



7

ENVIRONMENTAL RESOURCES

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The topics discussed in this chapter lie at the intersection of two central areas of transnational organized crime: the theft and smuggling of a country's natural resource assets, and environmental crime.

The trafficking of environmental resources is a key challenge for some developing countries. Many emerging economies are based on exporting raw materials, but under-resourced governments may lack the capacity to regulate the exploitation of these assets. Rather than promoting economic progress, poorly managed natural wealth can become a cause of bad governance, corruption or even violent conflict. The best documented instances involve mineral resources, such as oil, diamonds, gold or other valuable metals and ores. But biologic resources are also vulnerable, and their misappropriation and trafficking is an important form of transnational organized crime.

There are many forms of transnational organized environmental crime, and as global regulations grow, new forms will emerge. Classically, there are two major subheadings under which these offences fall. One is crime related to pollution, in particular hazardous waste dumping and the trade in ozone-depleting substances (such as chlorofluorocarbons - CFCs).¹ The second is crimes related to illicit harvesting of natural resources, in particular threatened animal species, timber and fish.

For reasons described below, this chapter deals with two important instances of environmental resource theft and trafficking: the trafficking of endangered species from Africa and South-East Asia to Asia as a whole, and the trafficking of timber from South-East Asia to Europe and Asia.

Africa's wildlife population, including many large mammal species, is part of what makes the continent unique. It is the basis for a tourist trade that comprises a key part of many national economies. But widespread poverty and conflict have left this population exposed to poaching, and exotic animal products command high prices due to strong global demand, especially from Asia. This chapter looks particularly at the markets for two of the best documented commodities: elephant ivory and rhinoceros horn.

The poaching of large mammals in Africa receives considerable attention, but species in Asia are also under threat. There are only an estimated 3,200 tigers remaining in the wild, and the skin and bones

command high prices. While high value large mammals garner much sympathy, many other wild species are harvested in South-East Asia for traditional medicine, food and decor products, as well as being captured for the pet trade. In terms of volume and market value, this trade dwarfs that of the larger species, and much less is known about its long-term sustainability.

South-East Asia is also home to some of the world's few remaining old-growth forests, containing many unique tree species, and the problem of timber trafficking is particularly acute. In order to protect these resources, national bodies have attempted to regulate the timber trade, but it is still possible to make money by skirting these controls, and illicit harvesting remains at unacceptably high levels. Demand for these hardwoods is broad, and consumers around the world may be unwittingly contributing to irreversible environmental damage. By concealing the nature and origin of this wood, organized crime makes this tragedy possible.

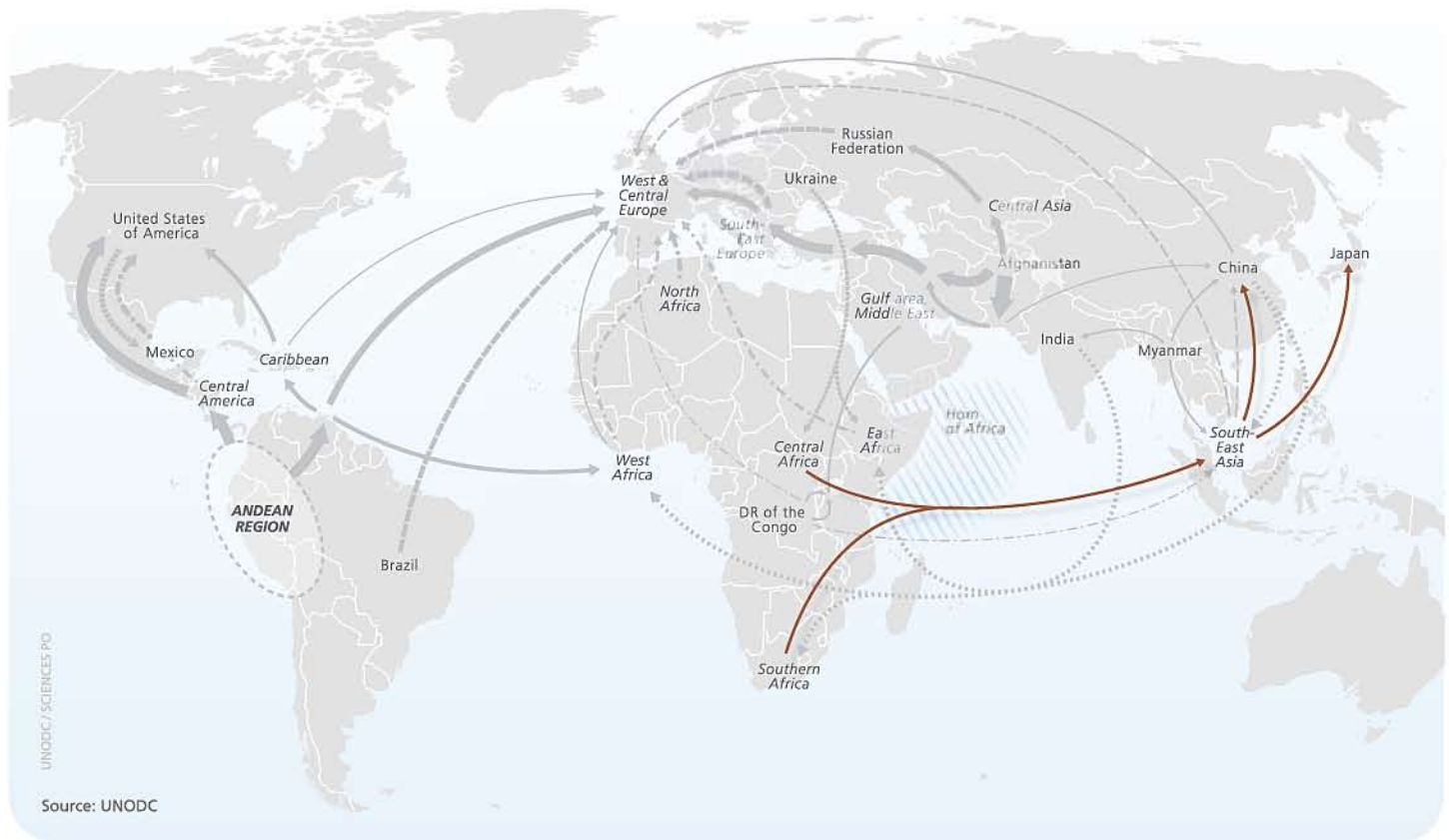
These issues are inherently international, because all countries share a global ecosystem. The release of CFCs anywhere in the world affects the common ozone layer. Toxic waste dumping at sea damages a common and essential global resource. Elimination of plant and animal species irrevocably destroys part of our joint environmental heritage. Further, many of the consumer markets for these forms of contraband are situated in another part of the world than the supply. Trans-shipment often involves third countries, and thus the problem is beyond the scope of any national power to address.

Coming to grips with this global responsibility requires international action. Many international conservation agreements have been signed, among the most influential of which is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (known as CITES), adopted in 1973 at a meeting of members of the International Union for Conservation of Nature (IUCN). Around 175 countries have adopted CITES, although the extent of compliance varies. Under the Convention, states that do not take measures to protect endangered species are subject to escalating international pressure, which can ultimately result in trade sanctions.

No matter how dedicated to environmental regulation, however, many countries struggle to protect their natural resources. Criminals make money circumventing these controls, subverting attempts to distinguish licit and illicit trade in natural resource

products. In addition to an inherent tension between development and environmental protection, some countries lack the capacity to police vast tracts of wilderness. Poverty and instability mean that officials may be easier to corrupt. Borders, especially wild borders, may have very few controls. Rural populations may have few sustenance alternatives to what they can harvest from their natural environment. Most importantly, corruption can undermine even the best designed regulatory system.

For these reasons, it is essential that the international community think creatively about ways of preventing the global looting of natural resources. Since many of these products are licitly traded and openly consumed, increased scrutiny of these open markets would be beneficial. In addition to tracking licit exchange, a global seizures database would greatly assist in understanding trends and developments. Cooperative action is key because local weaknesses in enforcing environmental controls can have global consequences.



7.1. Wildlife from Africa and South-East Asia to Asia

Route

Source:	<i>Elephants from Central Africa; rhinoceros from South Africa, Zimbabwe and north-east India; various wildlife from Myanmar, Cambodia and the Lao People's Democratic Republic</i>
Vector:	<i>By sea and air from Africa; by land and sea within Asia</i>
Destination:	<i>China (including Taiwan, Province of China and Hong Kong, China), Viet Nam, Japan and other parts of Asia</i>

Dimensions

Annual market volume:	<i>Elephant ivory: 75 tons Rhino horn: 800 kilograms Tiger parts: Perhaps 150 tiger skins and about 1,500 kilograms of tiger bones</i>
Annual value at destination:	<i>Elephant ivory: US\$62 million Rhino horn: US\$8 million Tiger parts: US\$5 million</i>

Traffickers

Groups involved:	<i>Asian expatriate communities in Africa and Asia Elephant ivory: Militias, rural Africans, businesspeople in Asia and Africa Rhino horn: Organized poaching gangs</i>
Residence of traffickers:	<i>Poachers in source countries, wholesalers in Asia and Africa, retailers in Asia and Africa</i>

Threat

Estimated trend:	<i>Elephant ivory: increasing in some areas Rhino horn: sharply increasing</i>
Potential effects:	<i>Tigers and black rhinos may become extinct in the wild; impact on South-East Asian wildlife unclear. Promotion of corruption and organized crime</i>
Likelihood of effects being realized:	<i>For tigers, high; for black rhinos, fair</i>

What is the nature of this market?

Between them, sub-Saharan Africa and South-East Asia are home to a large share of the world's endangered large mammal species. Both regions face serious challenges to environmental protection, including a lack of effectively managed resources for law enforcement, few alternative livelihoods for rural people, long hunting traditions, periodic insurgencies and conflicts, weak border enforcement, and some enforcement officials who may find the economic potential of this market more attractive than their salary. These problems are not unique to these regions, but, unfortunately, the wildlife species are.

