

How to Stop Pollution and Promote Industry

HOW to curb environmental disasters when many managers do not even know they are part of the problem? Around the world thousands of small industries — hard working, contributing substantially to the economic welfare of their communities and creating jobs — also create waste and pollution.

Education of the often self-made owners of these industries, and their employees, is important to help ensure the growth of industry without harming the environment.

For others it is not a matter of education, but the hard facts of survival. In the developing world particularly, special measures to make industry more environmentally sensitive can often cost too much to be viable.

An upcoming conference in Copenhagen, Denmark, will try to bridge the gap between two opposing factors: the pollution caused by industrialisation and the need for even more industrialisation in developing countries to improve the living standards of billions of people.

The Ecologically Sustainable Industrial Development (ESID) conference, hosted by Denmark, is part of the lead-up to the June 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil.

In the same vein, a report just published from a group of Commonwealth Experts*, highlights the need for greater help to development countries in the area of sustainable development. Its proposals will be put before the Commonwealth summit meeting being held at the same time in Harare.

It says the industrialised countries can assist through sharing technology, providing financing, and opening up trade barriers to reduce the costs of industrialisation in the South.

But above all it highlights that concerns of both environment and development must be dealt with in an integrated way: sustainable development by definition. The report recommends a high-level deliberative process in the UN system to do just that.

It also calls for more help from the North: "Developing countries have an obligation to contribute to global solutions; but they need incentives and support to enhance their capability to pursue sustainable development and resist short-term pressures."

The experts group recommends an international tax on carbon emission and suggests

The apparent contradiction between industrialisation and environmental protection, which has plague ecological debates for years, is to be discussed at a conference in Copenhagen. In promoting greater protection, the North often overlooks the concerns of the developing countries. A new Commonwealth report emphasises that development and environmental concerns must go hand in hand. In the lead up to the big UN environment conference in Brazil next year, reports Gemini News Service the South wants greater emphasis on sustainable development. by Eva Arnvig in Geneva and Allan Thompson in London

all countries establish special ministries to promote sustainable development. It also says the role of women should be better recognised so that they can play a greater part in decisions affecting development.

The Copenhagen meeting, which will address similar concerns in a different forum, follows on another such session recently in Geneva, at which delegates from the developing world criticised their Northern counterparts.

They were concerned that the Rio conference would put too much emphasis on environmental concerns and not pay enough attention to development and the important issue of technology transfer, resources and trade incentives that would promote sustainable development in the South.

Serious damage to the environment is being done in newly industrialised countries, and not only by big multinationals, the usual scapegoat, but by medium and small industries too.

The tanning industry is a classic example. About 20 years ago Third World countries exported skins and hides to the industrial North where the tanning, dying and final leather production took place.

Now the tables have turned. Northern countries export skin and hides to the South, where most of the tanning industries are now centred. Environmental restrictions in the North caused the shift.

It would have been too costly to change production facilities. It proved easier to

change base, resulting in the development of a \$20-30 billion industry in the Third World that leaves behind some 3.5 million tonnes of dangerous chemical waste each year.

That includes heavy metals, organic leftovers, enormous amounts of salt and often pesticides containing DDT and arsenic.

Annual water consumption by the industry hits 3.5 million cubic metres, the equivalent of a lake 10 km long, 3.5 km wide and 10 metres deep. The same amount of water would provide two litres a day for every person on the globe.

Bangkok, Thailand, is one of the centres of the leather-tanning industry with more than 100 small enterprises, most of them family run. A new purifying plant has been

made, already insufficient before it is even operating.

The tanning industry in Southeast Asia is indeed international. The chemicals are imported from Japan and Europe, 80 per cent of the hides come from China and main customers are the multinational companies shipping merchandise to the North.

The heavy pollution from tanning is frightening. Near the tannery all living things except humans have disappeared. Streams and gutters are bluish-white and chalky.

