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CANADA'S PERIODICAL ON REFUGEES

# REFUGE

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SPECIAL ISSUE

## ENVIRONMENTAL REFUGEES

This is the first *Refuge* issue devoted to "Environmental Refugees." We are pleased to present a collection of articles that deal with environmental problems in a wide range of countries across four continents, particularly Asia. In these articles, the approaches to the topic as well as the styles of writing vary a great deal. This editorial introduces some of the important issues raised by the contributors, as well as adding to the debate.

### From Natural Disasters To Ecocide

We have tried to present these articles in a logical progression, going from a discussion of refugees fleeing natural disasters to those displaced by human-made causes, i.e. dams and other development schemes, and finally to those who are the victims of intentional environmental degradation or "ecocide."

In discussing the people of Bangladesh fleeing their homelands after they have been devastated by cyclones and tidal surges, Muinul Islam employs the term "ecological refugees."



PHOTO: V. LASSAILLY-JACOB

Herdsman in Mali moving to the South

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**REFUGE**

YORK LANES PRESS  
Centre for Refugee Studies  
Suite 351, York Lanes, York University  
4700 Keele Street, North York  
Ontario, Canada M3J 1P3  
Phone: (416) 736-3843 • Fax: (416) 736-3837  
Electronic Mail via Bitnet Address:  
REFUGE@YORKVMS

*Editor*

Howard Adelman

*Guest Editors*

Véronique Lassally-Jacob

Michael Zmolek

*Associate Editor*

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This suggests that such a term could be used to refer to people fleeing natural disasters such as earthquakes, hurricanes, floods, volcanic eruptions and the like.

Ogenga Otunnu takes a theoretical approach to the question of environmental refugees in Africa. Africa holds only about ten percent of the world's population, but nearly twenty five percent of its refugees. He discusses the wide variety of environmental problems in Africa and various attempts to alleviate the recurrent suffering. He cites the Food and Agricultural Organization (FAO) and various well-known scholars who view the problem as basically one of overpopulation and misuse of land, arguing against such an explanation "which reduces the causes and persistence of the crisis to individuals and fails to understand the conditions under which the crisis occurs [and which] is a false comfort since it cannot lead to appropriate actions."

In presenting a broad overview of pollution, hazardous waste and the devastation of Chernobyl in the Commonwealth of Independent States (CIS), Renate Rybizki talks of regions under "critical ecological situations." She raises the issue of finding "ecologically clean" regions for the resettlement of persons currently living in "unclean" regions, which now comprise twenty percent of the former USSR. Hence, this enormous problem appears to be insoluble. While rapid industrialization and poor management have often been cited as the causes of pollution and environmental degradation in the former Soviet Union and Eastern Europe, it is instructive to contrast such problems with the environmental problems brought on by so-called development schemes in various "developing countries." The three pieces that follow Rybizki look at the effects of development, including the case of communist China. The term that is sometimes heard in labelling the people ousted by such projects is "developmental refugees."

The Friends of the Earth from Malaysia give us a broad overview of many different types of "environmental

displacement" in Malaysia. Industrialization, development schemes and subsequent land speculation have resulted in a plethora of environmental catastrophes for rural and indigenous peoples, often resulting not only in displacement, but repeated displacement. The authors of this piece work closely with the affected communities and so they try to integrate those views into their critique.

A similar approach is employed by Dave Hubbel and Noel Rajesh, who review the plans for eucalyptus tree plantations by the government of neighbouring Thailand, "which is forcibly evicting over ten million people from the country's National Forest Reserves." This figure is nearly a fifth of that country's population. The authors write: "The eviction programme has been shoddily formulated and callously implemented without regard for the welfare of village people."

Joseph Whitney examines the proposal to build the Three Gorges Dam on the Yangtse River in China. The dam will be the largest single hydro project ever and will displace between 539,000 and 1.2 million people (depending on the water level that is set). He concludes that a large number of costs have not been perceived or evaluated in the resettlement proposal and suggests that "the symbolic benefits of large dams have a nonmonetary value that is perceived to exceed all other costs." Hence the real costs in human, environmental and even monetary terms may be disregarded.

We turn now from cases where dislocation is the residual or prearranged consequence of development projects to cases of war. Jim Glassman writes of Vietnam and Cambodia, where massive bombing was employed, forcing peasants to flee to the cities. Glassman asserts that "ecological destruction has become integrated into counter-insurgency as a method of producing the refugees necessary for effective control of the countryside by imperial powers and their allies." He employs the term "ecocide" to describe the intentional destruction of the enemy's environment, citing the massive use of herbicides by

the U.S. military in Vietnam (as much as 41 percent of South Vietnam's mangrove forests were denuded) and the destruction of Salvadoran forests by napalm and other defoliants.

Destroying the environment is also a way of preventing refugees from coming back to their homeland. According to John Rogge, the Iraqi army sowed mines along roads, in orchards and in vineyards, around springs and wells and along mule tracks in order to terrorize the Kurdish population and discourage them from returning to their villages.

Moreover, it can easily be overlooked that environmental degradation can be a secondary consequence of either a development project or strategic destruction. Such residual effects may produce migrants or refugees. For example, the construction of a dam in a densely populated river valley may have a devastating impact on millions of downstream residents if their production systems are dependent in large part on annual flood recession. Glassman notes that in Vietnam the "flooding of rice lands continues to be a major problem because so many hillsides are denuded of foliage that rainfall is not absorbed adequately and rushes down onto the plains."

### **Environmental Refugees: The Value of a Category**

An environmental refugee is often defined as someone fleeing from environmental decline. However, a recent article by Astri Suhrke and Annamaria Visentin\* criticizes this definition in that: "It is so wide as to render the concept virtually meaningless." And rather than shy away at this juncture, the authors decide to forge ahead and define the term. "Uncritical definitions and inflated numbers lead to inappropriate solutions and compassion fatigue. We should not, however, reject outright the concept of environmental refugees. Instead we should formulate a definition that is more narrow but [sic] more precise."

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\*Astri Suhrke and Annamaria Visentin, "The Environmental Refugee: A New Approach," *Ecodecision* (September 1991): 73-74.

They proceed to make a distinction between *environmental refugees* and *environmental migrants*. The latter is someone who "makes a voluntary, rational decision to leave a region as the situation gradually worsens there," a decision that may be only partly based on environmental factors. She/he "moves by choice from an area." Juxtaposed against this is the definition of environmental refugees: "people or social groups displaced as a result of sudden, drastic environmental change that cannot be reversed." They are compelled to flee.