Destinations for products sourced from endangered species are broad, but, for a number of reasons, are especially concentrated in East Asia. Demand in Asia for Asian species is rooted in tradition, and Africa hosts species of many of these same animals, such as rhinoceros and elephant. Some feature in local cuisine, some are valued in traditional medicine, while others are prized for their decorative value and are regarded as status symbols. As habitats shrink and human populations grow, the demands placed on these resources multiply. As species become more scarce, some of their parts are worth more than their weight in gold. Despite the efforts of many dedicated rangers, in some areas these precious commodities are essentially free for the taking.

Enforcement efforts are hampered by the parallel licit trade in wild animals. Hunting for “bush meat”, as well as for trophies and commercial gain, is legal and common in many countries. Wildlife markets are found throughout Asia, and wild species are available in many specialty restaurants. Few openly sell endangered species, but these may often be acquired in backroom transactions; those with the networks to source legally culled wildlife can also access banned products. Many endangered species closely resemble more common ones, and it may take an expert to distinguish between them, especially when they have been butchered or processed.

Attempts have been made to “farm” some wild species in order to meet demand, but this does not necessarily reduce demand for wild animals. In fact, the legal availability of these products may increase demand beyond what the licit market can supply. Farms are necessarily required to maintain certain standards, and these restrictions limit the number of producers and increase costs. If demand outstrips

supply, even licit producers may feel compelled to buy poached animals to remain competitive. In this way, “laundered” animals can enter the market through the licit trade.

How is the trafficking conducted?

The first step in the trafficking chain is poaching. Well-organized groups have been documented, and it is clear that some have turned environmental exploitation into a business. Not all players in the market are full-time professionals, however, and some of those sourcing wildlife products may be informal participants. Hunting remains a form of livelihood for communities in both Africa and Asia.² Even if cashing in meant a long trek to a regional selling point, such a kill would represent one of the few opportunities for income in families otherwise focused on subsistence. Poachers may also approach local hunters with an offer to buy the wildlife products desired.

The concentration of endangered species in game parks may make the professional poacher's job easier. If they are able to corrupt game wardens, they can secure access to a steady stream of well-tracked and healthy animals. Every year, the national parks of Africa and Asia report thousands of cases of poaching. It is unclear how many of these cases involve the collaboration of rangers.

Once poached, the animal may be butchered for particular parts, or the whole carcass transported for further processing. Other species are captured and trafficked alive, to be used as pets, food, or medicine, though many die on the journey. Transportation, as described below, varies depending on the source and destination. As described below, the traffickers may be a completely different group of people than the poachers, acting as brokers with contacts in both source and destination countries.

From Africa to Asia

Every state in Africa with a wildlife population is affected by poaching, but some much more so than others.³ Governance seems to be an especially important factor in determining whether or not heavy poaching occurs.⁴ It appears that Central Africa is the main source of elephant ivory and Southern Africa the main source of rhino horn.

Once the desired parts are removed, they may be transported and processed further in Africa before being shipped abroad. A number of African countries have been identified as carving sites for elephant ivory, for example. Some products are also

moved north to the Middle East. While Yemen is a key destination for rhino horn, it is unclear how much of this flow is consumed locally and how much is for onward shipment to Asia.

Small players may be important in sourcing ivory and rhino horn in some areas, but they also play a role in trafficking it internationally. Africa serves as a retail centre for animal parts, with individual buyers from Asia transporting small items home in their luggage. In November 2008, INTERPOL coordinated “Operation Baba”, which targeted ivory markets in five African countries involving 50 markets: Congo (Brazzaville), Ghana, Kenya, Uganda and Zambia. In November 2009, INTERPOL coordinated “Operation Costa” targeting ivory markets in six East African countries – Burundi, Ethiopia, Kenya, Rwanda, Uganda and the United Republic of Tanzania. In Ethiopia, in particular, large volumes of ivory items obviously destined for the Far East were recovered (chopsticks, cigarette holders and signature seals). What share of these items are bought for personal use and what share resold for profit in Asia remains unclear. A similar situation has been observed in the Democratic Republic of the Congo, where ivory is sold to Asian buyers. Asian buyers have also been found purchasing ivory on ships in the harbour of Douala, Cameroon.⁵

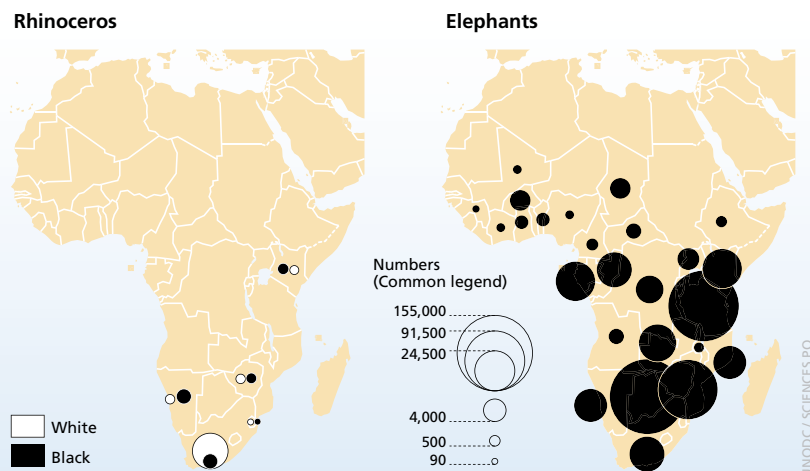
There are also documented cases of African vendors making larger-scale sales. In 2002, a sophisticated operation was found selling large amounts of ivory to Asian buyers from Malawi (see Box). Recently, a collective of Tanzanian businessmen were charged with smuggling 11 tons of ivory to the Philippines and Viet Nam between October 2008 and March 2009. The accused are representatives of domestic transportation companies, and their relationship with the poachers is not yet clear.⁶

From Africa, the contraband takes a number of routes to Asia. Singapore, Thailand and Viet Nam increased in prominence as transit countries for elephant ivory in 2009.⁷ For rhino horn, China, Viet Nam and Thailand have been identified as both transit and consumer areas,⁸ along with Singapore, Japan, the Republic of Korea, Malaysia (excluding Sarawak), Brunei Darussalam and Macao, China.⁹

Endangered species parts are often concealed in legitimate cargo, taking advantage of the growing trade between Africa and Asia. Ivory has been seized hidden in shipments of plastic waste, dried fish, stone statues, precious stones and timber. Many of

FIG. 131:

LOCATION OF EXISTING RHINO AND ELEPHANT POPULATIONS IN AFRICA



the largest shipments detected have been hidden in containerized cargo, often originating in the United Republic of Tanzania, but air cargo has also been used. In July 2009, Kenyan authorities seized 300 kg of ivory packed into coffins on a flight that originated in Mozambique. Both tusks and black rhinoceros horn were seized, and the flight was destined for the Lao People's Democratic Republic, via Thailand.¹⁰

Case study – Singapore 2002

Ivory poached in Zambia and Mozambique was smuggled to Malawi by road. Malawi does not ban the domestic trade in ivory, leaving it vulnerable to exploitation by traffickers. In Malawi, some of the ivory was processed in a factory and stored in warehouses for buyers. The factory's records indicated buyers with contact details in Singapore, Japan and Hong Kong, China. Investigations revealed a complex network of shell companies and pseudonyms used in procuring the ivory.

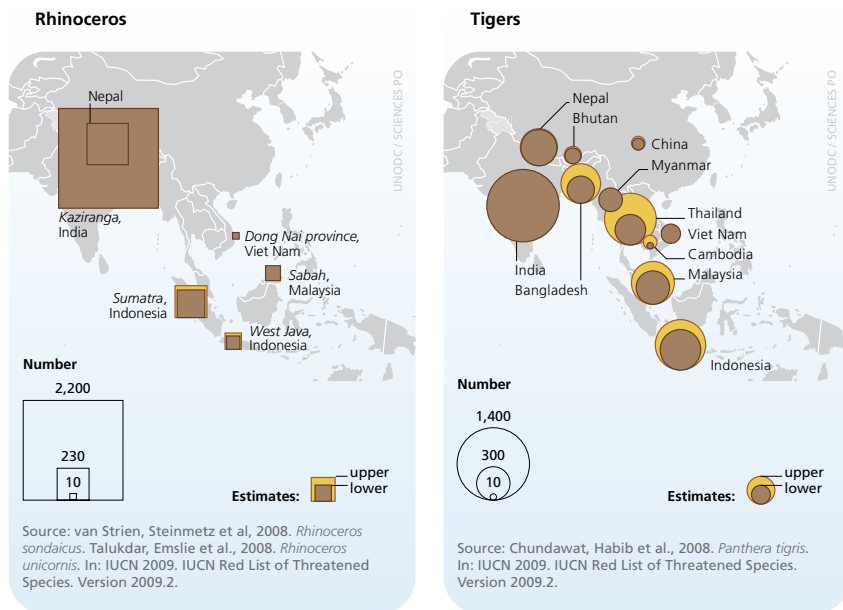
The case came to the attention of the authorities when more than 6 tons of ivory was discovered in Singapore, concealed in a shipment that had been declared as stone sculptures. The haul was equivalent to perhaps 300 elephants, and DNA testing later revealed that much of the ivory originated from Zambian savannah elephants.¹¹ Further investigations revealed that the networks in Zambia and Malawi had been in operation since 1994, having made at least 19 suspected ivory shipments: 15 destined for Singapore and four for China. Given, however, that some of the tusks seized in Singapore were marked with the name of a Japanese port, and that ivory hankos (Japanese signature seals) were also seized, investigators concluded that the final destination of the contraband was Japan. The criminal network responsible was said to have the capability 'to receive and launder tens of thousands of hankos into existing legal markets' and to date no significant members of the network have been prosecuted.¹²

In Asia

Asia serves as source, transit, and/or destination for a large share of the endangered animals poached in the world. Some products are sourced and consumed in the same country, but, for economic reasons, most are trafficked transnationally. Myanmar, which still contains extensive forested areas, is the main source country, but the Lao People's Democratic Republic and Cambodia are also affected.

