

Feature

Environment

# Environment and Development: Two Sides of the Same Coin

Sheng Yilei

I was roaming along a twisting path leading to a land of beauty when I caught sight of an old man walking falteringly ahead. I quickly caught up with him and greeted him. He said, "I'm Tao Yuanming." Tao Yuanming was the ancient poet who wrote "I pick chrysanthemums under the eastern hedge, and far away to the south I can see the mountains."

"I live in seclusion in the countryside hoping to find happiness and contentment," he added. "I never expected the place to be polluted like everywhere else in the world. So I must go to Peach Blossom Spring, that isolated spot, to spend my remaining years."

Peach Blossom Spring! Wasn't that the place described by the poet as a level and spacious land? There were houses and cottages arranged in a planned way; fine fields and beautiful pools; mulberry trees, bamboo groves, and many other kinds of trees as well. There were raised pathways round the fields; and the sounds of hens and dogs could be heard. The people there wore their hair in a knot and were happy and content with their life. I congratulated myself on being able to accompany the well-known pastoral poet in his search for the ideal world he depicted.

In the twinkling of an eye, we arrived at Peach Blossom Spring. But what we saw was entirely different from what Tao Yuanming had described in his writing. It was like everywhere else: high-rise buildings, a forest of chimneys, heavy traffic, deafening noise, stinking odours and overflowing polluted water. There was not a single tree, to say nothing of fine fields, beautiful pools and nightingales and swallows singing.

We were surprised and dazed when suddenly a plume of thick smoke rolled towards us. Tao Yuanming stumbled and fell. As I reached out to help him I too lost my balance and then woke up with a start. So it was only a dream! An unnamed sadness rose in my heart as my eyes fell on a report beside my pillow: The Earth at the End of the Century.

This was no dream. Environmental problems were definitely an issue that could not be ignored.

## Filipinos Paying Gruesome Price for Deforestation

Scenes of bodies bulldozed into mass graves brought home the message that deforestation kills. by Paul Icamina

It was the worst disaster to hit the country ever, with Typhoon Thelma claiming more than 8,000 lives and leaving 700,000 people homeless in Leyte province, eastern Philippines.

And it came on the heels of three major disasters all in less than a year and a half — the July 1990 earthquake which killed nearly 1,700 people, a major typhoon later in the year which left thousands homeless in central Philippines and the ongoing eruption of Mt Pinatubo since June.

The latest disaster stunned the nation, especially since the typhoon was not strong by local standards — it had a wind speed of just 65 kilometres per hour in a country used to having storms more than 200-kph strong.

But six inches of rains in just a few hours over deforested mountains brought down flash floods into Ormoc, the worst hit city (pop 180,000), 560 kms southeast of Manila. High tides also flooded the city from the sea.

The smell of death pervaded the air in this small city by the sea as relatives and friends looked for the bodies of their loved ones," a newspaper reported. "Bodies were found everywhere — on the street, on the shoreline and on the river banks." So many in fact that Ormoc city soon ran out of coffins while unclaimed bodies were buried in mass graves.

ies bulldozed into mass graves brought home the message that deforestation kills. Illegal logging is now the hottest topic, next perhaps only to the 1992 presidential elections. Congress is investigating illegal logging and charges have been made against politicians and military officials for condoning illegal loggers.

It was worse than the typhoon in 1984 which claimed 1,028 lives — then the local record for typhoon fatalities. And it surpassed the tsunami (earthquake-induced tidal wave) which swamped southern Philippines in the 1970s and claimed about 8,000 lives.

Not counting the latest disaster, more than 6,000 Filipinos were killed in typhoons in the last two years alone. That seems to indicate an increasingly higher fatality rate since in the last 20 years about 3,000 people were killed in tropical storms. The Philippines averages 20 typhoons a year.

One reason for the increasing number of fatalities, and made glaring by the latest disaster, is deforestation. The Philippines is an archipelago of more than 7,000 islands thrust from volcanic ocean floors. Most of the islands are mountainous and many communities are within site of mountains.

Mountain with sufficient forest cover acts as water catchment areas. But bald, deforested mountains lose their "sponge" role in absorbing rain water which runs down on eroded slopes. Flash floods downhill result.

Two years ago, eastern Leyte and Samar provinces — was already hit by flash floods traced to deforestation. It prompted the Department of Environment and Natural Resources to impose a moratorium on logging in the area. Four timber licences were suspended while only one logging company remains in Leyte province.

Environment Secretary Fulgencio Factoran Jr agrees

that forest denudation was the main cause of the recent tragedy in Leyte province. But he strongly insisted that the mountain catchment that empties into the river at the heart of Ormoc city had not been illegally logged. There was no forest to log in the first place, he said.

