

Help WWF Stop the Rhino Horn Trade

A WWF
Campaign
Report

April 1991



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On the cover:

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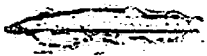
1. Black rhino, *WWF/Mark Boulton/ICCE*
2. Greater one-horned rhino, *Mark Boulton*
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5. Square-lipped rhino, *South African Tourist Corporation*

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Introduction: Shifting the Battle to End the War

Once, hundreds of thousands of rhinos roamed freely in the forests and plains of Africa and Asia. There are now fewer than 11,000 wild rhinos left in the world. In the past 20 years alone, more than 85% of the world's rhino population has been decimated by poachers seeking their horns. Why? Because the horn's believed medicinal qualities in Asia have caused its price to skyrocket to more than \$10,000 a kilo on the retail market. A rhino poacher in Africa can make more by selling a single horn to a trader headed for Asia than his normal income, from such means as farming, for an entire year.



Donald Peterson/WWF

The problem of poaching fueled by an Asian market demand has continued for decades in dozens of countries. But through the conservation efforts of WWF and others, and the resulting legislation passed by certain governments, there are now only four significant market countries for rhino horn and other rhino products: China, South Korea, Taiwan, and Thailand.

Former important markets in Yemen, Japan, Hong Kong, Macao, Malaysia, Burundi, and the United Arab Emirates have been closed or greatly reduced. This indicates that the trade can be stopped. In addition, protection efforts in Africa and Asia have slowed down poaching. However, rhino populations today are so low that if the remaining markets are not closed, one or more species of rhino could become extinct by the end of the century. The battle to save the rhino needs one last supreme effort.

WWF has been actively involved in rhino conservation for the last 30 years. Though it has been a difficult struggle, the battle can be won. WWF once again brings the issue into the spotlight and asks people, governments, and the media throughout the world to urge the four market countries to eliminate the rhino horn trade.

Help us make trade in rhino horn part of the past and ensure rhinos are part of the future.

Rhino Rundown: Species and Population

There are five rhinoceros species. In Africa: the black, or hooked-lip (Diceros bicornis), and the square-lipped, or white (Ceratotherium simum). In Asia: the greater one-horned, or Indian (Rhinoceros unicornis), the Javan or lesser one-horned (Rhinoceros sondaicus), and the Sumatran (Dicerorhinus sumatrensis).

African Rhinoceroses

The Black Rhinoceros

The black rhinoceros, perhaps the best-known species of rhino, once roamed sub-Saharan Africa in the hundreds of thousands. Today it survives in pockets primarily in Zimbabwe, South Africa, Kenya, Namibia, and Tanzania.

Vital Statistics: The Black Rhinoceros

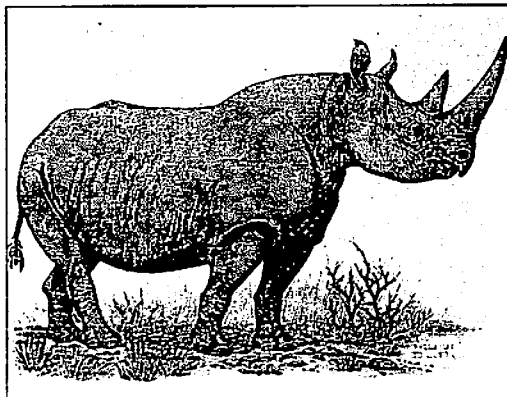
Aka: hooked-lip rhinoceros

Threat category: endangered

Total population: 3,400

Distribution: from Cameroon to Somalia, down to South Africa. Concentrations in Zimbabwe, South Africa, Kenya, Namibia.

Average height and weight: 1.5 metres at shoulder, 1,400 kilograms



©WWF, Helmut Diller

The 1960s estimated population of 65,000 plummeted to 3,800 by 1987. There are now only about 3,400 black rhinos in the wild. However, while they remain the most popu-

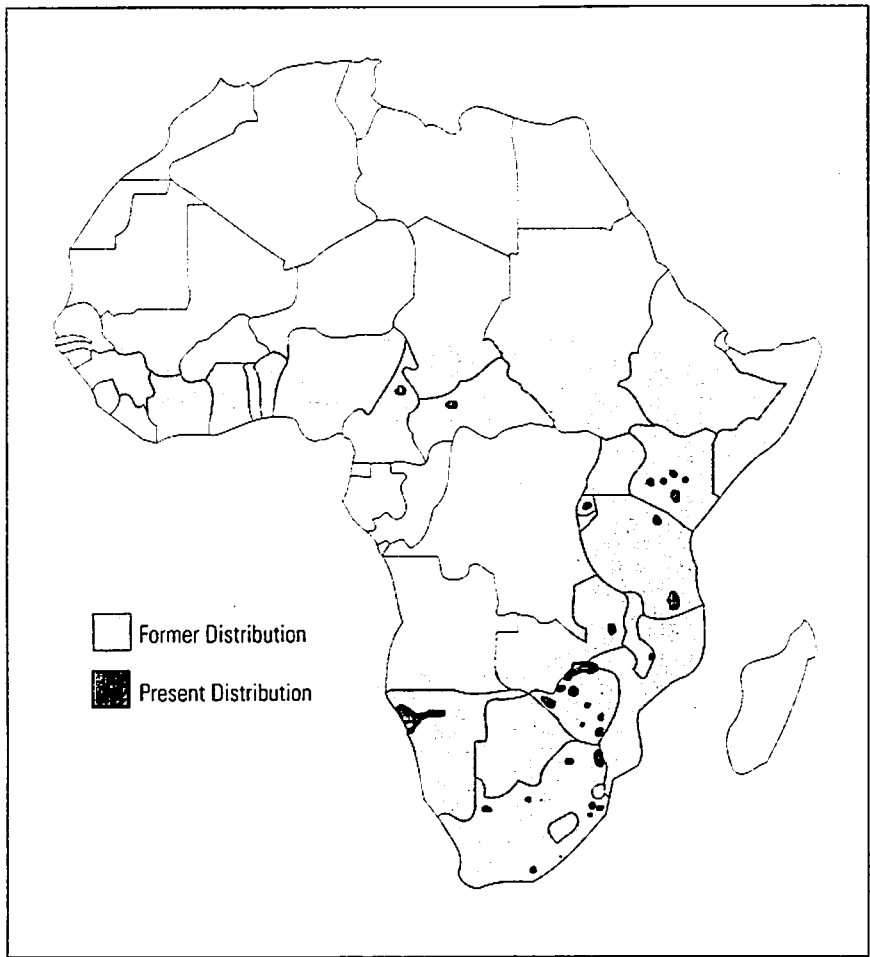
lar poacher target, recent statistics show the decline is slowing down. In fact, in Kenya their numbers have increased during the last four years, although 400 is still a far cry from the 1960s figure of 20,000.

