When it comes to rhinos, any news that isn't dire has to be wonderful. Certainly, not many large, slow-toreproduce mammals have ever been propelled by hunting into such a steep and relentless population crash. In the years from 1970 to 1985, every time a new field report came in, the numbers of rhinos seemed to drop by half, and for the concerned observer the despair was so bad that it was in danger of turning into resignation. But now, suddenly, the lines on the graphs are turning up a little, and some of the world's five species of rhinos may have been wrestled out of their nose-dives.

The scariest dive was the African black rhino's. Its population had plummeted from about 65,000 in 1970 to 3,800 in 1987, and the well armed squadrons of poachers seemed impossible to foil. The demand from the Far East for medicinal powdered rhino horn and from Yemen for prestigious daggerhandles seemed to defy all efforts at abatement, and one country, the United Arab Emirates, even pulled out of the international wildlife trade convention (CITES) so that it could help service the business.

What seems to have happened is that – through sheer, almost



The last lap

Will the rhino escape extinction by a nose? The business of saving it has not been universally depressing, and many more individuals, at least of the African species, now roam the planet than did in the darkest years, a decade or two ago. "But," says WWF's Simon Lyster, "we're never going to succeed unless we wipe out all the main markets." Given campaigning success elsewhere, only four remain – Taiwan, Thailand, China and South Korea – all of which are the target of a major new campaign to eliminate all trade in rhino products.

rhino-like perseverance — conservationists have made their strategies work. The anti-poaching battle has shifted, for the simple reasons that the game wardens are better armed and better equipped and the rhinos are otherwise better protected (see below).

But while the supply end of the trade – the business of keeping

rhino horns physically attached to the noses of living rhinos — is being controlled more or less by force, the proudest victories have been at the demand end, and have been diplomatic. For several years, Esmond Bradley Martin, who is WWF's rhino-horn field marshal — and who, with Lucy Vigne, summarises the state of all five

species (below), has been visiting North Yemen, first to convince the government to ban rhino-horn imports and then to convince it to enforce the ban.

In doing this, he has had to confront a tradition that could well go back to the days of the Queen of Sheba – that of every masculine man wearing on his waist, in a jewelled scabbard, his own personal rhino-horn-handled curved dagger. But persistence has worked, the ban has been enforced, the dagger-makers have turned to amber-coloured plastic and to buffalo horn, and the country that used to import three tonnes of rhino horn every year now accounts for about 150 kg.

Two other important centres of the trade, Hong Kong and Macao, have also passed and enforced rhino-horn bans. Through their colonial proprietors, the UK and Portugal, they were already members of CITES, which has long prohibited import and export of rhino horn, but internal trade actually stocking the stuff and selling it over the counter - is not necessarily affected by this. And when internal trade is allowed, external trade is easily disguised by it. The bans that Hong Kong and Macao have now implemented are internal ones: the stocks were

The horn quintet

White rhino

The white rhino once inhabited much of central and southern Africa. Poaching in the 1970s and early 1980s almost wiped out the northern subspecies, and by 1984,



only one viable population, of 15 individuals, remained in Zaire's Garamba National

Park. An international project in the park has been successful – staff morale has been greatly boosted, and with protection from well organised anti-poaching patrols, numbers have steadily built up to 28.

Southern Africa's subspecies of white rhino has been effectively protected from poachers for much longer, and numbers have expanded steadily to today's figure of about 4,800.

Black rhino

The black rhino was once found in suitable habitat over much of Africa south of the Sahara. Its recent drastic decline – from about 65,000 in 1970 to 3,800 in 1987 – has been one of the greatest international ▶

conservation scandals. Fortunately, certain governments, conservation organisations and concerned individuals have, in the past few years, made a concerted effort to rectify this disaster. In Kenya, for example, 98 per cent of the black rhinos were killed between 1970 and 1985; since then, though, the population has increased by 5 per cent per year to today's figure of about 400. Kenya's success is based on good protection of fenced-in private and public sanctuaries. Solio Game Ranch Sanctuary is perhaps the ultimate example: a 2.5m high electric fence around the 56km² sanctuary has succeeded in keeping rhinos in and poachers out, and during the 1980s, the rhino population there expanded by 12 per cent each year, probably the highest rhino-breeding success rate in the world.

