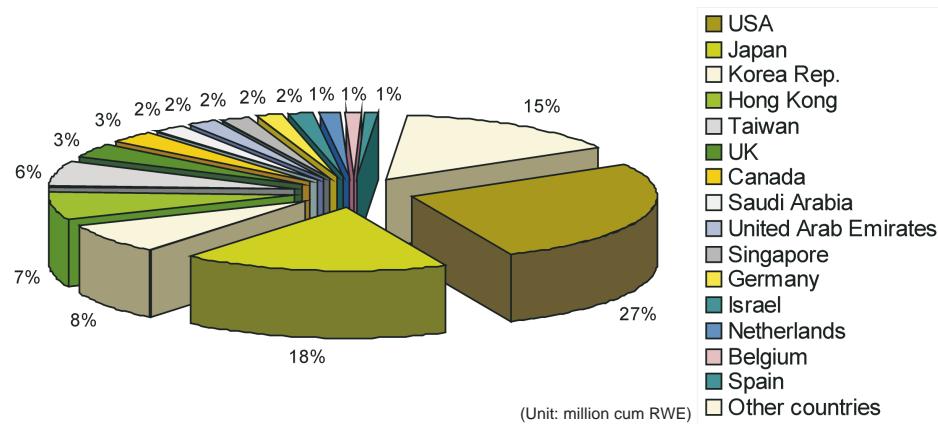


Figure 2.10 Major Importing Countries and Regions of China's Timber Products 2004⁵²

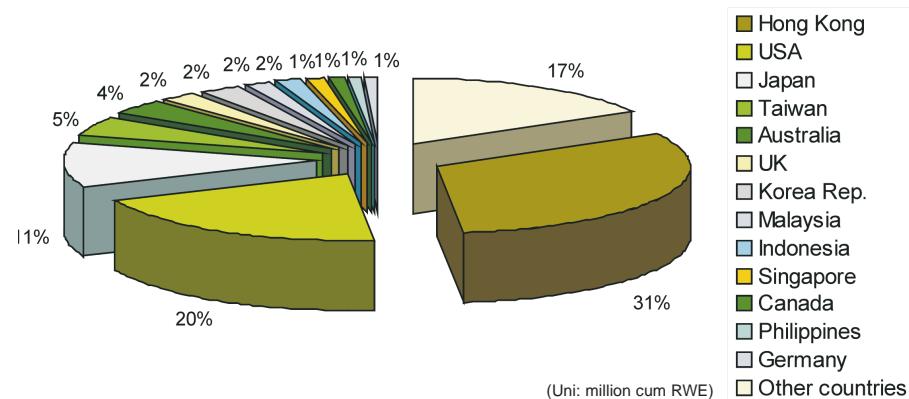
significant growth occurred in the sectors of plywood and wooden furniture, whose exports increased 33 fold and 49 fold respectively over the last 10 years. Paper export rose 2.5 fold for the same period. Plywood, wooden furniture and paper exports accounted for 70 per cent of total exports. Plywood exports doubled in 2004, replacing furniture as China's leading wood export product.

In 2004, China's timber products (excluding wooden furniture) were mainly exported to developed regions including the USA, Japan, Korea, Hong Kong, Taiwan, the EU, and Canada (Figure 2.10). The USA alone, as the largest importer of China's timber products, was responsible for more than a quarter of these exports.

In 2004, China's paper products were mainly exported to Hong Kong, the USA, Japan, Taiwan, Australia, Korea and the EU (Figure 2.11). Although Hong Kong tops the list in terms of exports, this figure is somewhat misleading, since some products that go to Hong Kong are ultimately destined for re-export to other countries.

The rapid growth of wood exports can be attributed to cheap production costs in China, as well as the government's policy of encouraging development of the export-oriented industry. Companies enjoy a 13 per cent tax rebate for exporting high value-added processed products, including fibreboard, plywood, wooden furniture and some paper products.

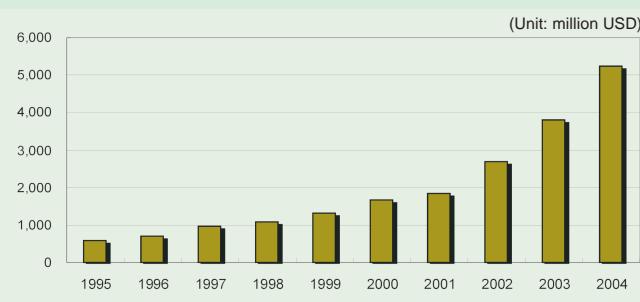
Figure 2.11 Major Importing Countries and Regions of China's Paper Products 2004



Analysis of wooden furniture exports

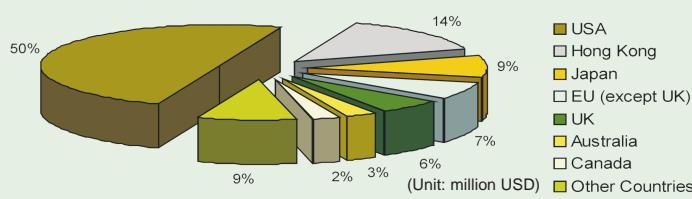
China's furniture industry is thriving due, in large part, to mounting domestic demands and surges in furniture exports in the last 10 years. Figure 2.12 shows that the total export value of China's wooden furniture was USD 600 million in 1995, but in 2004 it was USD 5.2 billion, representing over an eight-fold increase.

Figure 2.12 Trends of China's Wooden Furniture Exports 1995-2004



In 2004, China's major exporting countries and regions of wooden furniture products were the USA, Hong Kong, Japan, the EU, Australia and Canada, with the USA market taking up 50 per cent of its total export value (Figure 2.13).

Figure 2.13 China's Major Importing Countries and Regions of Wooden Furniture 2004



"Almost half of the [furniture] imports of the USA are originated from China. 63 per cent of its total imports were shipped from Asian countries."⁵³

The furniture industry is a comparatively export-oriented industry. In China, 31 per cent of the furniture production, in terms of value, is used for export, and some analysts believe that the percentage

is higher for wooden furniture⁵⁴. Furniture companies in the major furniture-producing regions in China have very strong export-orientation. For instance, furniture industries in Guangdong Province and Eastern China, which produce two-thirds of the country's furniture, are responsible for 88 per cent of the country's furniture exports⁵⁵.

The furniture industry also attracts more foreign investment compared to other wood sectors. In the 1980s, Hong Kong and Taiwanese furniture companies began to shift their production lines to Guangdong Province, which soon became the leading furniture-producing region in China. Later companies from the USA and Europe set foot in Shanghai and neighbouring Jiangsu and Zhejiang provinces, while Korean enterprises established their presence in Dalian, Shanghai and Dongguan, spurring the development of China's furniture industry⁵⁶.

China's low production cost is the main attraction for these foreign investors⁵⁷. Processed products are exported to their home countries or other destinations, and business is booming. In the first eight months of 2005, furniture exports of foreign-owned companies in the Guangdong Province

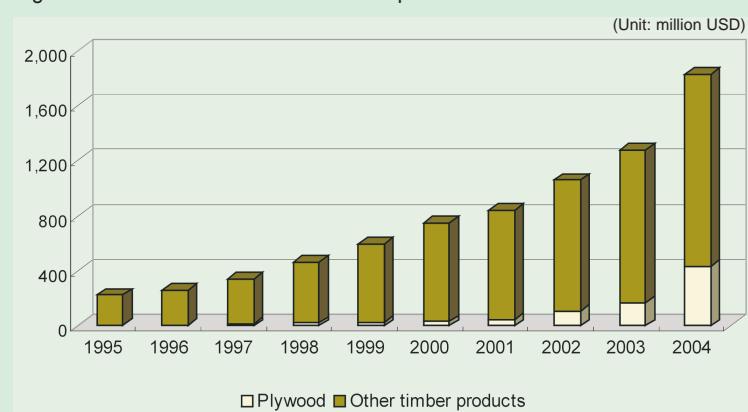
were valued at USD 2 billion - around 57 per cent of the total export value for the period, indicating that foreign businesses take up a large share of furniture export⁵⁸. Foreign-owned furniture manufacturers also tend to favour higher quality imported timber. For example, American hardwoods brought into China are mainly made into furniture that is then exported back to the USA, because such furniture "is relatively expensive for most Chinese consumers."⁵⁹

Trends of China's timber exports to the USA and EU

The demand of the USA, EU and other developed markets for cheap “Made in China” products is driving Chinese producers to import more timber, thereby increasing the impact on ancient forests.

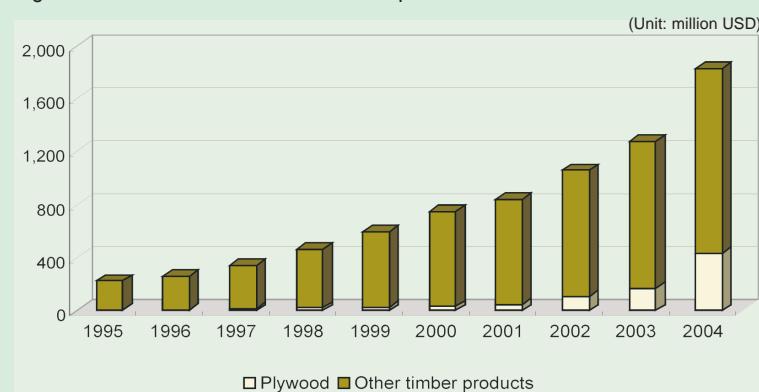
Figure 2.14 shows that in the last 10 years, the USA increased imports of Chinese timber products (excluding wooden furniture) by more than eight fold in terms of value. Of these, imports of plywood alone increased 97 fold⁶⁰. Consequently, China increased its share of USA’s plywood imports from 0.6 per cent to 20 per cent, making it the USA’s third largest supplier, marginally behind Canada (21 per cent) and Brazil (20 per cent)⁶¹.

