

WORLD•WATCH

WORKING FOR A SUSTAINABLE FUTURE

Crimes of (a) Global Nature

by Lisa Mastny and Hilary French

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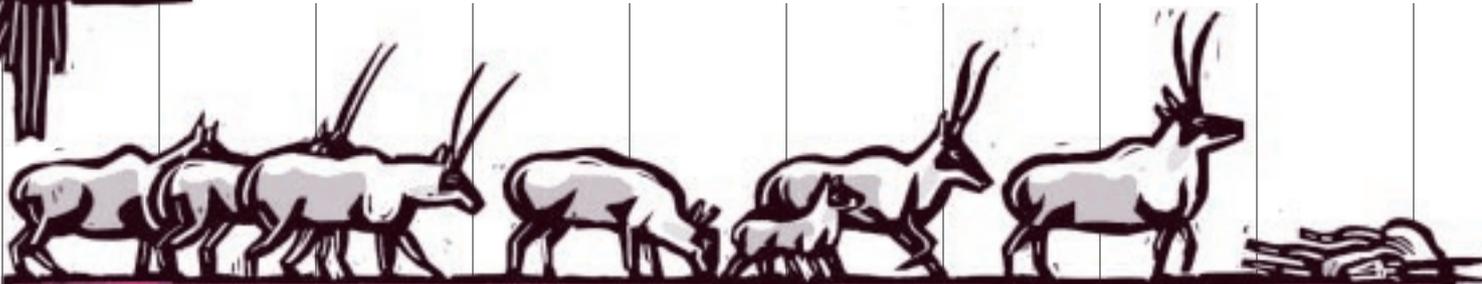
Crimes of (a) Global Nature

FORGING ENVIRONMENTAL TREATIES
IS DIFFICULT.
ENFORCING THEM IS EVEN TOUGHER.

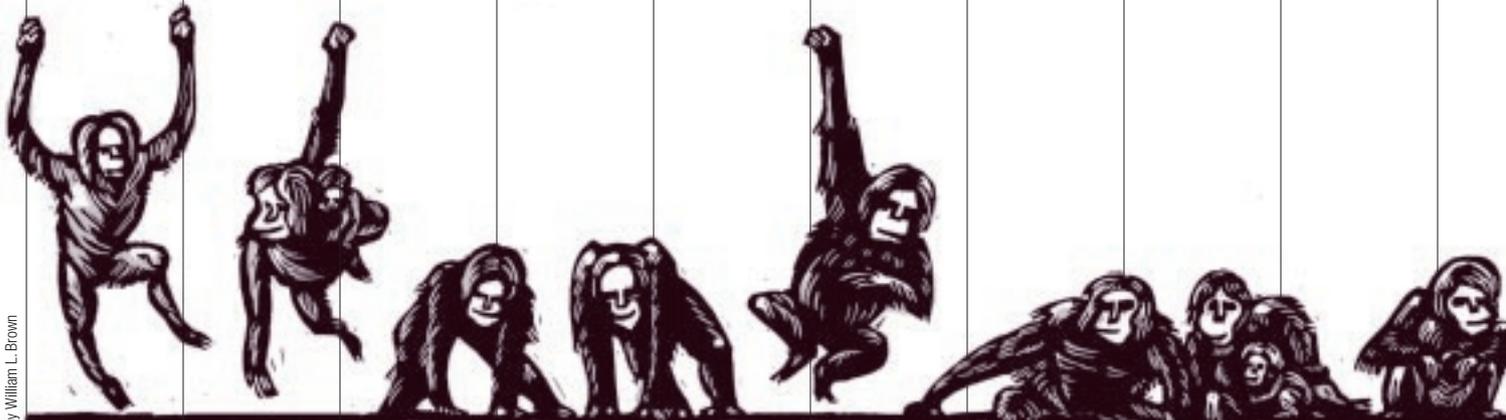
by Lisa Mastny and Hilary French



Lear's Macaw 200 left in wild @ \$60,000 dollars each = \$12 million



Chiru (Tibetan Antelope) 3 killed per shatoosh shawl • shawls average \$3,700 each • 275,000 left in wild @ \$1,250 each = \$92.5 million



Orangutan black market prices from \$5,000



Illustrations by William L. Brown

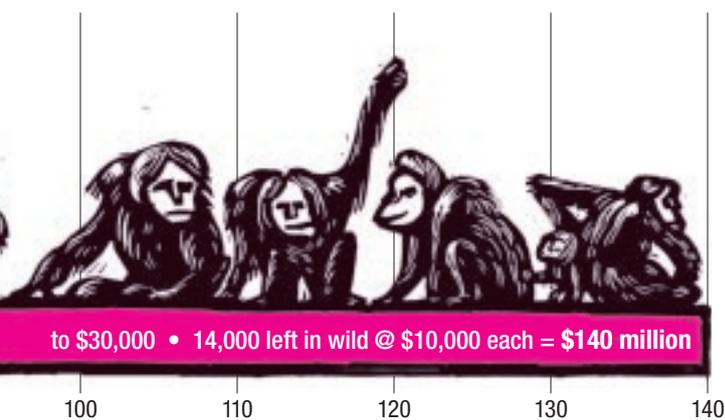
Last February, armed troops and fisheries officials on two Australian navy ships and a helicopter boarded and seized the *Volga* and the *Lena*, Russian-flagged fishing vessels operating near Heard Island, some 2,200 nautical miles southwest of Perth. The two ships were found to be carrying about 200 tons of illegally caught Patagonian toothfish in their holds. This bounty, valued at an estimated \$1.25 million, had been taken in violation of conservation agreements negotiated under the auspices of the Commission for the Conservation of Antarctic Marine Living Resources.

Few casual seafood lovers have heard of Patagonian toothfish, but many are familiar with Chilean sea bass, a different name for the same fish. Chilean sea bass began appearing on menus in the early 1990s, and consumption of the flaky, white fish took off fast, quickly endangering the health of the fishery. Large-scale commercial fishing of the species began only a decade ago, but scientists estimate that at current rates of plunder the fish could become commercially extinct in less than five years.

A few months after the drama in the Southern Ocean, a different front in the same battle opened up thousands of miles away in Washington, D.C., where nearly 60 restaurants and caterers pledged to keep the fish off their menus. More than 90 restaurants in the Los Angeles area did the same a few weeks later, following similar promises by chefs in Northern California, Chicago, and Houston. Thus the fight to save the

Extinction's Payoff

Pets, aphrodisiacs, distinctive clothing: these are a few of our favorite things—even if having them drives a species or two to extinction. The staggering prices some threatened animals fetch on the black market create powerful incentives for illegal trafficking and help increase the risk of extinction. The prices in the graph are probably conservative, since prices would tend to rise with increasing scarcity.



Patagonian toothfish is beginning to hit close to home. But many Chilean sea bass fans remain unaware that they may be accomplices to a growing phenomenon known as international environmental crime.

Although variously defined, in this article international environmental crime means an activity that violates the letter or the spirit of an international environmental treaty and the implementing national legislation. Trade in endangered species, illegal fishing, CFC smuggling, and the illicit dumping of wastes are all cases in point that are explored below. Illegal logging is another major category of environmental crime, although environmental treaties currently impose few specific constraints on logging (see sidebar, *Logging Illogic*, page 23). The rapidly growing illegal trade in these environmentally sensitive products stems from strong demand, low risk, and other factors (see sidebar, *Variable Crimes, Constant Incentives*, next page).