In Zimbabwe, home to half of Africa's remaining black rhinos, the poaching pressure of the 1980s has successfully been reduced by anti-poaching efforts and translocation of rhinos to safer areas. Though poaching is still intense, "fewer dead rhinos are being found," says Glen Tatham, Chief Warden of Zimbabwe's Department of National Parks and Wildlife Management. However, the increasingly isolated pockets of black rhinos remain vulnerable, calling for continued stringent protection.



The Square-Lipped Rhinoceros

There are two subspecies of square-lipped rhino: the northern and southern. Though also known as the white rhino, like the black it is actually grey. The name comes from a bad translation of the Boer word "widje," referring to the animal's broad lips.

Both subspecies have made dramatic comebacks. In the 1970s, 400 northern square-lipped rhinos lived in Zaïre's Garamba



Past and Present Range of the Black Rhino

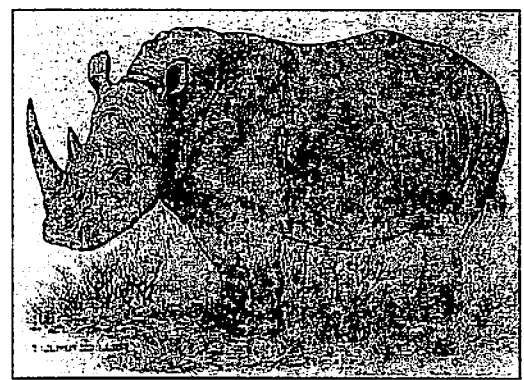
 Former Distribution
 Present Distribution

Source: International Wildlife Trade: Whose Business Is It?, Sarah Fitzgerald, World Wildlife Fund

National Park and by 1984 they had been hunted down to a despairing 15. Conservationists are relieved that the rhinos have rallied back up to 28 today. This last viable population is protected by the Zaire wildlife department and non-governmental organizations such as WWF.

The southern square-lipped rhino was heavily hunted by hungry European settlers for its meat and fat. The animal was believed extinct in 1892. Under protection since the turn of the century, the southern square-lipped rhino population is now up to 4,800.

Vital Statistics: The Square-Lipped Rhinoceros



© WWF, Helmut Diller

Aka: white rhino
Threat category: endangered (northern subspecies only)
Total population: 4,800 (southern) 23 (northern)
Distribution: South Africa, Botswana, Namibia, Swaziland, Kenya, Zimbabwe, Zaire
Average height and weight: 1.75 metres at shoulder, 2,500 kilos

Asian Rhinoceroses

The Greater One-Horned Rhinoceros

The greater one-horned rhinoceros, also called the Indian rhino, exists only in protected wildlife reserves in India and Nepal.

Vital Statistics: The Greater One-Horned Rhinoceros

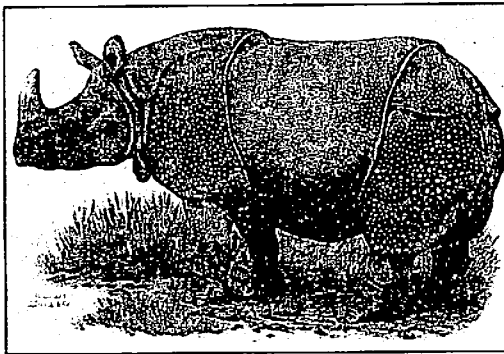
Aka: Indian rhino

Threat category:
endangered

Total population: 1,950

Distribution: northern
India, Nepal

**Average height and
weight:** 1.75 metres at
shoulder, 1,800 kilos



©WWF, Helmut Diller

Noted for its armour-plated appearance and single horn (African rhinos have two), the Indian rhino is the least threatened of the three Asian species. Its estimated population is 1,950, up from a mid-seventies figure of 750. The success is due to funds and com-

mitment from the government. However, the Indian rhino is still a poacher target—58 animals were killed in the northeastern Indian state of Assam in 1989. The rash of killings revealed an alarming new poaching technique: electrocution.

The Javan Rhinoceros

The Javan rhino has the dubious distinction of being one of the rarest large mammals on earth.

There are only 55 to 60 Javan rhinos left on Java and they all live in a small national park on the Ujung Kulon peninsula, making them very vulnerable to disease. One virus could wipe out the entire population in weeks. However, the greatest immediate threat is still poaching. Habitat loss and competition with other animals for food also keep the population in check.

Some believe the park has reached its carrying capacity for rhinos and there is a current debate on whether up to 30 animals from the Ujung Kulon group should be removed to start a captive breeding programme. In addition to the Javan population, up to 15 animals live along the Dong Nai River in Vietnam.

The Sumatran Rhinoceros

The smallest and only hairy rhino, the Sumatran rhino has been reduced to a population of 500 to 900 animals. There are no reliable early figures to trace the growth or decline of the rhino, however the current annual loss is about 10%, mainly due to poaching.