The distinction appears to be merely one of time. But the authors elaborate that the difference is between the truly desperate (and vulnerable) who cannot expect support from their own governments and are therefore refugees,

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***"...[T]here is a danger that we will begin to invent new categories simply by divorcing them from other categories and create hierarchies of terms by which people are somewhat arbitrarily classified."***

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and those with more resources, contacts and the time to plan for their migration. Suhrke and Visentin admit that "the separation is not absolute between the categories ... there may be a shading between the two." These authors are concerned primarily with distributing relief aid and hence the problem arises of how to categorize the various types of beneficiaries according to their needs. However, such a distinction is vague. It does not help us to understand the relationship the two groups have to each other and to the rest of the social groups in the society. It also does not confront political questions directly. It needs to be asked: Were the people involved coerced or not coerced to move? Did they have any say in the political process that may have resulted in the decision that they would be evicted/resettled? Does the religious, ethnic, gender or age group to

which these persons belong suffer any forms of discrimination or marginalization in the society? Without adequately addressing the socio-political, economic and historical dimensions for each specific regional problem, there is a danger that we will begin to invent new categories simply by divorcing them from other categories and create hierarchies of terms by which people are somewhat arbitrarily classified.

Suhrke and Visentin's distinction between environmental migrant and environmental refugee is thus an attempt to place particular emphasis on the most desperate of the population and to promote them to the status of "refugee." Yet such attempts to employ the term "refugees," as well as attempts to designate people ousted by development projects as "developmental refugees," or persons forced to abandon their lands due to war as "war refugees," are counter-productive and simply run up against the blinkered UN definition of refugee, which requires the crossing of international borders.

Writing of people in Bangladesh fleeing their homelands devastated by natural disasters, Muinul Islam mentions that "ecological refugees" in Bangladesh lose sympathetic public attention after the initial media attention subsides and the official relief camps are closed down. "Conceptually, these refugees are variously termed as "economic migrants," "distress migrants," or "compelled migrants," but the compulsive push of circumstances becomes so much a matter of life and death for the refugees fleeing the ravages of natural disasters that normally they have no choice but to migrate. Therefore, the term refugee should be more appropriate than the term migrant." Islam would like the victims of natural disasters in Bangladesh to receive the same sorts of comprehensive assistance that many cross-border refugees receive. He argues that the concept of a refugee has been stereotyped as someone fleeing the ravages of war, civil strife, political repression, famine or disease. The debate on famine aside, none of these causes necessarily involve an ecological dimension.

In discussing the complex problems of environment, poverty, war and the like in Africa, Ogenga Otunnu points out that environmental degradation is both a cause and an effect of poverty. He argues "the nature of the neo-colonial states and the international economic system must be overhauled." Poverty cannot be left as a problem for individual governments in Africa to deal with because many larger issues are involved. Therefore he urges that the UN should begin to recognize environmental refugees as refugees and act accordingly.

### **Problems of Relief and Assistance for "Refugees"**

The United Nations definition of a refugee requires that the person cross international borders and be able to prove that she/he suffers from religious, ethnic or political discrimination in order to be recognized as such. Migrants, or "internally displaced persons" are therefore people who migrate *within* their own country. This distinction is problematic in many ways. In particular it is a problem with the concept of nation states, in that other nations may be asked to step in and assist people who have crossed borders, thus sparing the host nation some of the cost of assisting such people.

Environmental refugees are often people who migrate within their own country. They are "internally displaced persons" who, except in particular cases of acute distress, are left to the mercy of their own governments — governments that may be oppressive, or even the cause of their migration. But relief given to persons affected by disasters and who remain within their own countries normally involves only short-lived projects.

People displaced by development are often promised adequate compensation (though they may have had no say in the decision to move). Compensation and plans for

resettlement often involve corruption and leave people in a much worse condition than before their displacement. Thus in Thailand, 250,000 families evicted from their land will be resettled on "an area of land one-quarter the size of that from which they once sustained themselves. Of this area, land suitable for agriculture is often already owned and farmed by other villages" (Hubbel & Rajesh). And in Malaysia, the resettlement of 3,000 Iban natives who, instead of the 11 acres of cleared land that they had been promised per family,

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***"Formulating definitions that can be useful as conceptual tools is clearly necessary, but there is a risk of developing hierarchies that may be used for political manipulation and bring about nightmarish difficulties for people trying to find refuge."***

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received only one acre. Furthermore, Sahabat Alam reports that "they had to pay for their new longhouses when they were informed earlier that it would be free."

Finally, it can hardly be expected that the same western governments who are contributing to the increasing numbers of refugees — (a) by funding development projects that displace people, or (b) by waging war against rural insurgencies — to donate tremendous funds to those same refugees. In the case of (a), assistance may be given as part of the resettlement and compensation part of the project, but often such funds are inadequate, or are squandered through corruption; and in the case of (b), we need only consider the case of Vietnam, still suffering the effect of an embargo imposed by the United States.

### **Conclusion**

The situation of people fleeing environmental or other kinds of devastation demands solutions. Solutions will only be as good as their analysis, planning and implementation. Formulating definitions that can be useful as conceptual tools is clearly necessary, but there is a risk of developing hierarchies that may be used for political manipulation and bring about nightmarish difficulties for people trying to find refuge. Moreover, the academic tradition today demands specialization which precipitates a search for new fields of research and new categories. However, the promulgation of definitions and categories must not overtake the search for real, viable solutions. The misery of others must not be used as simply the domain for carving out a career niche.

Economic refugees, environmental refugees, migrants, internally displaced persons, whatever we call them, all are one in that they are all destitute and oppressed people. Certainly there are degrees of poverty, degrees of oppression and even degrees of environmental degradation, but the solution can only lie in building sound economies, legal structures that safeguard human rights and that minimize environmental degradation, nay more, those that practice regeneration of the environment.

The pieces presented in this issue clearly demonstrate the wide variety of environmental problems that produce "refugees," the hitherto poor attention given to them and the need to more closely examine the environmental factors that lead to their flight in search of refuge. Those factors should not be examined in a closet, however. Rather, environmental factors urgently need to be more clearly incorporated into the agenda — alongside socio-political and economic concerns — of all serious research and analysis in the social sciences and in the "development" field as well. ■

*Véronique Lassailly-Jacob  
Michael Zmolek  
Guest Editors*

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*Véronique Lassailly-Jacob is a visiting Research Fellow and Michael Zmolek is a Research Assistant at the Centre for Refugee Studies, York University.*

# NATURAL CALAMITIES AND ENVIRONMENTAL REFUGEES IN BANGLADESH

Muinul Islam

## Ecological Catastrophes In Bangladesh

Bangladesh is one of the most disaster-prone countries of the world. Whenever the country hits the headlines of the world press and the other media, some natural or man-made calamities occupy the centre of attention, playing havoc with human lives, crops, cattle raising, poultry, fishery, houses, roads, forests and many other types of property and economic infrastructure.