The number of international environmental accords has exploded as countries awaken to the seriousness of transboundary and global ecological threats. The UN Environment Programme (UNEP) estimates that there are now more than 500 international treaties and other agreements related to the environment, more than 300 of them negotiated in the last 30 years.

But reaching such agreements is only the first step. The larger challenge is seeing that the ideals expressed in them become reality. What is needed is not necessarily more agreements, but a commitment to breathe life into the hundreds of existing accords by implementing and enforcing them.

Here the genteel world of diplomacy often runs into hard-nosed domestic politics. Countries that ratify treaties are responsible for upholding them by enacting and enforcing the necessary domestic laws. This requires the backing of businesses, consumers, and other constituencies, which may not be easily secured. Countries with strong fossil fuel industries, for instance, may meet staunch resistance to international rules to mitigate climate change. And countries where natural resource industries are politically powerful will probably find it difficult to adequately enforce environmental treaties designed to regulate resource-related activity. The effect has been to expand trafficking in a number of restricted substances, an increasingly urgent problem that is beginning to stimulate a stronger international response.

Trading in Wildlife

Undercover Russian police officers in the port city of Vladivostok recently trailed two investigators from environmental groups posing as eager purchasers of Siberian tiger skins from a corrupt official. When the deal went down, the officers arrested the wildlife trader on the spot. Russian investigators earlier had infiltrated

VARIABLE CRIMES, CONSTANT INCENTIVES

International environmental crime involves many different kinds of activities and contraband, ranging from illegal fishing and trading in endangered wildlife to smuggling ozone-depleting chlorofluorocarbons (CFCs) across borders. But in most cases there are several common elements:

➤ **Booming demand, minimal investment, high profits.** Such crime is generally very attractive to traders and smugglers. Demand for increasingly rare plants, fish, or CFCs is strong. Investment can be minimal and the rewards great, with prices climbing substantially as the items change hands. For instance, a Senegalese wholesaler may buy a grey parrot in Gabon for \$16–20 and sell it to a European wholesaler for \$300–360, who then gets \$600–1,200 for it.

➤ **Low risk, low penalties.** Environmental crimes normally carry low risk, with domestic penalties often light or nonexistent. A 2000 study by the secretariat of the Convention on Interna-

tional Trade in Endangered Species of Wild Fauna and Flora found that roughly half of the treaty's 158 parties failed to implement the treaty adequately. A common deficiency is a lack of appropriate penalties to deter treaty violations.

➤ **Creative smuggling methods.** Smugglers have devised clever ways to evade controls on restricted items, from using unauthorized crossing points to shipping illegal items along with legal consignments.

➤ **Links to organized crime.** Environmental criminals sometimes launder or funnel the proceeds from their trafficking to other illicit activities, such as buying drugs or weapons. The National Network for Combating the Traffic of Wild Animals (RENCTAS), a Brazilian NGO, reports that as much as 40 percent of the 300 to 400 criminal groups that control that country's wildlife trade also have links with drug trafficking.

➤ **Weak domestic treaty enforcement.** Because treaty secretariats have little

centralized authority, signatory countries are expected to designate their own permitting authorities and train local customs inspectors and police to detect and penalize illegal activity. But many countries simply don't have the resources to do this.

➤ **Porous borders.** Many countries lack the money, equipment, or political will to effectively monitor illegal activity at border crossings. In the developing world in particular, customs offices are chronically understaffed and underfunded. Agents are often untrained to spot crimes or overwhelmed by the sheer numbers of items they must track.

➤ **Permitting challenges.** Local authorities may unwittingly issue permits for animals, seafood, chemicals, or other items they don't know are restricted, or let consignments slip through because they can't identify a fake or altered permit. Corrupt local officials may issue false permits or overlook illicit consignments in return for bribes or kickbacks.

the wildlife trade crime ring and determined that it was raking in some \$5 million a year from smuggling wild ginseng, tiger skins, and bear paws and gallbladders across the Russian border.

Trade in these wildlife products is restricted under the terms of the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which bans international trade in some 900 animal and plant species in danger of extinction, including all tigers, great apes, and sea turtles, and many species of elephants, orchids, and crocodiles. CITES also restricts trade in some 29,000 additional species that are threatened by commerce, among them birdwing butterflies, parrots, black and stony corals, and some hummingbirds.

CITES has shrunk the trade in many threatened species, including cheetahs, chimpanzees, crocodiles, and elephants. But the trafficking in these and other species continues, earning smugglers profits of \$8 billion to \$12 billion annually. Among the most coveted black market items are tigers and other large cats, rhinos, reptiles, rare birds, and botanical specimens.

Most illegally traded wildlife originates in developing countries, home to most of the world's biological diversity. Brazil alone supplies some 10 percent of the global black market, and its nonprofit wildlife-trade

monitoring body, RENCTAS, estimates that poachers steal some 38 million animals a year from the country's Amazon forests, Pantanal wetlands, and other important habitats, generating annual revenues of \$1 billion. Southeast Asian wildlife has also been plundered: the Gibbon Foundation reports that in a single recent year, traders smuggled out some 2,000 orangutans from Indonesia—at an average street price of \$10,000 apiece.

The demand for illegal wildlife—for food and medicine, as clothing and ornamentation, for display in zoo collections and horticulture, and as pets—comes primarily from wealthy collectors and other consumers in Europe, North America, Asia, and the Middle East. In the United States (the world's largest market for reptile trafficking) exotic pets such as the Komodo dragon of Indonesia, the plowshare tortoise of northeast Madagascar, and the tuatara (a small lizard-like reptile from New Zealand) reportedly sell for as much as \$30,000 each on the black market. Wildlife smuggling is also a growing concern in the United Kingdom, where in 1999 alone, customs officials confiscated some 1,600 live animal and birds, 1,800 plants, 52,000 parts and derivatives of endangered species, and 388,000 grams of smuggled caviar.

The multibillion-dollar traditional Asian medicine industry has also been a strong source of demand for

illegal wildlife, with adherents from Beijing to New York purchasing potions made from ground tiger bone, rhino horn, and other wildlife derivatives for their alleged effect on ailments from impotence to asthma. In parts of Asia, bile from bear gall bladders (used to treat cancers, asthma, eye disease, and other afflictions) can be worth more than narcotics. The New York-based Wildlife Conservation Society reports that the illegal hunting and trafficking of animals for medicine, aphrodisiacs, and gourmet food is now the single greatest threat to endangered species in Asia.