Spread over a large area, primarily on Sumatra and the Malay Peninsula, the ani-

Vital Statistics: The Javan Rhinoceros

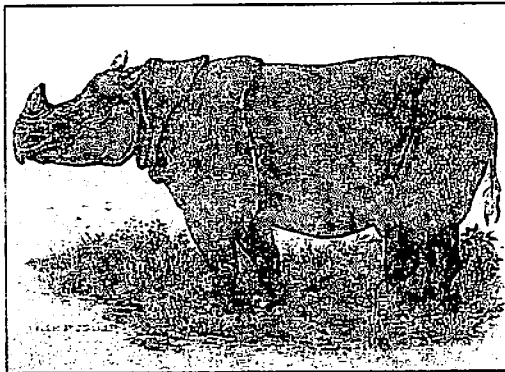
Aka: lesser one-horned
rhinoceros

Threat category:
endangered

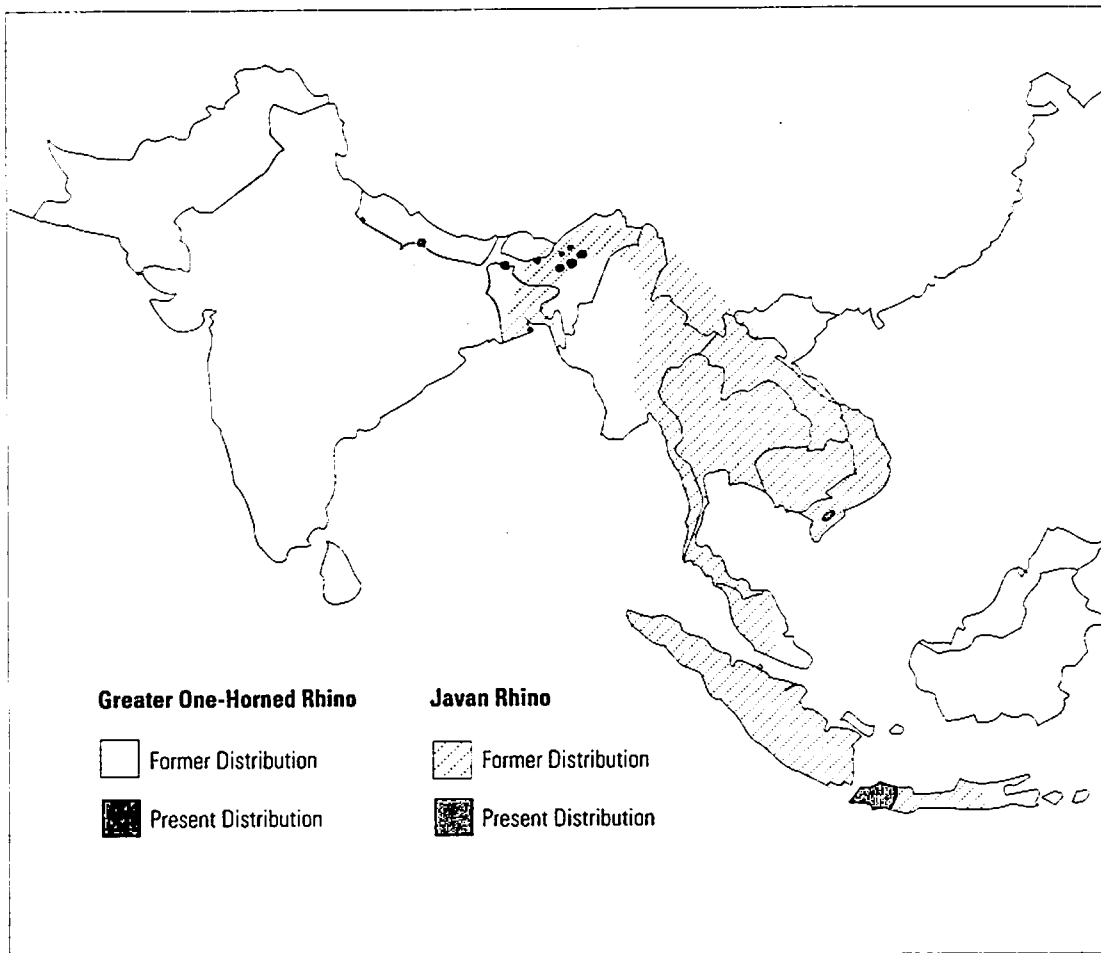
Total population:
about 70

Distribution: West Java,
Vietnam

**Average height and
weight:** 1.5 metres at
shoulder, 1,600 kilos



©WWF, Helmut Diller



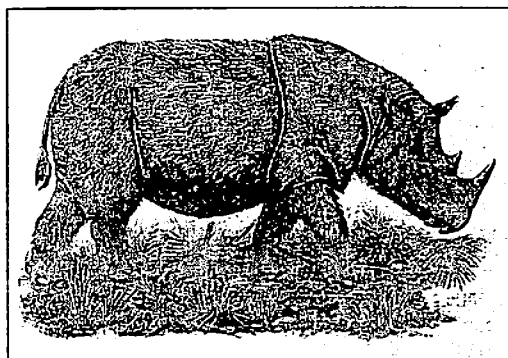
Past and Present Ranges of the Greater One-Horned and Javan Rhinos

Source: International Wildlife Trade: Whose Business Is It?, Sarah Fitzgerald, World Wildlife Fund

mal is difficult to protect. Rhinos recently captured on Sumatra for a captive breeding programme had fresh snare wounds on their legs, evidence of continued poaching. But the rhino's long-term nemesis is severe habitat loss from Indonesia's transmigration programme.

"The Javan and Sumatran rhinos are probably the most endangered species in terms of long-term survival," says Jorgen Thomsen, Director of the international office of the Trade Records Analysis of Fauna and Flora in Commerce (TRAFFIC). "Though all the rhinos are endangered, with all the attention paid to the black rhino, the two little rhinos have almost been forgotten."

Vital Statistics: The Sumatran Rhinoceros



©WWF, Helmut Diller

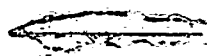
Aka: Asian two-horned rhinoceros, woolly rhinoceros

Threat category: endangered

Total population: 500-900

Distribution: primarily Sumatra, Indonesia and Malay Peninsula. Small pockets in Borneo, Burma, and Thailand

Average height and weight: 1.36 metres at shoulder, 900 kilos



Precious Cargo: The State of the Rhino Horn Trade

Between 1970 and 1987, more than 100 tonnes of rhino horn were bought and sold in international markets. That is equivalent to at least 40,000 dead rhinos. In 1987, the Contracting Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) agreed that the ban on international trade in rhino horn and rhino products should be extended to domestic trade. However, in China, South Korea, Taiwan, and Thailand the import, export, and domestic sale of rhino horn and rhino products remains a lucrative industry.

The figures speak for themselves: According to the *China Daily* newspaper, in 1987 the Chinese government earned a record \$700 million from the export of medicines and medicinal wines; rhino horn being an ingredient in some of them. In Thailand, African horn costs \$10,286 a kilo retail while in Taiwan the retail price for Asian horn is as high as \$50,000 a kilo.

Since almost all rhino horn trade is illegal, it is difficult to track precise amounts and origins, but most commercial rhino horn ends up in the Far East for use in traditional medicines.

What Is CITES?

One of the most important conservation agreements, the Convention on International Trade in Endangered Species of Wild Fauna and Flora came into force in 1975. Today 110 countries are Contracting Parties to the Convention, which prohibits international commercial trade in endangered species (listed in Appendix I) and regulates trade in less-threatened species (listed in Appendix II) through a permit system.

Each CITES Party is required to designate one or more governmental departments as a Management Authority to issue permits and compile annual trade reports. A designated Scientific Authority advises permit approvals. The CITES Secretariat, located in Lausanne, Switzerland, oversees Convention administration.

All five rhino species are listed in Appendix I.