Figure 2.14 Trends of China's Timber Exports to the USA 1995-2004⁶²



The total value of China’s timber exports (excluding wooden furniture) to the EU also registered rapid growth - from USD 238 million in 1995 to USD 1.16 billion in 2004 (Figure 2.15). Of this, the total value of plywood exports increased 36 fold. Despite the anti-dumping measures imposed by the EU in 2004 against Okoume-faced plywood from China, imports of Chinese plywood still soared in 2005, as the EU recorded an increase of almost 80 per cent in volume of Chinese plywood imports from January to November 2005⁶³.

Figure 2.15 Trends of China's Timber Exports to EU 1995-2004⁶⁴



5. Analysis of China's Domestic Wood Consumption

China's domestic consumption of industrial wood products⁶⁵ grew by 50 per cent in the last decade, reaching 174 million cum RWE in 2004, second only to the world's largest consuming country - the USA. Statistics from the State Forestry Administration (SFA) show that the construction, paper and furniture industries are the three main consumers of industrial wood in China, which were responsible for 95 per cent of domestic industrial wood consumption in 2004⁶⁶.

Wood Consumption of the Construction Industry

The construction sector consumes massive amounts of timber products, including plywood, construction mould board, flooring, lumber and decorative board. According to SFA statistics, the construction industry was responsible for almost half of China's domestic industrial timber consumption in 2004, with the booming real estate sector being the main driving force behind this consumption⁶⁷. Most analysts agree that, due to urbanization, the growing consuming capacity of the urban middle-

class, Beijing Olympics and the Western Regional Development Programme, China's construction and infrastructure industries will continue to grow, and their demand for timber will also continue to rise⁶⁸.

Wood Consumption of the Furniture Industry

In the last two decades, China's furniture industry has been growing at a rate of 15 per cent per year due to the real estate fever and the enhanced consumption capacity of the nation⁶⁹. China is now the world's fourth largest furniture producer, and this sector too is expected to grow. At the same time, China has become the furniture factory of the world, and its furniture exports are second only to Italy.

Wood Consumption of the Paper Industry

The paper industry is another major wood-consuming industry and one whose consumption has surged in recent years. From 1990 to 2003, China's consumption of paper and paperboard grew by 26 million tonnes or 9.6 per cent per year. By 2003, it was consuming 14 per cent of the world's paper supply⁷⁰. China is now the world's second largest



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consumer of paper⁷¹, though per capita consumption of paper is only about one-eighth that of the USA.

The primary raw material of China's paper industry had formerly been non-wood pulp (which mainly includes bamboo pulp, bagasse pulp, reed pulp, and rice and wheat straw pulp). In the 1990s, the government closed down thousands of paper mills using non-wood pulp as raw material in a campaign to control environmental pollution. As the standard of living improved, the Chinese market also grew to favour high-quality paper products made from wood pulp, and the proportion of wood pulp in the raw material composition rose steadily, from 15 per cent in 1990 to 22 per cent in 2003⁷².

China's demand for paper and wood pulp is expected to grow. Two industry analysts, He and Barr, forecasted that demand for paper and paperboard will increase at a rate of 2.9 million tonnes per year, reaching 68.5 million tonnes in 2010, while demand for wood pulp will soar from 9.2 million tonnes in 2003 to 15.1 million tonnes in 2010⁷³.

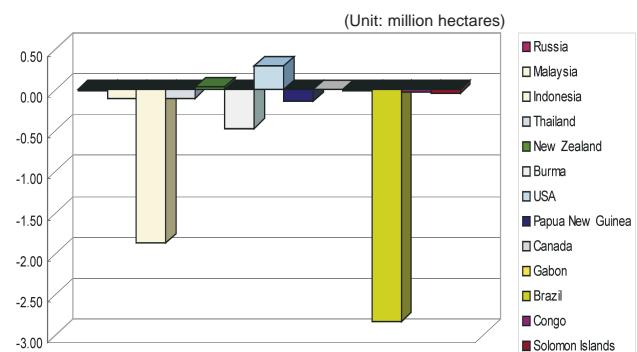
6. Illegal Logging, Associated Trade and Unsustainable Growth

"China is considered to be one of the largest buyers and millers of illegal logs."⁷⁴

As China's demand for wood continues to grow, concerns are also raised whether such growth is sustainable. China is highly dependent on a few countries for its timber product imports. Given the scale and growth rate of its imports, China's demand for timber products, especially logs and semi-processed products, has already placed a massive burden on the forest resources of these countries. According to FAO figures, the forests of most of China's timber supplying countries are shrinking (Figure 2.16). In the future,

it may be impossible for them to continue supplying a large volume of timber to China. In countries where illegal and destructive logging is widespread, their forests may soon be depleted. For example, Forest Trends estimates that at the present extraction rate, the natural forests of Papua New Guinea and Burma, two of China's major suppliers, will be largely depleted in about 10 years⁷⁵.

Figure 2.16 Average Annual Change in Absolute Forest Area of China's Major Timber Supplying Countries 1990-2005⁷⁶



Chinese officials and forestry experts are aware that their country cannot continue to rely on imported wood products to feed its ever-rising demand. As most timber supplying countries are past their logging peak, it would be difficult to increase their exports any further⁷⁷. China is developing plantation forestry on a large scale with the aim of reducing its dependence on imported raw materials, yet its land and water resources are extremely limited. Even in regions with good land resources, plantations may not be an attractive enough alternative for farmers who prefer to grow commercial food crops⁷⁸.

Another outstanding problem is illegal logging and associated trade. As most of China's wood supplying countries have serious illegal logging problems, the country has been criticized internationally for importing illegal timber and causing forest destruction in other countries, whilst at the same time

choosing to protect its own natural forests.

Being a large developing country, China has demonstrated a willingness in recent years to join the international community in accepting responsibility for protecting the global environment. Internally, there is increased awareness from both the government and members of the public that China cannot adopt the high-consumption model of development because the world's resources are limited. On the question of forest protection, China has made commitments through being a signatory nation to the United Nations Convention on Biological Diversity. On the question of illegal logging, the Chinese government has vowed in bilateral and international agreements to tackle illegal logging and associated trade. However, it has not taken concrete actions to tackle these problems (see Appendix 1 for more details).

What percentage of China's wood imports come from illegal logging? There have not been authoritative and comprehensive statistics to date, but some international organizations have made estimations based on wood trade between China and individual supplying countries. For example, a report by the World Bank pointed out that 40 per cent of China's timber imports from Russia are illegally harvested⁷⁹.

Nor should developed countries that purchase large amounts of processed products from China escape scrutiny. As our analysis shows, Europe, the

USA, Japan and other markets import large amounts of processed wood products from China. Therefore, they should bear, along with China, responsibility for contributing to the destruction of the world's ancient forests.

In fact, international concern over the environmental impact caused by China's wood industry is rising. In the last two years, some foreign buyers have begun asking Chinese manufacturers to show proof that the timber used in their products came from known, legal or even sustainable sources⁸⁰. Since some of the major importers of China's wood products have relatively high environmental awareness and standards, such market pressure will continue to intensify.

Whether the Chinese government agrees with these criticisms or not, the country cannot evade two vital questions. Can other countries sustain their large volume of timber supply to China? What proportion of China's imports come from illegal logging or other forms of destructive logging? The core of both these questions is "sustainability": how China can find a sustainable wood supply in order to fulfill its demand without excessively depleting resources and destroying forests in other regions. In the next chapter, we will focus on China's wood trade with Indonesia and Papua New Guinea, and examine its impact on the Paradise Forests, the largest ancient rainforest left in the Asia Pacific region.



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They came and disturbed the beliefs
we have. It will not be the same as
before.

Part 3

China's Impact on the Paradise Forests

"Some 70 per cent of China's timber imports come from Asia Pacific countries and China has become the leading market for most of them. In many cases, increasing trade flows are associated with unsustainable harvesting, corruption, illegal logging, and the abuse of indigenous and other forest community rights."⁸¹

China is now the world's largest importer of tropical timber⁸², with sources predominantly coming from countries in Southeast Asia and the Pacific Region. Illegal and destructive logging has already depleted much of the once abundant tropical rainforests in the Asia Pacific region. Some countries are only now aware that uncontrolled logging will soon exhaust their resources. In many cases, efforts to control illegal logging and forest destruction are undermined by corruption and regulatory failure in those countries.

The Paradise Forests of Indonesia, Papua New Guinea and the Solomon Islands in the Pacific is the largest remaining area of intact tropical rainforest in the region. In the last 15 years, however, Indonesia and Papua New Guinea combined have been losing 2 million hectares of forests every year.

China, being the major market for wood products from Indonesia and Papua New Guinea, plays a decisive role in the future of the Paradise Forests. In the following section, we will first

discuss the threats to the Paradise Forests, then analyze the trade in wood products between China and these two countries and make estimations of how much of this trade is illegal. Two investigative case studies are included in this section to illustrate how illegally harvested timber is exported to China, and used to make flooring and plywood for export.

1. Threats to the Paradise Forests

It was perhaps inevitable that the richness of the Paradise Forests would attract so many economic interests seeking to profit from its resources, but the sheer level of rapacious industrial activity is almost unprecedented. For decades now these forests have been under siege by numerous industries, including the logging industry, the mining sector, oil and gas companies, and the palm oil industry.

Illegal Logging in Indonesia

In Indonesia, according to the latest available figures for 2004, 76 per cent of the country's annual



timber production processed domestically comes from illegal sources. If we include the illegal exports of logs, the percentage of illegal logging will likely increase to 80 per cent⁸³. Despite pleas by the Indonesian Minister of Forestry to foreign governments for assistance in halting the trade in illegally-logged timber products, illegal logging and trade in the region continues.

Indonesia is somewhat unique when it comes to the issue of illegal logging. In many countries where illegal logging occurs, government officials issue

blanket denials that there is a problem at all, let alone acknowledge the massive scale of the problem. In stark contrast to this, the Indonesian government has acknowledged for years that illegal harvesting is rampant. Government officials have pleaded with their regional neighbours as well as the EU to help close the border to illegal trade: thus far, their efforts have been unsuccessful.

