

FOREST DESTRUCTION'S PRIME SUSPECT

By Steve Kemper

Ten years ago, Suifenhe and Manzhouli were small, little-known towns on China's remote northern border with Russia.

They are now booming centers of chaotic and often illegal commerce. The growth was fueled by timber. The vast forests of the Russian Far East—the world's second-largest carbon sink after Amazonia—are draining through border towns such as Suifenhe and Manzhouli at an alarming rate, often with help from the Russian mafia, Chinese criminal gangs and corrupt officials on both sides of the border. The raw logs get sawn into boards before being transported farther along the timber chain in China, where thousands of factories churn



out wood products that end up in homes in the United States, Europe and Japan.

Suifenhe and Manzhouli are still unknown to most Westerners, but they are no longer inconsequential. Nor are they uncommon. Huge quantities of wood, much of it illegally cut, reach China every day from timber depots in Indonesia, Malaysia, the Mekong Delta, central Africa and Amazonia. These places are feeding China's voracious appetite for wood, which in turn is continuously stoked by global demand for inexpensive furniture, flooring and other wood products. This cut-and-consume cycle is destroying the world's forests with breathtaking speed and on a scale never before seen.

"China is becoming a black hole for tropical timber around the world," says William Laurance, a senior research scientist at the Smithsonian Tropical Research Institute in Panama. "Basically, half of all timber being traded in the world is going to China. *Half*. That's an incredible figure. China has completely altered the tropical timber trade."

It has happened fast. A decade ago, China was a blip in the global wood industry. It imported few logs and exported relatively few wooden products. Domestic forests supplied the country's modest needs. A perfect storm of developments changed all that. In 1998, the Yangtze River flooded catastrophically, killing several thousand people and leaving millions homeless. The main cause was erosion brought about by deforestation—common throughout China. The government responded by banning logging in the country's few remaining natural forests.

At the same time, the Chinese economy had begun to surge, which intensified demand for wood needed for construction, paper and other products. This spurred the country's wood-manufacturing sector, whose expansion required a constant supply of two things: logs and new markets. For both, China looked abroad.

A few statistics capture China's recent impact on the world's forests and timber industry, as well as the Western consumerism that has subsidized it:

- Between 1997 and 2007, the volume of wood imported by China tripled. The country is now the world's biggest importer of raw forest products (logs and sawn timber). Nor is China's appetite for wood likely to diminish anytime soon. A 2006 report by Forest Trends, a Washington, D.C., group that monitors the timber trade, predicts that China's forest imports will double within a decade.
- By 2005, China had become the world's largest exporter of wood products, valued at more than \$17 billion. China's biggest customer: the United States, which bought about \$7.9 billion worth in 2005.
- China now makes about a third of the world's furniture. Between 2000 and 2006, its exports of furniture rose from 91 million pieces to 248 million pieces. The largest portion—about 40 percent—went to the United States.
- China has become the world's second-largest producer of paper and paperboard and the biggest producer of plywood and veneers made from tropical hardwoods.
- Between 1997 and 2005, imports of wood products from China to the United

States and the European Union rose by more than 700 percent.

Asian and Pacific countries, including the Russian Far East, supply about 70 percent of the wood entering China. In the last decade, the forests in many of these places have been plundered on an immense scale. The Smithsonian's Laurance found

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that half of all Asian nations have lost more than 70 percent of their forests, with Indonesia and Malaysia especially hard-hit. According to a 2006 report by Forest Trends, "If current cutting rates continue, the economically accessible mature natural forests in Papua New Guinea will be gone in 16 years or less. The equivalent figure for Indonesia is 10 years. The situation in Myanmar is no better, and may be even worse, and the Philippines and Thailand have already logged out most of their natural forests." If the logging in Russia's eastern forests continues at the present rate, they could disappear in 20 years.

Much of this wood ends up in China, and much of it is cut illegally—90 percent in Papua New Guinea, according to Forest Trends; 95 percent in Myanmar, according



STR/AFP/Getty Images

to Global Witness, which monitors the links between corruption, environmental abuses and human rights; up to 70 percent in Russia and Malaysia. Indonesia's minister of the environment estimates that 73 percent of the wood leaving his country is illegal and says that 37 of the country's 41 national parks are being pillaged by loggers.

