

TOWARDS A GREENER BANGLADESH

Zakeria Shirazi

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If there can ever be a single, simple and omnibus answer to the growing and complex environmental issues, it is — Forestry. Forests absorb air pollution and purify the atmosphere. Forests influence many ecological factors such as rainfall, soil erosion, soil moisture, flow of rivers and maintain balance of the environment. Forests help maintain and moisture in all seasons.

Besides sustaining the ecology, forests contribute a great deal to the economy. In Bangladesh forests contribute 4.1 per cent to GDP. Sixty six per cent of the country's energy consumption come from biomass sources, of which fuelwood accounts for 14.3 per cent and tree residue 2.7 per cent. Most natural resources are exhaustible but forest resource is renewable.

Annually one lakh people work in the Sunderbans alone. Directly and indirectly one million people draw their sustenance from forests.

The importance of forestry, unfortunately, has not yet received proportionate support in developmental priorities and the planning perspective. Ideally a country should have 30 per cent of its area under

forest for the safety of environment and for supply of timber, firewood and other items. An overpopulated country should have a still larger proportion of its area under forest.

In overpopulated Bangladesh forest area is not only small but gradually declining. At present national forests managed by Forest Department cover an area of 1.46 million hectares or 10.15 per cent of the total land area. Another 0.27 million hectares (1.88%) are under homestead forests scattered throughout the country. There is a sizeable area measuring 0.73 million hectares (5.06%) which is listed as unclassified state forests, devoid of trees but with great potential for afforestation.

The reasons for decline of forests are mainly three: encroachment, transfer of forest land to different organisations and bad management and stealing. It has been estimated that from 1960 to 1989 forest areas measuring 76.576 hectares have been lost to encroachment while another 54,668 hectares have been transferred to different organisations.

An export connected with the National conservation

strategy told this writer that there is not the least possibility of the forest land already land already transferred being recovered; all that can be done is to stop further transfer. Demarcation of forest land is at present unclear and must be made more definite and inviolable, he said.

The forests of Bangladesh can be classed under the following four categories:

1. Tropical evergreen
2. Tropical semi-evergreen
3. Moist deciduous or Sal forest
4. mangrove/Tidal forest

Numbers 1 and 2 which are often indistinguishable are hill forests and No. 4 is the natural forest of the Sunderbans.

Under the forest three Five-Year Plans a total area of 2.34 lakh hectares was brought under forest plantation. The Draft Fourth Plan is under implementation. Twenty six forestry Development projects have been included in the plan. In the mean time the government has taken up the task of preparing a Forestry Sector Master Plan which will take due note of environmental problems.

Apart from expansion of forest areas conservation and management technics are to

be improved. Experts are of the opinion that the Forests Act of 1927 was updated in 1989 to provide it with more teeth. Some other legislative measures are also necessary. What is more important is the implementation of the law. The Brick burning control Act (Act 8 of 1989) is in operation but this has not stopped the burning of loss in brick kilns. Act gives so much power to Upazila chairmen to make exceptions that it has almost become meaningless.

Conservationists are similarly dissatisfied with the Forest policy of 1979 which they say are of a very general nature and does not seem to have any definite goal.

Wood substitution as a government policy is yet to take effect. Recently a trend is being noticed in private establishments to prefer steel furniture but the motive is more economical than environmental.

Partial wood substitution in government offices has become highly imperative. Will that run counter to the interest of BFIDC which supplies wooden furniture to Government offices? Not necessarily, said a conservationist,

since BFIDC supplies not more than one-fourth of the total requirement.

Change in living habits can also go some way towards economising wood and fuel use. The improved fuel-saving stove devised by Bangladeshi scientists has gained very limited acceptability among the rural people. This stove saves fuel upto 30 per cent. In many countries matchsticks are made of synthetic material. An environmentalist deplored that at present there is no coordination between the industries and the ministry of environment. Nor is there much coordination between Government

agencies and the NGOs whose role in social forestry is vital.