Zimbabwe is home to about 1,700

black rhinos – half of Africa's remaining population. During the mid-1980s the country was at the receiving end of one of the continent's worst poaching onslaughts. Zambian poaching gangs armed with

modern rifles were crossing the Zambezi river into Zimbabwe in order to shoot black rhinos in the Zambezi valley. In 1985, the first full year of serious poaching there, 107 animals were killed, solely for their horns. By 1987, the figure peaked at 165, and it has been declining ever since. In 1989, only 41 rhinos were killed, and in 1990 (up to November), just 10. The sharp decline in poaching in the Zambezi valley is due to more anti-poaching equipment (including radios and a helicopter), an improved intelligence system and better methods of quickly locating poachers.

Greater one-horned rhino

The former range of this Asian species is



not known in detail, but it was considerably larger than today's. In recent years, perhaps the

main factor deterring much population growth is not poaching but shortage of habitat. The rhinos live mostly in relatively small protected areas in Assam province, India, and in Chitwan National Park, Nepal; invariably their sanctuaries are surrounded by large numbers of poor farmers, which leads to great competition for land. But poaching is still a problem. The horn from this species fetches more than 12 times as much, wholesale, as African horn because customers believe

registered and allowed to run down; now it is no longer legal in either colony even to claim that a tonic or a pill or a powder has rhino horn in it.

In fact, the rhino-horn trade has now declined so far that its extent can at least be grasped, and the remaining participants in it can be targeted by a last-push campaign — in this case a campaign launched by WWF and implemented, in part, by TRAFFIC. It was launched on 25 April and the four countries on the list will be China, South Korea, Taiwan and Thailand.

This campaign, says WWF's Simon Lyster, is strictly for conservation, and what the public is being asked to do is write letters to the embassies of the four countries, reminding them of the rhinos' plight and asking them to follow the example of Hong Kong. Each country will be singled out for three months, and in that duration all the letters will be aimed there. First up is South Korea.

TRAFFIC, in the meantime, will be trying to persuade the four governments to begin registering their rhino-horn stocks — Taiwan, in fact, has already done this — and will organise local conservationists into teams of monitors. "Our intention," says

Jorgen Thomsen, TRAFFIC's director, "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, to check and see whether any rhino horn continues to come into the country, and then to provide information that will allow us to report on any violations of these registration schemes, which probably would make the stocks disappear - and no new rhino horn would come in.'

Both Lyster and Thomsen point out that each country will be a different density of nut to crack. Taiwan is turning out to be the easiest. Not only has it already done its stocktaking — it has 1.5 tonnes — but a team of monitors organised by TRAFFIC is in place and set to start stage two.

China – being composed almost entirely of the nation of people who *use* rhino horn in medicines and also comprising one fifth of the world's humans – is, to put it mildly, the biggest challenge. But it isn't intractable. It is the only country that manufactures rhinohorn medicaments on a commercial scale, but it has also started registering its stock – 10 tonnes so far – and, as in the

instance of ivory, it has shown that it can be sensitive to international pressure. It was this sensitivity, in fact, that caused it to join CITES in 1981

South Korea hasn't joined — and that means it's under no international obligation to report anything to anybody. But it does have an import duty on rhino horn, and thus import statistics, and that, says Thomsen, is a start: "The records have proven quite useful, and clearly South Korea is a very important market, both for raw rhino horn and for products coming in from China." And in banning ivory imports it proved that it, too, can be sensitive to international pressure.

Thailand belongs to CITES all right, but it also has a reputation for ignoring the treaty fairly comprehensively. Rhino horn goes in and out of Thailand as easily as it goes in and out of South Korea, and there is even a duty on it. But, as with South Korea, a duty means statistics, and an inroad. Also, says Thomsen, it is primarily the Chinese that use rhino-horn medicine, and a survey of the pharmacies in the Chinese neighbourhoods might give a reasonable picture of the scale of the internal commerce.