For its part, the Indonesian Government imposed its second log export ban in October 2001, but illegal trade has continued unabated, particularly via shipments

*"Illegal logging has come to constitute a well organized criminal enterprise with strong backing and a network that is so extensive, well established and strong that it is bold enough to resist, threaten, and in fact physically tyrannize forestry law enforcement authorities."*⁸⁴

Indonesian Forestry Official

What is illegal logging?

Illegal logging takes place when timber is harvested, processed, transported, bought or sold in violation of national laws. It can occur at many different stages of the supply chain and include:

- Obtaining concessions illegally (e.g. via corruption and bribery)
- Cutting protected tree species or extracting trees from a protected area
- Taking out more trees, under-sized trees, over-sized trees than is permitted or trees outside an agreed area
- Illegal processing and export
- Fraudulent declaration to Customs of the amount of timber being exported
- Non-payment or under-payment of taxes
- Use of fraudulent documents to smuggle timber internationally



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to Malaysia. Although the majority of logging occurs without a government permit or license, it continues because of bribes paid to police, forestry officials and politicians. Kidnapping, bribery and attempted murder have all been documented as methods used by some logging companies to protect their illegal trade⁸⁵.

According to a report released by the Environmental Investigation Agency and Telapak: “Military involvement in illegal activities is taken for granted in Indonesia. Hundreds of reports of military involvement in illegal logging have emerged and there is a recognition of this serious problem within government. Reports of military personnel owning illegal sawmills, backing timber barons and applying pressure for the release of confiscated logs are common and widespread.”⁸⁶

Illegal Logging in Papua New Guinea

Despite Papua New Guinea’s Constitutional recognition of the rights of the customary landowners, illegal logging in Papua New Guinea is the norm,

occurring without the informed consent of the customary landowners. By law, all major land and forest agreements require approval by the customary landowner group, not by individuals. But in reality this does not happen, with contracts often being written in English which few of the landowners are even able to read. The impact on the people of this

“Overseas logging companies continue to mine the forests at an alarming rate. Across Papua New Guinea, logging operations have resulted in profoundly negative social and ecological impacts, and have been contrary to both Papua New Guinea’s Constitution and the long-term economic, ecological, socio-cultural and security interests of Papua New Guinea and the majority of its citizens.”⁸⁷

destructive logging is often devastating, causing food supplies from the forest to be depleted, a loss of clean water supply to the villages, and a loss of economic opportunities that were scarce to begin with.

A few very large companies control the majority



of the concessions and are responsible for these consequences. Increasingly it is Malaysian logging companies that have moved into Papua New Guinea, having logged out much of the forests in their own region. The largest remaining frontier areas in the Paradise Forests are concentrated in Papua Province and in Papua New Guinea, but these, too, have been targeted by foreign multinational logging companies.

Because of the legal system in Papua New Guinea and the requirement to gain prior and informed consent from the customary landowners, and the failure of companies to acquire this consent, Greenpeace estimates that between 90 to 100 per cent of the logging that occurs in the country is illegal. In addition to this fundamental violation of the law, a 2003-04 review of the major existing projects found not one to be fully compliant with the relevant laws, with many in breach of environmental regulations and several controlled by logging companies through horrendous abuses of human rights⁸⁸.

The 2003-2004 Review of Existing Concessions documented numerous allegations of abuse of local landowners, including rape and physical violence, by either logging company officials or by police associated with the logging companies. “The use of physical force by the Police Task Force to intimidate employees and landowners was one of the major issues raised by all members of the community. The people most certainly welcome the presence of police in the area, but not in the manner they were behaving and under total control of the company.”

The report went on to state that Rimbunan Hijau’s Wawoi Guavi Timber Company’s “treatment towards citizen employees in many aspects of their employment reflects labour exploitation and slavery, and should be condemned at all levels.”⁸⁹

Despite the severity of the problems cited by the Review Team, and despite the fact that the team was “seriously concerned for the safety of those workers and landowners seen talking with the team,” no penalties were imposed.

Rimbunan Hijau - The Giant Shadow Over Papua New Guinea's Forests

Today, approximately 70 per cent of Papua New Guinea's forest resources have been awarded to large logging companies, such as the Malaysian logging giant Rimbunan Hijau, a company that is heavily linked to wood products trade to China. It is Rimbunan Hijau that is at the forefront of the push to acquire concessions for what remains of the forests in Papua New Guinea, despite its record of human rights abuses, environmental violations and breaches of legislation in the country and elsewhere.

For example, the Papua New Guinea government ordered an independent review in 2002 of a number of disputed logging permits and extensions, three of which involved Rimbunan Hijau's logging projects⁹⁰. The review found that all three were illegal and stated that they had reached the "unavoidable conclusion that there have been serious departures and breaches from due process and there are serious anomalies in the timber permits and agreements."⁹¹ The findings of the independent Review also stated that "the time has come for a full investigation into the affairs of both these companies (Rimbunan Hijau subsidiaries). They should be compelled to produce documents and account for their actions."

"The overwhelming conclusion is that the robber barons are now as active as they ever were. They are not only free to roam, but in fact are encouraged to do so by persons whose proper role is to exercise control over them... Only a Commission of Inquiry could hope to unearth the entire picture and unravel the web of deceit."⁹²

Yet Rimbunan Hijau and its subsidiaries continue to operate openly with no sanctions being taken against them, and despite the environmental impact

their actions have on landowners' interests. According to Sakas Aonomo, a customary landowner from Bula Creek in the Middle Fly District, companies like Rimbunan Hijau have fundamentally altered the forests and waterways since the time his grandparents lived.

"They would use this creek when they were sick. It would make them feel better. This creek has faded away. It cannot heal people because they came and disturbed the beliefs we have. It will not be the same as before. There's no fish since the company came. Before my mother and father used to do this, now there is nothing. Our medicine is not like before."⁹³

"By looking at that place I feel very sad and upset and frustrated about my land being destroyed," he said.

Sadly, Aonomo's story is far from unique. Corruption and coercion are often used to gain access to forest resources. According to Annie Kajir, an environmental lawyer in Port Moresby, the capital of Papua New Guinea, "landowners were forced to sign papers with a barrel of a gun at their back. In the presence of police and company officials, without proper legal advice, with guns pointed at them."⁹⁴

2. Wood Exports from the Paradise Forests to China

China is the largest destination for Papua New Guinea's wood exports and the second largest for Indonesia's wood exports. As illegal logging is widespread in the Paradise Forests, huge volumes of illegally harvested timber are exported to China. In the following we will take a closer look at the wood trade between China and these two countries, followed by estimates of how much of this wood trade is illegal. As illegal logs from Indonesia are often disguised as logs of Malaysian origin when being

exported to China, the following analysis will include trade statistics of China and Malaysia.

Indonesia

China was Indonesia's second largest destination for wood exports in 2002, constituting 29 per cent of the country's total export by value (Figure 3.4)⁹⁵. According to China Customs data, Indonesia exported 9.96 million cum RWE of wood products to China in 2004 (Figure 3.3), making it China's third largest supplier. Major exports to China include wood pulp, paper and sawn wood. Indonesia's

sawn wood exports to China are used mainly to produce flooring, hardwood furniture and other joinery products.

Indonesia's log exports to China grew steadily between 1995 and 2001, but plunged after the Indonesian government banned log exports in October 2001. Despite the ban, China Customs still recorded a small quantity of direct log imports from Indonesia (Figure 3.2). The actual volume of logs coming from Indonesia, however, far exceeds Custom's figures as a large volume of illegal logs were being smuggled to China, camouflaged as Malaysian logs.

Figure 3.1 China's Wood Imports from Indonesia, Papua New Guinea and Malaysia 1995-2004

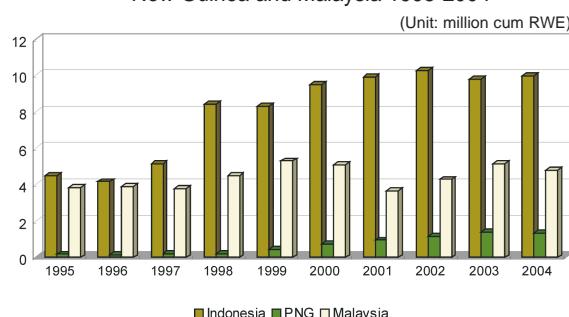


Figure 3.2 China's Log Imports from Indonesia, Papua New Guinea and Malaysia 1995-2004

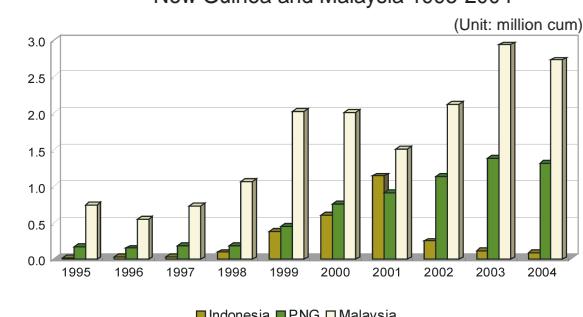


Figure 3.3 China's Major Wood Imports from Indonesia, Papua New Guinea and Malaysia 2004

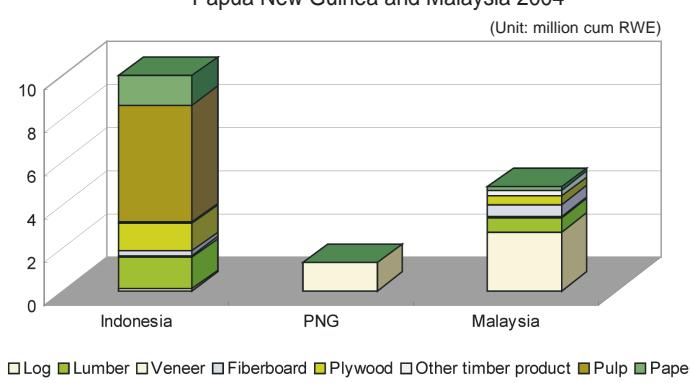
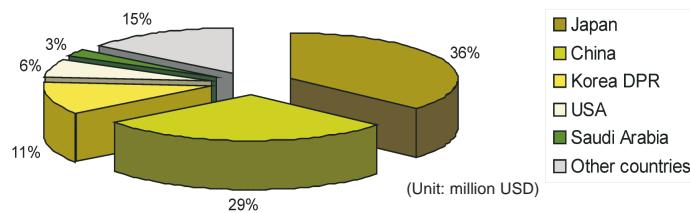


Figure 3.4 Indonesia's Major Importing Countries of Wood Products 2002⁹⁶





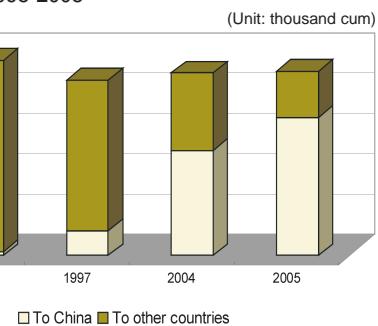
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Papua New Guinea

Over 90 per cent of Papua New Guinea's wood product exports are logs and most of these are exported to China. Papua New Guinea's log exports to China jumped 26 fold in the last 10 years (Figure 3.2), and it was China's third largest log supplier in 2004. According to ITTO's latest figure, Papua New Guinea's log exports to China increased 40 per cent in 2005⁹⁷. China's share of Papua New Guinea's total log exports grew from 2.1 per cent in 1995⁹⁸, to 75 per cent in 2005 (Figure 3.5)⁹⁹. China's share of logs from natural forests was even higher at 84 per cent¹⁰⁰.