FIG. 132:

STOCKS OF RHINOCEROS AND TIGERS IN ASIA, 2009



Pangolin

Pangolin (also known as the scaly anteater) are nocturnal mammals inhabiting areas of Asia and Africa. The distinctive keratin scales of the pangolin have historically been used to make clothing and are used in traditional Asian medicine. One environmental group has argued that the “greatest threat to the conservation of pangolins is illegal hunting for trade, largely to supply demand in China for meat and scales used for tonics and traditional medicines,” although pangolins are also utilized in “other East Asian pharmacopoeia.”¹³

Asian pangolins are currently listed on CITES Appendix II (vulnerable species) with an annotation for zero trade. They are receiving ever more attention, partly due to a growing number of seizures within Indonesia, Malaysia, Viet Nam, the Lao People's Democratic Republic, Thailand, the Philippines and China. It is not uncommon for traffickers to use one consignment for the transportation of a variety of species, including pangolin. For example, pangolins have been seized with bear paws in China in 2008 and 2009, and in Taiwan, Province of China in 2005, pangolin derivatives were seized with ivory and tiger bones.

The pangolin in Asia is threatened by habitat loss in addition to the illegal trade, and its relatively slow reproduction rate impedes short-term population recovery.¹⁴ Traders in Asia have reported pangolins as increasingly scarce.¹⁵ There are several species of pangolins in Africa, where they are subject to the pressures of poaching for bush meat.¹⁶ There is some evidence of African pangolins being seized in Asia,¹⁷ and it is possible that if Asian populations continue to be decimated, African pangolins will become increasingly targeted.

Myanmar is also the primary country used to smuggle South-East Asian wildlife into China, the single largest consumer, while wildlife from Cambodia and the Lao People's Democratic Republic are principally smuggled into Viet Nam, another major destination market. Thailand serves as a transit country and a retail centre for buyers throughout the region. Japan and the Republic of Korea are also destination markets for certain products.

The variety of wildlife products used in Asia is extensive, and include many species that have not been designated as endangered or threatened. Local wildlife markets feature snakes, spiders, turtles, scorpions, squirrels and birds, and some offer endangered species products as well. In addition to high profile commodities like ivory, rhino horn and tiger skin, less well-known animals such as the pangolin (see Box) and the slow loris may be sold. Many are transported alive to destination markets, but when trafficked, many die in transit.

A key source of demand is the catering industry. The China Wildlife Conservation Association (CWCA) conducted an opinion poll in 16 Chinese cities¹⁸ in 2007 on the consumption of wild animals as food. According to the survey, 88 wild animals were identified as species which might be consumed as food. This was 26 more than indicated in a comparable poll in 1999. The number of grocery stores and supermarkets selling wild animals and products also increased by 22.8% during this period. A recent survey of 969 people in six Chinese cities¹⁹ found that 44% of respondents claimed to have consumed wildlife in the past year, mostly as food. People with higher incomes and education levels were significantly more likely to consume wildlife as food, and 20% of respondents were open to eating protected animals, such as pangolin.²⁰

Cross-border wilderness areas are clearly a point of vulnerability for transnational trafficking, since they can be used to move illicitly harvested animals into the jurisdiction of least resistance. As with other commodities, trans-border ethnic groups can also be a factor. A key facilitator of wildlife trafficking in South-East Asia seems to be conflict and insurgency.

The frontier town of Mong La in Myanmar, situated along the Chinese border, is a case in point. Mong La is located in a “Special Region”, a rebel area where the Myanmar Government has come to terms with the rebels: in return for ending hostilities, the insurgent army has been essentially granted control over local affairs. In the case of Mong La,

this opened up a lucrative vice market with China. Following a pattern seen around the world, the presence of an unregulated mini-state next to a large, highly-regulated consumer creates tremendous opportunities for shady entrepreneurs. Gambling, prostitution and the wildlife trade were among the biggest industries when the Chinese Government cracked down on this cross-border tourism in 2005. But while no longer so visible, the vice trade continues alongside the sale of wildlife, with at least eight active markets where items such as tiger skins are sold openly. Mong La is headed by Lin Mingxian (also known as Sai Leun and U Sai Lin), a former Red Guard volunteer and Communist Party of Burma commander. Areas under control of the United Wa State Army, the largest ceasefire group, are also used for trafficking.

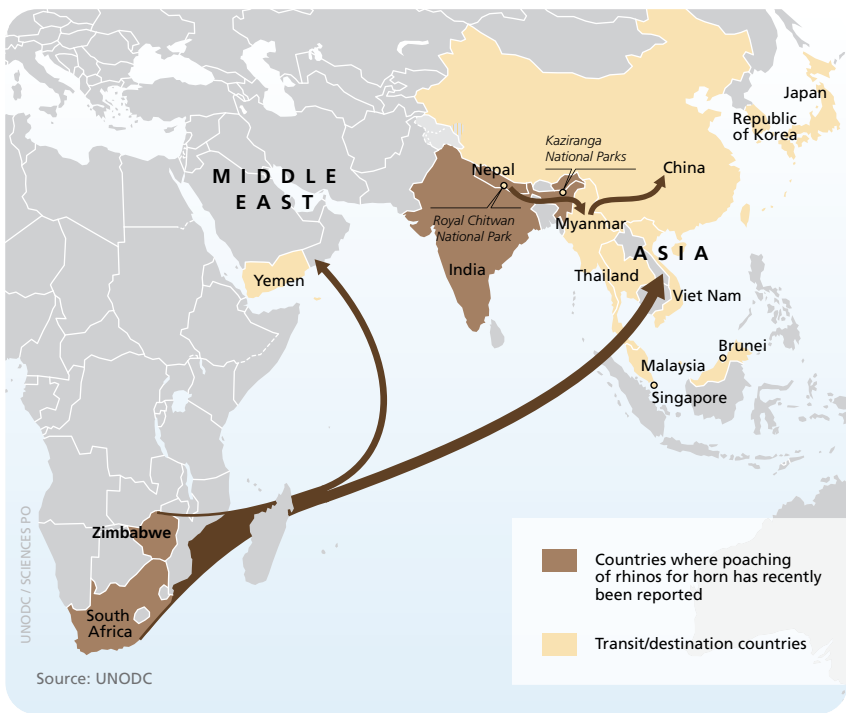
Myanmar also serves as a conduit for wildlife smuggled from north-east India and Nepal to China. One of the key commodities sourced in the subcontinent is tiger skin.

There are about 3,200 tigers left in the wild, with around half of these in India.²¹ Hunting of tigers is deliberate and systematic and there is evidence that ‘commissioning’ may occur.²² Traders in China have indicated that they can submit orders for animal parts, which are then procured, not from the poachers directly, but from a network of dealers in trade hubs such as Delhi and Lucknow²³ in India, and Kathmandu and Burang in Nepal.²⁴ Tigers are also smuggled across the Himalayas into China with important retail centres in Linxia, Xining, Lhasa, Nagqu, Shigatse and Litang. At the peak of the skin trade (1999 – 2005) the primary demand for skins came from Tibet, where the skins are used to make traditional costumes known as “chupas”. One seizure in Tibet in 2003 consisted of 31 tiger skins, 581 leopard skins, 778 otter skins and two lynx skins.²⁵ This seizure alone represents 1% of the remaining tiger population. But this trade has declined significantly since 2006. Today, much of the demand comes from wealthy urban Chinese who use the skins as home décor items.²⁶

Rhino horn is also sourced in national parks on the subcontinent. In Assam’s Kaziranga National Park, which is famous for its rhinos, two hornless rhino carcasses were found in mid-December 2009. At least 10 others had been killed that year.

The border between India and Myanmar is another area where insurgent groups, mainly on the Indian side of the border, may play a role, primarily by taxing the trade. Traffickers seem to have adjusted

FIG. 133: TRAFFICKING IN RHINOCEROS HORN



to this, avoiding the main crossing spot at Moreh/Tamu on the Manipur border and rather transiting Mizoram into Myanmar’s Chin State. But wildlife is also smuggled through government-controlled areas of Myanmar. The Chinese town of Ruili is connected by a bridge to a Chinese enclave south of the Ruili (Shweli) river, which otherwise forms the border between China and Myanmar, and this area serves as a major smuggling centre. The town of Tachilek, on the border with Thailand, is another

FIG. 134: TIGER TRAFFICKING ROUTES

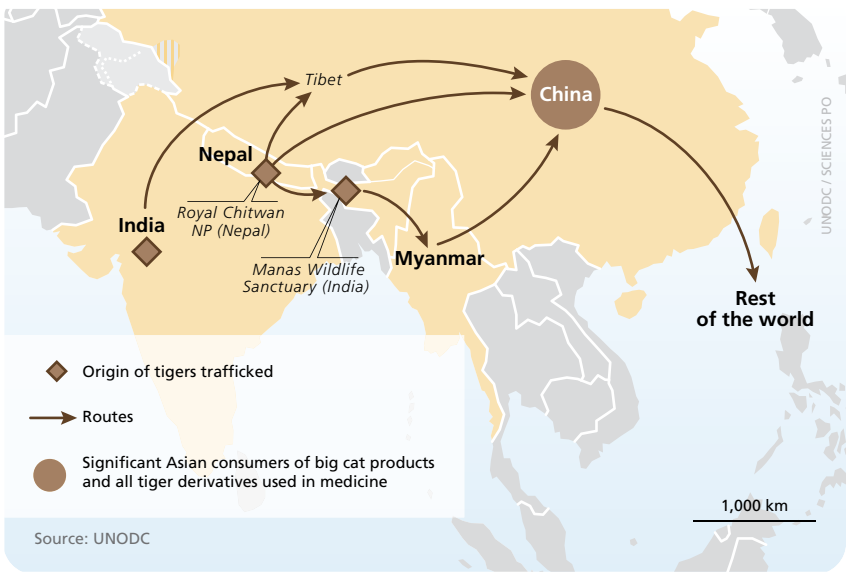


FIG. 135:

WILDLIFE TRAFFICKING IN SOUTH-EAST ASIA



notorious open market, although there appear to be fewer traders today than in the recent past, perhaps because the site is in a government-controlled area and has received media attention. Some of this trade may have moved to the Mekong settlement of Keng Lap, an area near the one crossing between the Lao People's Democratic Republic and Myanmar, across from Xieng Kok. It remains unclear how recent government crackdowns on insurgent groups will affect the wildlife trade.