Vanida Chatterath, who along with her three sisters owns one of the tanneries in Bangkok, says: "A drop of this waste water on the leg of a child leaves caustic wounds. If the whole body is covered, there is a life threat in five

minutes. The purifying plant is too small. We hope to obtain international help to get our pollution under control. We know it is dangerous, but what can we do? We cannot just close down. We have a certain responsibility to our employees."

There are some answers to clean up an industry vital because of its impact on many parts of society, from cattle raising to handicraft. The United Nations Industrial Organization report prepared for Copenhagen says that improving the industry might not be as expensive as once feared.

The process of tanning an dying involves many separate procedures. All too often government demands call for a total clean up — something that would be catastrophic for the industry and could close most of it down. Instead, the cleaning up must be done step by step.

Information on good house-keeping for chemicals and chemical recuperation could save lots of money, which could then be reinvested in new technology to lower water use.

This would again mean less use of chemicals and water waste. Recuperation of organic

waste would also reduce pollution and the collected organic material is usually suitable for animal feed and fertilizer.

To make such changes education is needed for managers and workers. UNIDO suggests targeting the 200 million women involved in Third World industry, not only because they are often the ones doing the dirtiest jobs and thus most exposed to chemicals, but also because of their strong influence on the next generation.

The Copenhagen conference will call for multinational corporations to apply the same environmental restrictions as their headquarters country in the countries where they operate.

It is hoped this will slow the export of dirty industry to poor countries and diminish the export of environmentally unsafe products or machinery already banned in the North.

The Danish government and UNIDO have set high goals for the Copenhagen conference and may have to accept half measures. But for developing countries on the verge of industrial expansion, the conference raises hopes of a more development-friendly outlook.

*Sustainable Development: An Imperative for Environmental Protection. Commonwealth Secretariat, London

Rhino Horn: Medicine or Murder?

THE medicinal qualities of rhinoceros horn, long prized in Asia but dismissed in the West as myth, have been given some scientific backing.

There's some good news in this, and some bad news. The bad news is that the poaching of rhinoceros for their horns, which has brought the animal to the very brink of extinction, is likely to continue, short of draconian action to discourage it. At present rates of slaughter, the rhino will not last beyond the year 2000.

The good news is that, if the scientific analysis of the medicinal properties of rhino horn is correct, then there are plentiful substitutes for it. There is, in short, no need to single out the rhinoceros for slaughter. The question is whether that message gets through in time to those with vested interests.

Rhino horn has been used for 2,000 years in medicines to treat fever, flu, epilepsy, delirium, poisoning, boils and abscesses. The animal's skin is used for skin diseases, the penis as an aphrodisiac, its nails as a horn substitute, bone for bone disorders, blood for menstrual problems and urine for throat ailments.

Recently, three Chinese doctors tested rhino horn for antipyretic, or fever-reducing qualities. They found that when feverish rats were injected with large doses of rhino horn the fever was reduced.