As some species of rhinos become more scarce, the market price and demand for rhino products go up. The tip cut of Asian and African rhino horn is widely regarded as "the best part." However, on the international market, Asian horn brings in 10 times the price of African horn. The reason? Asians say that because greater one-horned, Sumatran, and Javan horns are smaller, the elements that lower fever and cure nose bleeds are more concentrated.

Stopping the domestic sale of rhino horn medicines is just as important as ending the import and export of rhino horn. Until consumers are convinced that there are more effective substitutes for rhino horn, the demand for it will continue. As long as there is a demand, traders will smuggle in horn, claiming it is old stock. A first step towards controlling the sale of horn is to have an accurate register of existing stockpiles in the four target countries. So far Taiwan and China have taken this measure.

Former markets such as Hong Kong have banned all trade—internal and external. Hong Kong has even banned the sale of medicines claiming to contain rhino horn. Unfortunately, the governments of China, Taiwan, South Korea, and Thailand are not doing enough.

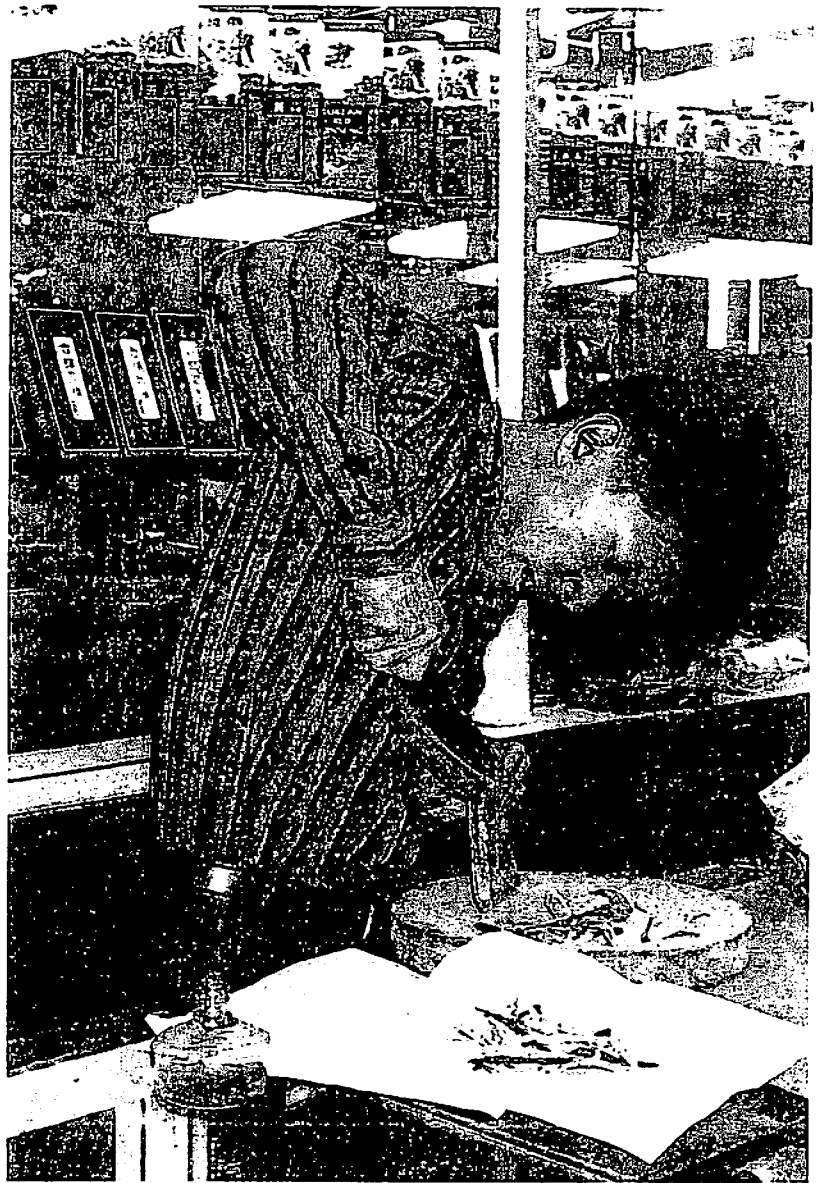
Part of the explanation is that governments are simply not willing to allocate resources to the issue. "Bureaucracies are notorious for not wanting to increase their workloads," says Tom Milliken, director of TRAFFIC Japan, "and that's just what the regulation and monitoring of rhino horn will do. They just don't want to be bothered."

China: Old Traditions Die Hard

The situation in China, the world's largest manufacturer of rhino horn medicines, is critical. The country's own rhinos were already rare by the eighth century and China has been importing the precious horn ever since. In 1989, under international pressure, Chinese authorities registered rhino horn stocks. They found more than 10 tonnes of rhino horn—the largest known stock in the world.

China has been making medicines with rhino horn for 2,000 years and is now the only country in the world still doing so on a large-scale basis. Two of the most common Chinese medicines available in Southeast Asia are the tranquilizers Niu Huang Ching Hsin Wan, a product of Beijing's famous Tong Ren Tang Pharmaceutical Company; and Laryngitis Pills, made by the Chengdu Traditional Chinese Pharmaceutical Factory in Chengdu to relieve high fever. China has not complied with the 1987 CITES agreement to ban internal trade of rhino products on the grounds that the horns being used were acquired before it joined CITES in 1981. However, China continued to import rhino horn from North Yemen, Hong Kong, Macao, Taiwan, Singapore, and Thailand after 1981.

Another source of rhino horn is antique carvings, which are being ground into pow-



© Esmond Bradley Martin

der for medicines. "Trading corporations and medicine factories have been acquiring them since the 1949 revolution," says Esmond Bradley Martin, who has been studying the rhino horn trade for WWF since 1979. "No one can guess how many Ming and Ch'ing carvings have been ground down to powder."

China has made efforts to control the rhino horn medicine trade, but with limited results. In 1988, the government ruled that all

Prized hide: A pharmacist cuts a piece of rhino skin in a traditional Chinese medicine shop in Southeast Asia.

exports of rhino horn medicine require a permit from the Chinese CITES Management Authority. Even though no permits have been issued, export continues through Chinese living overseas who purchase the medicines and take them out of the country. Most local Chinese do not purchase the medicines—they are too expensive.

CITES Management Authority statistics show that about 650 kilos of rhino horn are used in China every year. With the current stockpile, China has enough horn to last the next 15 years.