In part due to the role of tourism, Thailand serves as a trafficking hub for many commodities, although the wildlife trade cannot be conducted as openly as in some other countries. One wildlife trade monitoring group has recently argued that, due to legal loopholes, "Thailand continues to harbour the largest [open] illegal ivory market in Asia," highlighting its role as a retail center for the larger buyers to the north.²⁷ The group detected 13 ivory workshops in Thailand, eight of them in Uthai Thani and much of the ivory being processed there was illegally imported from Africa.

Viet Nam has emerged as a key destination market. Trade in ivory was outlawed in Viet Nam in 1992, with an exception for the sale of stocks existing at that time.²⁸ This parallel licit trade provides cover

for trafficking. Much of the ivory seized in Viet Nam is in raw form, including pieces of tusks, suggesting it is mainly a transit country for this product. But it has emerged as a key consumer of rhino horn, and may be partially responsible for the boom in demand seen recently.

Vietnamese networks source wildlife in the Lao People's Democratic Republic and Cambodia and are involved in trafficking to China (from Lao Cai province to Hekou Yao Autonomous County). In Laos, wildlife is for sale near the Boten Golden City casino/hotel project on the Chinese border. The Golden City area has been leased by the Lao Government to a Chinese company; only Chinese is spoken, only Chinese currency is accepted, and most of the staff are Chinese. Chinese require no visa to enter the "special economic zone." In short, this enclave serves much the same purpose as vice centres like Mong La.

Regardless of source and transit countries, the primary destination of wildlife products sourced in Africa and South-East Asia is China. China has moved from being a key source country for endangered wildlife to being the largest destination. In the 1980s, pandas, saker falcons, Tibetan antelope and other species were trafficked out of the country, and some of this trade continues. Since China's economy began to grow in the 1990s, however, a huge number of potential consumers have been brought on to the global market. In 2005, the CITES Secretariat declared that China was "the single most important influence on the increasing trend in illegal trade in ivory since 1995."²⁹ In 2008, China was said to be "the most important country globally as a destination for illicit ivory,"³⁰ and much the same was concluded the following year.³¹ It is also a significant exporter of wildlife products; for example, it was the second largest source of wildlife imports refused entry by the US Government between 2000 and 2004, after Mexico.³²

Animals sourced in South-East Asia enter China through the provinces of Guangxi and Yunnan, especially via the autonomous regions bordering Myanmar, the Lao People's Democratic Republic and Viet Nam. The provinces of Guangdong, Jiangsu, Yunnan, and Guangxi, as well as the cities of Hong Kong and Macao, are the primary destinations, but also important are Beijing and Dalian in the north and Shanghai in the east. A large share of the wildlife trafficked into China is believed to pass through Guangdong, and this flow has been the subject of a recent law enforcement crackdown.³³

In addition to land routes, high-powered speedboat traffic from Hong Kong to Shenzhen (Guangdong) is another vector. The traffickers use “zhongfei” boats, which are faster than the cutters used by the Coast Guard. Routes include use of the waters near Shenzhen and Shekou of Guangdong province; the Beibu Gulf close to Hainan province; the waters near Beihai and Fangchenggang of Guangxi province; the waters near Shantou and Chaoyang of Guangdong province; and the waters near Xiamen of Fujian province.³⁴

Who are the traffickers?

While well-organized and integrated groups exist, it appears that much of the poaching in South-East Asia is conducted by a large number of people who live in the wilderness areas, including armed groups. These people need not be professional poachers – they simply need to have a firearm and reside in a wildlife domain. There are, however, professional groups of poachers, some of whom will source specific wildlife on order.

The same is true in Africa, where the degree of professionalism is largely determined by the degree of law enforcement resistance. Groups harvesting wildlife in the Democratic Republic of the Congo are not necessarily well-organized, although having a militia connection can facilitate weapons and market access. In contrast, since the majority of the world’s African rhinos reside in relatively well-protected parks in South Africa, more sophisticated poachers have started using techniques less likely to attract attention than a gunshot, including the use of veterinary drugs, poison and cross bows.³⁵

There is evidence of militant groups being involved in the trade. The Janjaweed militia have long been implicated in poaching elephants in Chad, and on 15 May 2007, they attacked the national storehouse of confiscated ivory in Zakouma, killing three rangers before being repelled. Similar battles have been fought between Kenyan rangers and Somali poachers, some of whom are linked to militant groups.³⁶

The lynchpin in the system, the large-volume traffickers, are generally brokers with connections in both source and destination countries, though not necessarily citizens of either. Destination country diasporas in source and transit countries do seem to play a key role in trafficking. For example, one wildlife trade monitoring group has argued that “there is also evidence of commercial-scale illegal ivory operations involving Chinese nationals in 22 African elephant range states.”³⁷ More recently, they noted that Vietnamese nationals are active as mid-

dlemen in rhino poaching in Southern Africa. Chinese expatriate businessmen, some of whom may have taken foreign citizenship, also seem to be active in organizing trafficking in South-East Asia. Vietnamese networks are active in Cambodia and the Lao People’s Democratic Republic.

While some of the trafficking is conducted by individuals purchasing ivory on their own behalf, there is much evidence of active well-organized commercial groups. Since 1989, there have been at least 55 very large ivory seizures, the average volume of which was 2.3 tons.³⁸ These shipments would have been worth about US\$2 million at wholesale level in destination markets. The ratio of large seizures to total seizures suggests especially large groups are involved in trade to or through China (including Hong Kong and Taiwan), Japan, Singapore, Viet Nam, Thailand, Malaysia and the Philippines.

How big is the flow?

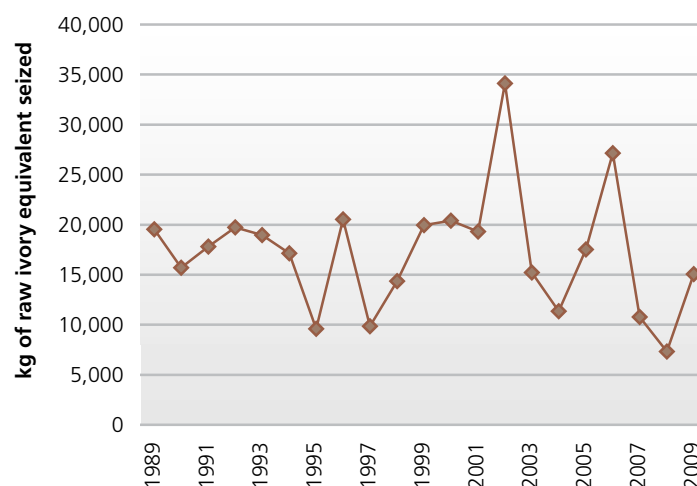
For estimation purposes, it is easiest to break down the flows by species.

Elephant ivory

Globally, there are, on average, 92 ivory seizures a month, or about three per day.³⁹ Seizures reported to the Elephant Trade Information System⁴⁰ indicate that more than 361 tons of ivory were seized worldwide between 1989 and 2009.⁴¹ While annual seizures varied substantially, the average is less than 20 tons per year. Based on 10,737 seizure records from 1992 to 2009, the average seizure size was

FIG. 136:

QUANTITIES OF IVORY SEIZED ANNUALLY AND RECORDED IN THE ELEPHANT TRADE INFORMATION SYSTEM, 1989-2009



Source: TRAFFIC

28.7 kilograms. However, as mentioned above, the 55 largest ivory seizure cases from 1989 through 2009 total 124,260 kg, or 34% of the total. This is an average *large* seizure size of some 2.3 tons. The number of large seizures in any given year can explain some of the volatility in annual seizure totals.

Almost all this ivory is sourced in Africa.⁴² To supply the unregulated domestic ivory markets in Africa and Asia, it is estimated that between 5,000 and 12,000 African elephants would need to be killed every year,⁴³ assuming no stockpiling takes place. Tusk weights vary substantially, but with an average weight of 10 kg of ivory per elephant, this suggests a total of between 50 and 120 tons of ivory entering the market annually. Since global annual seizures amount to about 20 tons on average, this suggests an interception rate of between 17% and 40%. On the upper end, this seems a rather high interception rate to be maintained over time, suggesting the figure is closer to 120 tons.

The value of illicit ivory depends on where in the world it is located, and accurate data on the price in destination markets are extremely limited.⁴⁴ It is said that a kilogram of ivory sold in Africa for US\$15 can fetch over fifty times that amount in Japanese markets.⁴⁵ For raw ivory in destination markets, a number of sources agree on figures

around US\$850 per kilogram.⁴⁶ Value may also be added to the raw material in the form of carving. The true value of the objects seized may be much greater than the weight of the ivory alone would imply.