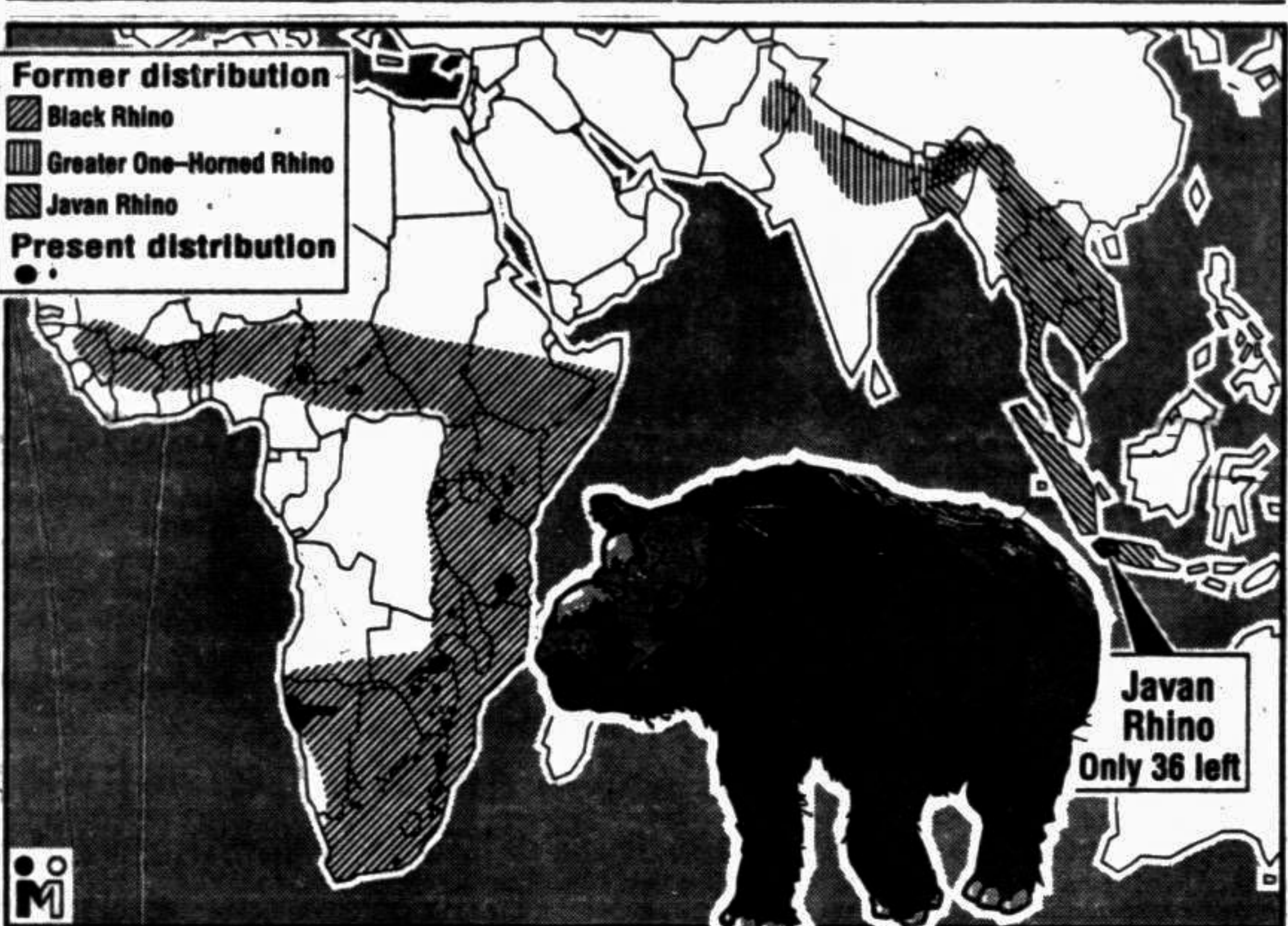
Other claimed applications remain to be tested, although a 2,000 year history of medicinal usage would suggest at least some truth in them.

However, horn of the saiga antelope, water buffalo and cattle were also found to reduce fever, and of course are plentiful and cheap. The problem with them is that more is needed to achieve the same effects, so a process of concentration is needed.

The point is that rhino horn is not indispensable.

The World Wildlife Fund has launched a new — possibly its final — campaign to save the rhino, and it will need quick results. If remaining markets for horn are not closed, one or more species of rhino may be extinct within 10 years. The WWF has named China, South Korea, Taiwan and Thailand as the four Asian countries which are the final front where the

The rhinoceros is on the verge of extinction, mainly because its horn is coveted as medicine throughout Asia. The supposed medicinal power of rhino horn has in the past been dismissed as myth, but new evidence suggests that the horn does have curative properties. Equally however, those same properties can be found in other products. And unless these are used, reports Gemini News Service, the rhinoceros has little chance of survival. By Damien Lewis



battle for the future of the world's rhino will be fought.

Four of the world's five rhino species are threatened by extinction. Populations have plunged from an estimated 100,000 in the 1960s to fewer than 11,000 today.