The loss of about half a million people during the 1970 cyclone and tidal surge stunned the world into disbelief about the killing potential of such a natural phenomenon. After the colossal losses of human life during the two major man-made disasters of the liberation war of 1971 and the famine of 1974, natural calamities have again emerged as the major killers in this region during the last decade, the most recent devastation being the cyclone and tidal surge of 29 April 1991.

Already recognized as the most severe cyclone of the century to hit the region, it has killed more than 140,000 people, which does not surpass the number of casualties during the 1970 cyclone, but this cyclone caused more widespread havoc in terms of crops, property and infrastructure than any other natural disaster in the country's history. Killer cyclones capture world attention because of the catastrophic toll they take on human life and resources, but they are only a few in a long series of natural calamities that frequently afflict Bangladesh, even several times a year.

*Muinul Islam is Associate Professor in the Department of Economics, University of Chittagong, Bangladesh.*

*This article is an abridged version of a paper presented by the author at the Conference on "Worldwide Refugee Movements, Development Politics and Human Rights." (New York, November 8-9, 1991).*

From the Bangladesh Bureau of Statistics publication, from which we compiled Table 1, we find that the decades of the sixties and the seventies of this century are the most turbulent in terms of cyclones with sixteen and fourteen killer cyclones recorded in these two decades respectively (BBS: 25-29).

Cyclones and tidal surges are, no doubt, the most devastating of the natural disasters to hit the entire coastal belt and offshore islands of Bangladesh, but other types of disasters also hit different areas of Bangladesh quite frequently. Tornados and "norwesters"<sup>1</sup> are regular visitors in the two yearly storm seasons of April-May and October-November. So are floods and flash floods, which inundate the lowlands and delta regions in different parts of the country several times each year during the monsoon rains. In some areas, *norwesters* are accompanied by incessant rains, which cause flash floods.

In a country situated at one of the great river deltas of the world, the Ganges-Jamuna-Meghna delta, it is natural that floods are a regular phenomena in Bangladesh. The economic life of the people is organized with this in mind, and the people have adjusted their lives to an ecosystem where floods are expected, and sometimes welcome visitors. But the severity and the timing of floods quite often surprise people. Some of the recent floods affected more than two-thirds of the total area of Bangladesh, and the devastation caused to crops, houses, roads, embankments, cattle, poultry, fishery and all other types of economic infrastructure was enormous. Floods take a smaller toll in terms of human life, but the magnitude of loss they cause in term of resources, such as in the floods of 1974, 1987 and 1988, may reach catastrophic proportions.

Besides floods and cyclonic storm surges, ecological phenomena like river and sea erosion,<sup>2</sup> droughts,<sup>3</sup> water-logging,<sup>4</sup> increasing salinity,<sup>5</sup> siltation and drying-up of river beds,<sup>6</sup> change of river course,<sup>7</sup> spread of desertification,<sup>8</sup> the receding of the ground water table, etc., have become part and parcel of the life of the people of Bangladesh. These phenomena do not make sensational news headlines, but the sum total of the economic losses incurred by them in different areas may in some years reach catastrophic proportions as well. Therefore, it is not surprising that natural calamities are inevitably mentioned as a crucial factor behind the impoverishment of the vast multitudes of people in Bangladesh.

Though it may provide a ready-made excuse for apologists, whereby the major share of the blame for the inexcusable poverty and deprivation of the masses can be laid on the vagaries of nature, it is, no doubt, true that almost all economic activities in such an ecosystem are virtual gambles with nature.

It is quite natural that the poorer segments of the population should be the first to lose out in the gamble of life. If we analyze the social differentiation and the marginalization process in the rural areas of Bangladesh, we find that the changes in production relations in peasant societies are significantly intertwined with ecological factors as well as with institutional, social and political realities in Bangladesh. Impoverishment of the peasant cultivators and sharecroppers, increasing landlessness, gradual marginalization of the small landowners and peasant families, increasingly skewed land ownership distribution, agricultural indebtedness and pauperization of the small peasantry — whatever the issue considered — the

analysis cannot but consider the deleterious effects of adverse changes in the natural phenomena mentioned earlier and the sudden devastations caused by them.

### Refugees in Bangladesh

In this paper, we focus our attention on the refugees of Bangladesh, who are uprooted from their rural homes by an amalgam of economic, social, institutional and political factors, as well as by consecutive onslaughts of natural disasters like floods, cyclones, river erosions, etc. Conceptually, these refugees are variously termed as "economic migrants," "distress migrants" or "compelled migrants," but the compulsive push of circumstances becomes so much a matter of life and death for the refugees fleeing the ravages of natural disasters that normally they have no choice but to migrate. Therefore, the term *refugee* is more appropriate than the term *migrant*.

For example, a marginal farmer or sharecropper loses two consecutive crops, one by flood during the early rainy season, the other by storm surges driven from the sea by the storm wind that inundates the field with saline water in the next storm season of October/November. Such consecutive blows will leave no option for such a farmer but to rush to the city for survival. The farmer may or may not sell the last parcel of cultivable or homestead land, but the decision to migrate is not a matter of choice; it is brought forth by the sheer need for survival.

When a 20- to 30-foot high tidal surge driven by a hurricane storm raging at more than 250 kilometers per hour demolishes everything in its way, including houses, trees, properties and crops, people, cattle, poultry and fisheries are washed away to their death. If the survivors of such a catastrophe find shelter in a relief camp, they cannot simply decide to go back to their ravaged homes, because such a singularly powerful strike of nature completely destroys the economic base of people in the affected areas, and therefore their potential for earning a livelihood for a

long time thereafter. Under these conditions, the decision to become a squatter in an urban area is not a matter of choice. A family whose entire property, both homestead and cultivable land, is lost to river erosion, may be fortunate enough to move to a safer place in the same locality, but more often that

family has no option but to move to an urban slum.

The term "*distress migrant*," or "*economic migrant*" cannot bring out the real plight of these groups of displaced people. Even the term "*economic refugee*" seems to evoke connotations that tend to minimize the utter desperation and

**Table 1: Major Cyclonic Storms and Tidal Surges in Bangladesh**

Date	Region	Phenomena	Death toll
1960, Oct. 9-10	Eastern Meghna Estuary	Severe cyclonic storm, wave 10 ft	3,000
1960, Oct. 30-31	Chittagong	Severe cyclonic storm, surge height 20 ft	8,149
1961, May 9	West Megna Estuary	Severe cyclonic storm, wave 8-10 ft	11,468
1963, May 28-29	Chittagong, Cox's Bazar	Severe cyclonic storm, wave 8-12 ft	11,520
1965, May 11-12	Barisal	Hurricane, wave 12 ft	19,270
1965, Dec. 15-16	Cox's Bazar and Teknaf	Severe cyclonic storm, wave 8-10 ft	873
1966, Oct. 10	Sandwip	Severe cyclonic storm, wave 20-22 ft	850
1970, Nov. 12-13	Meghna Estuary	Hurricane, storm surge 10-33 ft	300,000-500,000
1985, May 24-25	Chittagong, Noakhali Coast	Severe cyclonic storm, surge height 14 ft	11,069
1988, Nov. 29	Khulna	Severe cyclonic storm, surge height 14.5 ft	5,708
1991, April 29*	Chittagong, Cox's Bazar	Hurricane, storm surge 20-30 ft	140,000