Even though substitutes are available, Chinese companies still use rhino horn to a great extent. According to Martin, Tong Ren

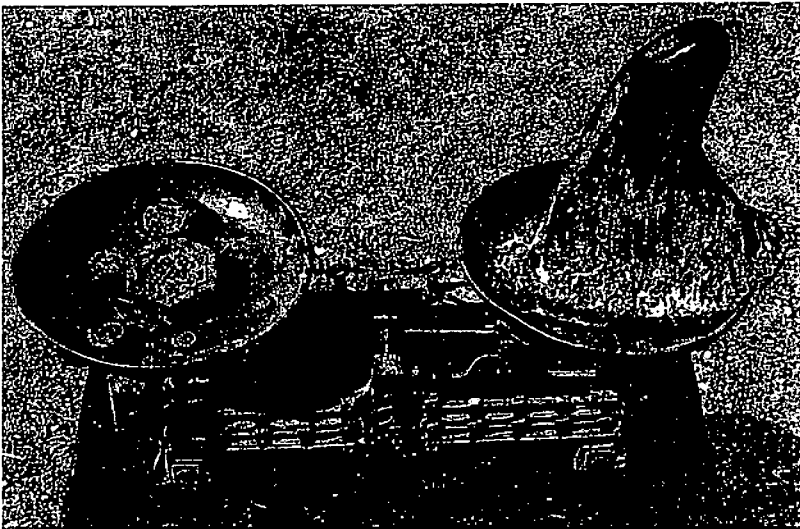
living outside China continue to believe rhino horn is superior to substitutes, making them a source of large profits for the drug manufacturers.

South Korea: Big Horn Leap

If you really need some rhino horn, South Korea is the place to go. A 1988 TRAFFIC Japan survey found that more than 80% of Asian medicine clinics in Seoul carried rhino horn. The demand for rhino horn has risen with South Korea's rapid economic growth. As in China, the horn is mainly used for medicinal purposes, such as the common cure-all Chung Shim Won balls. These edible pills, wrapped in gold foil, are used to treat high blood pressure, hysteria, nervous system disorders, and insomnia.

The African rhino horn Korea buys comes from a smuggling network that imports horns from Africa and Southeast Asia to East Asia.

The government outlawed the use of rhino horn in manufactured medicines in 1983, then, after WWF initiated negotiations, banned horn import in 1986. However, unlike China and Taiwan, Korea has made no move to register rhino horn stocks. So unregulated internal and black-market trade continue. The country also baulks at joining



© Esmond Bradley Martin

Tipping the scales:
Confiscated horns being weighed and labelled in India.

Tang started a five-year study in 1970 to find a rhino horn substitute. The company began to use water buffalo horn in 1974, but between 1974 and 1990, several tonnes of rhino horn were also used.

Several companies that could totally substitute water buffalo horn for rhino horn also continue to use rhino horn in medicines. Why does rhino horn remain a popular ingredient? Apparently, the large population of Chinese

What Is TRAFFIC?

Supported by WWF—World Wide Fund for Nature and IUCN—The World Conservation Union, TRAFFIC, the Trade Records Analysis of Flora and Fauna in Commerce, is the world's largest wildlife trade monitoring programme. Headquartered in Cambridge, England, TRAFFIC works closely with the Secretariat of CITES to monitor trade in wild plants and animals.

CITES, despite two appeals from HRH The Prince Philip, Duke of Edinburgh, President of WWF International. South Korea remains the proverbial tough nut to crack.

Taiwan: Two Steps Forward, One Step Back

Until 1988, buying and selling rhino horn was such big business in Taiwan that, in addition to sailors, professionals and businessmen smuggled it into the country from South Africa. A South African clampdown on exports has changed that. Since 1989, little rhino horn has entered the country from Africa. In fact, strangely enough, the demand for African rhino horn is actually down. The bad news is that Asian rhino horn is more sought-after than ever.

According to TRAFFIC consultant Kristen Nowell, Taiwanese are paying more than \$20,000 wholesale for Asian horn, investing just as they would in gold or old-master paintings. Retail, the horn costs up to \$60,000 per kilogram. Plus, "Taiwanese self-made millionaires are notorious for their conspicuous consumption of rare and exotic wildlife," says Martin.

Is banning the rhino horn trade in Taiwan just an exercise? In 1988, Martin found that Taiwan's 1985 ban on international rhino horn trade was unenforced. After the Legislative Yuan passed the Wildlife Protection Act to ban the sale and display of endangered wildlife in 1989, the rhino horn trade still thrived.

However, last year Taiwan took the important step of registering rhino horn stocks. And the Council of Agriculture recently said it may limit rhino trade to registered stocks

Average Cost per Kilogram and Uses of Rhino Horn, by Country

| | Year | African | Asian | |
|------------------|------|----------|----------|--|
| Guangzhou, China | 87 | \$16,304 | — | Patented traditional medicines for export |
| South Korea | 88 | \$4,410 | — | Traditional medicines, including Chyng Sim Hwan balls |
| Taiwan | 90 | \$4,221 | \$54,040 | Traditional medicines |
| Thailand | 90 | \$10,284 | \$21,354 | Trades large quantities of horn and hide, nails, dried blood, and other body parts |

Source: Esmond Bradley Martin

over the next three years, when it will completely ban all domestic trade.

Thailand: Renegade Trading

A country where almost any commodity can be obtained legally or illegally, it is not surprising that Thailand is one of the leading traders of rhino horn. "More rhino products are available in Bangkok than any other Southeast Asian city," says Martin. Smugglers flock to Bangkok with Asian and African horn. Even though Thailand is a party to CITES and trade in Sumatran rhino products has been banned since 1972, a 1991 TRAFFIC fact-finding trip there found rhino horn, skin, nails, penises, and dried blood readily available in Chinese medicine shops, due to what Martin calls "bureaucratic inertia."

Thailand's Forest Department, responsible for controlling wildlife trade, "is helpless because Thailand has never passed the necessary legislation that would enable them to crack down on the rhino horn trade," says Thomsen of TRAFFIC. "By not meeting its international obligations, Thailand is making a mockery of others' conservation efforts," he adds.

Winning the War: Conservation Successes

A lot of the money that has gone into rhino conservation since 1985 is resulting in success stories," says WWF's Esmond Bradley Martin. "After many years of failure, conservation measures are finally starting to work," agrees TRAFFIC Director Jorgen Thomsen. He cites improved protection in Africa and the lobbying efforts of Martin as particularly effective measures.

Though inroads are being made on both fronts of the rhino problem—trade and poaching—much work remains before all rhinos can be taken off the endangered list.

Closing the Marketplace

The most effective tools to end the demand for rhino horn products are substitutes. The use of horn from non-endangered species, such as the common domestic water buffalo, respects traditional beliefs while ending the demand for rhino horn. The cases of Japan and Yemen offer two models of the effectiveness of legislation and substitution.