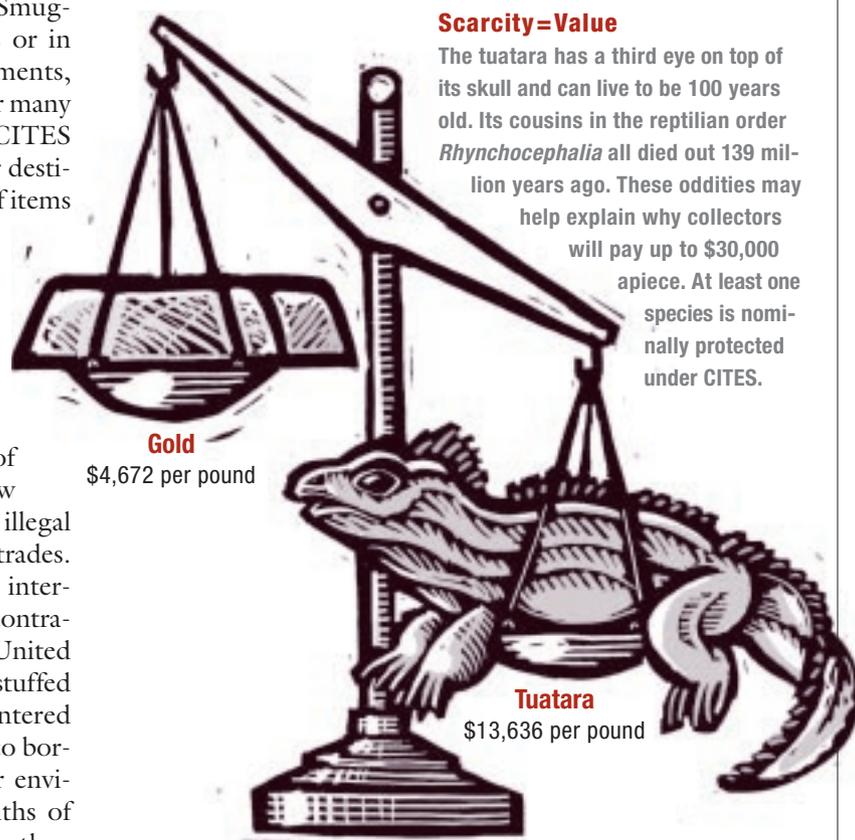
The scale of the illegal wildlife trade reflects the serious obstacles to enforcement under CITES. Smugglers may conceal the items on their persons or in vehicles, baggage, or postal and courier shipments, resulting in fatality rates as high as 90 percent for many live species. They may also alter the required CITES permits to indicate a different quantity, type, or destination of species, or to change the appearance of items so they appear ordinary. In February 2000, the U.S. Fish and Wildlife Service arrested a Cote d'Ivoire man for smuggling 72 elephant ivory carvings, valued at \$200,000, through New York's John F. Kennedy airport. Many of them had been painted to resemble stone.

As wildlife smuggling grows in sophistication, it accounts for a rapidly rising share of international criminal activity. RENCTAS now ranks the illicit wildlife trade as the third largest illegal cross-border activity, after the arms and drug trades. Wildlife smugglers commonly rely on the same international trafficking routes as dealers of other contraband goods, such as gems and drugs. In the United States, consignments of snakes have been found stuffed with cocaine, and illegally traded turtles have entered on the same boats as marijuana. The U.S.-Mexico border has become a significant transfer point for environmental contraband: in the first eight months of 2001, Mexican authorities reported seizing more than 50,000 smuggled animals en route to the U.S. border.

As the scope of international wildlife trafficking becomes clearer, authorities are beginning to take action on the domestic, regional, and global fronts. In Europe, officials are working together to improve regional cooperation in enforcement of CITES and to strengthen legal mechanisms for prosecuting violators. The United Kingdom has established a new national police unit to combat wildlife crime and announced tougher penalties for persistent offenders. And in the first program of its kind in East Asia, a team at South Korea's Seoul airport now uses specially trained dogs to detect tiger bone, musk, bear gall bladders, and other illegal wildlife derivatives smuggled in luggage and freight.

In general, developing countries have had greater difficulty in controlling wildlife smuggling and imple-

menting CITES. Many lack the political will, money, or equipment to effectively monitor their wildlife populations, much less the wildlife trade. In Kenya, where elephant deaths declined dramatically following a CITES-imposed ban on the international ivory trade in the late 1980s, poaching is again surging as funds to hire additional game wardens have run dry. In two separate incidents in April 2002, poachers armed with automatic weapons slaughtered 25 elephants in the country's wildlife parks and removed the tusks for sale on the black market.



At the international level, one tool that has proved successful in enticing (some would say coercing) countries to uphold their obligations under CITES is the use of trade sanctions. CITES is empowered to recommend that its members temporarily suspend all wildlife trade with noncomplying countries. Within the past year, such sanctions have been levied against the United Arab Emirates for not taking strong enough measures to combat the illicit trade in falcons, against Russia for not cracking down on the illegal caviar trade, and against Fiji and Vietnam for not enacting adequate wildlife trade legislation by the required deadline. In most instances, the governments scrambled to strengthen their legislation and enforcement, and the sanctions were soon lifted.

High Seas, High Crimes

Although CITES focuses mainly on terrestrial animals and plants, it protects several highly endangered fish species as well. In February 2002, the Philippine navy arrested 95 Chinese fishermen near a national marine park in the Sulu Sea and charged them with multiple counts of poaching fish, harvesting endangered species, and using illegal fishing methods like poison and explosives. Among the species found aboard their four vessels were endangered sea turtles and giant clams, both of which are prohibited from trade under CITES.

Countries have negotiated a wide range of other agreements to oversee and regulate the world's fisheries. Like CITES, many of these are poorly enforced, resulting in illegal fishing in all types of fisheries and in all the world's oceans, including national waters, regionally managed fisheries, and the high seas. In some of the world's most important fisheries, as much as 30 percent of the catch is illegal, according to the UN Food and Agriculture Organization (FAO).

As with other forms of wildlife trade, booming consumer demand is an important driver behind the rise in this activity. Big profits can be made selling black market seafood to selective buyers, who are willing to pay a premium for increasingly rare items. In Japan, species such as the threatened Southern bluefin tuna now fetch up to \$50,000 per fish.

One major form of illegal fishing occurs when foreign vessels fish without authorization in the waters of other countries, often developing nations unable to patrol their shores adequately. In early 2000, the Tanzanian government estimated that more than 70 vessels, most of them from Mediterranean countries and the Far East, were fishing illegally in its waters. Tanzania has few police boats of its own and has had to rely on assistance from France and the United Kingdom to crack down on offenders. Mozambique, Somalia, and other African countries also report increased illegal fishing, often by heavily armed foreign vessels, and worry that the continued poaching will damage national economies and deprive coastal villagers of the healthy fisheries they depend upon for their livelihoods.

Commercial fishers are also turning to the largely unmonitored high seas, including the Mediterranean Sea and the Indian, South Atlantic, and Southern

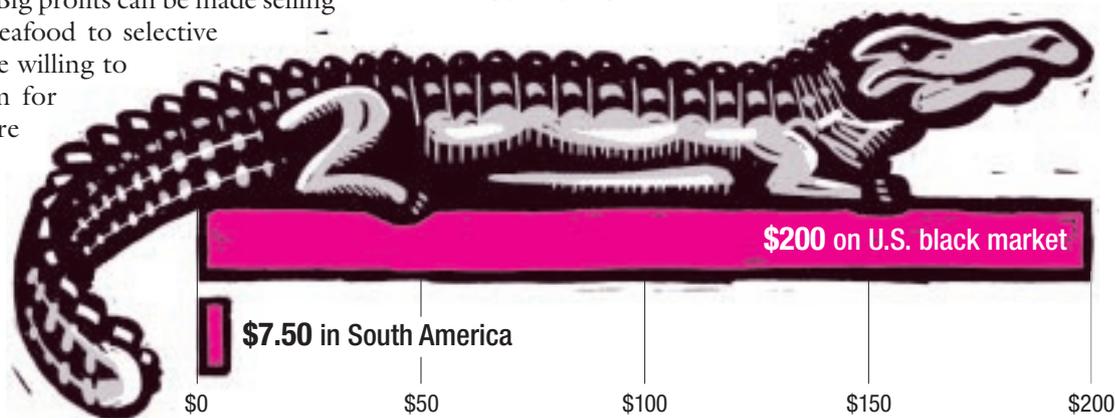
Oceans. Their ships illegally penetrate the borders of regional fishing grounds that are closed or restricted under international law, and deliberately hide their flags or other markings to avoid recognition. Some offload their illicit catch to other vessels to further disguise its origin and to minimize the penalties if discovered. Often these fishers do not report their activity, or if they do, they may falsify the equipment used, the fishing area frequented, or the species or amount caught.