As the Asian forests have thinned out, China and its Asian suppliers have turned their attention to new sources in central Africa and South America, with similar results. Chatham House, a British think tank that monitors the timber industry, estimates that 70 percent of the Chinese logging in sub-Saharan Africa is illegal.

According to a 2006 World Bank report, "It is feared that the Chinese demand, which does not currently distinguish between legally and illegally produced timber for imports, is escalating the problem of illegal logging." A 2008 report for the World Wildlife Fund (WWF) by Constance McDermott, program director of the Yale Program on Forest Policy and Governance and Program on Forest Certification at F&ES, and Lloyd Irland, Ph.D. '73, lecturer and senior research scientist at F&ES, concurs: "It is likely that a significant portion of the wood products imported into China comes from logging practices that

A shop in Jianli, China, sells freshly cut logs, mainly used for construction of homes in Jianli, in central China's Hubei Province. China's surging demand for wood, spurred by its rapid economic growth, threatens to have a devastating impact on forests around the world, the WWF warned, as China has become a major importer of timber and pulp from countries like Russia, Malaysia and Indonesia, and is now one of the major destinations for wood that is being illegally harvested or traded.

destroy and/or degrade high-conservation-value forests, and/or are otherwise unsustainable or illegal."

About 70 percent of that imported wood leaves China as inexpensive wood products. Many of these products end up in the living rooms of U.S. consumers, who are unaware that they are bankrolling a criminal enterprise with far-reaching consequences.

The costs of China's timber trade are immense. The first casualties are the local people, who often get swindled by loggers. A December 2007 report by the Environmental Investigation Agency (EIA) recounts that on the Indonesian island of Salawati, a logging company paid villagers \$22,000 for hardwood worth \$3 million. In Africa, Greenpeace found contracts in which communities signed away logging rights worth hundreds of thousands of dollars for less than \$100 worth of salt, sugar and beer.

If the local people object, police or military often step in to intimidate or coerce villagers. In Burma, military officials have obliged their Chinese partners by expelling villagers from forests. In the Democratic Republic of Congo, soldiers have used violence against people protesting the actions of loggers. Last year, a Penan chief in Borneo who opposed logging was killed.

In many poor countries, the property rights of local communities are tenuous or unrecognized, a flaw exploited by logging companies and governments. "In Cambodia, Laos and also China," says Kerstin Canby, director of the Forest Trade and Finance Program at Forest Trends, "there's something harsh going on called economic land concessions. The land is technically the government's, but people are living on it, so

when the government sells or gives away this land for a plantation or an agribusiness, it causes human rights issues."

According to the World Bank, more than a billion poor people depend on forests for subsistence. When those forests

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disappear, local people lose their principal resource and their livelihood. Mark Ashton '85, Ph.D. '90, Morris K. Jesup Professor of Silviculture and Forest Ecology, has traveled and worked in many of the areas affected by rampant logging and has seen the social consequences. "The original communities are completely destabilized," he says. "Their standard of living quickly lowers from subsistence to poverty."

Nor do the national governments see much economic benefit. Most of the profits are pocketed by a few logging companies and corrupt officials. The rest of the money leaves the country with the logs. The companies often pay bribes, but not taxes, royalties or customs fees. A World Bank study estimated that illegal logging on public lands alone costs poor governments \$15 billion a year. Indonesia estimates that outlaw loggers cheat it of \$4 billion a year, money that could go toward schools, health care and infrastructure. An EIA investigation exposed one Indonesian

smuggling racket that transported rare merbau logs worth \$1 billion a year from Papua New Guinea to China.

By avoiding expenses, outlaw companies also warp the price of wood. According to a 2004 report by the American Forest &

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2007 EIA Report

Paper Association, illegal logging costs the U.S. timber industry \$1 billion a year in lost exports and cut-rate prices.