Papua New Guinea's logging concessions and log exports are mainly controlled by a few Malaysian companies. Eighty per cent of its log exports are in the hands of five companies, with Malaysian-owned Rimbunan Hijau accounting directly and indirectly for at least half of the total log export volume¹⁰¹.

Figure 3.5 Trends of Papua New Guinea's Log Export 1995-2005¹⁰²



Solomon Islands

Logging in the Solomon Islands is controlled by a handful of Asian syndicates, among them Rimbunan Hijau. In 2004 logging reached a historical high with over 1 million cum exported, four times the estimated sustainable level of 225,000 cum¹⁰³. Almost half of this went to China¹⁰⁴, with Japan and other Asian countries taking the rest¹⁰⁵.

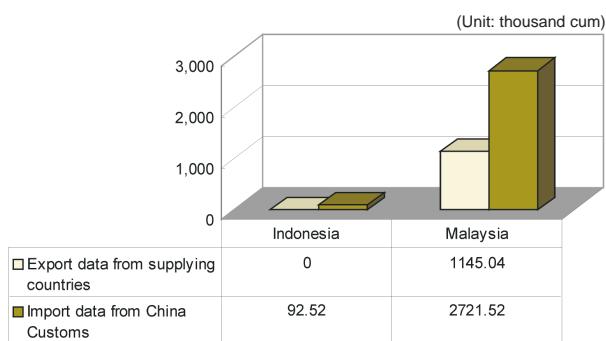
Illegal activities by logging companies, including Rimbunan Hijau¹⁰⁶, who have been proven to be linked to bribery activities¹⁰⁷, are widespread in the

Solomon Islands. Violations of laws by other companies operating in the Solomons include illegal logging¹⁰⁸, illegal log exports¹⁰⁹, destruction of local water supplies¹¹⁰ and prostitution¹¹¹.

3. How Widespread is the Trade in Illegal Timber?

Due to the nature of the illegal timber trade, it is difficult to conclude precisely what percentage of China's timber imports from Indonesia and Papua New Guinea are sourced from illegal logging. However, it is possible to make a conservative estimate of illegal trade, by contrasting the import figures from China Customs and the export figures from other countries (Figure 3.6).

Figure 3.6 Discrepancies of Log Trade Figures Between China and Indonesia and Malaysia 2004¹¹³



In October 2001, the Indonesian government introduced a ban on log exports with the aim of battling illegal logging and encouraging domestic timber processing. While this should entail zero log exports to China, in 2004 China Customs registered some 90,000 cum of logs imported from Indonesia. These logs were imported into China in violation of Indonesia's logging ban, and were possibly harvested illegally.

However it is the discrepancy between Chinese and Malaysian records that are most shocking. In 2004 Malaysia recorded only 1.15 million cum of

log exports to China, whereas China's corresponding import figure was 2.72 million cum - a massive difference of 1.57 million cum, or almost 30 per cent of Indonesia's legal harvest from natural forests in that year.

The most probable explanation for these glaring inconsistencies is that the logs do not come from Malaysia. After Indonesia's ban, the country's illegally harvested logs are commonly masqueraded, using forged documents, as "Malaysian logs", then smuggled to China¹¹². This expansive and organized trading network of illegal timber has long been an open secret to the timber trade and companies in China, Malaysia and Indonesia.

In 2004, China Customs recorded a total of 2.81 million cum of log imports from Indonesia and Malaysia, but 1.66 million cum were not accounted for by the corresponding export records of the supplying countries. In other words, 59 per cent of China's log imports from these two countries were of "unidentified origin" and it is extremely likely that a significant proportion, if not all, were related to illegal logging and illegal timber trade.

The volume of illegal timber from the Paradise Forests to China certainly exceeds the figures estimated above. We have only highlighted the discrepancies in trade records and have not included trade of illegal wood products other than logs. Some wood products from illegally harvested timber may be recorded in both the exporting country and in China, so no discrepancy would appear in trade records.

Illegal logging is a severe problem in Papua New Guinea and Indonesia. As we have discussed in earlier sections of this part, possibly more than 90 per cent of the logging in Papua New Guinea is in violation of the Constitution and laws of the country. This means most of China's log imports from Papua

New Guinea are coming from logging concessions that are associated with illegal practices. Yet because the logging companies hold enormous political sway and the Papua New Guinea government is rife with corruption¹¹⁴, logging companies remain unpunished and continue to export their timber “legally”¹¹⁵.

In Indonesia, the rate of illegal logging is estimated to be 76-80 per cent. This dire situation implicates both the country’s timber processing industry and its pulp and paper sector. The fast developing pulp industry in Indonesia is notorious for using wood from illegal logging. As the industry underwent overexpansion in the last decade, it now resorts to securing raw materials through illegal logging¹¹⁶. One-fifth of wood pulp produced in Indonesia is shipped to China¹¹⁷, and a significant proportion of this could well be derived from illegal sources.

The Choice for China

As China is the most important market for wood products from the Paradise Forests, its efforts to tackle

illegal and destructive logging activities is vital to the survival of the Paradise Forests. China has made several bilateral and international commitments to combat illegal logging and associated trade in the region, but so far it has not taken any concrete actions. Meanwhile, China’s rapidly expanding demand for cheap wood products is taking its toll on the Paradise Forests and elsewhere.

China’s impact on the Paradise Forests is likely to be felt in other major timber supplying countries, such as Russia, Burma, Gabon and Brazil. Like Indonesia and Papua New Guinea, these countries also suffer from illegal logging and serious deforestation. China’s increasing demand for timber is an extra burden on the already disappearing forests in these countries, and it may even fuel further illegal extraction and forest destruction. To small countries with a heavy supply of timber to China (such as Papua New Guinea, Burma, Gabon and Congo), the future of their forests will be largely dependent on China’s stance on combating illegal and unsustainable logging.



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How forged Malaysian documents facilitate illegal trade to China

In February 2005, an investigative report released jointly by the Environmental Investigation Agency (EIA) of the UK and the Indonesian environmental organization Telapak revealed large-scale illegal logging of merbau in Indonesia's Papua Province¹¹⁸. The illegally logged merbau was smuggled to China and other countries using forged Malaysian documents. After the report came out, the Indonesian government promptly sent in law enforcement staff to combat illegal logging and associated trade. In the following months, merbau log exports to China dropped dramatically, and sent shockwaves throughout the hardwood timber market in China.

Merbau is one of the most highly prized tree species in Southeast Asia and the Pacific Islands. Yet its extraordinary value has made it the victim of extensive logging for manufacturing up-market wood flooring, furniture, decking, doors, cabinet making and other joinery products. The World Conservation Union's Red List has categorized merbau as "facing a high risk of extinction in the wild," with logging and habitat destruction being the major threats¹¹⁹.

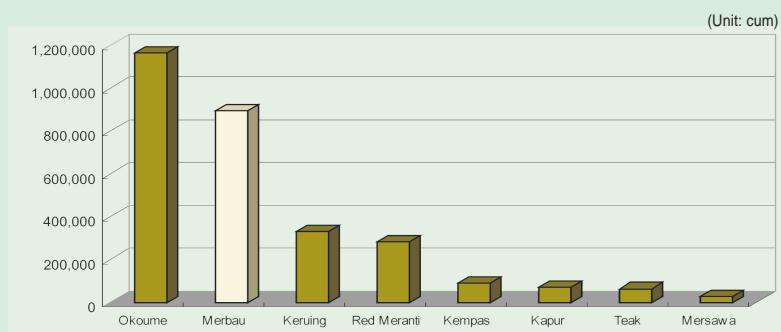
At present, merbau only exists in commercial quantities in the Paradise Forests in Indonesia's Papua Province and in Papua New Guinea, but these areas are now also under siege. As merbau was virtually logged out in much of Southeast Asia, the logging industry soon shifted its attention to Papua Province. In 1998, Indonesia exported only 50,000 cum of merbau, but the figure soared to 660,000 cum in 2001¹²⁰. Although a log export ban was introduced in 2001, it has failed to stop the illegal logging and export of merbau.

According to the report by EIA and Telapak, at least 3.6 million cum of merbau have been illegally harvested and exported from Papua Province every year. Most illegal loggers are Malaysian companies and a criminal network comprising traders from Jakarta, Singapore and Hong Kong smuggles the timber to China and other countries¹²¹.

China is a key market for illegal merbau. In 2004, China Customs recorded almost 900,000 cum of merbau log imports (Figure 3.7), making merbau China's second largest tropical hardwood log imports. Chinese Custom statistics indicate that China imported 870,000 cum of merbau from Malaysia in 2004. In reality, an overwhelming majority was illegal timber from Indonesia, camouflaged as "Malaysian" logs. The Malaysian Timber Council does not even list merbau in their very detailed statistics on log exports by species¹²².