The Chinese have been using

rhino horn as a fever nostrum for many centuries, and it's not very likely that they would have persisted if it didn't work. And last year, sure enough, three scientists at the Chinese University of Hong Kong tested the substance on febrile white mice and discovered that indeed it did. This means that, in persuading the Chinese as a people to stop taking it, it's no good telling them that they are being superstitious, that it's only compacted hair or something and that they might as well swallow their toenails. Powdered rhino horn lowers fever. If the Chinese are to be deprived of that remedy. conservationists would do well to recommend a substitute.

Fortunately, the same Hong
Kong team has discovered not one,
but two. Saiga antelope antlers
and water buffalo horn work just
as well. Water buffalo is one of the
most common domestic animals in
the world, and a local one to
China. Using a water buffalo's
horns in the medicine instead of a
rhino's could lead to that most
effective persuasion of all: a lower
price.

ALEX ROWE

For a copy of the rhino campaign leaflet, write to Alison Lucas, WWF, Panda House, Weyside Park, Catteshall Lane, Godalming, Surrey GU7 1XR.

that the Asian horn (being smaller) has more concentrated healing properties. In Assam, the price poachers received for rhino horn doubled from 1986 to 1989 to \$6,250 a kilo, and in 1989, 58 rhinos were killed there – the largest spate of killing since 1983. The horn became so sought after that poachers discovered a new way of killing: electrocution from overhead power lines.

In neighbouring Nepal, poaching of this species was largely brought under control in 1973 with improvements to antipoaching patrols and a new intelligence system. But the situation changed drastically last year. The first incident occurred in January, when two rhinos in the Central Zoo near Kathmandu were poisoned. The killers only had time to cut off the tiny horn from the six-year-old male, leaving the adult female's horn intact. Then followed the deaths of five more rhinos in and around Chitwan National Park. Some were shot, and speared, but two were also poisoned. Park authorities are very worried about the sudden increase in this method of poaching, which is relatively easy to carry out: a deadly pesticide is put inside green maize cobs, which grow in areas where rhinos regularly go to feed, around the park's borders; the rhinos eat the maize and then usually stagger back inside the

Despite this recent upsurge in poaching in India and Nepal, it is encouraging that both countries' rhino populations continue to increase; in India there are now 1,550, and in Nepal 400.

Sumatran rhino

This has the largest range left of the three Asian species, but its natural habitat – especially the rainforests on Sumatra Island



and in
Borneo –
are being
steadily cut
down
around
them.
There are
about 700

Sumatran rhinos widely dispersed in Indonesia and Malaysia (and probably a very few still left in Burma, Thailand and, possibly, Laos). Because the rhinos are scattered over such a large range, they are difficult to protect, and because of poaching, numbers are not increasing. Moreover, unlike the other rhino species, virtually all parts of the animal are in commercial demand. The horns and nails are used for medicinal purposes (mostly to reduce fever), the hide to alleviate skin diseases, the blood as a tonic and the penis as an aphrodisiac. As with the greater one-horned rhino, the wholesale price of the horn is almost 10 times higher than that of African horn, due to its supposedly greater strength as a medicine.

Hunters will spend days searching for these rhinos, which they kill by means of pit traps, rifles, shotguns and even wire snares. Most are killed deep in the forest, usually far away from any anti-poaching unit, and so a hunter can take his time removing the various parts to sell. To keep some of these scattered rhinos safe, and to

help their breeding, it may soon be necessary to bring a number together in well protected fenced-in sanctuaries where the rhinos can be protected day and night (as has been done so successfully with the black rhino in Kenya).

Javan rhino

This is the most threatened of all five rhino species, and probably the rarest large mammal in the world. It numbers a mere 50 in western Java, plus a newly

discovered group of 12 to 15 in Vietnam. Java's population exists in a small park, the Udjong



Kulong, on the western tip of the island. Unfortunately, numbers there have remained very low for about 15 years, though only a few have died of disease or at the hands of poachers. Conservationists are concerned that the Javan rhino's numbers may not expand, and some experts believe that this park may have reached its carrying capacity for the species, or that certain other mammals are competing directly for the same food. The Indonesian government has now agreed that some of these rare rhinos should be moved to another reserve, to give them more space and, hopefully, improve the breeding rate

ESMOND BRADLEY MARTIN LUCY VIGNE

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park to die.