TRAFFIC, a UK-based nonprofit group that monitors the international wildlife trade, reports that illegal Russian trawlers are accelerating the collapse of

Smugglers' Markups

For vivid examples of the economics of smuggling, it's hard to do better than caiman skins, the African grey parrot (opposite), the chopi (p. 18), and the golden lion tamarin (p. 19). Middlemen at every stage add their costs and the dealer charges a premium, but the peasant or tribesman scouring the jungle for a rare animal gets only a tiny fraction of the retail price.

Caiman Skin



once productive fisheries in the Bering Sea. Backed by the Russian mafia, the fishers remove billions of dollars worth of pollack, cod, herring, flounder, halibut, and other species from the ecosystem each year, often trawling in prohibited areas and using illegal nets and other gear. They then transfer the catches to ships bound for ports in the United States, Canada, and Asia, in particular the South Korean port of Pusan, where vessel inspections are rare.

One of the most serious challenges to adequate fisheries enforcement is the rapid rise in so-called flag-of-convenience (FOC) fishing. Increasingly, commercial fishing companies register their ships in countries known to be lax enforcers of international fisheries laws or that are not members of major maritime agreements. By transferring their allegiance to these new "flags," the companies can easily enter the waters of their adopted countries or operate undercover on the high seas where only the coun-

try of registry (the flag state) can make an official arrest. Some vessels change their flags frequently in order to hide their origins or identities, making it difficult for enforcement officials to track them down.

An estimated 5 to 10 percent of the vessels in the world fishing fleet now fly flags of convenience. This includes more than 1,300 large industrial fishing vessels registered in such countries as Belize, Honduras, Panama, St. Vincent, and Equatorial Guinea.

The countries and companies that own the re-flagged vessels are also partially to blame for the problem. Fishing companies from Europe (primarily Spain) and Taiwan own the highest numbers of FOC vessels. Many of these firms receive special government subsidi-

or incineration capacity onboard or because they wish to avoid the high costs of eventual disposal on land. Often this at-sea discharge occurs in the waters of countries where monitoring and enforcement are minimal and the activity can go undetected. In 1999, however, U.S. officials fined Royal Caribbean Cruises Ltd. a record \$18 million for releasing oil waste from its ships into U.S. waters, among other violations. In April 2002, rival Carnival Corporation was also fined \$18 million for similar offenses.

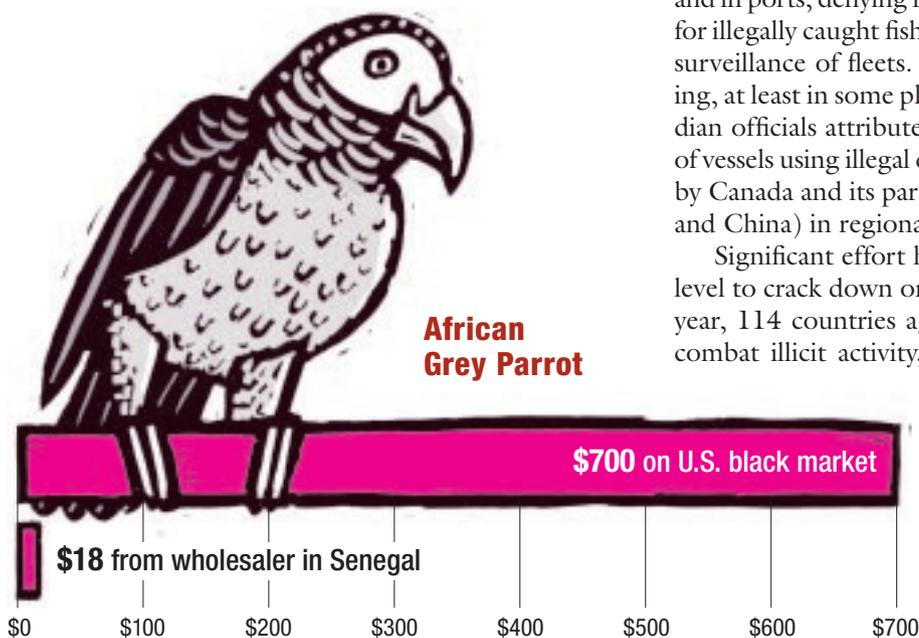
As the scope of maritime violations becomes increasingly evident, many countries are redoubling their efforts to combat illegal fishing, including by exchanging information about illicit activity, making vessel registries more transparent, increasing inspections at sea and in ports, denying landing and trans-shipment rights for illegally caught fish, and improving monitoring and surveillance of fleets. These steps appear to be working, at least in some places: in the North Pacific, Canadian officials attribute the recent drop in the number of vessels using illegal driftnets to stepped-up air patrols by Canada and its partners (the United States, Russia, and China) in regional enforcement.

Significant effort has also been made at the global level to crack down on illegal fishing. In March of last year, 114 countries agreed to a non-binding plan to combat illicit activity, including that by flag-of-convenience vessels. Developed under the auspices of the UN Food and Agriculture Organization, the plan calls for improved oversight of vessels and coastal waters by flag states, better coordination and sharing of information among countries, and stronger efforts to ratify, implement, and enforce existing fisheries accords.

The plan is expected to work in conjunction with other international efforts to protect global fisheries, including a 1993 pact known as the Compliance Agreement and the 1995 UN Agreement Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

Dumping on Land

A Japanese district court last March sentenced Hiromi Ito, the president of a waste disposal company, to four years in prison and slapped him with a 5 million yen (\$40,000) fine. Ito and his accomplices had masterminded an elaborate scheme to illegally dump some 2,700 tons of industrial and medical waste in the Philippines, in containers marked 'paper for recycling.' When the Filipino importer opened the 122 shipping containers, each 40 feet long, he found not just paper but



dies to register their ships abroad.

FOC vessels also pose a serious problem in the cruise and shipping industries. Freight companies may re-flag their vessels in order to avoid higher taxes, labor, and operating costs at home, or to take advantage of the lower safety standards and weaker pollution laws in countries like Liberia, Panama, and Malta. The International Transport Workers' Federation reports that FOC ships accounted for nearly a quarter of all large freight vessels in 2000, and carried 53 percent of the world's gross tonnage. The re-flagged ships account for a disproportionate share of pollution and accidents at sea, as well as detentions in ports for violations of maritime laws.

Some of the most serious offenses have been breaches of MARPOL, the international treaty regulating the disposal of garbage and other pollutants at sea. Vessel owners may decide to dump their waste overboard illegally either because they lack the storage

also hazardous materials, including contaminated hypodermic needles and bandages, used plastic sheeting, and old electronics equipment.