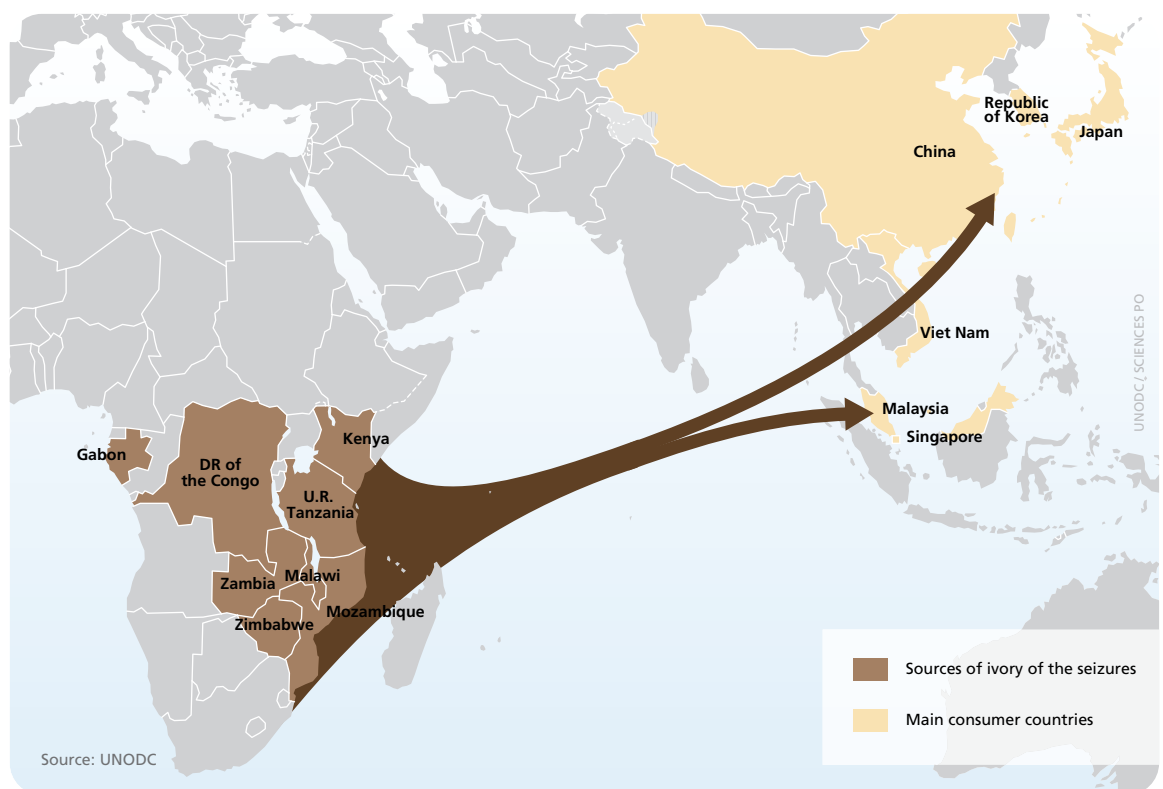
The illicit nature and size of the sale can also substantially impact the price. For example, in 2008, the Namibian Government sold 7.2 tons of stockpiled ivory for US\$1.2 million, or only US\$164 per kg. This was actually an increase over the price commanded in a similar auction in 1999, when only Japan was allowed to purchase.⁴⁷ Much higher prices have been cited to foreign buyers for smaller quantities in destination markets.⁴⁸

Using the figure of US\$850 per kilogram and taking the high end of the volume estimates cited above (120 tons), the total value of ivory entering the market would be about US\$100 million annually.

The share of this production that heads to Asia is difficult to determine. Seizure figures may be more reflective of enforcement action than real prevalence of the problem, especially given the parallel licit market. China appears to be the largest national destination. In 2008 and 2009, China itself made 51 ivory seizures but was mentioned as destination in 120 other seizures that took place elsewhere in the world, many of which resulted in the arrest of

FIG. 137:

TRAFFICKING IN ELEPHANT IVORY



Chinese nationals. Total seizures amounted to 43 tons in the decade between 1999 and 2009, or about one fifth of the global total during that period. This would suggest that China alone is the destination of ivory worth perhaps US\$20 million per year.

In 2007, selected countries in East Asia accounted for 62% of the ivory recovered in the 49 largest recorded seizure cases in the Elephant Trafficking Information System database.⁴⁹ Taking 62% of US\$100 million would indicate an Asian ivory market worth about US\$62 million per year, generated through around 75 tons of ivory transferred to Asia at a cost of 7,500 elephants poached.

Rhino horn

While seizures are smaller, rhino horn is worth far more than elephant ivory per kilogram. As with elephant ivory, prices paid in source countries may be as little as 1% of the final retail price. The reported wholesale value of Asian rhino horn increased from US\$35/kg in 1972 to US\$9,000/kg in the mid-1980s. The retail price, after the horn has been shaved or powdered for sale, has at times reached US\$20,000-30,000 per kilo.⁵⁰ The key factor is demand, which reportedly spiked in 2009.

Based on a detailed consideration of both African and Asian rhino poaching, one recent assessment concluded that more than 3,100 kg of illicit rhino horn reached Asian markets between January 2006 and September 2009, or about 800 kg per year.⁵¹ At a value of US\$10,000 per kilogram (a conservative figure given the peak valuations above), this would represent a market of just over US\$8 million per year.

Tiger

Tiger parts continue to fetch high prices, with skins retailing in 2009 for up to US\$20,000 in China, and raw bones selling for up to US\$1,200 per kg.⁵² A single kill would represent a large amount of money to individual traffickers in the region, because they are relatively close to the destination market, and so could be expected to earn a good share of the final retail figure. As a result, the incentives for poaching and trafficking remain strong.

Tiger populations are less monitored than herd animals like elephant and rhino, and seizures of tiger products are less well documented. This makes it difficult to say how much product enters the market each year, but the market is likely to be

much smaller than that for ivory or rhino horn. The National Tiger Conservation Authority of India detected 66 tiger deaths (not all of which were poached) and 29 seizures of tiger products in 2009,⁵³ out of an estimated population of 1,411 tigers.⁵⁴ This suggests a known loss of 5% from all causes. Since all parts of the tiger are used, however, it is possible that many are disappearing unrecognized. If as much as 5% of the remaining tiger population were poached each year, there would be about 150 tiger skins and about 1,500 kilograms of tiger bones entering the market. At optimal prices, this market would be worth less than US\$5 million per year.

Other South-East Asian wildlife trafficked to China

Tens of tons of wild animals are shipped into China on a daily basis, with terrapins and reptiles accounting for much of the total volume. Not all of this traffic is illicit, but from January to April 2009 alone, 129 cases of wildlife trafficking were opened in Guangdong, with wildlife seized valued at 48.3 million yuan (US\$7 million). This surge was a result of a crackdown in the area, however, and may represent a significant share of the total flow.

The scale of the trafficking in smaller species is alarming. For example, the pangolin is largely nocturnal, highly evasive, and considered endangered in mainland South-East Asia. Adults typically weigh only a few kilograms, but seizures of trafficked pangolin are often measured in tons. In 2008, some 23 tons of pangolin carcasses and scales, the remains of approximately 8,000 animals, were seized in the province of Hai Phong, Viet Nam, in a single week.⁵⁵

A pangolin typically sells for about US\$15 in Malaysia. They are even cheaper in Indonesia (between US\$5 and US\$10), increasingly the source as mainland stocks are decimated.⁵⁶ However, the same pangolin commands more than US\$100 per kilo on the black market of Guangdong, yielding at least seven-fold profits. At these rates, the 23 tons seized in Hai Phong would have been worth over US\$2 million in Guangdong. This is just one species among at least 88 that are imported daily. It appears that the market for South-East Asian wildlife is worth far more than that for African wildlife.

This suggests that while the high profile poaching of large protected mammals in Africa receives much of the media coverage, the wholesale looting of South-East Asia's wildlife may not be getting the attention it deserves.



7.2. Timber from South-East Asia to the European Union and Asia

Route

Source:	<i>Indonesia, Malaysia, the Lao People's Democratic Republic, Cambodia, Papua New Guinea</i>
Vector:	<i>Sea, land</i>
Destination:	<i>China, Viet Nam, Europe</i>

Dimensions

Annual market volume:	<i>Perhaps 10 million cubic meters</i>
Annual value at destination:	<i>US\$3.5 billion</i>

Traffickers

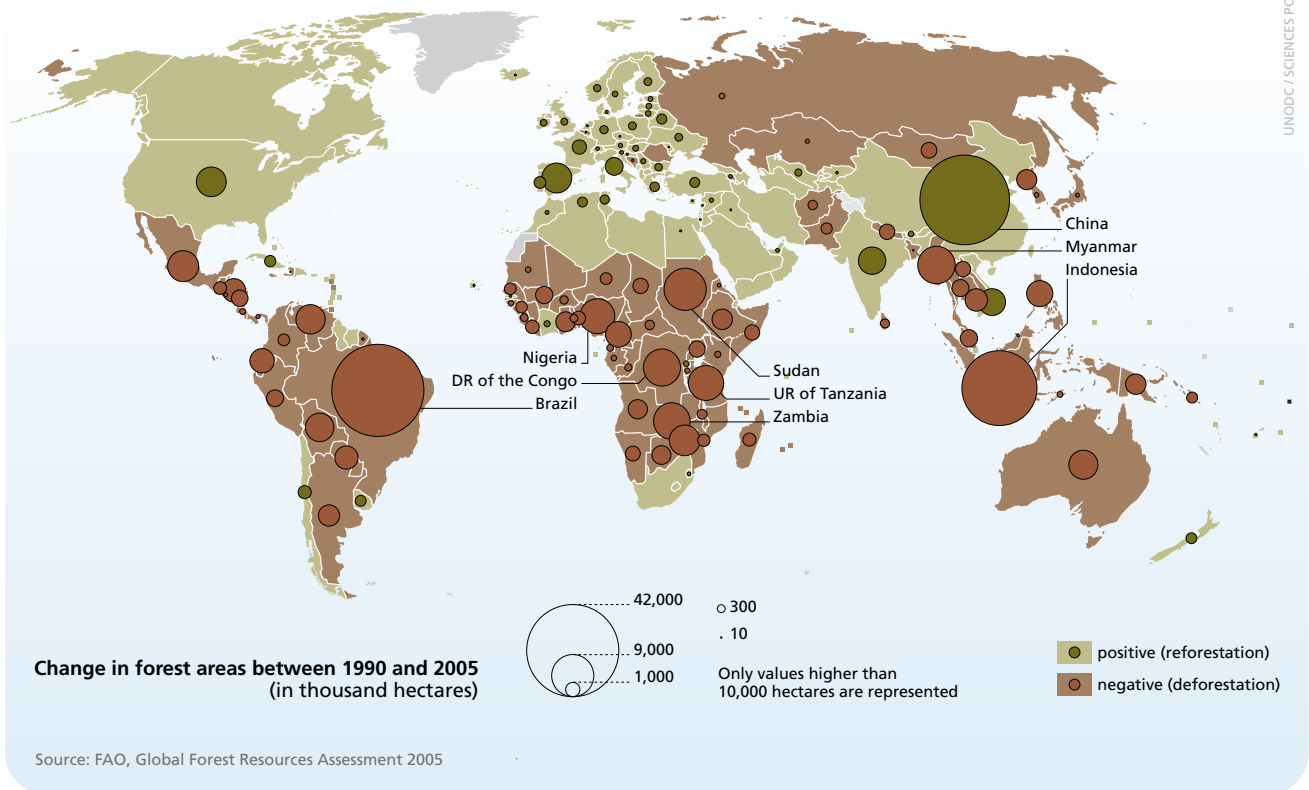
Groups involved:	<i>Brokers in Singapore, Hong Kong, China and Taiwan, Province of China; timber trading firms in mainland China, Indonesia, Viet Nam; local military, police officials and business people; rebel groups</i>
Residence of traffickers:	<i>Source, brokering and destination countries</i>

Threat

Estimated trend:	<i>Declining in Indonesia and Myanmar; possibly increasing in the Lao People's Democratic Republic and Papua New Guinea</i>
Potential effects:	<i>Deforestation, loss of habitat, loss of species, climate change, increased rural poverty especially amongst indigenous people, irregular migration, flooding, soil erosion</i>
Likelihood of effects being realized:	<i>High</i>

FIG. 138:

EVOLUTION OF FOREST AREAS, 1990-2005



What is the nature of this market?