He said the 45,000-hectare catchment area overlooking Ormoc city is almost bald, only 10 per cent of it is covered by forest — the geothermal reservation of the Philippine National Oil Company. Since 1952, the rest of the water catchment area was converted into private farmlands.

In the 1930s, the Philippines was covered by nearly 17 million hectares of forest. Today, only about 7 million hectares remain, of which about 800,000 are primary virgin forests. Only 10 provinces have forest cover above 40 per cent. Six provinces have been totally stripped of forests.

The government has curbed logging permits nationwide, from 137 concessions in 1987 to 60 authorised logging firms today. These firms cut about 2.1 million hectares of forest a year, or half of what it used to be, 5.4 million hectares a year in 1987.

Logging and wood processing contribute more than US\$700 million to the Gross National Product each year. Many of the forests were cut in the 1980s when logging companies exported some 9 million cubic metres of tropical hardwood to Japan alone.

Six out of 10 of the world's poor are being pushed by modern agricultural practices and high population growth into marginal lands that are more vulnerable to disasters.

ACCORDING to a recent survey, 62% of heads of firms in France now consider the protection of the environment as an extremely important objective. The public authorities, for their part, are helping them to design products with low harmful effects.

Catastrophic events hitting the headlines further strengthen the resolve of ecologists: pollution of water reserves, repeated oil spills, an increase in the greenhouse effect, etc. So the "green business", which aims to make development compatible with the protection of the environment, has some fine days ahead.

There is no doubt that the coming economic battles will be centered on the environment. In Europe, ecology-related markets represented 320 billion francs in 1990. This trend is expected to continue at a rate of 6 or 7% a year. It is an eldorado for those involved in a new production policy.

In 1990, the French car manufacturers, Renault and Peugeot, launched an ambitious programme to build a "clean car". All solutions will be considered "from the good old two stroke engine, to the gas turbine, and from the electric engine to the hydrogen engine and to petrol substitutes. This

research will cost 1.8 billion francs, a third of which will be financed by the state.

Oil industrialists are also falling in line with the demands of ecology, by producing unleaded petrol. They will profit by it as the government grants them a considerable tax reduction. 5% of the 2,66,000 employees in the chemicals industries are working on the protection of the environment. One of the big firms in this area, Rhone-Pulenc, has 1,200 of its executives working on this matter. In 1988, the firm obtained the first incineration permit for industrial waste for the state of Louisiana in the United States. Its researchers have also developed a process for recycling sulphuric acid which the Americans are interested in.

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# Green Fever in Industry

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the world, has undertaken to quickly replace CFCs by harmless gases. A French engineer, Claude Blazet, has been awarded the European "Ecoproduit" prize for his refrigerator, the Zeoroll which works without CFCs. On the "green market", "Air Liquide" stands out for its processing of paper pulp using oxygen instead of chlorine. Foreign papermills are adopting this method.

What can be done with all the plastic bottles spilling out of dustbins? Manufacturers in the east have launched the "Pelican" operation which mobilizes schoolchildren to collect them. A crusher reduces them to powder which industrialists turn into car parts, vine-stakes and boat-hulls. Progress is also being made in containers where metal is making a comeback. It is replacing plastic and offers better protection. It can easily be picked out of waste deposits using a magnetic sorter.

The chainstore "Monoprix" was the first to offer its customers products bearing a "green label". These include

nappies which have not been bleached by chlorine, batteries not containing mercury, recycled paper and biodegradable dustbin liners. These new products are favoured by consumers who have decided to use ecological products.

French specialists are well placed in water purification. They are developing new processes such as "hyper-filtration through membranes" (invented by "La Linages des Eaux"). This world first caught the attention of town councillors in Los Angeles "La General des Eaux", a competitor of "La Lyonnaise des Eaux", has won a contract in Spain to clean up the water in Saragossa. In Nice, an engineer has thought up a promising method of eliminating phosphates and nitrates from water. Mineral solutions are injected into the polluted water and these coagulate the phosphates and the nitrates and make them sink to the bottom of tanks.

100% natural materials, which produce no pollution, such as linen, jute and raffia, are making a comeback. In one collection, a dress called "Pollution", attracted considerable attention. It was embroidered with wilted seaweed, bottle-tops and other rubbish conjuring up the seaside at the end of the century.