With Ito's conviction, the Japanese government closed the books on an embarrassing international incident. But the episode points to a much larger global challenge: effectively regulating the 300 to 500 million tons of hazardous waste generated worldwide each year. This vast waste mountain includes everything from used batteries, electronic wastes, old ships, and toxic incinerator ash to industrial sludge and contaminated medical and military equipment.

Roughly 10 percent of this waste is shipped legally across international borders, under the terms of the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. The agreement requires member countries to obtain prior consent from the importing country for waste shipments and uses a system of permits to track the pathway to disposal. Most of the waste originates in and moves among industrial countries, but some also travels to and within the developing world.

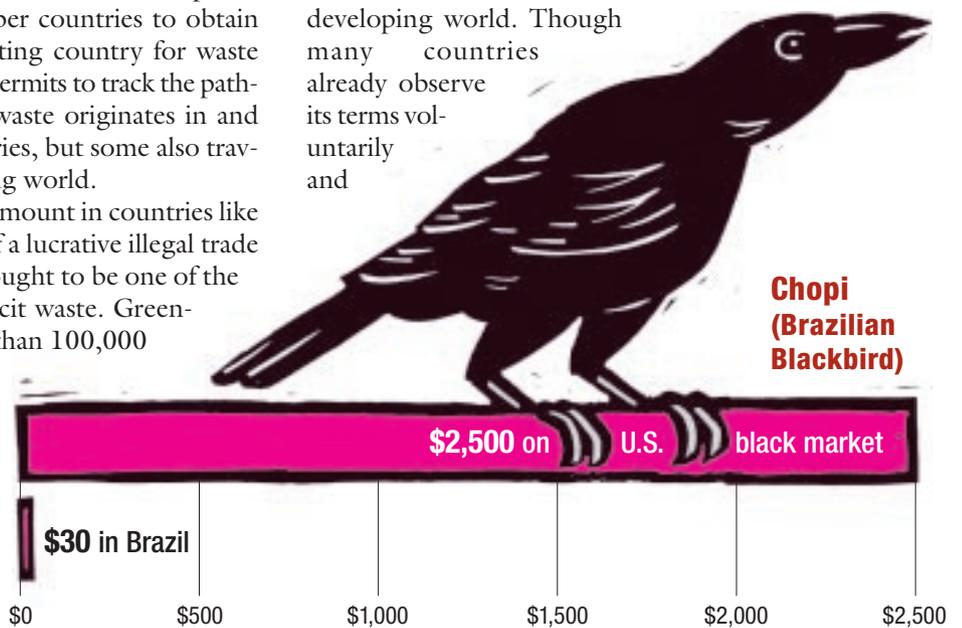
As waste disposal problems mount in countries like Japan, so does the likelihood of a lucrative illegal trade in hazardous wastes. Asia is thought to be one of the biggest destinations for the illicit waste. Greenpeace India reports that more than 100,000 tons of unauthorized wastes entered India in 1998 and 1999, including toxic zinc ash and residues, lead waste, used batteries, and scraps of chromium, cadmium, thallium, and other heavy metals. The illicit imports, originating in places like Australia, Belgium, Germany, Norway, and the United States, violated both the Basel treaty's notification rules and a 1997 Indian government ban on waste imports.

China receives a massive flow of illegally imported hazardous electronic waste each year. A recent study by the Basel Action Network (BAN), a watchdog group that monitors implementation of the Basel treaty, and the California-based Silicon Valley Toxics Coalition reported that workers in Chinese recycling factories risk serious exposure to heavy metals and other poisonous chemicals as they salvage components from old computer circuitboards, monitors, batteries, and other equipment. This toxic trade continues despite a Chinese import ban on the material, and hence violates Basel rules that forbid the export of wastes to countries that have banned their import.

Roughly half of this "e-waste" originates in the United States, where an estimated 20 million com-

puters become obsolete each year. Yet the U.S. government doesn't consider the high-tech shipments to be illegal because the waste isn't technically classified as hazardous. The United States is also the only industrial country that hasn't ratified the Basel Convention.

Developing countries are particularly vulnerable to the health and environmental effects associated with the illegal waste trade. Many governments lack the infrastructure or equipment to dispose of or recycle waste safely, prevent exposure to workers and communities, clean up dumpsites, or monitor waste movements. For this reason, a bloc of developing countries secured passage in 1995 of a far-reaching amendment to the Basel Convention, known as the Basel Ban, which would outlaw all transfers of hazardous wastes from industrial countries to the developing world. Though many countries already observe its terms voluntarily and



the European Union has already implemented it, the Ban is not yet in strict legal force and still faces serious opposition from a few industrialized countries, including the United States.

Even so, the Basel Ban has helped slow the flow of hazardous wastes from industrial countries to the developing world, says Jim Puckett, coordinator of BAN. And once the amendment enters into legal force (it needs 32 more ratifications), it should be even harder for waste traders to operate, as violators would face strict criminal penalties. If the ban fails to enter into force, however, or if it is weakened through continued opposition, the waste flood could resume.

But the ban alone would likely fail to wipe out the illegal waste trade. Smugglers rely on a wide range of tactics, including false permits, bribes, and mislabeling of wastes as raw materials, less dangerous substances, or other products, to evade the laws. Moreover, no port

in the world can check all sea-going containers, let alone developing-country ports.

One growing trend is the export of hazardous wastes under the pretext of “recycling.” Like Hiromi Ito, illicit waste dealers increasingly pass off waste as recyclable material, which in many cases frees them from strict government oversight. Greenpeace estimates that as much as 90 percent of waste shipped to the developing world—particularly plastics and heavy metals—is now labeled as destined for recycling. Much of this waste, however, is never recycled—or, as with e-waste in China, is recycled in highly polluting operations that are little better than dumping. Typically, the end result is the same: the export of a serious pollution problem from a rich country to a poor one.

In many cases, organized crime is thought to be behind large-scale waste trading, which can be closely linked with money laundering, the illegal arms trade, and other



criminal activities. The Italian mafia is reportedly a key player in the robust trade in radioactive metal waste from Eastern Europe and the former Soviet Union, which it re-sells to smelters as “safe” scrap metal.

Efforts to combat the illegal waste trade face serious challenges. A recent survey by the Basel secretariat revealed that many countries lack adequate—or any—legislation for preventing and punishing illegal waste traffic. On a global scale, the absence of uniform definitions of hazardous waste and of coordinated enforcement efforts among customs officers and port authorities has contributed to the spread of illegal waste trading. Even for countries that do have the resources, the lack of hard data on the extent or geographic flow of this trade makes it hard for officials to know how to allocate the resources properly.

The member countries of the Basel Convention

have taken some steps to give the treaty sharper teeth. In 1994, the Basel secretariat strengthened information sharing among member countries by agreeing to set up a centralized system for reporting suspect activity. The treaty also requires members to pass laws to curb and punish illegal waste traffic and outlines how to handle illegally traded waste once it is discovered.

A new liability protocol to the convention, negotiated in December 1999, could further discourage illegal activity—if it ever comes into force. It makes exporters and disposers of hazardous waste liable for any harm that might occur during transport, both legal and illegal. It also requires dealers to be insured against the damage and to provide financial compensation to those affected. But the protocol will not be legally binding until 20 ratifications are received (none have been registered so far). Moreover, it still only covers harm that occurs in transit, not after disposal, and only applies to damage suffered in the jurisdiction of a treaty member.