The transportation of wild animal parts, when detected, tends to raise questions. In contrast, the transport of large volumes of timber and wood products is a staple of international commerce. As with other ostensibly licit goods, the legality of any particular shipment of timber is based on paperwork. Fraudulent paperwork can be used for a number of purposes. It can transmute a protected hardwood into a more mundane variety. It can render a product originating in a protected area into one from an authorized source. In Asia, much of this paperwork is not forged – it is bought from corrupt officials in timber source countries.

Fraudulent paperwork can be used to evade the forest management policies of countries whose woodlands are threatened. For example, in Indonesia, the majority of illegal logging has involved clandestine harvesting of trees outside of authorized forest concessions or approved cutting plans.⁵⁷ In the past, illegal logging has outpaced the licit industry in Indonesia.⁵⁸ A number of countries have strict controls on logging, and some ban the export of whole logs or rough sawn wood, which serves both to protect the local timber processing industry and to reduce forest loss. For example, Indonesia has had a log export ban since 2001, and, in a reciprocal

policy arrangement, Malaysia has banned the import of logs from Indonesia since 2003.⁵⁹ Laos has had a ban on export of all unfinished wood products since 2007. Cambodia previously had a general logging ban, but has in place a quota system for national demand today.⁶⁰ Thailand has had a logging ban since 1989.

There are a variety of ways wood can become contraband. It can be harvested illegally, in contravention of national law. Most countries in South-East Asia have a range of regulations on commercial logging, in an effort to try to restrict the scope and scale of the enterprise. It can also be exported and imported illegally. Some countries prohibit the importation of particular strains of hardwood, while for others, the provenance of the wood is also significant. In either case, fraudulent paperwork pits the word of one national official against another.

Due to the bulk of the product, timber is generally transported by sea or by road, entering through official border crossings. Purely clandestine smuggling is rare, but where paperwork is lacking, a corrupt customs official on the receiving end will suffice. Since the import of illicit timber damages the source country and not the receiver, there may be little moral stigma attached to looking the other way for fraudulent imports. Often, importing coun-

tries lack the required legislation to seize shipments of illicit timber.

As with wildlife trafficking, the role of “special” or autonomous zones in both the source and destination areas is important. These are areas where the national government may have limited authority, and may assume limited responsibility. When these areas lay astride a strategic border, they are especially vulnerable to trafficking. In addition, some South-East Asian countries make provision for a ‘barter’ trade, where goods are exchanged instead of cash. The barter trade has special designated jetties and landing points and customs forms are mandatory, but little other paperwork is required for imported products, including timber.⁶¹

South-East Asia is experiencing deforestation at the fastest rate on earth, but still retains some 7% of the world’s old-growth forests. These forests provide habitat to many species found nowhere else on earth. Wildlife trafficking exterminates species one animal at a time, but deforestation can eliminate whole ecosystems in short order, and the impact that this loss of cover has had on waterways, soil erosion, and climate is well documented. The impact of this loss is global and many of the changes are irreversible.

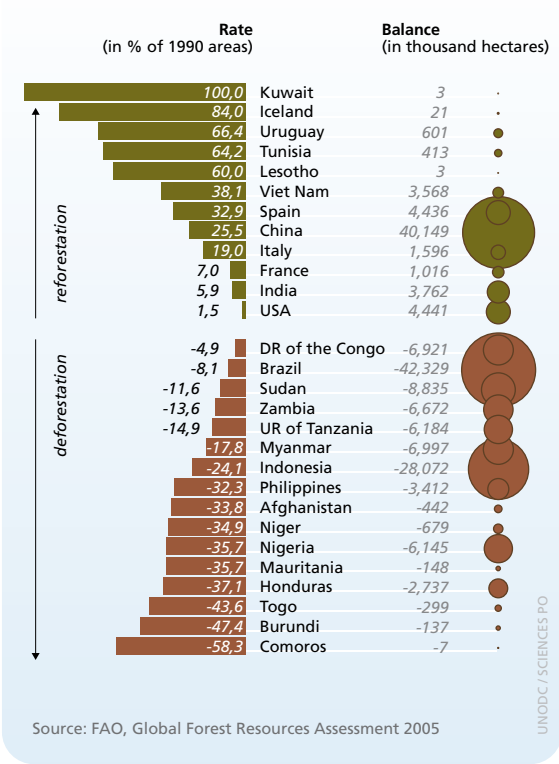
The motive for this crime is economic, and with globalized commerce, all nations bear some responsibility. The EU and Asia are two of the world’s biggest markets for timber and wood products. The EU has been estimated to import about 20% of the illegally felled timber in the world, and China an estimated 25%.⁶² Adding other significant importers like Viet Nam, the demand discussed in this section constitutes at least half the global market.

How is the trafficking conducted?

According to a 2008 assessment, as much as 40% of wood-based products imported into the EU from South-East Asia are said to have originated from illegal logging. Most of these are in the form of furniture and other finished products, but raw timber is also involved. The primary source of illicitly harvested timber is Indonesia. Indonesian timber is frequently misrepresented as coming from Malaysia, often trans-shipped from China.⁶³

Over the past decades, European wood products traders have increasingly outsourced manufacturing to Asia. Initially, these contracts went to countries with abundant forest resources of their own, like Indonesia and Malaysia. But today, Viet Nam and China are the most prominent contractors. Since these countries do not have sufficient timber

FIG. 139: EVOLUTION OF FOREST AREAS, 1990-2005



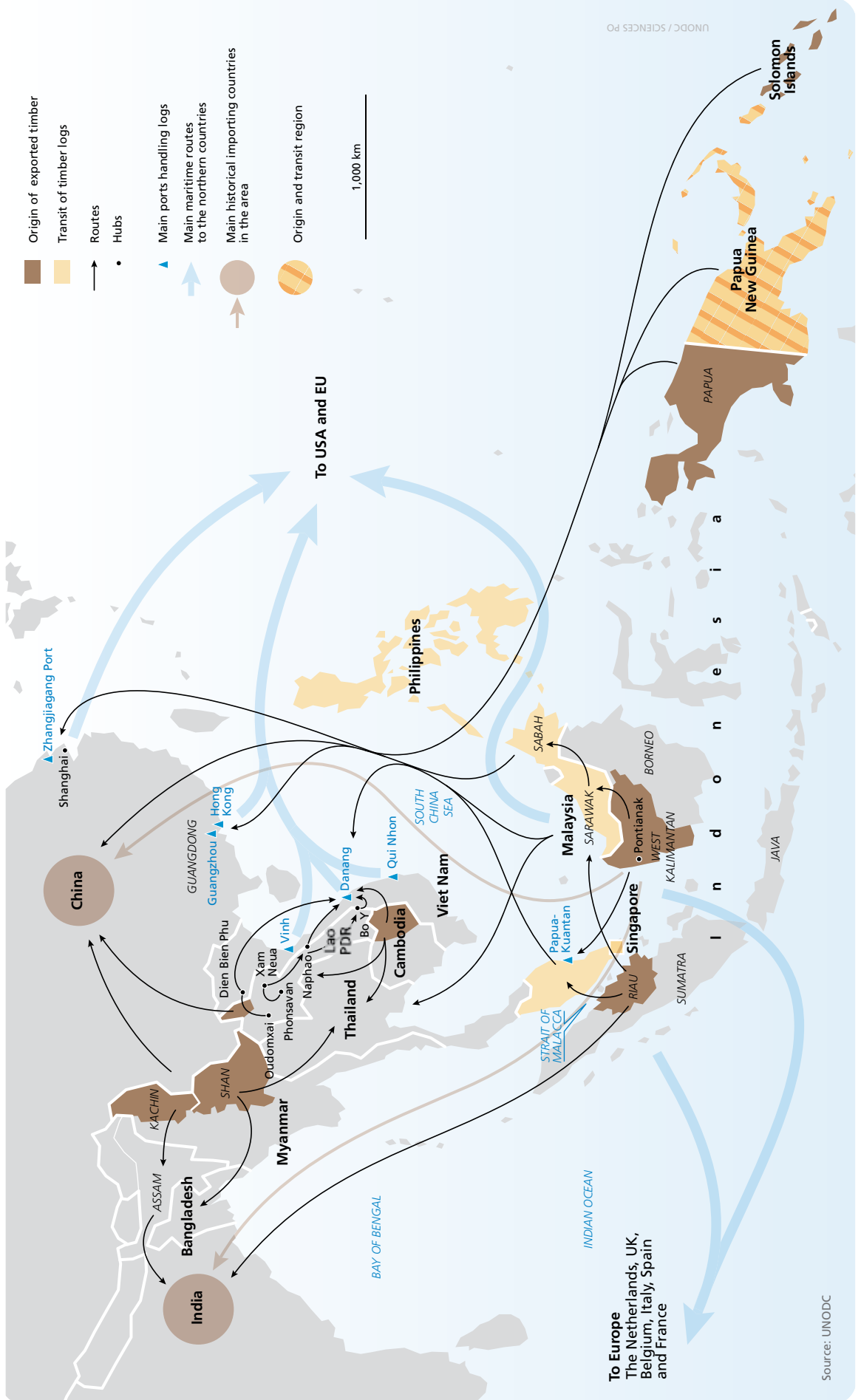
resources of their own, they import the wood to fill the EU’s manufacturing requirements. In this way, the European companies have cut costs, but they cannot be sure of the origin of the wood being used to make their products.