Source: Compiled from Table 1.16, Bangladesh Bureau of Statistics, 1990 Statistical Yearbook of Bangladesh (BBS. Dhaka, 1990: 25-29)

\*The data of the 1991 hurricane are incorporated from official data published in various newspapers.

helplessness of such people. The word "refugee," long associated with war, civil strife, turmoil, political repression, famine and epidemics, seems to have stereotyped the concept. Khasiani, writing about refugee research in Africa, complains about this conceptual inadequacy (Khasiani: 371). He writes,

*In defining refugees some studies restrict themselves to the narrower United Nations definition while others apply the slightly broader Organization of African Unity definition. Many other studies are not clear concerning the type of definition adopted. This renders the area of refugee studies vague, confusing, and of limited comparability. [He further laments,] ... refugee populations which settle spontaneously are excluded from estimates of refugee populations since they usually fall outside organised assistance. (ibid.: 373)*

This conceptual confusion is particularly pertinent for "ecological refugees" who lose the sympathetic public attention after the initial media attention subsides, and the official relief camps are closed down. Rehabilitation of such refugees is almost always abandoned halfway; official quarters and relief organisations do not normally follow up on the camp-leavers to oversee the rehabilitation of their economic life.

We are concerned, then, to describe the process whereby ecological phenomena tend to accelerate the process of marginalization and pauperization of the lower rungs of the people of Bangladesh, and have been creating a distinct group of "environmental refugees" in the continuum of "economic refugees" in Bangladesh.

### Ecological Phenomena and Refugees in Bangladesh

Among the poorer victims of ecological disasters like cyclones, tidal surges and floods, the worst affected of the immediate survivors normally seek shelter in relief camps for immediate succour provided by the government, various aid agencies, voluntary organizations and the general public. As the severity of the crisis caused by such a

disaster subsides, the long and arduous problem of rehabilitation arises. It is generally admitted that the loss incurred by the poorer families among the victims is proportionately greater compared to their capacity to sustain such losses. Repair of dwellings, replacement of lost assets, cattle, poultry, furniture and fixtures, etc., add up to a stupefying burden, however meagre the value and volume of those properties and assets a poor family had before the disaster in an absolute sense. Therefore, a great many of them decide to eke out an existence in the urban areas.

They arrive in throngs, crowd the footpaths, railway stations, river terminals, all sorts of public buildings where they can get entry, parks, vacant plots, narrow strips of land by the sides of railway tracks, etc. As beggars, coolies, vendors, domestic servants, rickshaw-pullers, pushcart drivers, they try to earn a living for themselves and their family

members. They are the floating population of the cities and towns of the Third World. It is estimated that about 3,000 people sleep in the platforms of Dhaka railway station, and 1,500 in the Sadarghat river terminal every night. These types of public places are the initial shelters for the newly arriving destitutes.

They proceed to the slums and squatter colonies spread all over the cities or towns and their suburbs. The larger a city is, the greater is the number of its slums. A survey in 1983 estimated that eighteen percent of the migrant population in Dhaka city live in slums accounting for more than eight percent of the squatter poor (Centre for Urban Studies; Majumdar, 1989: 3). It is further estimated that about one and a half million people of Dhaka live in slums and squatter colonies, which comes to about twenty-five percent of the total population, estimated at around six million in 1991 (Majumdar, 1992). A

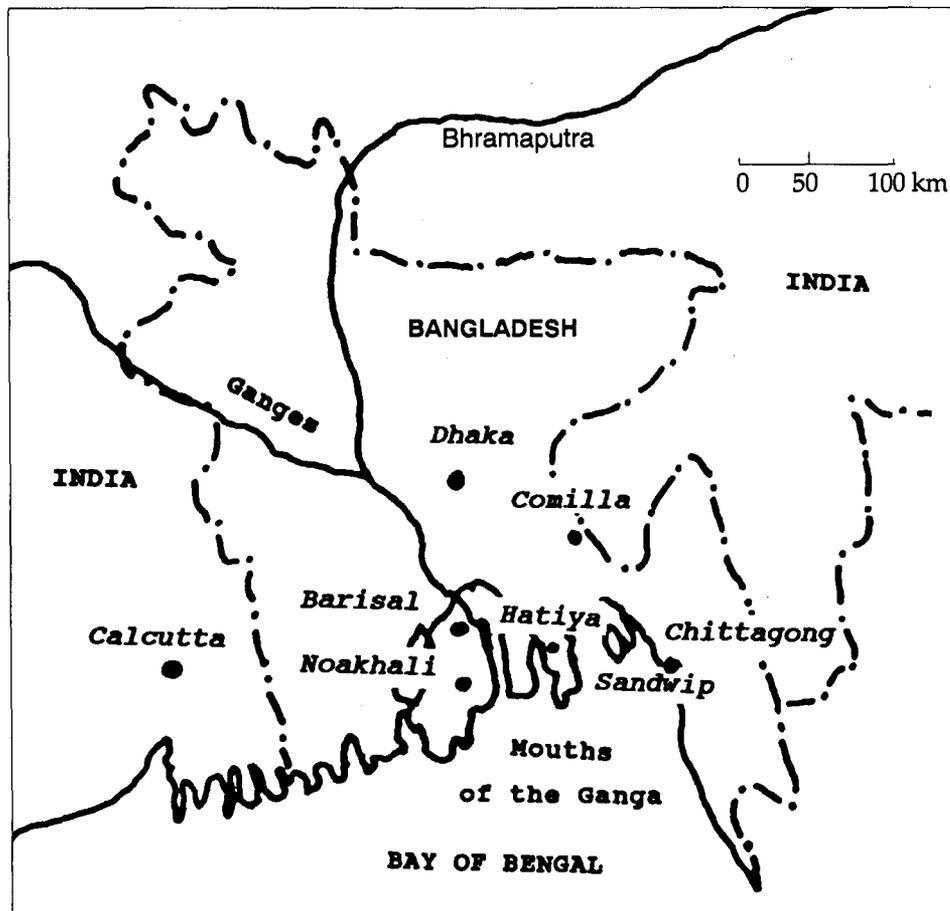


Fig: 1: Bangladesh

significant proportion of these slum-dwellers and almost all of the floating population can justifiably be counted as refugees rather than economic migrants or distress migrants, due to the absolutely minimal standard of living, health and sanitation they endure. The bare floor of the railway platforms is their bed; roadside drains are the latrines; they buy food from the footpath vendors; they carry their belongings around during daytime; street water taps and derelict ponds are their sources of water. Surely these arrangements are meagre even by the standards of refugee camps.