CFCs on the Loose

The landmark Montreal Protocol on Substances That Deplete the Ozone Layer, adopted in 1987, mandated far-reaching restrictions in the use of certain chemicals that damage the thin, vital veil of stratospheric ozone that protects the earth and its inhabitants from excessive ultraviolet radiation. The Protocol and its later amendments set target dates for the phaseout of 96 different ozone-depleting substances, most notably CFCs and halons, chemicals once widely used in a range of industrial applications.

Industrialized countries were required to halt production and import of CFCs in 1996, while developing countries have until 2010 to complete the phaseout.

Considered one of the world’s most successful environmental treaties, the Protocol has resulted in a dramatic decline in the overall use of ozone-depleting substances. But starting in the mid-1990s, the different phaseout schedules for industrial and developing countries helped stoke a flourishing illegal trade in the banned chemicals. CFCs that were still legally produced in the developing world began to make their way to lucrative black markets in the United States and Europe, where demand for substances like Freon (used in older-model auto air conditioners) remained high.

Government and industry reports suggest that in the mid-1990s, as much as 15 percent of global annual production of the chemicals, or 38,000 tons, was smuggled into industrial countries. Early shipments originated

in Russia, but today the bulk of the smuggled CFC supply is thought to originate in China and India, which together account for more than half of the world's remaining CFC production.

CFC importers resort to fraud and other evasive tactics to smuggle the banned chemicals. For instance, traders abuse existing loopholes in the Montreal Protocol and domestic laws to pass off shipments of new CFCs as recycled material or as CFC replacements, neither of which are restricted under the treaty. The chemicals are typically colorless and odorless, making them easy to disguise and virtually impossible to differentiate without chemical analysis.

In the United States, the illegal CFC trade is believed to have peaked in the mid-1990s, just after the initial phaseout. At that time, as much as 10,000 tons of the chemicals entered the country each year. By 1995, CFCs were considered the most valuable contraband entering Miami, after cocaine. Following a crackdown on large consignments through East Coast ports, much of the illegal trade shifted to the Mexican border.

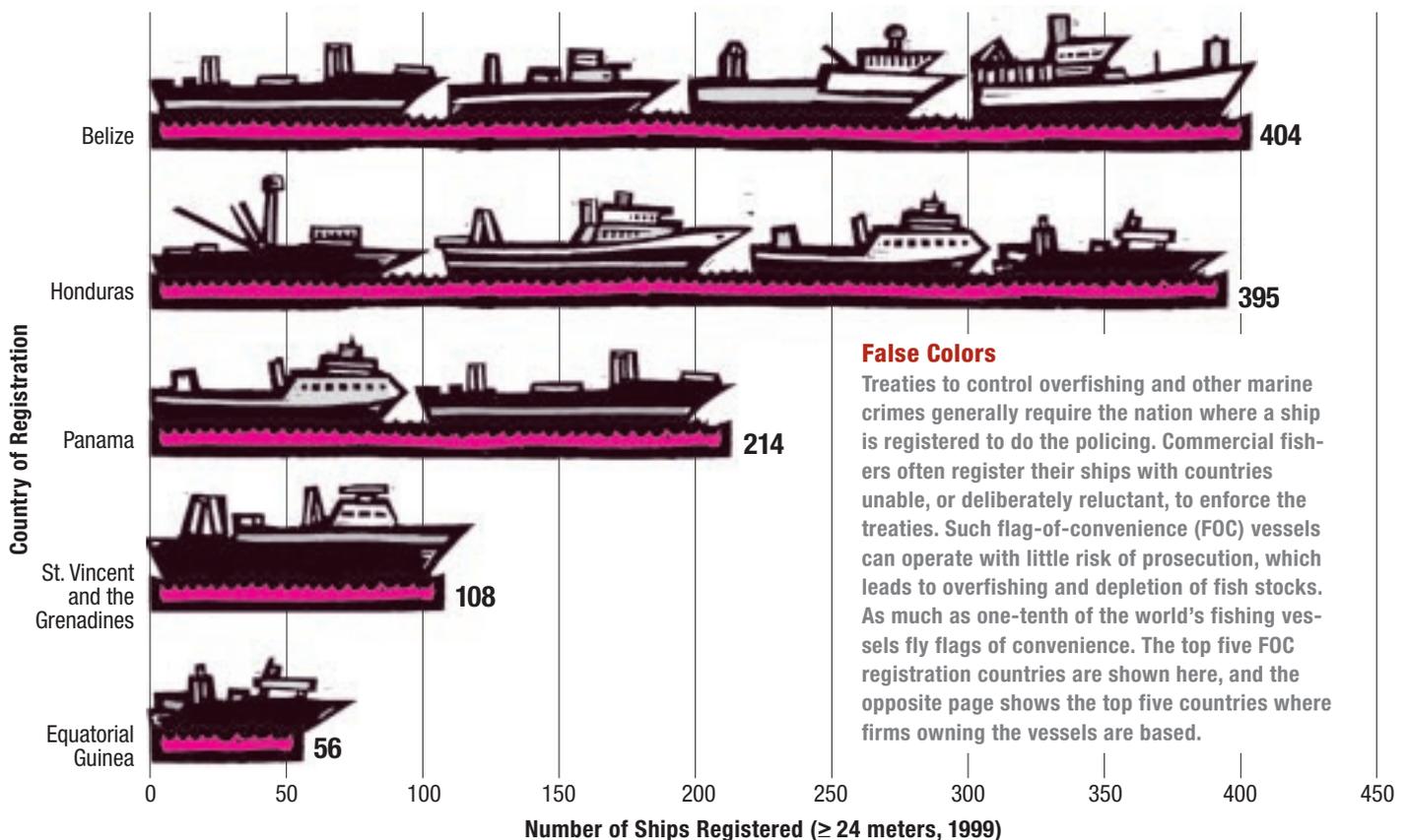
The U.S. Department of Justice estimates that in total, some 10,000-20,000 tons of CFCs have been smuggled into the United States since 1992. Despite stronger enforcement efforts, officials have recovered only a fraction of this contraband. So far, activities under the North American CFC-Anti-Smuggling Ini-

tiative, an interagency task force established in 1994, have led to 114 convictions and the seizure of some 1,125 tons of smuggled CFCs.

Today, a second, smaller, spike in black market activity is occurring as the remaining U.S. stockpiles of legal CFC-12 are depleted. Traders can once again earn a high profit on the contraband supplies: a 30-pound cylinder of CFC-12, bought in China for as little as \$30 to \$60, can be resold on the U.S. black market for as much as \$600. For auto repair shops and other end users, obtaining this illegal product can still be cheaper than buying the legal supplies, which now cost as much as \$1,000 per cylinder.

Europe has been another significant market for illegal CFCs. In the mid 1990s, researchers with the London-based Environmental Investigation Agency (EIA) uncovered a thriving regional trade amounting to between 6,000 and 20,000 tons of the chemicals annually. Well after the phaseout deadline, supplies were still abundant and prices disproportionately low, suggesting that the market was being swamped with illegal imports. Meanwhile, regional sales of CFC replacements were slower than expected.

The European black market has thrived in part because regional refrigerant management programs have been poorly organized, and because consumers perceive alternatives to CFCs to be too costly and less effi-



cient. In Central and Eastern Europe, where the illegal CFC trade is thought to be increasing, a major problem is that border officials are typically untrained in identifying the chemicals and have difficulty deciphering their often vague customs codes.