Japan stopped using rhino horn almost overnight. In the 1970s, it was importing about 800 kilos of horn a year for medicinal purposes. "Then it joined CITES in 1980," says Tom Milliken of TRAFFIC, "and since then we haven't had any reports of significant amounts of rhino horn being smuggled into the country. The government, which was the object of strong international criticism for its conspicuous consumption of endangered species, told the pharmacists and doctors not to prescribe it because it was an illegal commodity and urged the use of substitutes, and they listened." TRAFFIC Japan's monitoring programme helped ensure that the demands were met. The fact that Japanese are generally law-abiding also made an impact. Japanese pharmacists now use saiga antelope and water buffalo horn in medicines.

When Martin started investigating the rhino horn trade, he found that China was not the number-one consumer of rhino horn as was commonly thought. In the early 1980s, Yemen, on the southwest tip of the Arabian peninsula, was importing 1,500 kilos of African rhino horn a year—about half of the annual horn harvest—to use as dagger handles. The carved horn is a status symbol. After discussions with government officials, Martin succeeded in getting trade laws established. These laws, combined with a sagging economy, have resulted in a great reduction of rhino-horn imports into Yemen. Yemeni men now sport daggers with handles fashioned from more affordable water buffalo horn, camel nails, and plastic.

In Asia, Hong Kong has the most comprehensive rhino horn trade policy. The import, export, and domestic sale of rhino horn and medicines containing rhino horn are against the law—and the laws are enforced. Permits are required for all rhino horn possession, including antiques such as a 500-year-old rhino carving. In 1990, Martin found that only 5% of the Hong Kong pharmacies he visited carried rhino horn, down from 32%

three years earlier. Retail prices have dropped, too. Perhaps the most significant change is the increased sales of saiga antelope horn.

Elsewhere in Asia, Macao and Malaysia all had rhino products galore in their traditional Chinese pharmacies. Pressured by WWF, Macao, which was also a big trading centre for rhino horn, prohibited all internal trade in 1988. The Malaysian Department of Wildlife and National Parks cracked down on pharmacists selling rhino horn products in Kuala Lumpur and Penang. The demand for rhino-horn products in both countries has dropped dramatically because of their willingness to enforce international agreements and domestic laws. Macao and Malaysia have turned to substitutes like saiga antelope horn.

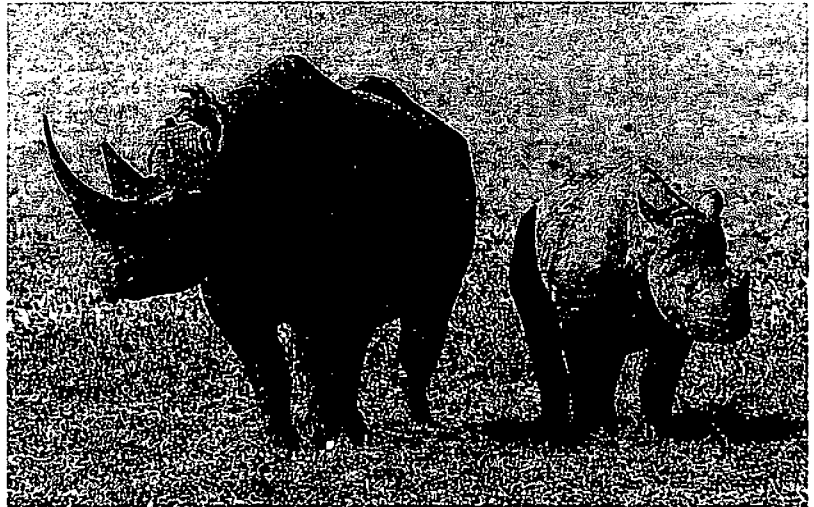
In the mid-1980s, Burundi, in Central Africa, and Dubai, the United Arab Emirates' largest city, were both trading posts for rhino horn. In 1987, press attacks prompted Burundi to crack down on the market in the capital, Bujumbura. In 1988, Martin, representing WWF, began talks with United Arab Emirates' leaders. Ensuing support from other international conservation organizations led Dubai to halt its rhino horn trade by 1989.

Rhino Math

Old rhinos and baby rhinos are the most visible signs of conservation success. Their existence means rhinos are living longer and breeding. The greater one-horned rhino, square-lipped rhino, and South African and Kenyan black rhino populations are all on the rise. Experts are cautiously optimistic: Conservation is working but the numbers are still precarious.

The Kingdom of Nepal, separating India from China, has managed to set the tone for exemplary rhino conservation. In 1968 the

country was down to about 95 greater one-horned rhinos. One of the poorest countries in the world, Nepal established a successful protection programme on a minimal budget. In 1974 hundreds of soldiers from the Royal Nepali Army were assigned to guard the Royal Chitwan Park. Today there are two



© Mark Boulton

Black rhinoceros and calf in Tanzania's Ngorongoro Crater.

people for every rhino. Although there have been some recent setbacks, the rhino population is now up to 400.

In Africa, the highly publicized "rhino war" between poachers and wardens continues. After Kenya's black rhino population dropped 98% between 1970 and 1985, down to 335, the government, working with conservation organizations and other concerned groups and individuals, established rhino sanctuaries. Guarded day and night, the fenced-in areas have let the rhino population grow to about 400.

In 1989, South Africa set up the Endangered Species Protection Unit, manned by police, which has stopped the smuggling of rhino horn and hide to Asian destinations such as Taiwan. Over the past five years, the country's southern square-lipped rhino population has continued to grow. About 5,000 of them now graze in protected areas.

Trade Raider

American geographer Esmond Bradley Martin has tracked and fought the rhino horn trade for more than 12 years, independently and for WWF International. He almost single-handedly stopped the rhino horn industry in Yemen and has been instrumental in helping shape rhino horn legislation in WWF's four target countries: China, South Korea, Taiwan, and Thailand.

WWF: How did you get involved in the rhino horn trade?

EBM: In 1979 WWF funded my first trip to Southeast Asia to look at, for the first time, where the rhino horn was going, who was buying it, how it was being used, what the prices were, etc. From that single study myths were smashed from the western world! One was that the Chinese were the main consumers of rhino horn—which they weren't. The second was that most rhino horn is used for sex purposes. This is simply not true. Less than one percent is used for sex purposes, and only by Indians.