The technique of wood extraction followed in this country causes unnecessary wood loss. Trees are felled at a height of 1.5 meter. It has also been estimated that crude method of sawing causes wood loss of another 10 to 25 per cent. Felling of trees under contract inside the forest is done by the contractors' hired lumbermen. This creates opportunity for over extraction and stealing. It has been suggested that Forest Department officials should themselves do the felling and the contractors' men should not have a free

hand.

In the Sunderbans the sundri trees (technically called *Heritiera fomes*) are dying. A series of investigations have failed to find any fungi. It is thought that salinity is the cause. The trees are to be saved.

Permanent forest covers must be maintained in the catchment areas of rivers and streams, especially in Chittagong, Chittagong Hill Tracts, Cox's Bazar and Sylhet to prevent river erosion and maintain the ecological equilibrium. To help the growth of homestead forests which vary in size for 0.02 to 0.05

hectares, more extension workers should be deployed. The upazila forestry project has shown little result and so special emphasis must be laid on successful implementation of this project.

Land in this country being in short supply, forests are to be developed in blank and denuded areas in the national forest, on fringe lands such as roads, highways, embankments, riverbanks, and in the unclassified state forests of Chittagong hill tracts. Not only environmentally but in every other sense the future of this country largely lies in making it greener.



For a country like Bangladesh with a population burgeoning at an undesirable speed, more trees are needed to ensure a better environment. — Star photo

THE apparent chemical poisoning of Bangkok slum dwellers in the wake of massive chemical fire nearby underscores pollution and overcrowding problems that have been neglected in some of Asia's largest cities.

In mid-March a fire ripped through the Klong Toey slum here, leaving thousands homeless. Cannisters of toxic chemicals exploded and created a toxic cloud that drifted overhead like a giant deathtrap.

Men, children and pregnant mothers, who inhaled the fumes, have shown alarming concentrations of chemicals in their blood. Wounds are not healing, skin is peeling off and babies have stopped moving in the womb, according to recent reports.

Bangkok's leading advocate for slum-dwellers, Prateep Hata, estimates that 30,000 people — or half the total population living in the affected communities — have been stricken with some ailment.

Such a catastrophe implies human negligence at the highest level, though authorities have been slow to prosecute or even point the finger.

But the ramifications go further. The incident proves once again that governments in the region — this time it just happens to be Thailand — are not taking seriously the UN's call to integrate infrastructure development and environmental protection.

Nor has the basic principle of "polluter pays" been applied in this case. It appears that victims of the disaster will be left beating up against a bureaucratic wall if they seek compensation and health care.

The concept of environmental protection and assessment has been paid much lip service in recent months by Asian government officials. In February, experts and officials affirmed their commitment to a regional environment strategy that would give them priority.

"You have to be a bit skeptical of meetings of experts when you look at what is happening on the ground," said an official of the UN Development Programme (UNDP) in Bangkok. "The experts all agree that something needs to be done. Then there is Thailand. Who is responsible here?"

Overcrowding, chemical hazards and pollution grow worse every day in cities like Bangkok.

The recent economic and social survey for the region estimates that from a quarter to two-fifths of the urban population in Asia and the Pacific live in "overcrowded squatter settlements, city tenements, or on pavements without constructed shelter."

Agencies and organisations that could take effective action on behalf of the slum-dwellers are left powerless in Thailand due to the lack of democratic institutions. Environmental groups in Thailand have had their voices muted since the February coup d'état.

Citizens have been left in the lurch about the health hazard they now face. Slum dwellers stood ignorantly watching the fire as they inhaled toxic fumes when a simple warning could have saved them from the symp-

United Nations' Economic and Social Survey of 1990 released in March. With more people drawn to urban areas for jobs and education, the situation promises to grow worse.