The least-known but most threatened species — the Javan rhino — has the dubious distinction of being one of the rarest large mammals on earth. A mere 65 survive in the wild.

Throughout Asia, there are just 2,000 remaining Sumatran ("woolly") and greater one-horned rhinos.

It is the plight of the African black rhino however, that has captured world attention. It once roamed Africa in hundreds of thousands; now, only a few pockets of them survive in Zimbabwe, Namibia, Kenya and South Africa. The 1960's population of 60,000

black rhinos is down to 3,400. Habitat loss and hunting reduced numbers, but the greatest threat has been from poachers. Between 1970 and 1987, over 100 tonnes of horn — equivalent to 40,000 dead rhino — were traded on world markets.

This is an ancient and lucrative business. China, the world's main manufacturer of rhino-horn medicines, has been using horn for over 2,000 years. Two of the most common medicines are the tranquilliser Niu Huang Ching Hsin Wan, produced by the Ren Tang Pharmaceutical Company, and fever-reducing pills made by the Chengdu Traditional Chinese Pharmaceutical Factory.

In South Korea, demand for rhino horn has been fuelled by rapid economic growth. Here too, the horn is mainly used for

medicines, such as the common cure-all Chung Shin Won balls. And in Taiwan, certain millionaires are notorious for their demand for rare and exotic wildlife products including rhino horn.

Elsewhere, in the Yemen, horns have been carved into traditional dagger handles, ornately decorated and jewelled.

But the greatest villain of the rhino racket is Thailand. In Thailand, any and all wildlife products are traded and rhino horn is no exception.

"More horn is available in Bangkok than in any other Asian city," says WWF. As a result of such demand an African horn now fetches over \$10,000, and an Asian horn over \$60,000. The "logic" says that as Asian horn is smaller, so its curative properties must be more concentrated.

Over the past 30 years, the battle to save the rhino has increasingly concentrated on smashing the rhino horn trade. This has been done by waging virtual war on the poachers, by foiling the smuggling networks or through international legislation — like the convention on International Trade in Endangered Species (CITES).

There have been some remarkable victories. Japan, a country which imported 800 kilos of horn a year in the 1970s, stopped using it almost overnight.

After intense criticism of its widespread use of endangered species, Japan joined CITES in 1980. Doctors were told not to prescribe rhino horn, as it was illegal, and search for alternatives. Japanese pharmacists now use saiga antelope and water buffalo horns in medicines which once used rhino.

The same year, Yemen shocked the international environmental community by revealing that it, not China, was the largest consumer of rhino horn. Yemen was importing over 1,500 kilograms of horn each year, or half the world horn trade, for use as dagger handles.

The establishment of trade laws in Yemen, coupled with a sagging economy, has resulted in a massive drop in imports, and rhino horn has now been replaced by water buffalo horn, camel nails or plastic.

In Africa the rhino war between poachers and wardens has been highly publicised. Countries like Kenya, dismayed by the 98 per cent in rhino numbers between 1975 and 1980, moved quickly to establish rhino reserves. Kenya's 400 remaining rhinos are now guarded day and night.

In the 12,000-square-kilometre Zambezi valley — home to the largest concentration of black rhino in Africa — the war between wardens and poachers is perhaps at its fiercest.

WWF is calling on China, South Korea, Taiwan and Thailand to prohibit all trade in rhino horn and register and monitor existing stocks.

The most effective tactic of all however, may be that great universal leveller — a lower price. Any medicinal substitutes developed are bound to be cheaper than rhino horn.

— GEMINI NEWS

Drugs Crackdown Leaves Coca Farmers in Poverty Trap

Coca leaves have been used for centuries by peasant farmers of the Peruvian Andes mountains in traditional religious ceremonies and as a medicine. Now the cocaine trade has made them the major source of income. But, as Gemini News Service reports, pressure from the US Drug Enforcement Administration to wipe out the coca plantations threatens to impose even greater poverty on farmers already struggling to scratch a meagre living. by Maritza Luque

TO peasant farmers in the Andes mountains of Peru, they are a gift from mamapacha (mother earth), sacred leaves which are part of a rich cultural heritage. To the United States Drug Enforcement Administration (DEA), they are a deadly part of a much newer culture.