EU imports of products from wood and paper from China virtually tripled between 2003 and 2006, from 4 million m³ to 11.5 million m³. In contrast, the import of wood-based products from Indonesia has fallen by 15% from just under 6 million m³ to 5.1 million m³. A very large share of this wood (over 80%) is believed to be illegal.⁶⁴

In addition to its role as a re-exporter, China’s rapidly growing economy is a major consumer of South-East Asian wood in its own right. China’s timber demand is projected to rise to 350 million cubic metres in 2010, with a shortfall of 150 million cubic metres from official imports. The primary seaport of entry for raw logs is Zhangjiagang, an inland port city on the southern bank of the Changjiang River, Jiangsu Province, although the nearby ports of Nantong, Yangzhou and Taicang have also been important. In addition, a large amount of timber is imported from South-East Asia over land borders with Myanmar, the Lao People’s Democratic Republic and Thailand via the autonomous areas in Yunnan, and from Viet Nam though

FIG. 140: ILLICIT TIMBER FROM SOUTH-EAST ASIA TO THE WORLD

FIG. 140:



the Guangxi autonomous area. In September 2009, the former vice chairman of Guangxi was sentenced to 18 years in prison for corruption related in part to timber brokering.⁶⁵

The second major importer in the region is Viet Nam, where the wood is used to make furniture, especially outdoor furniture, for export. The Vietnamese export furniture industry has boomed remarkably in recent years, and is projected to rise to US\$3 billion in 2010.⁶⁶ Vietnamese outdoor furniture manufacturers have been accused of illegally sourcing their materials on many occasions.⁶⁷ In January 2010, a report on the trade between the Lao People's Democratic Republic and Viet Nam re-confirmed many earlier findings. It found that Vietnamese companies have a large influence over the forestry sector in the Lao People's Democratic Republic, and often circumvent controls. Vietnamese timber imports more than quadrupled between 2000 and 2008 and Viet Nam exported three quarters of a billion dollars worth of wood products to the EU in 2007.⁶⁸

Despite a ban on log and sawn timber exports, timber is trafficked from the Lao People's Democratic Republic to both China and Viet Nam. Traffic from the Lao People's Democratic Republic to China passes through Phongsali northeast of Boten and enters Pakha crossing, where customs presence is limited. It has been estimated that 48% of timber imports by Viet Nam are illegal.⁶⁹ Viet Nam imports around 500,000 cubic metres of logs from the Lao People's Democratic Republic per year.⁷⁰ Much of this goes to fuel Viet Nam's own burgeoning wood processing industry and outdoor furniture manufacturers. Most of this furniture is exported to the USA and Europe.

Indonesia remains the country most heavily affected by criminal deforestation, particularly the island of Papua. Historically, the two main countries directly importing Papuan timber, notably merbau, have been China and India. Logs transit the Philippines, Papua New Guinea, Singapore and Malaysia. The route through Papua-Kuantan (Malaysia) via Pontianak has also been identified.

In addition, Kalimantan (the Indonesian portion of the island of Borneo) has been a location for illegal logging, including within the National Parks. A variety of species of timber were smuggled through the Malaysian provinces of Sarawak and Sabah. From the mid-1990s to 2004, this cross-border trade was believed to be high, but appears to have been reduced since that time.

Timber trafficked into Malaysia includes sawn

timber, which is prohibited for export in Indonesia. The timber crosses land and sea into cites in Sarawak where processing for export to Viet Nam, China, Thailand, Europe and the USA takes place. The Center for International Forestry Research (CIFOR) has estimated in the past that some 2 million m³ of exported timber allegedly sourced in Sabah, Malaysia, was actually brought over from Indonesia.⁷¹ Helicopters are also used to transport logs from Indonesia into Malaysia.

Elsewhere in Indonesia, Riau province in Sumatra has also been identified as a key location for the timber trade, especially in Gaung, Kampar (South), Siak Kechil, Bukit Batu (Central), Rupert, Panipahan and Duri (North). Timber is transported into Malaysia, increasingly in the form of sawn timber. Some of the timber is processed in Malaysia, and some simply transits Malaysia en route to China, India and other destinations. As in other locations, this is facilitated by misrepresentation of the cargo, and the complicity of corrupt authorities.

In the past, Indonesian logs were transported first to Shanghai and then distributed to other areas. But with the growth of containerization, products such as merbau sawn timber are sometimes shipped directly to locations such as Fuzhou and Beijing. As mentioned above, the key port for whole logs is Zhangjiagang Port near Shanghai, China's biggest timber port, which is located close to Nanxun, where there are many flooring and decking factories. For ramin, however, Guangzhou may be used, with shipments sometimes transiting Hong Kong, China.

The trade in timber from Myanmar has greatly decreased, partly due to interventions made by China and partly due to the fact that much of Kachin State, the primary source, has been denuded. From the early 1990s to about 2005, the trade in illegal timber was vast, much of it associated with areas controlled by "cease-fire groups" on the Myanmar side of the border. In fact, access to this economic opportunity was one reason these groups agreed to stop fighting the government. This timber crossed into China to Tengchong, Baoshan and the Yunnan provincial capital of Kunming. According to a recent report from an NGO focusing on natural resources and conflict, "...imports of logs and sawn wood across the land border from Burma fell by more than 70% between 2005 and 2008. However, 270,000 cubic meters of logs and 170,000 cubic meters of sawn timber were still imported into Kunming customs district in 2008, more than 90% of which was illegal."⁷² There is also some flow to India, Bangladesh and Viet Nam.

Case study – Merbau

Merbau is a dark, tropical hardwood, commercial stands of which are largely restricted to Indonesia, Malaysia and Papua New Guinea. It is one of the most valuable hardwoods in the region: in 2005 it was worth US\$150–200 per cubic metre for logs and up to US\$450–600 for sawn wood at the point of export.⁷³ By 2009 prices had risen to around US\$540 per cubic metre for logs and US\$750 for sawn wood. Although commercial exploitation of this timber only took off in the late 1990s, it has been harvested to the extent that it is presently classified as “threatened.” In response, the Indonesian Government banned the export of whole merbau logs in 2001, limiting exports to what the local sawmill industry could produce. But by 2005, it was estimated that criminal syndicates were smuggling 300,000 m³ of merbau out of West Papua every month,⁷⁴ worth at least US\$45 million–60 million to the sellers.

One key problem is governance. In 2001, a system of autonomy was introduced for the province of West Papua, intended to direct a greater share of the proceeds of logging to local communities. This system was abused by loggers in cooperation with military leaders, and by the time the programme was abandoned in 2002, more than 300 projects were active across the province.⁷⁵ Despite the national ban, the governor of West Papua issued a decree allowing the export of merbau logs. In 2003, the regional government issued permits for logging more than twice as many hectares of land as permitted by the central government, covering almost one third of the entire land area of Papua.⁷⁶

The professionalism of the groups involved is revealed by the techniques they use to evade detection: false flagging of vessels; the use of barges instead of transport ships as these are less likely to be searched; the use of containerized rough-sawn timber instead of round logs; and a variety of fraudulent documentation, including origin certificates from neighbouring Papua New Guinea.

A national clampdown in 2005 involving 186 suspects, including senior officials, caused the price of merbau to double,⁷⁷ but by 2007, only 13 of these suspects had been convicted, and no senior figures were prosecuted. Of the suspects, the Minister of Forests at the time stated: “the evidence to incriminate them is already clear. I suspect that behind the rulings there has been something that is in conflict with the legal norms.”⁷⁸ Estimates for 2008 suggest that merbau accounted for 14.3% of Indonesia’s overall timber production, and 31.4% of its processed wood exports.

The primary method of illegal importation remains the use of fraudulent Malaysian place-of-origin certificates to mask illegal imports from Indonesia. One of the most prized hardwoods is merbau, a timber found in Malaysia, Indonesia and Papua New Guinea, and used in China to produce flooring and furniture. It is illegal to export whole merbau logs from Indonesia, so exporting this product through an official Indonesian port requires fraudulent paperwork. Almost all of the timber exported from Papua New Guinea goes to China, and independent reports have found the majority of logging operations there to involve illegalities.⁷⁹

Since these products are ostensibly legal, they are “trafficked” to China and Europe using the mainstream methods of international commerce, including containerized shipping. The buyers may include many of the top European dealers in wood products. For example, an investigation into the merbau flooring industry in Europe in 2006 found many of the top brands and retailers were implicated, and a 2008 study found that, in many instances, little had changed.⁸⁰

Who are the traffickers?

Illegal logging gangs operate throughout the source countries, with varying degrees of assistance from corrupt officials, particularly in the military. In Indonesia, for example, in a 2005 crackdown on

illegal logging, many military figures were implicated,⁸¹ and recently the Indonesian military missed a deadline to shut down its illegal businesses, including logging.⁸² According to Human Rights Watch, “...the military has had a prominent role in large timber operations that have displaced communities from their ancestral lands and fuelled rampant illegal logging. Military units providing protection services to companies have earned off-budget cash payments, raising serious corruption concerns.”⁸³

European players are difficult to identify, because destination markets include most European countries, and a wide variety of wood products are imported, many in the form of furniture, flooring, and other finished products. Since much of this material is re-exported from China, European importers can credibly claim ignorance as to its origins. It therefore becomes difficult to classify these operators as complicit in organized criminality, although without their purchases, the size of the market for illegal timber would be greatly reduced.