The Economic and Social Commission for Asia and the Pacific (ESCAP, UNO Agency) defines distress migration as that which is caused by periodic famines, droughts, floods and other natural calamities (ESCAP: 12). But the conditions of the environmental refugees of Bangladesh call for a redefinition of these people as refugees proper rather than migrants. Khasiani rightly comments:

*This population is forced to migrate because of economic hardships which may be caused by environmental calamities or wars. This migration is in search of livelihood and their destination may be different areas within the same countries or across borders into neighbouring countries. These individuals are displaced and live in refugee-like conditions.* (Khasiani: 371)

The fact that these refugees fall outside organised assistance should not restrict them from being categorised as refugees.

For the last two decades, these environmental refugees have also been moved to the relatively inaccessible and sparsely populated hilly areas of Chittagong Hill Tract, or CHT. A massive resettlement program encouraged by the government to counter the insurgency activities launched by the tribal nationalities of these areas has succeeded in attracting about half a million destitute and displaced people from the disaster-prone coastal areas and off-shore islands into these hostile settlements. The wrong political designs of the rulers notwithstanding, this program is a cruel

move, because these refugees are used as pawns and as the first line of defense against armed insurgents, who frequently attack, kill and plunder these hapless people in the settlements. In fact, these settlements could be considered as refugee colonies, the only difference being that these were established in the danger zones of Chittagong Hill Tract,

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***“A massive resettlement program encouraged by the government to counter the insurgency activities launched by the tribal nationalities of these areas has succeeded in attracting about half a million destitute and displaced people from the disaster-prone coastal areas and off-shore islands into these hostile settlements.”***

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far away from the disaster-hit areas, to neutralize the numerical strength of different tribal nationalities in the disturbed areas.

The following excerpt from an article on this problem of insurgency will be instructive:

*The abolition of its special status in 1964 opened up the CHT to large scale migration and to economic penetration by outsiders with a callous disregard for the traditions and interests of the indigenous population. From Dhaka the government has launched a systematic scheme to dilute the tribal population of the CHT by means of massive migration from the plains. In 1951 more than nine-tenths of the population of the CHT were tribal, but after the abolition of the excluded area status the demographic balance has altered dramatically: in 1974 the outsiders constituted twelve per cent of the total population; in 1980 it was about 35 per cent and, even though the current figures are not available, it is variously estimated that the tribal people by now have been outnumbered in their own home. Under the late President Zia-ur Rahman's*

*directive a resettlement scheme was launched whereby 30,000 Bengali families were to settle in the CHT in 1979; 25,000 families in 1980, and about 250,000 people in 1982. A settlement programme today continues unabated.”* (Rizvi: 42)

It is important to note that about 30,000 tribal refugees have fled to the refugee camps of India to escape from the counter-insurgency operations launched by the Bangladesh Armed Forces against the tribal insurgents. It is an ironic fate that ecological refugees are being lured to fill in the vacuum. Most of these refugees hail from the coastal areas of Chittagong, Noakhali, Patuakhali, Barisal, and the offshore islands of Sandwip, Hatiya and Bhola. They are displaced and driven out of their homes by cyclones, tidal surges, sea-erosion, change of course of rivers, etc. A noticeable percentage of the settlers hailing from Comilla, Noakhali, Faridpur and Barisal lost their homes and cultivable lands in river erosions and floods. The life risk posed by the insurgents called the Shanti Bahini was considered by these people to be an acceptable danger in the face of hunger and economic ruin caused by natural phenomena.

In support of our contention that environmental catastrophes like cyclones, tidal surges, serious floods, river erosions, sea erosions, etc., drive mainly the poor from their roots and turn them into economic refugees, we note some of the empirical findings of a recent survey conducted by G.S. Sahota (and others) on the victims of the 1988 flood of Bangladesh:

a) The loss of human life in the country was 5,000, cattle 135,000, and poultry birds 1.25 million. Over 2.2 million or one-seventh of all types of buildings and 19 743 kilometres of roads and embankments were fully destroyed. The damage is a colossus... The losses of poultry, goats, cattle, dwellings, and household effects among these destitutes are assessed at 67 percent, 77 percent, 66 percent, 73 percent, and 56 percent, respectively, of the total value of the respective asset. The average respondent household lost assets worth about Bangladesh taka

10,000 or approximately 70 percent of all assets (Sahota: 25);

- b) Almost half of those interviewed (44.6 percent) had also sought refuge in a relief camp during the flood of 1987. Recurrence of similar floods most likely will force a certain segment of the population to become dependent on outside help, at least for a certain period, each time (26);
- c) The findings of the relief camp survey suggest that the 1988 flood damage to this typically poor segment of the population has been colossal. They have lost more than half of their assets, paltry though they were to begin with (28);
- d) The poor do suffer significantly more than the nonpoor in the sense that the losses of overall income of the poor are higher than those of the other strata of the society (29);
- e) As many as 8.1 percent of sample households resorted to distress sales (29);
- f) Natural disasters in disaster-prone Bangladesh hit the poor harder than the nonpoor. ... both the intensity and the extent of damages are higher among the poor (39);
- g) The extent of distress sales is approximately 2.5 times higher on the poor than the nonpoor (39);
- h) The losses of overall income of the lower rungs of socioeconomic classes are at least ten per cent higher than those of the rest of society (39);
- i) While the nonpoor may withstand a dissipation of a good part of their assets without bankrupting themselves, the poor are on thin ice. Once that ice breaks under their feet, it will take much longer for them to recover their balance again (39-40);
- j) Both the intensity and the extent of unemployment caused by floods were consistently higher among spouses of lower socio-economic classes in comparison to spouses from upper socio-economic classes (40);
- k) The poor are more vulnerable to the ravages of natural disasters than the average household in Bangladesh (41).

## Conclusion

In a peripheral, neo-colonial state such as Bangladesh, the laws of motion of peripheral capitalism breed squatters and slum dwellers. The more aid that is accepted, the more aid-dependent the country becomes. While industry is virtually stagnant, agricultural production can hardly keep pace with the rapid population increase.

While the country can afford to pay less than half its import bill, the greater part of the government budget is spent on the military and the civil bureaucracy. A meagre 1.5 percent of the GDP goes to education, so not surprisingly the literacy rate has increased from 20 percent to only 25 percent in the last 40

In this paper, we focused on the ecological phenomena, and their effects in the acceleration of the marginalization process of the poorer classes of the society. From this viewpoint, our study may seem cursory. Admitting this limitation of our approach, however, we submit that ecological phenomena have a substantial impact on the changes in production relations in an ecosystem where nature may become a formidable adversary. But what is more important is that these ecological adversities can be effectively tackled through appropriate human efforts.