In Asia almost every part of the rhino is used: the horn is essentially used for lowering fever, the skin is used against human skin diseases, the nail is poor man's rhino horn, the bone is used for bone disorders and burnt on a pole to get insects out of people's houses, the blood is used as a tonic and for women who are suffering from menstrual problems etc.

We also discovered there is a huge price difference between the African and the Asian horn. Today for instance, the Taiwanese are importing African horn at \$2,000 a kilo while for greater one-horned rhino horn, importers

are paying \$20,000 a kilo or more. When you ask the Asians why the Asian horn is so much more valuable, they say that the horns are smaller and more concentrated—therefore a more powerful drug. This is an extremely important point—because if we had the prices in Africa that there is for Asian horn, there would be essentially no rhinos left.



WWF/M.Gunther/BIOS

Esmond Bradley Martin

WWF: What trends have you noticed in the rhino horn trade?

EBM: Since the end of 1986, the wholesale prices for both African and Asian horn have gone up. From 1987 to 1990, South Africa became a major entrepôt for African horn from surrounding countries. Fortunately in the last year or so, WWF, TRAFFIC, and

other organizations put a lot of work and publicity into closing the South African connection. The South Africans set up a special unit to look into rhino horn and ivory trade and it's been very effective. For instance in September last year, they intercepted some Taiwanese who had 114 horns!

As far as Yemen is concerned, in the seventies they were importing 40 percent of all the rhino horn in the world. Now they are importing hardly any. There are three reasons for that: the Yemeni government has

clamped down on the trade, they are now making a lot of yellowish brown plastic handles as substitutes, and Yemen has suffered an economic recession and can't compete with the Taiwanese prices.

WWF: How much risk is involved in the work you do?

EBM: A lot of risk, because I've been personally responsible for closing down whole industries based on rhino product trade. I'm

WWF: What inspires you in your work? What keeps you going?

EBM: The challenge of it! What I enjoy most is learning new information. For instance, in the ivory trade, almost no westerner knew that 55% of the ivory going into Japan was used to make name seals, called *inkan*, and that every adult over 18 has to have one of these. Nobody knew that rhino horn was used for lowering fevers, except the Chinese. They wrote about it, but of course in Chinese.



Horns of plenty: Martin in the Nairobi Ivory Room.

WWF/M. Gunther/BIOS

unable to work in South Korea now because I was responsible for the legislation to close down their trade. The last time I was there, which was several years ago, my life was threatened.

I have to deal with traders—the people who buy and sell—and poachers. You might say, “well, these people are criminal types.” But there is no other way of getting the information. It can be very dangerous.

So what I like is getting into an area that nobody has worked in, break a few myths and write it up in scientific journals and in popular form for a publication like *National Geographic*.

Also from a conservation point of view, we have major success stories! Japan is one of the greatest success stories. Japan was importing over 800 kilos of horn a year in the seventies. Then it joined CITES in 1980.

Since then, we haven't had any examples of significant amounts of rhino horn being smuggled into Japan. TRAFFIC's follow-up work in Japan has made all the difference.

I've learned that an important point in stopping the rhino horn trade is that the average shop in Southeast Asia that stocks rhino horn probably handles 100 to 200 other

horn—nobody is solely working with rhino horn.

But the world press is always interested in the disaster stories. I had no problem selling the story that appeared last year, that Indian rhinos were being electrocuted—everybody wants to read about that type of thing. But if you put it in perspective, the Indian rhino population has increased every single year over the last 20 years.

The point is that there are places and areas in the world where things have improved, but we must keep up the pressure. Otherwise it could easily go the other way. What I fear most is that as less and less rhino horn comes onto the market the prices will become monstrously high. That will go right back to the middleman who will then give a greater price to the people to poach. So that's what we have to be careful about.

We have to keep pushing for the closing of these markets and keep pushing for the use of substitutes. That's so important! In Yemen, plastics started being used as substitutes about five years ago in a major way. In Eastern Asia, they've been using antelope, cow, and water buffalo horn, herbs, and other things as substitutes.



Martin and a black rhino.

WWF/M.Sunther/BIOS

commodities. So, if they move out of rhino horn, not a single person will become unemployed—nobody will lose their livelihood. In fact, they can make a much higher return on a cheaper commodity like cow horn—it has a much higher profit margin. It's very different from the ivory trade where thousands of carvers have gone out of business and lost their livelihoods. Not with the rhino

WWF: *How do you see your future work developing?*

EBM: I would like to continue until most countries have implemented rational conservation plans so their rhino populations are increasing. It's an exciting time right now because we have success stories, and I'd like to see them expanded to other places. I'm an optimist.

News From the Field: Updates on the Rhino Front

Javan Rhino Self-Portraits



WWF/R & L Schenkel

For the first time, scientists can accurately identify elusive Javan rhinos in the Ujung Kulon National Park by age and sex and monitor their health and movements through a photographic survey.

Using a technique he perfected, biologist and WWF Field Officer Mike Griffiths started the survey of the last major population of Javan rhinos in January 1991. The rhinos will, in effect, photograph themselves. According to Charles Santiapillai, WWF Senior Scientific Officer, 40 cameras are set up along a grid system throughout the rhino stomping grounds on the Ujung Kulon peninsula, just 150 kilometres west of Jakarta. An animal walking across a pressure pad triggers the camera.

Nepal Setback

In 1973, with a few hundred pounds sterling from the Fauna and Flora Preservation Society of London, the warden of the Royal Chitwan National Park established an effective intelligence system of informants who identified poachers.

After 16 years of anti-poaching success, with an average loss of less than two greater one-horned rhinos a year, seven animals were killed in Nepal in 1990. The reasons? "One is that a lack of funds has caused the collapse of the national parks intelligence system. The other is the drop in law and order due to Nepal's unstable political situation," says WWF's rhino horn trade expert Esmond Bradley Martin.

Taiwan's Hot Message

In January 1991, the Council of Agriculture (COA), the Taiwanese equivalent of a CITES Scientific Authority, staged a public burning of confiscated rhino horn and other wildlife products.

The public act is a sign of Taiwan's growing commitment to ending trade in rhino horn and improving its international image. Previous burnings were held in May and November of 1990.

Zambezi Valley: The Death Toll Is Down

"The war has a far wider front now," says Glen Tatham, Chief Warden of Zimbabwe's Department of National Parks and Wildlife Management. "The arena stretches from the Mozambique border in the east, along the length of the Zambezi River, to Victoria Falls in the extreme west."

The "war" Tatham refers to is the ongoing struggle between rhino conservationists and poachers. Despite the growing offense—in the form of Zambian poachers—and the difficulty of locating rhinos in the dense vegetation, it seems apparent that "there are a lot fewer [dead] rhinos."