"If we are going to have decent urban development, we certainly don't want other towns to come up like Bangkok," said a UNDP officer in Bangkok.

The quality of life for many Bangkokians has improved inside their air-conditioned offices and homes, but worsened considerably once they stepped outside the front door.

"It is a hazard to go outside," said the official. "Bangkok was a much more pleasant city to live in 50 years ago."

Even Ona refuses to say if the mine will ever work again. The few mine buildings which escaped the torches of the

With little or no medicine, the health problems in Bougainville are acute. Five thousand people have died from normally preventable or treatable diseases such as malaria, tuberculosis and dysentery, says Dr Charles Loubat, the head of Bougainville Red Cross. "The dramatic increase in the number of malaria cases is the result of a lack of anti-malarials and the ending of spraying of mosquito breeding areas after the blockade."

He shares the popular view in Bougainville that their secession presents PNG with three unsavory possibilities: more unacceptable compensation claims at other PNG mineral projects underway or being negotiated; encouragement to other potential tribal break-aways on New Ireland and New Britain islands; and substantial loss of government revenues which has already fuelled unrest and led to the imposition of a dawn-to-dusk curfew in Port Moresby, the PNG capital.

Mood swings on the island are as changeable as the tropical weather. Without a radio station; telephones and only limited fuel for transport, rumours abound. Each day its cit-

Population Crunch Squeezes Squatters in Tighter Quarters

by Philip Gorton

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toms they are now suffering from.

A local newspaper condemned the government's inaction saying, "most outrageously of all no comprehensive list of the chemicals released into the atmosphere by the fire, or the symptoms that may be caused by exposure to them, has been made public."

Though Thailand, the Philippines and Indonesia have been able to provide their citizens with basic health care and education, safe water and safe air are in short supply. Many experts say they are disappearing.

The water and air are safer in rural areas than in urban areas in both Manila and Bangkok, according to the

city once had trees and clean canals that flushed into the Chao Phraya River. Today, most canals have been filled in, leaving stagnant, filthy water. Trees have been sacrificed to road expansion that still cannot contain the millions of cars that stand at a virtual standstill everyday at rush hour.

Rural folk who come to Bangkok for a taste of the "good life" find that they must take up residence in small shacks set on waters polluted with human excrement. The homes are a fire hazard and a breeding ground for rats.

Activist Prateep Hata is leading efforts to upgrade the city's slums. But her efforts often appear futile as the population crunch and real estate boom are squeezing slum dwellers into increasingly tighter living quarters.

Squatters without guarantees that they can remain on land, have no incentive to upgrade their living quarters.

The UNDP is helping slum leaders in their efforts to work out compromises with wealthy landowners.

The concept is called "land sharing". Often what it means is moving more people into closer proximity and allowing a highrise to go up next door.

The projects that are being assisted, are high-minded.

— *Depthnews*.

REFUGEES ACCUSED OF 'SHAVING THE LAND'

by Berhane Woldegabriel

KHARTOUM, SUDAN: Refugees have become an ecological scapegoat for the Sudanese government. They are accused of destroying the environment — and for most of the other ills which beset the country.

The Government-owned Radio Omdurman recently claimed refugees were responsible for widespread deforestation, unemployment, inflation, scarcity of essential commodities, arms and liquor smuggling, prostitution and corruption.

"The refugees have shaved our land," say the East Sudan authorities, and a government study of Kassala, a town bordering Eritrea, also scapegoats refugees.

Refugee representatives believe that inappropriate agricultural policies and laws are to blame for environmental degradation. They say deforestation is a result of large-scale mechanised commercial farming for cash crops. But their voices are not heard on the state-owned media.

The United Nations High Commissioner for Refugees (UNHCR) says there are 940,000 refugees in the country. They have fled from neighbouring states, across borders that are to big to control. Sudan, Africa's largest country with a population of 25 million, has nine neighbours, all of which suffer political instability and economic hardship.