Cyclones and tidal surges are vagaries of nature, but the damages from them can be minimized with proper remedial measures like permanent

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***“Cyclones and tidal surges are vagaries of nature, but the damages from them can be minimized with proper remedial measures like permanent embankments, planned coastal afforestation, cyclone shelters, concrete fortifications, modern warning systems, adequate rescue facilities, well-planned preparedness programs, effective relief programs, etc.”***

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years. Only 0.65 percent of the GDP is spent on health. The alliance of the military bureaucracy and the comprador merchant capitalists continue to plunder the country under the semblance of popular democracy with active, and quite often overbearing guidance of the donor countries and aid organisations. The country is a smugglers' paradise with active connivance of the law enforcing agencies and policy makers. The meagre domestic savings are not invested for any productive purpose; institutional credit is siphoned off by merchants and diverted to the "black empire" of smuggling and black marketing. Capital flight is rampant; poverty alleviation only gets lip-service in this scenario; the system rests on exploitation of the poor, and increasing concentration and centralisation of ownership in rural areas result in rapid rural to urban migration and swelling urban slums.

embankments, planned coastal afforestation, cyclone shelters, concrete fortifications, modern warning systems, adequate rescue facilities, well-planned preparedness programs, effective relief programs, etc.

Floods are controllable; river-dredging, river-training, embankments, sluice gates, dams, barrages, etc., are techniques within the command of existing knowledge. Without further elaboration, what we emphasize is that people and their ecology have to be harmonized with sincere efforts by society. The priority has to be determined by the society itself, whether it needs flood control programs more urgently, or it needs to expand and modernize its armed forces and its bureaucracy on a priority basis.

The society has to decide whether it will beg from the whole world for relief materials for the refugees, or whether it will ask for help and assistance from the other nations of the world for building

up an effective cyclone-protection system. In a class-oriented society like Bangladesh, the ruling groups will never surrender their vested interests. But people's power must speak up in a participatory democracy to compel public representatives to determine the real people-oriented priorities of the society. We agree with Sahota when he says that:

*The country herself being a disaster-prone delta land and its poorer strata even more, any program to mitigate natural disasters or their impacts is a pro-poor program. Additionally, any program that is focused on alleviating poverty is a step toward minimizing the damages from natural disasters because the poorer a group of people the more vulnerable it is to incur heavy damages from such disasters. (Sahota: 41)*

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***"The society has to decide whether it will beg from the whole world for relief materials for the refugees, or whether it will ask for help and assistance from the other nations of the world for building up an effective cyclone-protection system."***

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Sahota has marvelled at the indomitable spirit, fortitude and resilience of the people of Bangladesh who have restarted human activities after the 1988 flood to such a degree that it now seems as if nothing happened.

We believe that the poor of Bangladesh can brave the torments of ecological devastation if they effectively combine their indomitable spirit, fortitude and resilience in a democratic struggle to break the shackles of the ruling cliques of Bangladesh and their foreign mentors who have been ruthlessly keeping them helpless victims of nature for time immemorial. The poor of Bangladesh have to decide themselves. □

## Notes

1. "Norwesters" are summer storms that hit localized targets in different areas of the country from March to June. They do not kill many people but cause enormous damage to houses, crops (especially rice), fruit trees, rivercraft and other economic infrastructure.
2. Bangladesh has a network of more than 700 rivers, about 3,000 tributaries and canals. The zigzag courses and the alluvial nature of the soil of the delta regions combine to create serious problems of erosion of river banks during the summer and rainy seasons when the river currents are particularly strong. The offshore islands of the Bay of Bengal and in the Meghna Estuary also routinely experience erosion of the coastal belt during the windy and violent months.
3. The northwestern part of the country suffers from occasional droughts during the months of November-May. Crop failures result from such droughts. Sometimes floods followed by droughts in a year or vice-versa cause consecutive crop failures, which accentuate marginalization and pauperization of peasants.
4. The very low and low categories of land are waterlogged for most parts of the year. Even the medium-low category of land suffers from waterlogging after the rainy season, especially after the floods and tidal surges. The unplanned construction of roads and silting up of river beds have led to a deterioration in this regard. A new dimension is added by the alarming magnitude of waterlogging problems in the urban centres of the country, including Dhaka and Chittagong. Unplanned expansion of houses, roads, urban sprawl and the deterioration and closure of drains, ditches and canals increase the waterlogging problem.
5. The problem of salinity took a serious turn in the southern delta region of Bangladesh after the erection by India of the Farakha Dam in the upstream of the river Ganges near the Indo-Bangladesh border. The dam reduces the dry-season flow of the river system of southern Bangladesh, fed by water from the Ganges-Padma. The lower parts of those rivers which become lean or dried up in the winter months because of diversion of water by the Farakha, are affected

daily by high tides carrying saline water upstream.

6. Silting has increased alarmingly in all of Bangladesh's rivers because of vastly increased amounts of silt carried by river water from upper-riparian countries, as well as from catchment areas within Bangladesh. Added to this now is the problem of the drying up of river beds during six or seven months of the year because of construction of dams, barrages and irrigation projects in many major rivers flowing from India.
7. This is a natural problem of a country comprising deltaic regions, especially if the rivers are shallow and zigzag, and the soil is mainly alluvial. Some districts routinely lose human habitations and crop lands due to this problem.
8. Surprising though it may seem, the northwestern districts of Bangladesh are increasingly experiencing symptoms of desertification. Drying up of rivers, large-scale deforestation, excessive pumping up of sub-soil water, the withdrawal of water by the Farakka and Teesta dams in India are some factors responsible. The Barindh tract of Rajshahi appears to be the major affected area.

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# ENVIRONMENTAL REFUGEES IN SUB-SAHARAN AFRICA

## Causes and Effects

Ogenga Otunnu

Environmental degradation, over-population, droughts, famines, debt crisis, political and social instability, and economic marginalization have become popular catchwords in any major debate on Africa. One of the most tragic indicators of the continent's chronic state of demise is the extremely high incidence of refugees. Although sub-Saharan Africa only has about ten percent of the world's population, it accounts for nearly twenty-five percent of the world's refugees (Lofchie: 89). A substantial percentage of these were environmental refugees, "people fleeing land that could no longer support them" (Timberlake: 162). Others have fled civil wars and human rights violations. There are millions more internally displaced people who are not legally recognized under international law as refugees. Unless there is a major reversal of current trends, there is very little basis for optimism about the famine or the economic, environmental and refugee crises in Africa. In retrospect, debate about the complex and controversial concept of an environmental refugee in sub-Saharan Africa must be located in and informed by the larger discussion on the crisis facing the entire region. Various factors that directly or indirectly lead to environmental deterioration or degradation include: desertification, deforestation, drought, land degradation and depletion, locusts, wars, deterioration of the ozone layer, overpopulation and flooding. It should be indicated straightaway that there are no impenetrable walls between environmental, political and economic factors — they are, at one and the same time, causes and effects of environmental crisis.