Asking the coca growers to make their living from growing coca leaves to help solve the drug problem in countries like the US by switching to less profitable crops is like asking them to commit suicide.

They can earn US\$6,000 per hectare of coca plants, which is up to 20 times more than they can get from a hectare of cacao. Life is already hard enough in the mountains without making that sort of sacrifice.

The national company Emprasa Nacional de la Coca (ENACO) has the monopoly of the coca industry in Peru and sets the price for legal production.

But as the Peruvian economy continues to deteriorate and the struggle of the poor to survive gets harder, illegal coca growers have appeared.

Peru is the world's major producer of coca leaves, with an estimated 300,000 hectares under plantation. The DEA claims that about 110,000 hectares in the Peruvian jungle are illegal.

About 60 per cent of the coca is exported, mainly to Colombia, where it is processed into cocaine hydrochloride and re-exported to Europe and to the US, the major consumer of the drug. Spending on drugs in the US is nearly 50 per cent of the annual military budget.

Palm oil, cacao and coffee have been suggested as alternative cash crops to coca in the Agreement Against Drugs signed in May by Peruvian and US governments.

But unless fair prices for such produce on the national and international markets can be guaranteed over a period of time, the coca growers will not be induced to stop planting coca.

An additional problem is that it would be three to four years before the first yield from the alternative crops, and the Peruvian government is in no position to guarantee financial support and loans during the transition period.

Even more rural peasants would have to migrate to the already overcrowded cities to seek work, living in shanty town squalor. It would also mean that many others might choose to risk everything — including their lives — to carry on growing coca and selling the leaves to anyone in order to feed the family.

Drug traffickers would take advantage of the situation to buy the leaves at about one per cent of the price they get for selling the cocaine hydrochloride. Peruvian official sources said that, while the coca growers earned \$97 million in 1990, the traffickers earned \$79 billion.

Coca is not cocaine. The leaves have to be mixed with man-made chemicals to produce the stimulant drugs cocaine hydrochloride and

"crack". For the traditional coca growers, the coca (kuka in the indigenous Quechua and Aymara languages) is a life force, a gift of nature to the Andes. They grow it as their ancestors did some 600 years ago, when it was considered a divine plant used only by the Incas and royals for religious purposes. Only after the Spanish Conquest in the 16th century was coca growing industrialised. Indians were paid in coca leaves for work in gold and silver mines.

By chewing the leaves, the indigenous mountain people overcome sorroche (altitude sickness) by increasing blood circulation, or can go for several days without food and water while working in the mines. It is also used as an anaesthetic and pain-killer.