Most illegal merbau enters China through the port of Zhangjiagang, which is located north of Shanghai. It is then transported to factories for processing into flooring¹²⁵. Merbau flooring is commonly found in the home furnishing market and retail stores in major Chinese cities such as Beijing and Shanghai. A well-known home

Figure 3.7 China's Import Volume of Major Tropical Hardwood Logs 2004¹²³



"All the export of round log from Jayapura, from Indonesia, is like smuggling. They smuggle it. Using Malaysian shipping document. They make a whole set. Country of origin, the whole set of documents, Malaysian. I am expert on this."

A Hong Kong Merbau log broker¹²⁴



© Ji Guoqiang/Greenpeace(2006)

Indonesian merbau logs found in the timber market of Yuzhu, Guangdong Province.

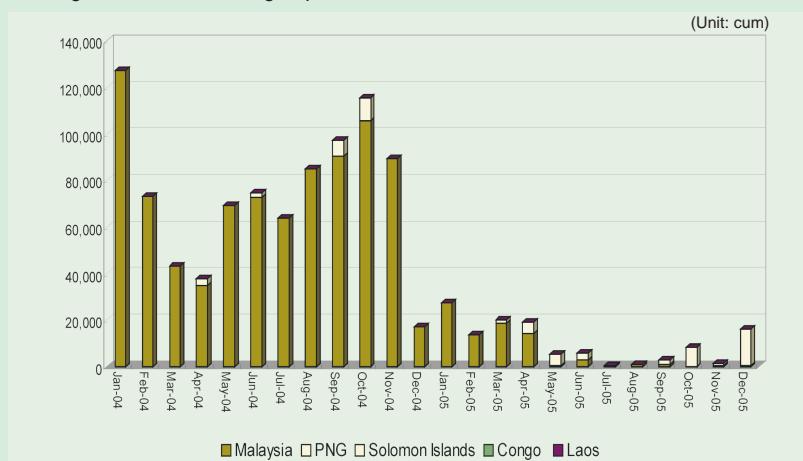
furnishing store in China has nine different brands of merbau flooring in one of their branches in Beijing¹²⁶. China also exports a significant amount of flooring to the USA, Canada, Japan, the UK and other countries.

After the release of the report by EIA and Telapak, the Indonesian President Susilo Bambang Yudhoyono immediately sent the National Police and the army into Papua Province to crack down on illegal logging and exports. In the following two months, law enforcement staff confiscated close to 400,000 cum of illegal logs¹²⁷, which was equivalent to 3 per cent of the world's total trade volume of all tropical logs, or almost 10 per cent of Indonesia's legal harvest from natural forests in 2004.

As a result of the measures taken by the Indonesian government, China's merbau imports from "Malaysia" plummeted after May 2005 (Figure 3.8). This shows that the majority of "Malaysian" merbau actually comes from illegal logging in Indonesia. The drop in supply drove merbau prices up, and some factories that relied on this illegal trade had to shut down temporarily.

The report and its consequences confirmed the existence of serious illegal timber trade between China and Indonesia, but it also demonstrates that Chinese companies that rely on illegal timber supply are financially vulnerable if foreign governments do choose to crack down on illegal logging.

Figure 3.8 Merbau Log Imports in 2004-2005



China's plywood export launders illegally sourced wood the world over

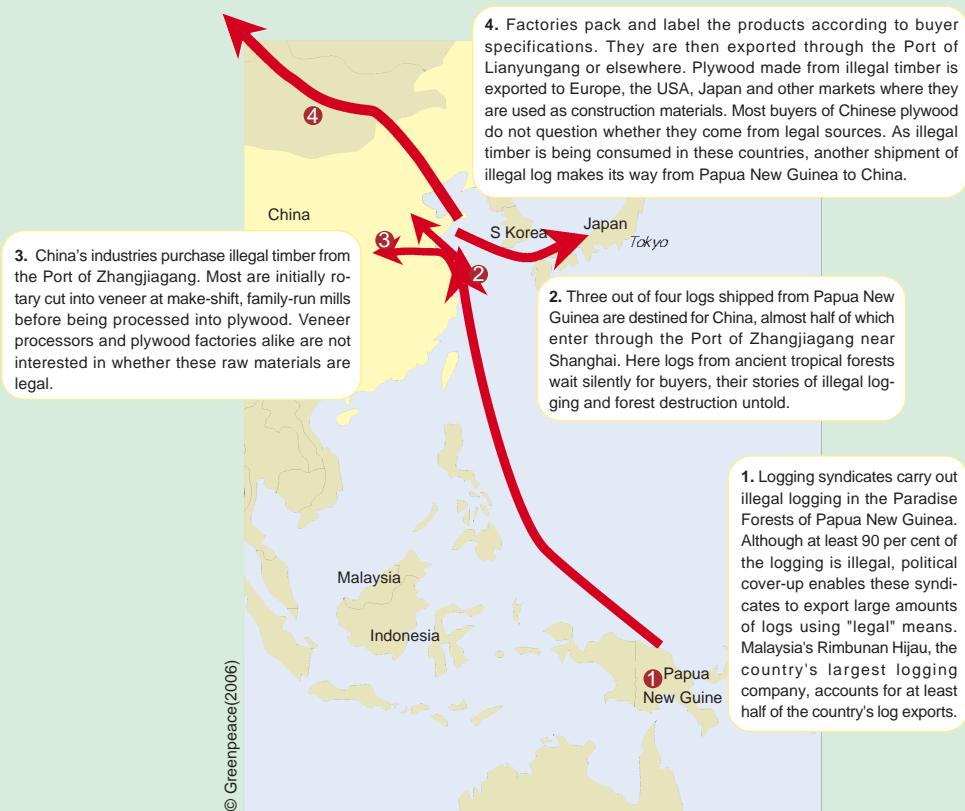
The enormous growth in China's wood processing industry has made it a world leader in the international trade of wood products. According to an unofficial source, there are more than 5,000 plywood mills in China¹²⁸, and many of these are small veneer processors and plywood producers; a few are major factory producers with thousands of employees.

Attracted by offers of cheap plywood offered through e-mails or hundreds of websites such as alibaba.com, western traders from Europe and the USA have been flocking to China to turn a quick profit from a plywood manufacturing industry subsidized by cheap, illegally sourced raw materials and Dickensian labour conditions.

China has become a major hub for plywood made from timber extracted from the world's key remaining rainforest areas. African Okoume is used for making plywood for the USA and Europe, Meranti from Indonesia for plywood to Japan, and Bintangor from Papua New Guinea and the Solomon Islands for plywood to Europe. Most of this timber comes from destructive logging in ancient forests - often illegal and in conjunction with severe abuses of the human rights of local people.

Greenpeace investigators, focusing on timber from Papua New Guinea, investigated over 20 major Chinese veneer and plywood mills in the booming industrial heartland of eastern China, as well as traders, in the second half of 2005. The aim was to connect products on the shelf in Europe with destructive, illegal and human rights-abusing logging activities in Papua New Guinea.

Flow Chart of Illegal Log and Plywood Trade

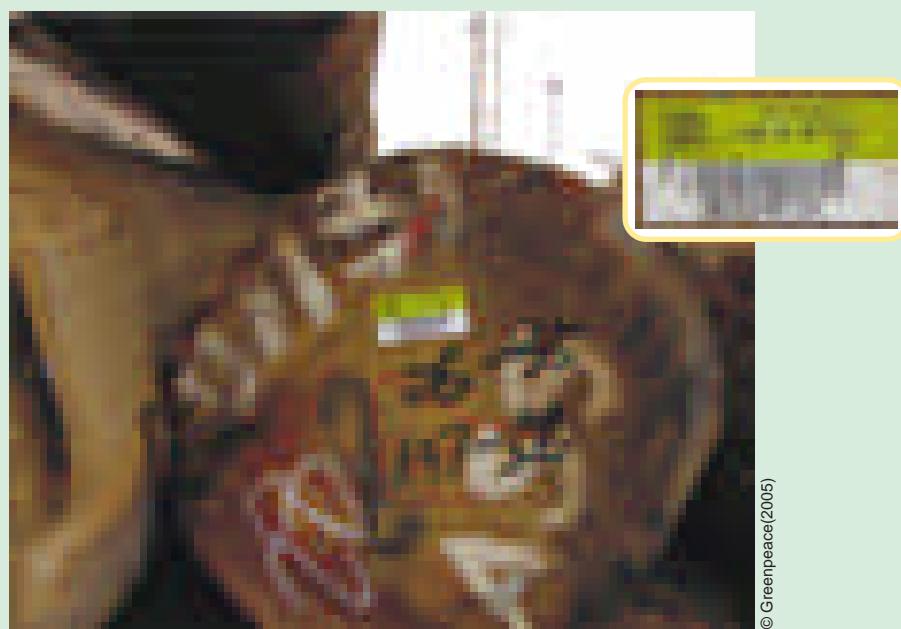


The port of Zhangjiagang is a key entry point for illegal timber into China

Just north of Shanghai, the port of Zhangjiagang has been transformed into the world's largest graveyard of rainforest logs, accounting for 53 per cent of Chinese tropical hardwood log imports in 2002¹²⁹. Nearly 3 million cum of tropical timber entered China through the port in 2004, with a reported declared value of EUR 400 million¹³⁰. Cargo vessels, bearing more than 300 different species of timber¹³¹, come from many of the world's ancient forests including the Congo Basin in Africa and the Paradise Forests of Papua New Guinea and Indonesia. Logs marked with the mobile phone numbers of importers make procuring illegal timber as easy as ordering takeaway.



Logs from the world's threatened ancient forests piled up in Zhangjiagnag. Log sellers often paint their mobile phone number on the log.



Logs in the port of Zhangjiagang. Labels on the logs indicate that they originate in Papua New Guinea. The number on one of the labels "10215" means that the log came from Rimbunan Hijau's logging concession "TP 2-15" in East Kikori, the province of Gulf.