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*Ogenga Otunnu is a Doctoral Candidate in the Department of History at York University and a Researcher in the Centre for Refugee Studies.*

This paper is devoted to a general description of environmental degradation in sub-Saharan Africa and to a review of the factors that play a significant role in causing environmental refugees. It is hoped that the following points will be highlighted: that the concept of an environmental refugee is a multi-dimensional phenomenon. It has exogenous and endogenous aspects, causes and effects. While climatic change has compounded the crisis, the nature of the state, the political economy of sub-Saharan Africa, and the international economic system are largely responsible

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***"In retrospect, debate about the complex and controversial concept of an environmental refugee in sub-Saharan Africa must be located in and informed by the larger discussion on the crisis facing the entire region."***

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for generating environmental refugees. Environmental catastrophes have far more devastating impacts on the poor, the young, and therefore the most vulnerable groups in their societies. Put succinctly, impacts differ depending on gender, age, class and region. Finally, environmental degradation exacerbates the crisis of underdevelopment, political instability and refugee problems in the region.

### Natural Causes

The severe droughts of the 1970s and 1980s not only initiated new environmental and land quality problems as well as exposing and accelerated existing ones, they also

focused attention on the underlying weaknesses in the economic and agricultural systems of the sub-Saharan region. Compounded by the economic vulnerability of the sub-continent, the droughts led to devastating famines — displacing millions and sending many more fleeing their lands. Scholars, including S.E. Nicholson (1985), Nicholson and D. Entekhabi (1986), C.A. Wood (1977), D.J. Shove (1977), Eugene M. Rasmusson (1987) and Workineh Degufu (1987), point out that there is a major ecological change affecting the region. In his work on Ethiopia, Degefu indicates that due to the 1980s drought, thousands of domestic and wild animals perished, forest fires caused incalculable damage to the forest-based economy, and large population migrations took place from the arid north to the west and southwest direction. Dessalegn Rahmato (1991) adds:

*As of December 1987, over two million peasants in Tigray and Wollo were said to be in distress and in need of emergency assistance. In the early part of the year, the northeast and Eritrea were threatened by a serious locust invasion, said to be the worst outbreak since 1958.... The outlook for 1988, according to Relief and Rehabilitation Commission, was quite gloomy: more than 5.2 million peasants in the country were expected to starve if relief supplies did not reach them in time. The worst affected areas were Eritrea, Tigray and northern Wollo, but peasants in North Shoa, northeastern Gondar, and parts of Harrarghe provinces were also suffering from drought and food shortages. In many areas in the northern provinces the 1987/88 harvest failed completely, and peasants were faced with starvation on a large scale. (14-15)*

As Hailu Lemma (1985), Peter Lawrence, Francis Snyder and Moris Szefta (1985) correctly point out, the situation was compounded by the wars in Eritrea and Tigray.

## Wars

Wars are rampant in Africa. In Mozambique, Frente de Libertação de Mozambique (FRELIMO) has been engaged in a long and costly war with the Mozambique National Resistance and its ally, the government of South Africa. In Angola, war continues between the Movimento pela libertação de Angola (MPLA) government and the dissident União Nacional para a Independência Total de Angola (UNITA). In the Sudan, the government in Khartoum has been fighting against

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***“Wars make sustainable land use and agricultural development impossible. Furthermore, a regime that is militarily engaged in battles for its survival places no priority on sustainable environmental practices.”***

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the Sudan People's Liberation Movement. In Chad, wars, and annexation of the extreme north by Libya led to a temporary semi-partitioning of the country. Uganda has witnessed several wars: 1978-79 between Uganda and Tanzania, 1980-85 in the Luwero Triangle and West Nile, and since 1985 in the Northern and Eastern regions. There is a close connection between wars and environmental degradation, refugees, famine and economic crisis. Wars make sustainable land use and agricultural development impossible. Furthermore, a regime that is militarily engaged in battles for its survival places no priority on sustainable environmental practices. Wars rule out care for the environment. Also, desertification may be caused by “activities of shells, bombs and tracked vehicles.” Timberlake is convincing when he concludes that: “War damages the environment; but environmental degradation can also add to the pressure from which conflict emerges” (165).

## Overpopulation and Other Human Activities

Environmental degradation is not only caused by climatic change in the region. In retrospect, Michael H. Glantz explains this phenomenon in terms of population explosion and other human activities:

*In the 1960s, when the West African Sahel was enjoying a moist climate, a number of communities were established in areas previously regarded as inadequate to sustain agriculture. Ever-increasing human and animal populations have threatened traditional agricultural and livestock-raising practices. Over-cultivation and over-grazing have reduced the productivity of land. The widespread destruction of tree cover for fuelwood (encouraged by high prices of petroleum-based fuel) and construction has accelerated the degradation. Poor water management and the salinization of irrigation systems have also left their mark. The net result is that each year 1.5 million hectares are overwhelmed by a glacier of sand. (xv)*

This and other related factors, which have led to nearly two decades of the harshest drought in recent history

*have had a devastating effect upon the people and the economic and social systems of a score of African countries. It has wrenched the ecology and the environment of most of the continent. Successive failures have led to food scarcity, resulting in malnutrition, unchecked disease, the decimation of livestock herds and ultimately famine, with staggering loss of human life. There has been enormous migration — within and between countries — and human suffering.. In addition, the drought has aggravated the economic crisis that almost all sub-Saharan countries have been experiencing. It has further depleted government revenues and foreign exchange, intensified unemployment and brought growth in major productive centres to a halt. (xvi-xvii)*

Glantz traces the root causes of the crisis to what he calls “colonial baggage” and the subsequent integration of the region into the international capitalist economy. In his view, African economies are highly dependent on market-economies and keyed to the export of commodities, which has precipitated the

neglect of food-production systems. He asserts that environmental degradation and overpopulation largely reflect the failures of national decision-making in the region. In keeping with the general thrust of his argument, Glantz maintains that drought leads to famine in Africa because of the vulnerability of the society. Put succinctly, “the real problem in Africa is poverty.” Like Robert J. Cummings (1987), he concludes that there is a close link between environmental degradation, drought, famine, national policies, the International economic system and economic (under)development.