The majority of refugees come from Eritrea and elsewhere in Ethiopia, others from Chad and Uganda. Libyans and Palestinians sought refuge during previous administrations and refugees from the then Belgian Congo settled in southern Sudan as far back as the late 1950s.

Since the fall of Colonel Mengistu's regime in Ethiopia in June and the apparent independence of Eritrea, another 150,000 refugees have crossed into Sudan.

The burden on Sudan has been considerable, and for years its open-door policy to refugees has put Western governments to shame. But recently the government has been financially penalised by Western donors for its support for Iraq and for its continuation of the long-running civil war in the South.

The Sudanese response has been to try and prompt the international community into sharing the costs of looking after the refugees by inflating refugee numbers to two million and blaming them for destroying Sudan's environment through deforestation, contributing to deforestation and drought.

But refugees were encouraged to settle near the borders of their own countries, which often happened to be areas containing forests.

They build their huts and compounds from wood and grass, which need renewal every few years. In the baking sun of Sudan the dry huts are susceptible to fire, even from a

small spark from a traditional stove. However, most Sudanese also build with wood and grass.

The refugees depend on charcoal for fuel — but so does Sudan's urban elite, because of the unreliability of gas and electricity services in towns.

A refugee representative in Khartoum says: "The only time we use more wood than our Sudanese brothers is when we take a long time to use more wood than our Sudanese brothers is when we take a long time cooking the extra-hard beans we receive from UNHCR and the World Food Programme!"

About 70 per cent of the refugees are, in the words of the UNHCR, "spontaneously settled": they live outside the official settlements, unassisted by UNHCR or the government. They face enormous difficulties of survival, especially at a time when the country is threatened with famine.

In some of the 40 settlements and reception camps set up in the Eastern Region, covering an area the size of Kuwait, five acres (about 2 hectares) of rain-fed agricultural land was allotted each family to allow in to be self-sufficient at least in the staple crop, sorghum.

But most allotments in the East are no marginal land where annual rainfall ranges from 600mm to zero.

During the recent cycle of drought years, none of the Eritrean and Ethiopian refugees in the Eastern Region land settlements harvested enough food to feed themselves for even half a year.

Nor have the refugees been able to earn enough legal income from non-farming activities to support themselves. A programme of income-generating activities set up in 1981 by the International Labour Organisation (ILO) and UNHCR in cooperation with the Sudanese government was a failure.

By 1990 only US\$4 million of the US\$22 million originally pledged had been spent and fewer than 50 refugees had become self-reliant.

Refugees are not allowed to own fixed assets such as land and buildings so entrepreneurial refugees have been confined largely to transport sector.

Those who built up wealth from transport businesses lost money in April when General El Bashir's two-year-old government introduced new currency. Refugees were not allowed to open bank accounts so were forced to pay high commission charges by exchanging their money through local dealers.

Exchange controls also prohibit refugees from receiving remittances from relatives in the oil-rich Arab states.

POLLUTION PROTEST THAT LED TO WAR

by Jim Beatson

ARAWA, Bougainville: Rimmed by the misty jungles of the Panguna mountains, the Bougainville copper mine lies dormant, like a vast dried-out tropical ulcer, three kilometres wide. The only sound comes from workshops as members of the Bougainville Revolutionary Army (BRA) turn out rifles using water pipes for barrels.

The mine once provided Papua New Guinea with 17 per cent of its government revenues and 45 per cent of its foreign exchange. It also provided the 160,000 people on the island of Bougainville with one of the highest standards of living in the Pacific. But in May 1989 the mine was forced to close: the BRA's six-month campaign of blowing up the pylons had succeeded.

The Bougainville mining agreement was negotiated by Canberra six years before Australia granted independence to PNG. It gave 20 per cent ownership to PNG, 26 per cent to private Australian investors and 54 per cent to Conzinc Rio Tinto of Australia which is 49 per cent owned by Britain's Rio Tinto Zinc, the biggest mining company in the world.