All the traders and mills investigated by Greenpeace confirmed that the tropical timber used in plywood production came through the port of Zhanjiagang. They are either imported by the processors themselves (in case of large plywood producers such as Happy Group/Kuai Le and Jiaxin Jinlin Wood) or by traders acting on a mill's behalf at the port. Decisions are made based on documents that may list only the ship name, and the volume and species available for sale. Traders pick the logs they want from the list, before transporting them to the mills for processing. Buyers also purchase logs at the port and transport them north for auction in the plywood producing centres. Despite repeated requests, none of the traders or mills investigated by Greenpeace were able to provide documents to indicate the legality or the sustainability of the timber for sale.

Table 3.1 China's Top 10 Importers of Papua New Guinea Logs 2005 (Jan-Oct)¹³²

Company	Import Volume (cum)
Sumec International Technology Trade Co., Ltd.	212,060
Jiangsu Kuaile Wood Industry Group Co., Ltd.	132,627
Xiamen Xinda Import & Export Trading Company	95,700
Shanghai Xinxing Import & Export Co., Ltd.	89,548
Shanghai KJ Import & Export Co., Ltd.	87,856
Jiaxing Zhipu Development Group Co., Ltd.	86,785
Huzhou Baishun Import & Export Co., Ltd.	62,676
Jiaxing Jinlin Wooden Industry Co., Ltd.	51,754
Jiangsu Provincial Foreign Trade Corporation	49,095
Jiangsu Economical & Technical Cooperation Company	45,873
Others	573,997

How rainforest robbery is laundered in three easy steps:

- From Chinese port to veneer
- From veneer to Chinese plywood
- From Chinese plywood to export

Step one - from Chinese port to veneer

After being procured in the country of origin, at the quayside or at auction, logs are transported to one of thousands of veneer mills in Shandong or Jiangsu provinces. Logs from the world's ancient forests lie piled in the streets and in the yards of the mills, offering the full spectrum of rainforest destruction.

The veneer mills specialize in certain forms of production: some peel only

African logs, others only South East Asian logs. Thousands of small family veneer mills operate across the region, with machines running throughout the day to strip veneers from the logs as rapidly as possible. Workers labouring in 35°C heat, often living in the mills, are stripped down to the waist with little or no safety protection. When asked what workers are paid, mill managers refused to disclose wages.

Six veneer mills Greenpeace investigated are known to supply veneers to plywood mills that sell to the EU market as cheap “Made in China” plywood. All processed logs from Papua New Guinea’s rainforests. One mill also had Meranti logs from Indonesia, despite Indonesia’s ban on log exports, and Okoume logs from Gabon where illegal logging is rampant and goes hand in glove with the bushmeat trade. At these mills, Greenpeace identified Papua New Guinea logs which came from concessions being illegally logged by Rimbunan Hijau and other logging companies.



Logs from the world's endangered tropical rainforests are trucked to one of the many veneer mills in Shangdong and Jiangsu provinces.



Meranti log outside a veneer mill in Linyi, Shandong Province. According to the mill owner, the log came from Indonesia, despite the log export ban in that country.

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Logs are peeled in these veneer mills where workers toil in poor and unsafe working conditions .



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Step two - from veneer to Chinese plywood

From the veneer mills, stacks of tropical veneer are sent to plywood mills to be processed into final products. These mills produce all types of plywood - generally they will produce whatever the customer stipulates in terms of size, volume and timber species, with Bintangor-faced Poplar plywood being the latest blockbuster for European buyers.

Repeated requests at numerous mills for information on the legality and origin of the timbers being used drew a blank, indicating that European buyers have not been asking basic questions about their plywood suppliers. Most mill representatives and traders stated simply that no one had ever asked them such questions. European companies buying from these mills include Montague Meyer in UK, PontMeyer, Hoek Lopik and Oldenboom in the Netherlands, Possling and Roggemann in Germany and St. Gobain in France. For Europe, the major importer of Chinese plywood is the Belgium-based trader FEPCO which also deals with illegally operating suppliers in Indonesia, such as Korindo. None of these companies have any idea where the timber originates. Regardless of whether the timber used is Meranti, Okoume or Bintangor plywood, in most cases documented, the products come from destructive and illegal logging in ancient forests.

Greenpeace contacted some of these companies before this report was published, and Oldeboom, PontMeyer, Hoek Lopik, Point P. (St. Gobain Group) and Castorama (Kingfisher) responded by committing to stop selling Chinese plywood made with Bintangor or Red Canarium timber originating in the Paradise Forests.

Evidence of chain of destruction

In 2003-2004, the Papua New Guinea government commissioned an independent review of existing logging projects, including Rimbunan Hijau's logging concession "TP 18-2" in Manus West Coast and Turama's logging concession in the Gulf Province¹³³. The review concluded that the two projects were unlawful. In Chinese veneer mills producing for foreign buyers, Greenpeace researchers were able to identify logs originating in these two concessions.



Bintangor log outside a veneer mill in Linyi County, Shandong Province. The number on the label "11802" indicates the log came from Rimbunan Hijau's logging concession "TP 18-2" in Manus Province, Papua New Guinea.

According to the independent review, Rimbunan Hijau's logging concession in Manus was found to be guilty of the following:

- No valid environmental plan for the logging operation;
- Routine ignoring of the Logging Code of Practice;
- No attempt made towards sustainable log production or to maintain the forest's ecological balance;
- Failure to provide any health and safety equipment;
- The timber permit, expired in May 2003, was extended by extremely legally questionable means;
- Legally questionable takeover of the concession by Rimbunan Hijau, as the Timber Permit holder was neither consulted nor informed as is required under clause 39 of the Deed of Agreement; and
- Timber permit conditions were not being met, e.g. the agreed plywood mill had not been built.



Bintangor log outside a veneer mill in Linyi County, Shandong Province. The number on the label "10213" indicates the log came from Turama Forest Industries' logging concession in Gulf Province, Papua New Guinea.

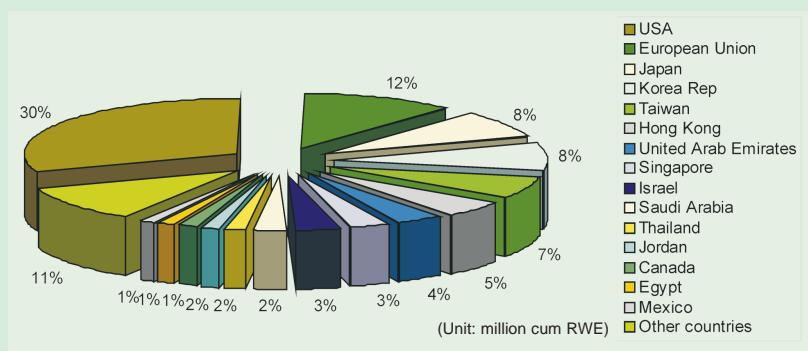
According to the independent review, Turama's logging concession in Gulf Province was found to be guilty of the following:

- Environmental Plan Approval conditions were not being met;
- Widespread logging in limestone karst areas in contravention of the Logging Code of Practice;
- Other widespread abuses of the Logging Code of Practice;
- Other legal breaches including serious human rights abuses, use of foreign labour in restricted positions, general infringements of workers rights, failure to provide safe drinking and cooking water, as well as health and safety equipment;
- Unlawful use of waterways without landowner consent (trespassing);
- Failure to realize agreed infrastructure projects, including medical clinics, school classrooms, and roads;
- Royalty payments are not distributed fairly to all landowners and many levies are not paid at all; and
- Unlawful sub-contracting of logging to Rimbunan Hijau.

Step three - from Chinese plywood to export

Next, plywood is trucked to one of the two main export ports at Qingdao and Lanyungang, where it is stored in warehouses and exported to ports throughout the EU, the USA, Japan and many other countries (Figure 3.9). Within months, logs that have been illegally stolen from the world's last remaining rainforests will end up as cheap Chinese plywood in builders' merchants, on building sites and in billboard construction across the world.

Figure 3.9 Major Importing Countries and Regions of China's Plywood 2004

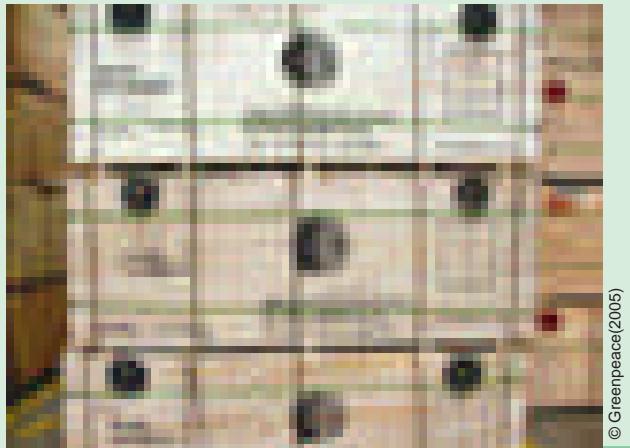


FEPCO: Profile of a European buyer of illegal Chinese plywood

FEPCO is a Belgium-based international plywood trader sourcing from Indonesia, Brazil and China a total volume of up to half a million cum per year¹³⁴. With 150,000 cum imported from China into the EU, FEPCO is by far the largest importer of this product, accounting for about one third of the total volume (500,000 cum in 2004¹³⁵). In China, FEPCO buys from several different suppliers, among them Jiade Wood Industries and Pizhou Jiahe Wood Co. Ltd.