European efforts to control CFC smuggling have generally lagged behind those of the United States, but there are signs that European enforcement is improving. In 1997, authorities in Belgium, Germany, the Netherlands, and the United Kingdom jointly nabbed a multimillion-dollar crime ring that had illegally imported more than 1,000 tons of Chinese-made CFCs for redistribution in Europe and the United States. And in an unprecedented move, in September 2000 the European Union adopted a regional ban on CFC sales and use.

Demand for contraband CFCs has also been high in Japan, especially as retail prices for the chemicals have skyrocketed. Although the Japanese government banned the use of Freon in new cars in 1994, 15 to 20 million vehicles in the country still use the refrigerant. The *Japan Times* reports that auto repair shops in the country circulated more than 100,000 canisters of illicit CFC-12 in 2001, most of them originating in China and other developing countries.

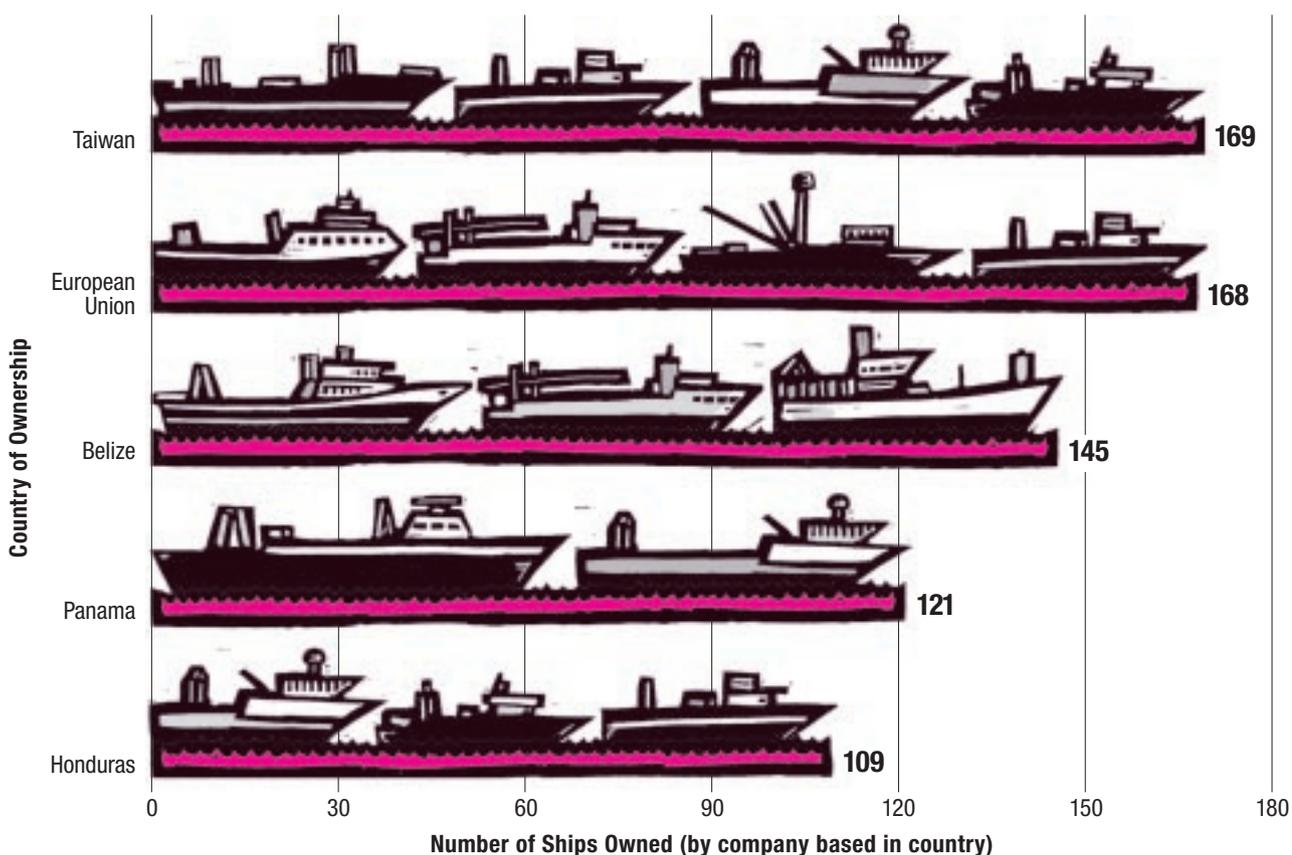
As the CFC phaseout begins to take hold in the developing world (countries were required to freeze con-

sumption in July 1999), black markets are beginning to emerge in places like Asia, where there are still millions of users of CFC-based equipment, including old cars and refrigerators that have been exported from the industrial world. In October 2001, EIA reported on a growing multi-million dollar market for illegal CFCs in India, Pakistan, Bangladesh, Malaysia, the Philippines, and Vietnam. Between early 1999 and March 2000, smugglers slipped some 880 tons of ozone-depleting substances into India, representing an estimated 12 percent of national consumption.

To improve monitoring of the CFC trade and head off future black markets, parties to the Montreal Protocol recently adopted a new licensing amendment that entered into force in 1999. It requires member countries to issue licenses or permits for the import and export of all new, used, and recycled ozone-depleting substances and to exchange information regularly about these activities. By identifying who is and is not licensed to trade, the system should make it easier for police and customs officials to track the movement of the chemicals worldwide.

From Words to Action

Four years ago, the environment ministers of the leading economic powers expressed “grave concern about the ever-growing evidence of violations of international



environmental agreements,” and called for a range of cooperative actions aimed at stepped-up enforcement. This initiative was followed by the adoption last February of international guidelines to promote compliance with multilateral environmental agreements and prevent cross-border environmental crime. This August’s World Summit on Sustainable Development will focus renewed international attention on the importance of adequately implementing and enforcing international environmental treaties and other agreements.

In other promising developments, the World Customs Organization is working with governments to

police forces to bring international environmental criminals to justice. Both institutions have established close working relations with UNEP and with the CITES and Basel Convention secretariats.