The agreement was designed to help finance development in the newly independent PNG. But Bougainvillians were not prepared to fund this growth at their own environmental and social cost.

Traditional landowners were dissatisfied with the level of compensation payments from Bougainville Copper and unhappy about the pollution caused by the mine. The River

Jaba became a mud bath and the fish caught in the Empress Augusta Bay where the Jaba discharges were found to be ulcerated. Villagers had to be moved from their homes. Even the local delicacy, large "flying fox" bats, had flown away.

In early 1989 PNG sent 1,600 troops to quell the rebellion which resulted from the dissatisfactions. They were forced to withdraw one year later. By then the secessionist movement, which developed in the 1960s, had taken on a military aspect and 39-year-old Francis Ona had declared himself president of the republic of Bougainville. Now BRA troops await a possible second invasion.

Even Ona refuses to say if the mine will ever work again. The few mine buildings which escaped the torches of the

Bougainville Revolutionary Army are now his headquarters. He says: "We can survive without the mine," and adds: "If the mine is to reopen we have to sort out the political problem first. We are setting up village-level government. I'll leave it up to them to decide."

The day after Ona declared Bougainville a republic on May 17, 1990, Papua New Guinea Prime Minister Rabble Namaliu began a blockade of the island. Now, the shops are empty.

Petrol stations, government buildings, engineering workshops, the radio station, telephone exchange, airport and police stations were burnt down during the war. Only the dozens of Catholic, United and Seventh Day Adventist churches of these religious people remain intact.

Sewerage and water sys-

tems remain but there is on fuel to run them. "Plentiful rivers and good rainfall are a blessing but we lack the things that go with them: soap, detergent, toilet paper," explains Martin Miriori, formerly an administrator with South Pacific Forum and now Coordinator of the self-styled Interim Government.

With little or no medicine, the health problems in Bougainville are acute. Five thousand people have died from normally preventable or treatable diseases such as malaria, tuberculosis and dysentery, says Dr Charles Loubat, the head of Bougainville Red Cross. "The dramatic increase in the number of malaria cases is the result of a lack of anti-malarials and the ending of spraying of mosquito breeding areas after the blockade."

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The people are learning how to make do without the riches of Bougainville Copper.

Jim Tausire, BRA Commander in Wakulani on Bougainville's north-east coast, seems as proud of his petrol made from coconut milk and the washing detergent made from cocoa beans as of the BRA's military successes.

He says: "We made two kinds of fuel, a wet one for kerosene lamps and a more complicated dryer process for diesel and petrol. We also make a pretty good home brew from pineapples."

Tausire believes there will be more fighting: "It is inevitable. We believe the Papua New Guinea Defence Force will try to invent some diversion or confusion to create a new invasion. We believe the war will start again."

zons listen angrily to PNG radio stations which they claim misrepresent the strength of their commitment to secession and hope for announcements from foreign governments and organisations of aid or pressure on PNG to lift the blockade.