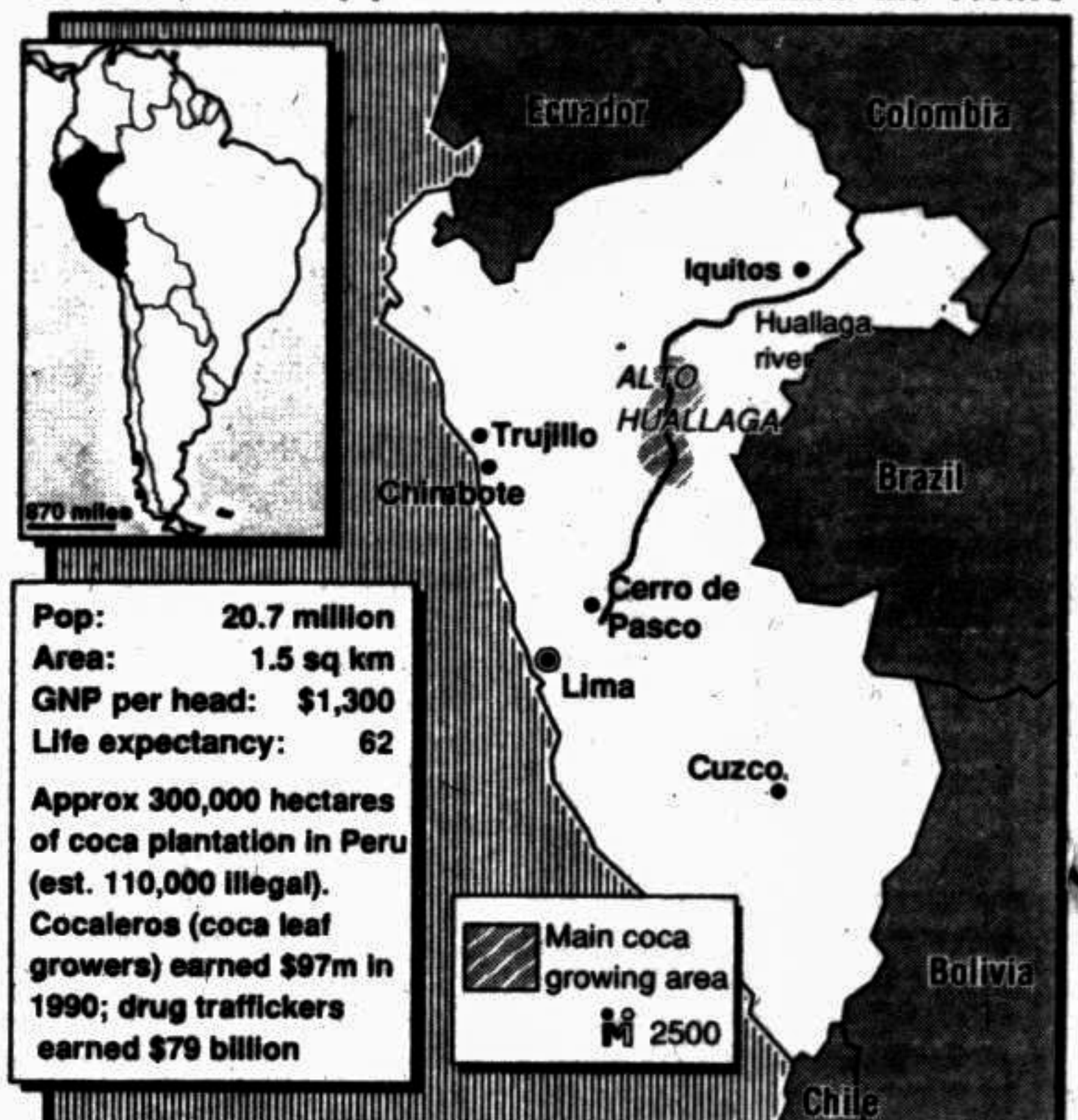
The peasant coca producers believe that every plant has

the use of Tebuthiuron, the chemical known as Spike, which the US approved for use only on non-food crops.

It is not yet known what effects it may have on food crops or humans, but it does not differentiate between types of plants. Since the middle of last year, coinciding with the spreading of Spike on coca plantations, peasant farmers in the region have claimed that their food crops have been drying up without apparent reason.

Bob Martinez, Director of the US Drug Control Bureau, denied that US had ever used any chemical agent on coca crops.

However, La Republica reported that the "Front Against the Eradication of Coca in Alto Huallaga" sent soil samples and a coca plant for analysis at a laboratory in Germany. The results confirmed the Front's



a reason to exist, that plant cells contain energy of the sun, rain, air and of "mamapacha", from whom they receive their daily food. Nature and culture go hand in hand in the Andean highlands.

It is in the highlands of Peru, particularly the Alto Huallaga valley near the Amazon jungle, that the best quality coca grows. The red clay soil is rich in alkaline and oxides, and because of the warmer weather in the area, the coca leaves become drier, containing more alkaloids than in any other region in the Andes.

The coca from this area, where most of the "illegal" coca growers are located, is in great demand from the traffickers.