“If you take wood and you don’t pay the landowner,” says Ashton, who is also director of F&ES school forests, “and you don’t pay the nation, if it’s public land, and then you export that wood and sell it, you’re lowering the price, because there is always a cost in sustainability. And if you’re trying to take wood in a sustainable way, you also have to do it in such a way that you do least harm to the land. That also costs money. So illegal logging affects sustainable forestry in a huge way. We’re having a hard time sustainably managing the Yale Forests because of depressed timber values due to illegal logging in Siberia, Asia and Latin America, and the raw logs go directly to these big industries in China.”

The loggers leave a trail of destruction beyond the cutting. They kill animals for food, pollute water and denude riverbanks, which leads to erosion, flooding and landslides. They leave behind slash that contributes to forest fires. They destroy habitat and sometimes push

threatened and endangered animals to the brink, including Siberian tigers, Amur leopards, red pandas, Sumatran tigers and elephants, bonobos and orangutans. Loggers often build access roads, which encourages incursion by small farmers or industrial loggers and agribusiness.

And, of course, the massive loss of trees worsens climate change. According to the Stern Review, deforestation is responsible for nearly 20 percent of global carbon emissions—making it worse for the planet than emissions from transportation or industrial manufacturing.

One of the most toxic consequences of illegal logging is corruption, which rots respect for law and destroys not only lives but hope. The scale of what is occurring would be impossible without the help of crooked officials from beginning to end. “In several country case studies,” notes the 2007 report from EIA, “illegal logging is financed and conducted by criminal syndicates and mafias with high-level connections. Bribery and impunity undermine the rule of law in developing countries and cripple the enforcement functions of government agencies.”

The network of corruption is wide. When EIA traced the merbau logs involved in that \$1 billion-a-year smuggling ring, the trail led from the forests of Papua New Guinea to ports where the Indonesian military allowed the logs to be shipped to middlemen in Jakarta, Singapore and Hong Kong. Next the logs passed through Chinese customs—despite Indonesia’s ban on all exports of merbau and China’s bilateral agreement not to import it. The logs ended their trip at Chinese factories that make flooring for export to the United States and elsewhere. After the report was released in 2005, the

Indonesian government cracked down and arrested some of the smugglers. The illegal traffic slowed. But corrupt judges acquitted all but a few underlings, including every major suspect, and by 2007 the smugglers were back in business, using false papers and new routes to China through Sarawak and Sabah in Malaysia.

Matthew Steil, research associate for the World Resources Institute’s forest initiative in central Africa, worries about the Chinese companies flooding into Africa and exploiting its resources. But he worries just as much about other pernicious long-term effects. For instance, the Chinese are changing the development model in Africa. Loans from Western governments and institutions, such as the World Bank, come with environmental and accounting requirements, but the Chinese impose no such conditions.

“Over the last 10 or 15 years, these governments had been moving toward better governance, more transparency, more sustainability,” says Steil, “but with the influx of all this money with no strings attached, China has basically subverted the whole process. Everybody was getting more involved—the local populations, the multilaterals, the increasing integration of all the stakeholders. Those processes have been shoved to the side in favor of direct negotiations between the minister of mines and the Chinese investment bank. It becomes this bilateral affair between highly corrupt money-hungry politicians on the African side and investors on the Chinese side who are looking to acquire as many resources as they can. The Chinese companies are also pushing back against the need to adhere to any environmental or social standards. So things are actually going backwards now.”

Kerstin Canby, who worked on African logging issues for the World Bank before joining Forest Trends, also sees Africa as an important testing ground. “The World Bank is probably scared to death that all its lending will be undermined by Chinese financing,” she says. “For the World Bank to survive in Africa, they have to get China to come in line with their donors’ way of thinking about corporate social responsibility and environmental impact assessments. If the World Bank can convince China, then there’s hope. China is proud that they provide support without conditions.”

Some of the countries being plundered, including Indonesia, Cambodia, Laos and

Vietnam, have passed bans against the export of certain timber. But laws are toothless unless enforced, and the forests in all these places continue to fall, mostly toward China.

The industrial countries also have taken steps. The G8 countries developed an “action program” on illegal logging, which encourages countries to develop better governance. About 100 countries have signed onto the Forest Law Enforcement and Governance (FLEG) ministerial process, which calls for various actions to fight illegal logging, including bilateral agreements about procurement policies and sourcing of wood.