Trafficking to China is often arranged by brokers based in Singapore, Taiwan, Province of China and Hong Kong, China who have long experience in the trade. In South-East Asia, Chinese expatriates are important players in arranging cross-border deals. In China, the timber industry is controlled by

a number of large trading firms who deal in import quotas. To meet tremendous demand, these brokers source timber wherever they can.

In addition, corrupt public officials and businessmen in the source countries remain important in perpetrating this crime. Today, exports from Myanmar are controlled by local businessmen, who may also be involved in other extractive industries, in cooperation with rebel commanders. Thai businessmen are also involved in procuring illicit timber from the Lao People's Democratic Republic, often by bribing corrupt military officials. Before the opening of the Chinese border, the border between Thailand and Myanmar was the epicenter of trafficking in South-East Asia. While this trade has been drastically reduced, Thai brokers remain important players on the regional scene.

For traffic to Viet Nam from the Lao People's Democratic Republic, actors on both sides of the border are important. Vietnamese timber companies actually do the felling while Lao teams handle the transport to the border. The lumber is passed to both Vietnamese wood processors and brokers, who may sell internationally.

How big is the flow?

The World Bank has estimated the annual global market value of losses from illegal logging alone at over US\$10 billion, and annual losses in government revenues of about US\$5 billion.⁸⁴ An influential 2004 study into the financial impacts of illegal logging on legitimate trade stated "there is credible

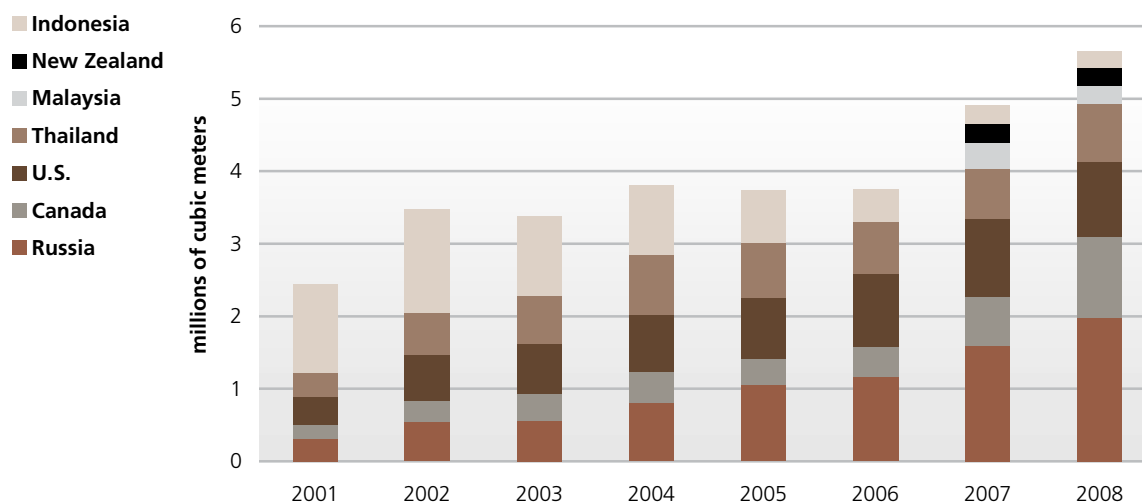
evidence to suggest" that "8%-10% of global wood products production and, similarly, of the value of global wood products trade" stems from illegal logging. The report based these figures on 2002 global roundwood production of 1.7 billion cubic metres, worth \$256 billion. Registered imports were worth US\$186 billion.⁸⁵

Illegal logging can reach extraordinary proportions. Between 2001 and 2004, it was estimated that 98% of all the timber leaving Myanmar for China overland was illegal.⁸⁶ Similarly, at the height of Indonesia's illegal logging problem, 80% of the timber coming out of the country was illegal, and the government estimated that this trade was costing the government US\$4 billion annually.⁸⁷ This is around five times the country's 2004 health budget.⁸⁸ Indonesia's rate of deforestation peaked at around 2 million hectares a year (equivalent to 300 football fields every hour)⁸⁹ with one source stating this represented "several hundred thousand truckloads, corresponding to a continuous line of trucks from Paris to Bangkok."⁹⁰ The United Nation Environmental Programme declared in 2007 that illegal logging was taking place in 37 of Indonesia's 41 national parks.⁹¹

In the Indonesian example, the largest mark-up was made by the gangs organizing illegal logging. Traffickers stood to double their money exporting logs from Papua to China, more than the mark-up made by those who turned these logs into flooring. If similar conditions prevail today, the incentives for trafficking remain.

FIG. 141:

CHINESE LUMBER IMPORTS BY SOURCE COUNTRY, 2001-2008



Source: China Woods Logistics Association

It has been estimated that 20-40% of global timber production comes from illegal sources, and that 20% of this enters the EU.⁹² This amounts to around US\$3 billion worth of illegally-sourced timber every year. In 2001, the EU was believed to be directly importing US\$700 million of illegal timber from Indonesia and Malaysia alone.⁹³ A report for the American Forest and Paper Association in 2004 referred to estimates which suggested that up to 80% of tropical log imports into the EU15 were illegal.⁹⁴ According to the WWF (World Wide Fund For Nature), writing in July 2008, “On average 40% (9.5 million [cubic meters in round wood equivalent volume]) of the wood-based products which are imported into the European Union from South-East Asia including China, probably originate from illegal logging.”⁹⁵

A more recent estimate suggests that the quantity of illegal timber which was imported into the EU from South-East Asia during 2009 amounted to a roundwood equivalent volume of almost two million cubic metres, with an import value of roughly US\$0.8 billion. The quantity imported into the EU from China had a roundwood equivalent volume of 2.3 million cubic metres and an import value of US\$1.8 billion.⁹⁶ Thus, illegal timber imports from China and South-East Asia in 2009 amounted to some US\$2.6 billion.

Unlike the EU, China’s timber imports, particularly of logs, have been growing at a remarkable rate, so any estimates tend quickly to become outdated. A forthcoming report from the WWF estimates the illegal timber content of China’s imports at somewhere between 30% and 45% in 2006.⁹⁷ In 2009, Global Witness, a non-governmental organization, estimated that half of all China’s wood imports are illegal in 2007, but a large share of the total was illegally harvested timber from the Russian Federation.⁹⁸

The import value of China’s timber imports from Myanmar, Cambodia, Indonesia, the Lao People’s Democratic Republic, Malaysia and Singapore was about US\$900 million in 2007. According to experts, about half that total was probably illegal (between 10% and 90%, depending on the origin country and the product). Paper and pulp imports from Indonesia, almost all of which were likely to be illegal, amounted to about US\$1 billion. Thus, total illicit imports from South-East Asia that year would have been on the order of US\$1.4 billion.

Since that time, the share of China’s imports of timber from countries where a large share of the timber is likely to be illegally harvested (such as the Russian Federation) has declined, while the share of imports from less vulnerable countries (such as Canada) have increased. As a result, the share illicit today would be closer to one third than one half. Illicit timber exported from Myanmar, Cambodia, Indonesia, the Lao People’s Democratic Republic, Malaysia and Singapore to China amounted to an estimated US\$170 million, while pulp, paper, and woodchips from Indonesia amounted to about US\$700 million, for a total of around US\$870 million in 2009.

IMPLICATIONS FOR RESPONSE

Transnational trafficking in endangered species and timber are facilitated by the licit trade in some of these products. For example, elephant ivory is not, in itself, contraband. The legality of any given piece of ivory depends entirely on its provenance. In a number of countries, legislation allows domestic processing, marketing and use of ivory. The same is true of many tree species: the legality of the wood is dependent entirely on where and how it was harvested. A piece of forged or fraudulently acquired paperwork is all that is needed to transform a container-load of trafficked goods into legitimate commerce. If the demand is legal, it is difficult to ensure that the supply remains so.

Even when a product is legally available in international trade, it is often cheaper to obtain it from illicit sources. Once one key player takes advantage of this cost savings, market pressure makes it very difficult for competitors to avoid doing the same. Over time honest players are eliminated from the market, unable to compete with those who cut corners. To avoid this downward cycle, it is necessary to create disincentives that outweigh the advantages of profiting from natural resource trafficking.

For those products that cannot be completely banned, protecting the environment comes down to a reliable system of origin certification and international accounting. Buyers must be able to distinguish the illegal from the legal – there must be no grey area.¹⁰⁴ A regime must be devised that makes it cost-ineffective to bring banned merchandise into the licit supply stream. International oversight is essential to circumvent corruption and short-term thinking on behalf of local actors. Once natural resource contraband has been effectively ghettoized, it will become more expensive to procure and more difficult to market.

With such a system in place, those who licitly deal in these commodities will have strong incentives to inform on those who gain a competitive advantage by skirting the rules, so long as the informants are assured that swift and effective action is taken on information submitted. Industry competitors are in an excellent position to know where the weaknesses are in the system and how they might be corrected. They may also contribute financially to ensuring their industry avoids disrepute. Providing an international platform for information sharing and collective enforcement could go a long way to enlisting the support of these key players.

Greater regulation must go hand in hand with consumer education. For example, demand for endangered wildlife is especially galling because it is often combined with health fraud. The recent surge in demand for rhino horn, for example, has been tied to a rumour that powdered horn can cure cancer. This myth seems to have gained currency in Viet Nam in particular,¹⁰⁵ and may be behind the fact that demand for rhino horn skyrocketed to a 15-year high in 2009. Rhino horn is largely comprised of keratin, like human hair or fingernails, and there is no evidence that keratin has any effect on cancer. As a result, the trade in rhino horn simultaneously speeds the extinction of an animal species and exploits the ill people. Public education plays a critical role in preventing such inappropriate demand.

More research is required to better quantify the problem and to identify priorities. There are a number of complex factors that make a species vulnerable to extinction, aside from market demand. Some of the most vulnerable animal species are slow to reproduce. Others require large ranges, or are adapted to very specific climatic conditions. The same is true for timber: trees that took hundreds of years to grow can be felled in minutes. They cannot be replaced at the rate they are poached. Ironically, as the species becomes scarcer, its value increases, and with it the incentives to drive it into extinction. Tracking this process is required so that scarce resources can be directed to the most acute problems.