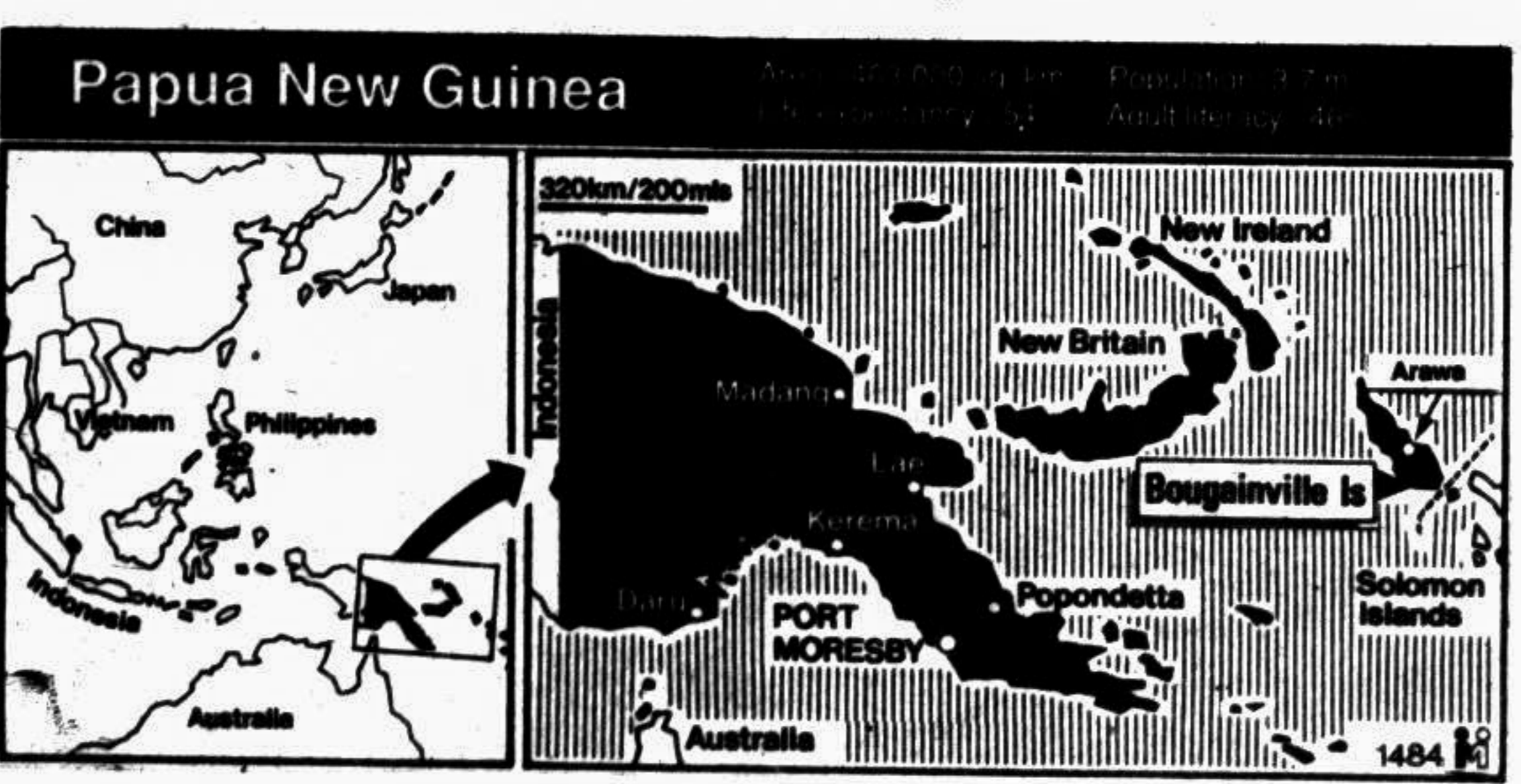
Francis Ona simply says: "We want the blockade to end. We want the ability to trade." Closure of the mine has turned Bougainville into a cocoa bean economy, but he says that this is sufficient: "Cocoa gives us US\$28.47 million a year, which is enough to enable us to run this country."

Their cocoa economy provides an average annual income of US\$285 per person which could double if plans succeed to export livestock such as pigs and chickens. While the blockade prevents any goods entering the island, PNG companies have recently been allowed to buy cocoa from the island.

If the mine was reopened, PNG's previous tax and dividend return rate suggest that average income per person could rise to well over US\$1,000. An aerial survey undertaken before the mine's closure revealed good mining prospects elsewhere on the island.

In the old provincial capital of Arawa, most people are looking beyond the immediate impasse. Martin Miriori would like the mine to be reopened with a new mining company "but coming in on our terms" with less pollution, a larger workforce and reduced profits.

— PANOS



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