The 12,000-square-kilometre Zambezi Valley is home to the most substantial remaining population of black rhino in Africa. Protection measures have intensified over the last three years as poaching becomes more aggressive.

"We are getting some assistance from Zambian officials," says Tatham, "in the form of follow-up to our information. People are getting arrested." Already funded by groups like SAVE and WWF, new support from Australia, France, England, Canada, Germany, and South Africa is helping to step up the defense.

Poaching's Double-Edged Sword

Immediate death is not the only result of rhino poaching. "One of the major adverse effects of poaching in Africa is the division of rhino populations into small groups," says Martin. "Isolated groups of one to three animals are essentially doomed." If the rhinos are too old, too young, or of the same sex, they cannot mate, spelling the end of rhinos in that area. The solitary Sumatran rhino, sparsely spread out in Malaysia and Indonesia, particularly suffers from this problem.

Medicinal Myth?

The Truth Behind the Rhino Horn Debate

Westerners have long been sceptical about the Asian belief in the healing powers of rhino horn. Most often used as an ingredient in fever-reducing medicines in China, rhino horn is also taken as treatment against flu, convulsions, epilepsy, and other ailments. The idea that Chinese covet rhino horn as an aphrodisiac is a Western fabrication.

Outside China, other rhino parts, such as the penis, skin, and blood are sometimes taken against such things as impotence, skin diseases, and menstrual problems.

The Divine Plowman's Herbal, a book of Chinese medicines written between 200 BC and 200 AD, lists rhinoceros horn as a cure for intoxications and delirium. The reputation of rhino horn as an important medicine has remained intact for 2,000 years.



In a traditional Chinese medicine factory.

As recently as 1986, a Chinese doctor claimed rhino horn helped AIDS patients with fever and blood heat symptoms.

Last year, three doctors from the Chinese University of Hong Kong's Department of

Biology and Chinese Medicinal Material Research Centre, partially funded by WWF-Hong Kong, tested rhinoceros horn for antipyretic, or fever-reducing, effects. The results? When fever-induced rats were in-

Human Uses of Rhino Products

Horn: primarily to treat fever and nose bleeds. Also used for convulsions, flu, epilepsy, poisoning, restlessness, delirium, boils, abscesses

Skin: skin diseases

Penis: aphrodisiac

Nails: budget substitute for horn

Bone: bone disorders, burned as insect repellent

Blood: tonic, menstrual problems

Urine: asthma, throat ailments

jected with large doses of a solution containing rhino horn, their temperatures dropped. In other words, as far as fevers are concerned, rhino horn works.

The results were a surprise. Conservationists generally had previously accepted the European firm Hoffman-LaRoche's 1982 test results that said rhino horn was not an effective fever-reducing agent.

However, the Hong Kong team, led by Dr. Paul Pui-hay But, also tested the horn of saiga antelope with the same results. Water buffalo and cattle horn were also found to reduce fever, but much higher doses were needed. The study proves that rhino horn is not an indispensable ingredient in Chinese medicines. Dr. But's results are important in establishing the use of rhino horn alternatives. WWF-Hong Kong plans on translating the report into such languages as Chinese and Korean.

The effectiveness of rhino horn combatting other illnesses such as epilepsy, flu, or poisoning remains to be seen.

Taking Action

Necessary Steps

WWF urges China, South Korea, Taiwan, and Thailand to take the following measures:

- Prohibit all domestic and international trade in rhino horn and rhino products, including medicine, as recommended by the 1987 CITES resolution, and strictly enforce this prohibition.
- Register and monitor existing rhino horn stocks.
- Encourage the use of rhino horn substitutes such as water buffalo horn.

Essential protection measures:

- Thailand, the only one of the four countries that has its own rhino population, needs the funds and manpower to establish a rhino management plan.
- Continue wildlife management training programmes that emphasize development of an indigenous capacity to manage wild rhino populations, to capture, translocate, and reintroduce rhinos, and to maintain and breed them in captivity.
- Continue protected area management training programmes that emphasize survey techniques, anti-poaching measures, and village extension work. Devise methods that allow villagers to benefit economically from protected areas.

WWF: In the Works

Registration of rhino horn stocks and subsequent monitoring provides the foundation to abolish all internal and international trade in rhino horn.

Steps are already being taken to convince South Korea and Thailand to follow China and Taiwan's example of registering stocks. "Our intention," says Jørgen Thomsen of

TRAFFIC, "is to have a person in Taiwan, China, South Korea, and Thailand to oversee and monitor the stocks in these countries, to monitor customs statistics as soon as they are available, and to investigate any further import of rhino horn so we can report on any violations of the registration. In other words, to make sure no new rhino horn comes in."

WWF has two ongoing projects aimed at stopping rhino horn trade. "Africa: Rhino Products, Closing Down the International Trade" (I3637), now six years old, is led by Dr. Esmond Bradley Martin from his base in Nairobi, Kenya. Martin's success in Yemen, the creation of a six-point action plan in 1986, is part of this project. He plans to visit Yemen between 1991 and 1992 to help with enforcement of the plan. This trailblazing rhino-trade project has spawned the proposal of specific on-the-ground project activities in China, South Korea, Taiwan, Thailand, and Zambia. The second WWF campaign report will cover their progress.

TRAFFIC's Kristen Nowell, working out of Taipei, is the Project Executant of "Africa: Stopping the Rhino Horn Trade in Taiwan, Phase II" (II3637.03). Having helped the government to register rhino horn stocks, Nowell is now working to with authorities to enforce current legislation. Current action includes the formation of a Chinese-speaking undercover team of monitors to assess rhino horn availability through medicine dealers. The team will report directly to the Council of Agriculture for law enforcement.

To achieve the final steps needed in the fight to save the rhino, WWF is actively engaged in raising public awareness, lobbying, and protecting rhinos, particularly in the four countries where legislation and other conservation measures are lacking.

"These four countries are the final front," says Thomsen. "We must stop the rhino horn trade once and for all."

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WWF—World Wide Fund For Nature is the world's largest private international conservation organization with 28 Affiliate and Associate National Organizations around the world and more than 4 million regular supporters. WWF aims to conserve nature and ecological processes by preserving genetic species and ecosystem diversity; by ensuring that the use of renewable natural resources is sustainable both now and in the longer term; and by promoting actions to reduce pollution and wasteful exploitation and consumption. WWF continues to be known as World Wildlife Fund in Canada and the United States of America.

WWF shares its international headquarters in Switzerland with The World Conservation Union—IUCN.

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