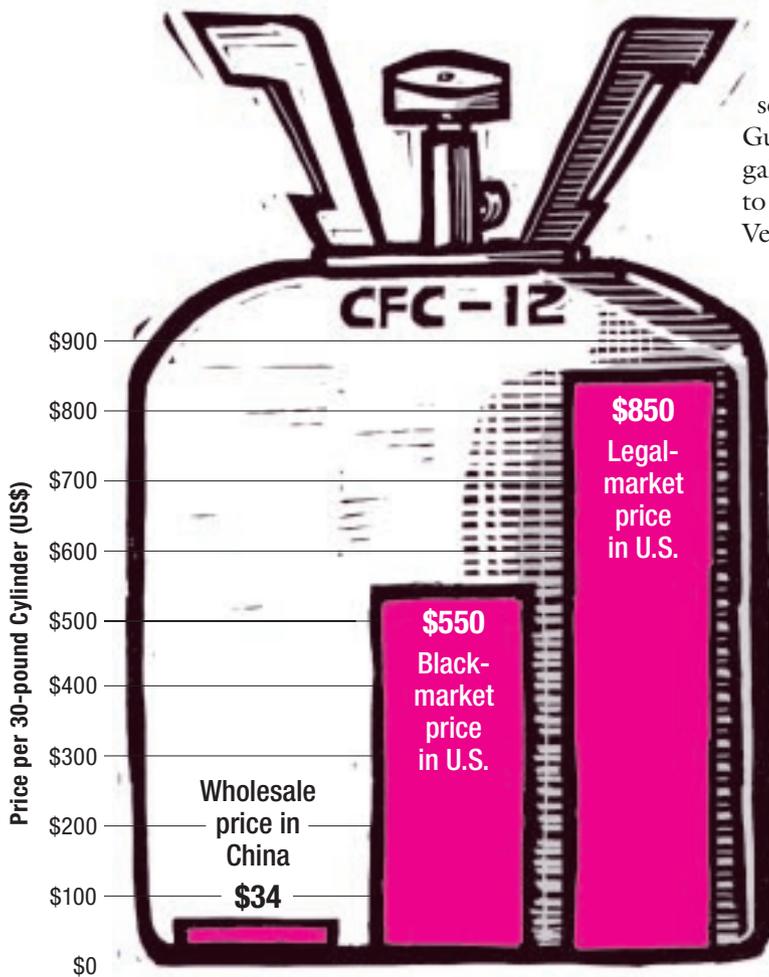
NGOs are playing a strong role as well. Brazil’s RENCITAS is cooperating with the police and the federal environment ministry to train officers in wildlife inspection and is investigating anonymous tips about wildlife smuggling left on its Web site. At the international level, TRAFFIC is tracking national customs enforcement efforts, documenting areas of unsustainable wildlife trade, identifying trade routes for wildlife commodities, and investigating smuggling allegations.

New technologies are also being deployed against international environmental crime. Remote sensing, for instance, was used by the U.S. Coast Guard in the late 1990s to gather the evidence of illegal dumping of oil in international waters that helped to bring Royal Caribbean to justice. Satellite-linked Vessel Monitoring Systems are also increasingly being used to monitor the movement of fishing boats in order to detect illegal harvesting. DNA tracing is being used to monitor both fishing and wildlife trade by enabling researchers to link seafood items and wildlife parts back to the species or even the animal of origin.

Targeted industries and countries have bowed to the combined might of NGOs and consumers in several cases. In 1999, pressure from the World Wide Fund for Nature and increased public awareness of the threats that traditional medicine usage poses to wildlife caused leading practitioners and retailers in China to pledge not to prescribe or promote medicines containing parts from tigers, rhinos, bears, and other endangered species. Late last year, Belize, which Greenpeace calls “the world’s most fish pirate-friendly country,” struck five notorious pirate vessels from its shipping register after Greenpeace showcased the plight of the Patagonian toothfish.

Although so far they are exceptions rather than the rule, these examples demonstrate that international environmental crime can be controlled through the combined efforts of governments, international institutions, businesses, NGOs, and ordinary citizens. That’s good news for the integrity of the Earth’s protective ozone layer, numerous threatened species, and the health of communities poisoned by hazardous wastes.

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The Price of Cool

The Montreal Protocol ended CFC manufacture in the industrialized world, but developing nations have until 2010 to phase it out. Some of their output feeds illicit demand in the United States and Europe.

harmonize classification systems for waste and other environmental contraband. The international police organization INTERPOL is training national enforcement officers and customs agents to identify illicitly traded goods more easily, and is also working with national

LOGGING ILLOGIC

Money doesn't grow on trees, but some trees might as well be pure gold. The world's voracious (and growing) appetite for wood, paper, and other forest products is driving a stampede to mow down forests.

Much of this logging is illegal. Illegally cut wood accounted for up to 65 percent of world supply in 2000, according to the World Resources Institute. Estimates of illegal logging as a share of the total range from 35 percent in Malaysia, to 50 percent in Cameroon, 50 percent in eastern Russia, 70 percent in Gabon, 73 percent in Indonesia, and up to 80 percent in parts of Brazil. About 40 percent of the wood processed in the pulp and paper industry in Indonesia is of questionable origin, and up to 46 percent of the domestic demand in the Philippines is supplied from illegal sources. Precise global data are unavailable, but in terms of commodity value, illegal logging may be the most serious transnational environmental crime.

Illegal logging activities include logging in national parks and protected areas; harvesting protected timber species; overcutting and underreporting of timber volume, grade, and species; logging for illegal commercial charcoal and fuelwood production; logging without permits; smuggling; and violating forest laws and restrictions. Like money, timber can be "laundered;" in May the BBC reported on illegally logged Indonesian timber that was imported openly into Malaysia, processed into garden furniture, and exported as of Malaysian origin.

National governments have taken a range of measures against these crimes—overhaul of forest legislation, reforming permit processes, adjusting tax codes and royalty systems, various bans—with mixed success. Indonesia, for instance, banned log exports last year and in May declared a temporary moratorium on logging concessions. Logging persists, however, to supply pulp and paper mills and (via bulldozing and burning) to clear forests for palm oil plantations. Logging bans often increase illegal logging in neighboring countries; a recent Chinese logging ban has boosted demand for timber from Cambodia, Vietnam, and far eastern Russia. Thailand's logging ban in the 1990s encouraged the extraction of timber in Laos and Myanmar, especially teak.

On the plus side, in northern Tanzania, pilot village forest management programs were so successful in controlling illegal forest activities, including logging, that Tanzania's forest policy now promotes community involvement in forest management nationwide. Ecuador recently launched *Vigilancia Verde*, a coalition of the Environment Ministry, the armed forces, police, and environmental NGOs, to collaborate in monitoring the transport of timber to markets and mills. In its first year it seized five times the volume of timber confiscated by the government the year before.

Controlling illegal logging is dangerous. After Brazil banned mahogany logging, one of the promoters of the ban was gunned down at his house. In Guerrero, Mexico, the army shot one

farmer and jailed and tortured two others who protested logging abuses. A campaign by the Philippine Department of Environment and Natural Resources against illegal logging and its own corruption has made progress—in 2001, over 12 thousand cubic meters of illegal timber confiscated, 76 criminal cases filed, and 14 DENR personnel suspended—but at the cost of nearly 80 DENR staff killed in the line of duty over the years.

The risk is commensurate with the profits, which are high because of strong demand for timber products, especially from the developed world. According to the non-profit Environmental Investigation Agency, the European Union imported about \$1.5 billion worth of illegal timber in 1999; in 2000 the United States imported an estimated \$330 million worth of illegal timber from Indonesia alone. The G8 nations (Britain, Canada, France, Germany, Italy, Japan, Russia, and the United States) account for about three-quarters of global timber and wood products imports, yet to date no G8 nation has laws requiring routine seizure of illegal timber imports.

—Christine Haugen

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FOR FURTHER INFORMATION

Wildlife Trade

CITES: www.cites.org
TRAFFIC: www.traffic.org
RENTAS: www.rentas.org.br

Illegal Fishing

Take a Pass on Chilean Sea Bass campaign:
<http://environet.policy.net/marine/csb>
International Transport Workers'

Federation FOC campaign:
www.itf.org.uk/seafarers/foc/foc.htm
FAO Fisheries Department:
www.fao.org/fi

Hazardous Waste Trade

Basel Convention: www.basel.int
Basel Action Network: www.ban.org

CFC Smuggling

Montreal Protocol:
www.unep.org/ozone

Miscellany

Environmental Investigation Agency:
www.eia-international.org
UN Environment Programme:
www.unep.org
World Summit on Sustainable Development: www.johannesburgsummit.org
INTERPOL: www.interpol.int
World Customs Organization:
www.wcoomd.org