FEPCO's Chinese suppliers source their Bintangor from Papua New Guinea companies such as the Rimbunan Hijau-affiliated Turama Forest Industries and Innovision. Turama is logging in one of the largest remaining intact tracts of ancient forest in Papua New Guinea and has been documented to violate Papua New Guinea's laws, environmental and forestry regulations. In its concession in Gulf Province, it is logging on karst (limestone), which is strictly prohibited under the Papua New Guinea's Logging Code of Practice. Turama was also found to have seriously affected water courses, which local people depend upon as a water source¹³⁶. Protesting villagers, the constitutional owners of the forest Turama is logging, are kept at bay by the police. The final report of the Review of Current Logging Projects states that "the company uses the members of the Police Force to assault employees who raise concerns on personnel issues. There is evidence of this abuse and suppression of workers' rights amounting to violation of human rights by the company."¹³⁷

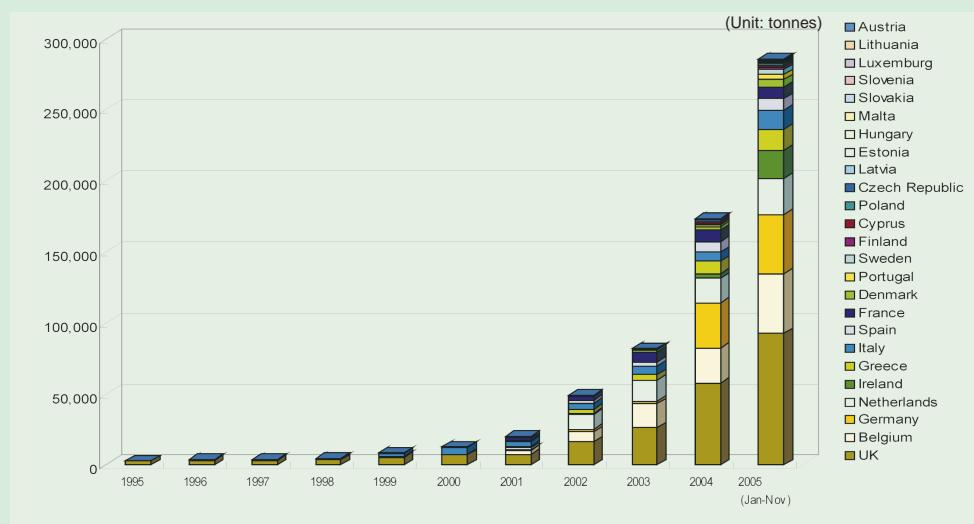
In Indonesia, FEPCO's main supplier is Korindo, another plywood producer frequently found to be involved in illegal logging or other breaches of the law in Indonesia¹³⁸.

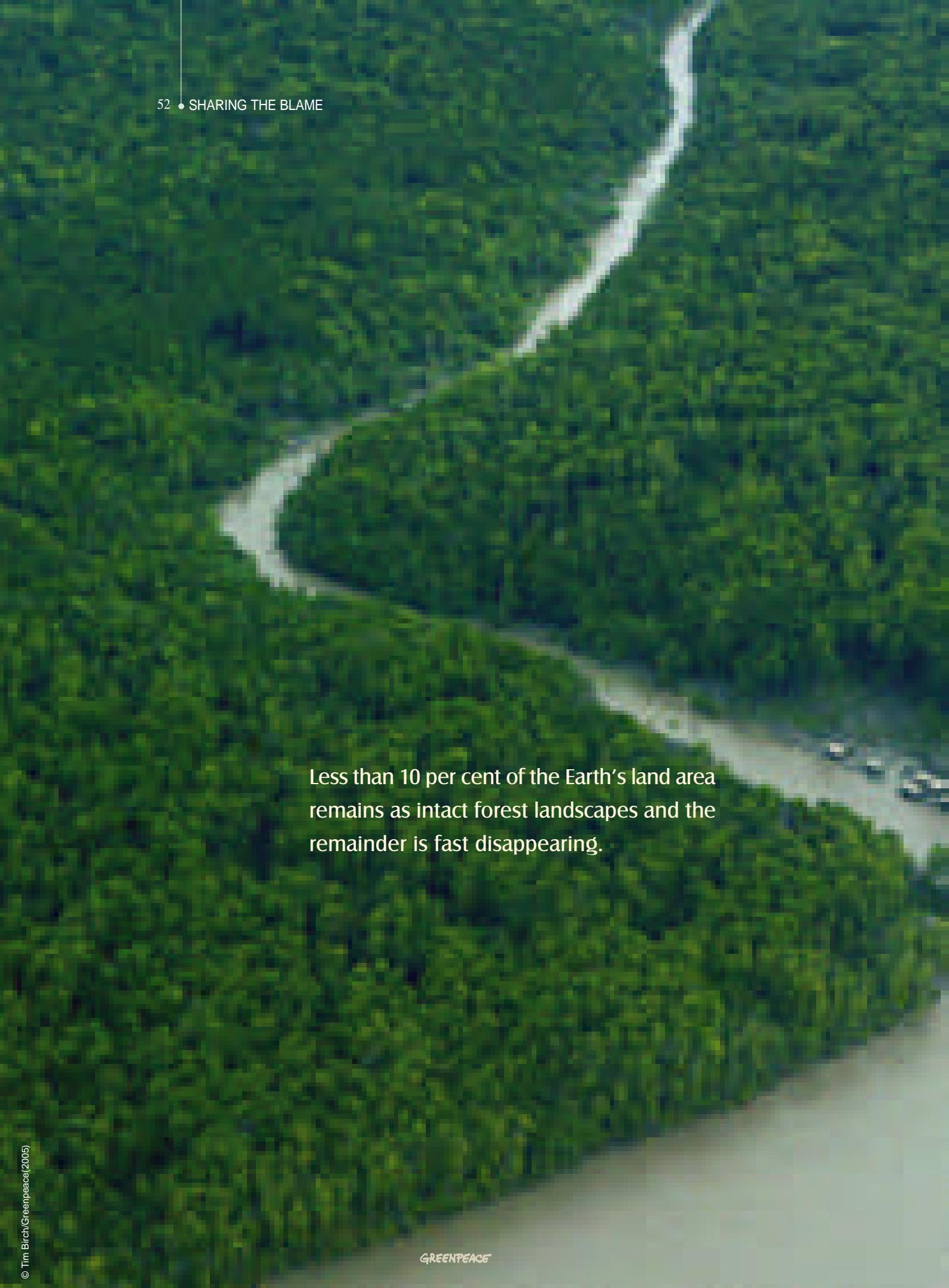


Chinese plywood in Portbury, UK. According to Greenpeace's investigation, the Chinese plywood producer used illegal timber from Papua New Guinea.

In the last decade, China's plywood exports to the USA, EU and Japan have increased significantly. China's plywood exports to EU, for example, increased more than 100 fold from 1995 to 2005 (Figure 3.10). Meanwhile, plywood exports from producer countries, e.g. Indonesia, Malaysia and Brazil, to EU are in decline¹³⁹. Increasingly timber from the world's threatened rainforests is exported to the EU via China, where illegal timber is effectively laundered and turned into finished products. While the EU is considering policy options to stop imports of timber of illegal and destructive origin, it has so far focused on the timber trade between EU and producer countries in Africa and South East Asia. This does not close the EU border to illegal timber products from China, and worse still, it may simply shift the pattern of illegal timber trade by encouraging more illegal timber to be shipped to China and laundered before being exported to EU.

Figure 3.10 Trends of China's Plywood Exports to EU Countries 1995-2005 (Jan-Nov)¹⁴⁰



An aerial photograph showing a dense green forest. A light-colored, winding road cuts through the trees, starting from the bottom right and curving upwards towards the top left. The forest appears healthy and well-preserved.

Less than 10 per cent of the Earth's land area remains as intact forest landscapes and the remainder is fast disappearing.

Part 4

Conclusions and Recommendations

"China has a large timber import volume but it's a legal trade. If certain industries or individuals engage in illegal logging or associated trade, it is their own act and definitely not the government's. The Chinese government has always taken a firm stance against illegal logging. This will not change. Besides continuing to enforce laws in China to prohibit illegal logging and protect our forest resources, we should also strengthen bilateral and multilateral collaboration to battle the illegal logging and timber trade."¹⁴¹

Qu Guilin, Director-General, Department of International Cooperation, State Forestry Administration

"Expecting or asking one country to combat illegal logging while at the same time receiving or importing illegal logs does not support the efforts to combat these forest crimes...In fact, allowing the import and trade of illegal timber products could be considered as an act to assist or even to conduct forest crime."¹⁴²

Muhammed Prakosa, Indonesian Forest Minister

"Wood product companies, manufacturers, the government and consumers are all links in the timber supply chain. We must join forces to combat and eliminate illegal logging. It is not enough to rely on the law. Industry must also engage in responsible procurement to stop such criminal acts."¹⁴³

Lu Weiguang, Board Chairman, Shanghai Anxin Flooring Company Ltd.

play a vital role in maintaining climatic stability and ecological balance. They are also home to tens of millions of indigenous peoples who have lived in these forests for generations and depend on them for their livelihood. Less than 10 per cent of the Earth's land area remains as intact forest landscapes and the remainder is fast disappearing. Illegal and destructive logging is the main cause of their demise.

In the last 10 years, China's wood consumption and imports experienced exponential growth, but there are two prevailing problems in China's wood market and trade.

Illegal Logging and Associated Trade: A significant proportion of China's wood imports come from illegal logging and ancient forest destruction. China is buying ancient forest destruction, and the buyers of Chinese products in the USA, Europe and

1. China and the Global Forest Crisis

Ancient forests provide habitat to two-thirds of the world's land-based animal and plant species and

Japan are helping to fuel the forest crisis with their desire for inexpensive wood products.

Rapid rise in consumption patterns: China's continuous growth in wood consumption is an extra burden on the world's remaining ancient forests. The world's dwindling forest resources can neither support the wood consumption level of developed countries, nor the continuously rising wood consumption of China and other developing countries.

The two problems are interrelated. Sustained growth in China's wood consumption places additional pressure on global forest resources and, in many cases, may fuel illegal logging and forest destruction in producer countries. Illegal and destructive logging, in turn, further undermines the ability of the world's forests to meet consumption needs in a sustainable way.

China has made commitments to address the problem of illegal logging, but it is clear from Greenpeace investigations that the trade in illegal timber goes on with impunity throughout the booming Chinese wood products sector.

As China's wood product traders and processors are the main importers and buyers of illegal timber they are highly responsible for the illegal trade. However, this seriously impacts the reputation of China as a country, as well as its wood exports industry. In October 2005, several key companies in the UK announced that they would stop buying plywood made from illegal timber coming from Papua New Guinea. As the majority of China's plywood exports to the UK come from Papua New Guinea, Chinese companies were directly impacted by this move.