In 2006, President Vladimir Putin, exasperated by what he called the embezzlement of Russia’s Far Eastern forests, created a plan to prevent illegal logging. Thus far its only effect has been to confuse the forestry authorities, says F&ES’ McDermott, who visited the Russian-Chinese border last October. “It’s not clear what the new law even is,” she says, “or who’s in charge or where revenue goes.”

Workers transport logs at a forestry farm in Yichun City of Heilongjiang Province, northeast China. Located in the Lesser Xing’an Mountains hinterland, Yichun is one of the most important wood production bases in China.



China Photos/Getty Images



Celty Images

The situation along the Russian-Chinese border also demonstrates the difficulties inherent in another possible solution to illegal logging—certified wood. This “green” label is supposed to guarantee that a log has been validated as legal all along the timber chain, from the forest to its final incarnation as furniture, flooring or paper. McDermott says that’s an impossible goal in the timber depots along the Russian-Chinese border.

“By the time the logs get to the border,” she says, “a lot of different operations have mixed their logs together. It’s not a clean chain. And once the logs hit China, it’s complete chaos. A train comes in and 100 brokers are lined up, pointing at different cars and buying them on the spot through cell phones. It’s that fluid. There’s certainly

no long-term relationship between suppliers and companies. So how can you possibly say where that log came from once it hits the border or what happens to it when these hundreds of wholesalers and distributors buy it? The chain of custody is already shattered before it leaves the border.”

Fraudulent documents are also laughably easy to obtain. Logs from Indonesia, Malaysia or Africa are often laundered through various districts and entrepôts, where corrupt officials stamp them. By the time the logs reach China, they have become legal imports. “The longer the chain gets,” says McDermott, “the harder it is to be sure that the documentation is accurate.”

The new report for WWF that McDermott co-authored points out that

An artisan sands a table in a small crafts factory complex in China.

a piece of furniture is likely to contain multiple species of wood purchased from multiple vendors, who in turn bought the wood from multiple middlemen. So a single piece of furniture, notes the report, “could contain wood products involving literally dozens of separate companies at different processing and distribution levels. The inclusion of wood from a number of different countries, including China, is likely. As a result of this complexity, the actual tracing of a log from a forest concession in a tropical country, to a specific furniture item on the loading dock of a Chinese plant, would be a daunting undertaking indeed.”

Several organizations have developed standards for verifying whether wood is green. The most common method of tracking wood is via audits by independent inspectors. The Tropical Forest Trust is experimenting with bar codes on logs, and Australia is looking into a DNA test that matches the genetic code of wood legally harvested in Indonesia with the wood that actually reaches Australian ports.

The most widely used certification standard comes from the Forest Stewardship Council (FSC), based in Bonn, Germany. FSC puts its logo of approval on about \$5 billion of wood products each year. What this label means is unclear. Last October *The Wall Street Journal* reported that FSC was certifying wood from companies known to be destroying tropical forests, and noted that FSC based its recommendations on reports done by outside auditors who were paid by the companies they were rating. FSC has since vowed to tighten its criteria for approval.

"Tracking is just so central to all of this," says McDermott. "If there's no really credible way to track this wood as it moves around the world, you're lost before you start." In any event, certified wood barely registers in the timber trade, accounting for an estimated 7 percent of volume.

Market pressures may eventually improve this. The European Union and Japan, for instance, have adopted procurement policies that require companies bidding on civic contracts to prove that the wood they use is legally and sustainably harvested. In January, New York City banned the use of Amazonian hardwoods for park benches. In February, the office products company Staples ended its

relationship with Asia Pulp & Paper Co. (APP), one of the world's largest paper companies, with big pulp mills in Indonesia and operations in China. According to *The Wall Street Journal*, Staples' vice president for environmental issues didn't cite green concerns for the decision, but the "great peril to our brand" of being associated with APP.