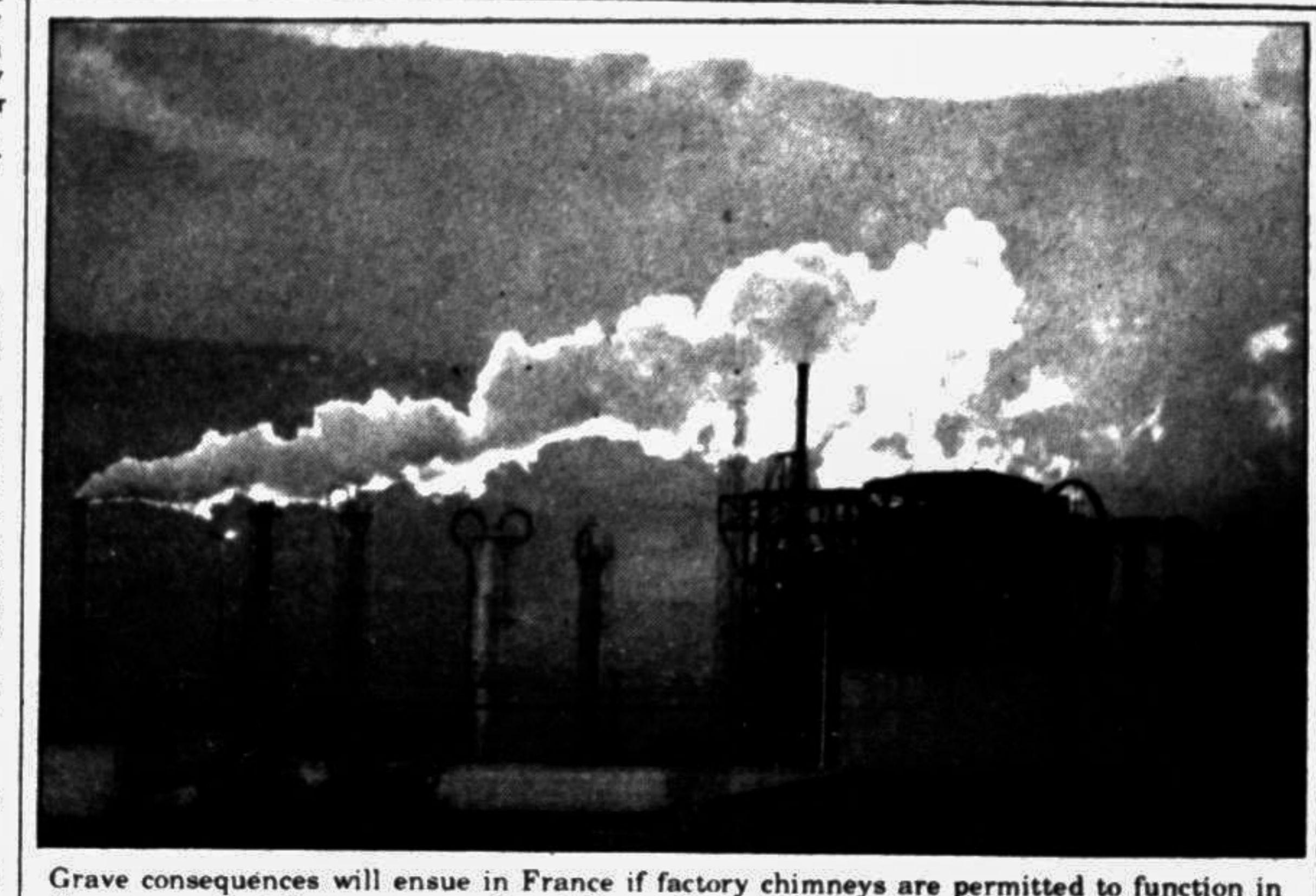
provide the bulk of the protein, vitamins and minerals. Hunting itself accounts for about 10 per cent of food, but amongst men it is the most prestigious of all skills. They hunt with large bows and arrows, often taller than themselves. Skill at hunting is greatly prized and is an essential part of wooing a partner. Often the head of a village is a man with the greatest number of sisters and daughters; for men will be brides.

The first scientific aerial surveys of geology of Amazonia carried out in the 1970s suggested that Yanomami lands contained radioactive materials, tin and gold. Before the end of the 70s independent tin prospectors started to move in. Since the 1980s the main attraction has been gold.

By the mid 1980s a gold rush had developed with up to 200 panners arriving a day and a total of up to 45,000 on Yanomami land, serviced by 120 airstrips. Many of the miners were themselves carrying diseases. They were completely uninformed about the dangers, calling them 'monkeys'. It was hardly surprising that the healthy Indian community was ravaged by disease. Since 1987 the state and the federal governments had prevented voluntary groups from going in with medicines. This restriction was lifted in early 1990. By 1989 in the Paapiu region 90 per cent of the Indians were suffering from malaria.