Since 1987, the valley of Alto Huallaga has been the chosen site for testing herbicides to eradicate the coca plantations. The Peruvian daily newspaper La Republica says the DEA tests have included the use of Picloran — the infamous Agent Orange used by the US during the Vietnam War and which has been identified as causing malformation in unborn babies.

The latest US attempt to halt coca growing has involved

suspicion: the leaves contained traces of Tebuthiuron.

The Agreement Against Drugs, while not specifically forbidding the use of Spike, recommends that any programme to eliminate coca leaves should safeguard human health and the environment.

It also mentioned the need for recognition of peasants' land rights, building of access roads, fair prices for produce and, most important, a voice for the coca growers in the decision-making process of coca eradication.

If all the projects and structural reforms outlined in the Agreement were put into practice the problem would be tackled at its root, but it is estimated that the cost would be \$3 billion — and there is no indication as to where such an amount would come from.

The US, which spends \$12 billion every year on its anti-drug campaign, has promised Peru \$60 million in goods and services this year to help fight the drugs.

— GEMINI NEWS

Back on the World Tourist Map

SRI Lanka's placid palm-fringed beaches in the south are back on the world tourism map with Western visitors descending in droves to catch the sun and a tan.

Sweet Serendip's travel industry has bounced back, having survived two bloody insurgencies which engulfed the country and nearly choked the thriving trade.

"The arrival figures for the first half of the year is better than last year," said Nizam Lanra, director of research and international affairs at the tourist board.

Southern Sri Lanka has seen relative peace since November 1989 when security forces broke the back of a leftist insurgency led by the People's Liberation Front (JVP).

The travel industry was jolted but only briefly when car

Colombo's airport is once again humming with activity, disgorging hordes of Western tourists, kept away for some time by two bloody insurgencies. Rita Sebastian of IPS reports.

bombs went off twice this year in the heart of Colombo.

"The winter bookings are excellent," said a leading travel agent, dismissing speculation that tourists may cancel en masse if militants strike again in the south.

In Sri Lanka's northeast, a raging separatist war has put a damper on the tourist business. In eastern Trincomalee where the beaches are said to be the most beautiful in the island, Western holiday-makers have not booked into hotels in years.

According to a tourist board official, Sri Lanka offers all that Western visitors are looking for — sun, sea and sand —

when they want to escape the harsh winters in their countries.

The United Nations Development Programme (UNDP) recently pledged US\$1.2 million for the preparation of a 10-year master plan for the development of tourism.

"There will be a mid-term plan to improve and strengthen tourism, an important contributor to the Sri Lankan economy," said an official at the UNDP office in Colombo.

The mid-term plan will also identify development projects which will hasten the travel trade's recovery. In 1983, the year anti-

Tamil pogroms ignited the civil war, a record 450,000 tourists visited Sri Lanka.

The tourist industry's darkest days were between 1987 and 1989 when hand-cuffed bodies littered the golden beaches along the south coast, and suspected JVP sympathisers were killed with necklaces of burning tyres.

But with peace restored, hotels are doing brisk business as the tourists have come back. And Sri Lanka's handicrafts industries which employ an estimated 60,000 people are bringing in considerable foreign exchange.

"We are doing very well. Our occupancy averages 45 per cent monthly but we are targeting it at 46 per cent," said Oshi Lallananda, public relations officer at the Small Ceylon Intercontinental.

Said the manager of a hotel 50-room seaside hotel in

southwestern Hikkaduwa, the most famous beach resort in Sri Lanka: "Most of the hotels here are overbooked. We have holiday-makers who come back every year."

As the demand for skilled workers in the hotel and tourism sectors increase, the UNDP is also assisting the Ceylon Hotel school which will later be expanded into a national tourism training institute.

With the country's third export processing zone getting off the ground in southern Koggala, hotels are optimistic that occupancy rates will go up.

Though there were fears that the government's sudden decision to close down casinos in May would adversely affect the hotel business, a five-star hotel manager said the drop in tourist arrivals has been minimal.