Yet although the Chinese wood industry is largely responsible for the illegal trade and the Chinese government insists that illegal timber import is the act of industry and individuals, the problem cannot be solved without government intervention.

At present there is no international mechanism through which all countries can work together to systematically combat illegal and destructive logging and its associated trade. Due to the global nature of the timber trade, a global solution is required. Governments of all nations must negotiate a multilateral, legally binding agreement which aims to implement sustainable forest management and timber trade. The United Nations Convention on Biological Diversity is an appropriate framework for the development of such an agreement.

Simultaneously, governments, industry and consumers all have to tackle the escalating problem of over-consumption. All countries must confront a stark reality - the world's forest resources are limited and they are dwindling as we speak. It is abundantly clear that the world's forests cannot sustain the consumption patterns of developed countries and will not sustain China's aspiration to attain the same level of consumption. The example cited of China raising its current per capita consumption of paper (36kg) to the level of consumption in the United States (301kg)¹⁴⁴ would require the availability of almost another 1.6 billion cum of timber - timber that simply does not exist¹⁴⁵. If developed countries do not curb their wood consumption and, similarly, if China does not slow down the rapid increase of its wood consumption, future generations will be living on a planet without ancient forests.



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2. Greenpeace Recommendations

There are five key over-arching measures that must be taken immediately in order to stop illegal logging and expedite the shift towards ecologically responsible purchasing and consumption:

- **All Governments, including that of China, must introduce legislation to prohibit the export and import of wood and wood products from illegal and unsustainable sources;**
- **Governments and industry must adopt and implement purchasing policies that prohibit products from illegal and unsustainable logging and give preference to products derived from ecologically responsible logging practices, as certified by the Forest Stewardship Council;**
- **Governments must develop a legally binding international protocol, under the auspices of the United Nations Convention on Biological Diversity, to ensure socially and ecologically sustainable use, consumption and trade of forest resources, combat illegal logging and related trade and improve forest law and governance;**
- **Governments must establish a global network of protected areas which includes the large intact ancient forest landscapes, through a process involving local stakeholders and other local communities, with the participation and prior and informed consent of indigenous peoples; and**
- **Developed countries must reduce consumption levels on a per capita basis, whilst developing countries must reject the unsustainable model of consumption of developed nations.**

The following are key steps that must be taken by stakeholders in order to meaningfully implement the recommendations listed above.

Key Steps for Governments of Consumer Countries:

- Relevant ministries must investigate illegal timber trade and assess its scale, chain of custody, and identify companies and individuals involved;
- Government departments must engage in multi-ministerial collaboration since various ministries are involved in tackling illegal logging and trade (for China these include the State Forestry Administration, Ministry of Commerce, Administration of China Customs and Ministry of Foreign Affairs);
- Governments must actively participate in bilateral and multilateral international collaboration and implement corresponding measures at home to eliminate illegal logging and its associated trade;
- Importing countries must work with customs authorities of timber-supplying countries to exchange trade statistics and documentation and to establish credible wood tracking systems, as well as other measures to eliminate illegal timber trade, forgery of documentation and timber smuggling;
- Governments must encourage corporations and individuals, through policy, to use environmentally friendly timber substitutes and promote recycling of wood and paper products; and
- Developed countries such as those in Europe, the USA and Japan should assist timber-producing countries to boost forest management capabilities through aid, bilateral and international collaboration.

Key Steps for Governments of Producer Countries:

- Improve forest management, including perfecting relevant legislation, enhancing law enforcement and increasing penalties for forest crimes;
- Countries with serious corruption must combine improvement of forest resource management with anti-corruption measures;
- Assist forest-dependent communities to establish sustainable forestry projects, which benefit the environment and the local communities; and
- Engage in bilateral and multilateral collaboration to exchange trade statistics and documentation, implement a credible wood tracking system, and adopt other measures to eliminate illegal timber trade, including addressing forgery of documentation and timber smuggling.

Key Steps for the Wood Products Industry:

- Establish a verification system for chain-of-custody tracking to ensure that timber comes from sources that operate legally and are ecologically sustainable; and
- National wood products associations must adopt and implement relevant policies to prohibit member companies from importing or buying illegal timber or wood products made with illegal timber.

Key Steps for Consumers:

- Consumers, including institutional buyers, must recycle wood and paper products and purchase products with higher recycled content (e.g. 100% recycled paper) and wood products that are FSC-certified.

Appendix 1

What Commitments Has China Made?

United Nations Convention on Biological Diversity

Commitments were made at the Convention on Biological Diversity (CBD) in 2004 where signatories, including the European Union, China, Papua New Guinea, and Indonesia agreed, "individually and collectively to take further steps in curbing the illegal exploitation and trade of resources, particularly from existing protected areas and from areas of ecological importance for biodiversity conservation."¹⁴⁶

Forest Law Enforcement and Governance

Forest Law Enforcement and Governance (FLEG) is a multilateral political process, covering several regions¹⁴⁷ and which aims to curb illegal logging and associated trade. In 1998, the G8 agreed on the Action Programme on Forests, in which elimination of illegal logging and associated trade was elevated to a high level of importance on the international political agenda. This breakthrough led to the first East Asia and Pacific FLEG Ministerial Conference, which took place in Bali, Indonesia in September 2001. This resulted in the signing of a Ministerial Declaration and agreement of an Action Plan. Participating countries from East Asia and Pacific Region, including China, pledged to "take immediate action to intensify national efforts, and to strengthen bilateral, regional and multilateral collaboration to address violations of forest law and forest crime, in particular illegal logging, associated illegal trade and corruption, and their negative effects on the rule of law."

In November 2005, China took part in the Europe and North Asia FLEG Ministerial Conference in St. Petersburg, Russia, where it signed the St. Petersburg Ministerial Declaration. FLEG ministerial declarations are not legally binding but, by signing the declaration, countries are making a solemn political commitment. But so far China has not taken concrete actions to implement these agreements at the national or international level.

Memorandum of Understanding Between China and Indonesia

China and Indonesia signed a Memorandum of Understanding after the Bali Ministerial Conference in 2001, agreeing to curb illegal exploitation and trade of timber resources. Following this, China set up a multi-ministerial working group to address the problem but to date no further actions have been taken. The State Forestry Administration criticized the Indonesian government for not having made any corresponding moves. The latter, on the other hand, indicated that it had informed and requested the State Forestry Administration to take action against shipments carrying illegal timber, but the response had been lukewarm and no action had been taken.

China-EU Summit Joint Statement

Leaders of China and the EU signed the China-EU Summit Joint Statement at the 8th China-EU Summit held in Beijing in September 2005. The two sides "pledged to work together to tackle the problem of illegal logging in the Asian region."¹⁴⁸

Sino-Russian Joint Statement

The Chinese Premier and the Russian Prime Minister agreed at the 10th Regular Meeting between the heads of China and Russia held in Beijing in November 2005 to "further strengthen the development of forest resources and step up measures to curb illegal harvesting of forest resources and trade."¹⁴⁹

Appendix 2

Data Sources and Technical Notes

- Data used in this report come from China Customs unless specified.
- Wood products include timber products (all commodities in Chapter 44 of China 木 Customs HS system except wood packaging), pulp (Chapter 47), paper (Chapter 48) and wood furniture (HS code 940161, 940169, 940330, 940340, 940350, 940360).
- Wood product weight and volume have been converted to RoundWood equivalent (RWE).

Factors used to convert wood weight and volume to RWE

Products	HS code	Weight (ton) to Volume (cum) Factor	Factor Source	Wood volume (cum) to Roundwood equivalent volume (RWE) factor	Factor Source
Wood Chips	4401	1.4	WWF	1	Ollmann
Charcoal	4402	—		6	FT
Log	4403	—		1	Ollmann
Hoopwood	4404	1.4	WWF	2	FT
Mill Waste	4405	1.4	WWF	1	FT
Sleeper	4406			2	FT
Sawn Wood	4407			1.53	UNECE
Veneer	4408	1.33	ITTO	2.11	UNECE
Mouldings	4409	1.4	WWF	1.9	FT
Particle Board	4410	1.54	FT	1.65	UNECE
Fiber Board	4411	1.42	FT	1.7	Ollmann
Plywood	4412			2.53	UNECE
Desifed Wood	4413	1.4	WWF	2	FT
Picture Frames	4414	1.4	WWF	3	WWF
Packaging	4415	1.4	WWF	2	WWF
Casks and Barrels	4416	1.4	WWF	2	WWF
Tools	4417	1.4	WWF	3	WWF
Joinery	4418	1.4	WWF	3	WWF
Table and Kitchenware	4419	1.4	WWF	2	WWF
Ornaments	4420	1.4	WWF	3	WWF
Other Items	4421	1.4	WWF	3	WWF

Products	HS code	Weight (ton) to Roundwood equivalent volume (RWE) factor	Source
Mechanical Pulp	4701	3	FT
Dissolving Pulp	4702	5	Ollmann
Wood pulp, chemical	4703/4704	4	FT
Semi-Cellulose	4705	3.3	FT
Recycled Pulp & Cotton pulp	4706	0.4	Greenpeace estimate
Waste Papers	4707	2.6	FT
Newspapers	4801	2.8	FT
Tissue products	4803, 4818	2.8	FT
Paper & paperboard	48	2.8	FT

Source

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the most important factor in determining the success of a project is the quality of the team. A team that is composed of individuals who have different skills and expertise can work together to achieve better results than a team that is composed of individuals who have similar skills and expertise.

The second factor that is important in determining the success of a project is the availability of resources. If a project requires specific resources that are not available, it may be difficult to complete the project successfully.

The third factor that is important in determining the success of a project is the level of motivation of the team members.

The fourth factor that is important in determining the success of a project is the level of communication between the team members.

The fifth factor that is important in determining the success of a project is the level of support from management.

Overall, the success of a project depends on many factors, but the most important factor is the quality of the team.