Pressuring large retailers may make a dent. Wal-Mart, Home Depot, Lowes and Ikea have become sensitive about the issue of illegal logging and have pledged to improve the sourcing of their wood, though with little follow-up or effect. In December, for instance, EIA released an investigation of manufacturers that supply wood products to Wal-Mart. "The suppliers pretty much unanimously said that Wal-Mart does a lot of inspecting in terms of quality control, but nothing in terms of the sources of wood," says David Groves of EIA. "When we went undercover at one manufacturer and asked about the source of the wood, because we needed to know for our customers, she laughed as if we were kidding. Whenever we asked whether big customers like Wal-Mart asked about origins, they said no, never."

Home Depot's website declares, "We now know item by item—from lumber to broom handles, doors to molding and paneling to plywood—where our wood products are harvested." "That just doesn't sound feasible at all," says F&ES' McDermott.

On the supply side, China's response to illegal logging has been contradictory. Last August, for instance, its State Forestry Administration and Ministry of Commerce issued guidelines for all Chinese companies doing logging overseas. The guidelines

endorse sustainable forestry and preservation of biodiversity.

More typically, however, Chinese authorities deny that any illegal wood is entering the country, deny any responsibility for criminal acts performed in other countries or put the blame on Western consumers. They show little interest in certification mechanisms. They prefer to focus on their domestic achievements in forestry, which are considerable. The government is in the midst of planting 2.5 billion trees, the biggest reforestation project ever undertaken. In December, in an article in the journal *Science* titled "China's Forestry Reforms," several Chinese scientists boasted that in the past six years the country has

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WWF Report

invested \$22 billion in the forestry sector, with plans to invest another \$68 billion in the next four, and that the wood products industry is booming.

"The article is true insofar as what it mentions," says Smithsonian's Laurance, "but there was not one word about the wood industry's ties to illegal logging."

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Science published his tart response: “[The authors] fail to even mention China’s burgeoning consumption of imported timber—much of it illegally harvested—and its implications for Chinese forestry and the global environment.” As long as this willful denial continues, so will China’s complicity in illegal logging.

The other giant whose head seems stuck in the sand is the United States. Consumers here know little about illegal logging or certified wood. The Bush administration has denounced illegal logging but, like China, blames other countries and turns a blind eye to imported wood of questionable origin.

That may change. The Senate has passed an amendment to the Lacey Act that would ban the import, sale or purchase of wood products that violate foreign or domestic laws or international treaties. In short, the law would criminalize most of the wood products entering the United States from China. The House of Representatives is considering a similar measure. If passed and signed by President Bush, say environmental advocates, this could be a crucial weapon against illegal logging.

“If even a small group like EIA can track this illegal wood into Wal-Mart,” says EIA’s Grove, “we can give our information to the Justice Department, and they can open an investigation. The Wal-Marts and Home Depots do *not* want to think about having a Justice Department investigation against them. Once a Wal-Mart or a Home Depot starts asking its Chinese suppliers where their wood comes from and the suppliers’ access to U.S. markets depends on their answer, the Chinese government might become more cooperative.”

Other promising strategies include satellite technology, which can quickly detect incursions by illegal loggers (see story on page 32), and the so-called REDD mechanism (Reducing Emissions From Deforestation and Degradation). REDD was an important topic at the recent United Nations climate talks in Bali. Under this mechanism, which could become part of the next Kyoto agreement, wealthy countries would pay developing countries for every hectare of forest left standing. The payments could amount to billions of dollars—excellent motivation to protect forests.

Meanwhile the deforestation continues at a ferocious pace, as does consumption of the products that are a result of it. F&ES’ Ashton points out that China is doing what Europe did in the 18th century and the United States did in the 19th century—fueling its economic growth by devouring natural resources, its own and others. Historically, he says, countries have not worried about deforestation until most of their trees are gone and they are suffering the consequences of a timber famine, such as a shortage of construction material or drinking water. In his view, this exploitative process won’t be stopped by most of the solutions being proposed.

“You can talk until you’re blue in the face about laws and certifications,” he says, “but if you don’t have strong land tenure—property rights—and enforcement of strong environmental laws, you’re a goner. And those only come with poverty alleviation.” A problem even harder to tackle than illegal logging. ■