The November 15 announcement regarding demarcation of the Yanomami territory came in the backdrop of a strong campaign organised by Survival International and other nongovernmental organisations which, by the second week of the month, were on the verge of organising a mass NGO boycott of the June 1992 UN Conference on Environment and Development (UNCED) to be held in Rio, Brazil.

The announcement, however, marks the initial success of a two-decade-old campaign it will take a good deal of efforts and time to properly address the Yanomami problem.



Grave consequences will ensue in France if factory chimneys are permitted to function in the manner that they are proceeding. (Photo: Jerrican/Dandier)

# Glimmer of Hope For The Yanomami

by Mostafa Kamal Majumder

The Yanomami Indian community of Brazil are now close to winning victory in their fight to protect their territory from encroachments by miners, loggers and merchants. Their lands in northern Brazil look more likely than ever before to be protected by the government.

An announcement made on November 15 by President Fernando de Melo of Brazil for demarcation of 9.4 million hectares of Yanomami territory has created a new glimmer of hope for saving the community from extinction. International groups, campaigning for protection and security of the Yanomami for the last two decades are now lobbying for an early allocation of funds for physical demarcation of the territory and other steps to save the Amazonian rainforest that provide shelter to the Yanomami.

The Yanomami community of 9,000 represents a fraction of the 250,000 Indians who still remain in Brazil. Records show Indians comprised a population of five million in 1500 living in the areas of modern Brazil. Encroachment has forced the decline of the population to a mere five per cent of that total in the last five centuries.

Occupying an area of 36,367 square miles near the Venezuelan border, the Yanomami are still in mortal danger. Shooting, invasion, disease, poisoned rivers, casual racism and greedy business interests threaten the community which has lived on this land for thousands of years.

Successive Brazilian constitutions — the most recent was prepared in October, 1988 — have acknowledged the Indians' right to their land. But the reality is that Yanomami territory has been continuously trampled on.

The former Brazilian President Sarney made some gestures towards removing 45,000 gold miners from Yanomami land. But in practice little was done. The federal police was ordered to evict the miners in January, 1990 but the operation was called off after 24 hours in the interests of miners among others. Thus in the past the government broke promises of Brazil's own constitution, which recognizes the Yanomami land rights as well as defied a court ruling of

October, 1989.

Meanwhile, the Yanomami continued to die of diseases, brought in by miners, such as malaria, tuberculosis, flu and respiratory infections to which they have no immunity. The mercury effluents from the mining have poisoned the rivers, killing the fish and destroying the Indians' water supply. The Yanomami are being physically attacked. Miners have even shot children out of the trees, shouting 'monkey'.

Numbers of wildlife, which is central to the Yanomami diet, have declined dramatically. The animals are hunted and scared off by the noise of mining. And by now the Yanomami have become completely disoriented. No longer able to produce their own food, they are reduced to begging.

Juca Filho, the Governor of the state of Roraima (where the Yanomami live) made a 1988 proposal to split Yanomami territory into 19 pockets. He threw all resources of the state behind the miners and against the Yanomami. In Roraima the gold miners have much more influence than the Indians. They have voting power, the Indians do not. Juca claims that 400,000 people depend directly on indirectly on prospecting.

The first real assault on this free people took place in the early 1970s when Brazil's then military government launched a plan for roads through Amazonia deliberately to open up the forests to rich companies and landless migrants. Until that time the Yanomami populations were strong and healthy and actually growing in numbers.

A road — Perimetral Norte — carved through Yanomami lands was never completed, but the preliminary works were enough to introduce a series of diseases — flu, measles, venereal diseases, malaria among them — to the villages. The communities were decimated by epidemics with a 90 per cent loss of life in some places. The survivors were reduced to a few small groups of thin beggars.

the time of the first invasion of miners and missionaries into their lands, they were one of the few isolated communities still to use stone tools.

Shifting cultivation accounts for about 80 per cent of the Yanomami food. More than half the crop fields are also great favourites, as well as vegetables such as corn and other sweet tropical fruits such as peach palm and papaya. In all about 60 crops are grown, of which only 20 or so are for food. The rest are for medicine and religious ritual, or for making the various objects needed by the Yanomami in their daily life.

Hunting gathering and fishing account for about 20 per cent of the food, and pro-



A Kuwaiti oilfield worker at midday prayer near a burning oil well. Hundreds of oil wells were set ablaze by retreating Iraqi troops at the end of the Gulf conflict.