Glantz and his colleagues are not alone in their assertions. As a matter of fact, whenever a major environmental catastrophe occurs in sub-Saharan Africa, discussions centre around overpopulation, deforestation, soil erosion, crop failures and misuse of land. In arid and semi-arid areas, discussions on environmental degradation focus on desertification, a catch-all term that encompasses soil erosion due to wind

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***“African economies are highly dependent on market-economies and keyed to the export of commodities, which has precipitated the neglect of food-production systems.”***

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and water, soil compaction due to trampling, firewood gathering, reduced follow time salinization and waterlogging (Glantz: 49; A. Warren and J.K. Maizels, 1977: 1). But why does overpopulation persist? And to use Mahmood Mamdani's words (1985), why do people cut down forests? Why do they overgraze? Why do they work the same tired land without resting it? Is it out of sheer ignorance?

There is no single uncontested answer to each question raised. Nonetheless, most literature on development in Africa suggests that high

population growth is a result of inadequate education on the relevant issue. In retrospect, by indicating that the young and most vulnerable comprise the majority of the population, national governments are urged to put in place coherent and informed policies to control high population growth. Education is often emphasized as central to overcoming the problem. Similarly, deforestation and land degradation are often linked to overpopulation, ignorance and poor agricultural and land-use policies. Governments, donors and intellectuals have blamed nomadism for problems arising due to overgrazing (E.H. Palmer, 1974: 297-300; M.J. Herskovits: 1926; G.P. Murdock, 1959; A. Lomax and C.M. Arensberg, 1977: 659-701). H.F. Lamprey asserts that overwhelming evidence indicates that overgrazing is the cause of "widespread damage to semi-arid and arid zone grasslands" (1983: 643-66). The FAO has attacked the very character of pastoralists: "... caring for nothing, disdaining manual labor, balking at paying taxes, and being unwilling to sell their animals...; they do not make the economic contribution to their countries that is rightfully expected of them" (1973: 14). In its later work the Food and Agriculture Organization (FAO) finds the cause of environmental degradation in the attitudes and customs of pastoralists, not the conditions under which pastoralism operates. "It is basically a problem of the misuse of land... particularly in pastoral areas, much of the problem results from the customs, value systems and attitudes of the people concerning grazing lands and livestock, together with the lack of government mechanisms for effective control" (1980: 56; for a comprehensive review of the literature, see Michael M. Horowitz and Peter D. Little (1987)). Such a view, which favours sedentarization, does not only lead to greater impoverishment of the pastoralists, it has negative environmental and productive impacts.

An explanation for environmental degradation and environmental refugees which reduces the causes and persistence of the crisis to individuals

and fails to understand the conditions under which the crisis occurs, is a false comfort since it cannot lead to appropriate actions. In his contribution to the debate, Mamdani like Timothy Shaw (1987) is convinced that the genesis of the disaster is to be found in the colonial political economy which led to the peripheralization and marginalization of the peasants. Like Walter Rodney (1972), Martin Klein (1980), Shula Marks

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***"For these changes to be explored, there is an urgent need to develop viable civil institutions that can effectively articulate and meet the socio-economic and political demands of the people."***

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(1985), Jane I. Guyer (1980), Robin Cohen (1976), Jane L. Parpart (1983), and R.H. Bates (1989), he asserts that colonial land, labour and taxation policies led to both exploitation and pronounced disparities. This system, he goes on, which favours cash crops at the expense of food crops, big traders (including the state) at the expense of small peasants and pastoralists in rural areas, has remained essentially unchanged in neo-colonial sub-Saharan Africa. It is in response to the crisis that a peasant or a pastoralist uses whatever control he or she has over land and labour. With land scarcity, the peasant is forced to work the tired land over and over. In keeping with the focus of his work on Uganda, Mamdani writes:

*At the same time, the peasant has as many children as possible to maximise the labour at his disposal. For a middle-class family, a child may be just a mouth to feed for 20 years, but for a peasant family after four years the child is also two hands to work! My point is that people are not poor because they have large families; really they have large families because they are poor! ... Of course, each of the solutions arrived at by the peasant is contradictory. It solves the problem in the short run, only to reproduce it much worse in the long run: on the one*

*hand soil erosion, on the other, 'over-population.' The sharpest expression of this is Karamoja ... The Karamoja famine can't be fully understood without an historical analysis. Its starting point must be understood that the Karamojong people lost roughly 20 per cent of their grazing land, in phases, through either the redrawing of administrative boundaries in the 1920s or creation of National Park like Kidepo later. It is this fact which called forth a change in pastoral practices. No longer could grasslands be rested up to the annual burning. Not only was all grazing land used throughout the years without any annual burning, forests were progressively cut down to increase the grazing area. (95)*

In a similar vein, P.D. Little (1984), D.A. Low (1963), Collins Leys (1975), E.A. Brett (1974), David Throup (1988) and J.G. Galaty (1980) indicate that in Kenya, encroachment on Masai pastoral lands dates to an early White-settler economy — when large tracts of grazing land were handed to the settlers. In neo-colonial Kenya, the land problem has remained unresolved. As a matter of fact, Michael M. Horowitz and Peter D. Little (1987) note that the loss of Masai grazing land to state development schemes (including tourist parks), private farmers and ranchers, has made life increasingly hard for herders during drought.

*With independence and the ensuing political dominance of agriculturalists, such as the Kikuyu, cultivators were permitted to settle in the higher rainfall, dry season pastoral areas. Further loss of pastoral lands in Kenya is attributed to the expansion of the tourist industry and national parks. Most of Kenya's tourist sector, its second largest earner of foreign exchange, focuses on wildlife resources, which are concentrated in the country's range areas. Indeed, two of the most important wild game areas in Kenya (Amboseli and Maasai Mara) are in Maasai regions. Both of these, particularly the swamp-grazing area of Amboseli, were significant grazing areas for Maasai. Recent legislation in Kenya, however, transformed Amboseli from a game reserve (which allows pastoral use of the area) into a national park that excludes pastoralists altogether. (75)*

Therefore, deprived of swamp-grazing areas and traditional highland,

pastoralists like the Masai of Kenya and Tanzania are compelled to concentrate their animals on already depleted lowland range areas.

Among the Dasanetch along the border of Kenya and Ethiopia, C.J. Carr (1977) indicates what the loss of grazing lands has meant: "In sum, the input of territorial restriction to the system has resulted in a self-perpetuating (or runaway) deterioration within the system, especially along the lines [of]: (1) environmental breakdown in the plains in the form of reduction of total plant cover, ... disruption of natural faunal assemblages, soil erosion, and (2) economic breakdown within the major production activity, ... increase in disease and death, and reduced milk yields ..." (226).

F.N. Ibrahim (1984) describes environmental degradation in terms of increasing marginalization of the peasants and pastoralists and high population growth in western Sudan:

*... the sound, traditional system of shifting cultivation turned into land misuse, and a chain of processes of deterioration of land productivity was begun: population increase led to excessive cultivation, which, in turn, led to enhanced soil erosion and soil impoverishment. This resulted in the decrease of millet yields per hectare in the Sudan by half in the last 15 years. To make amends for this, the population, which is constantly increasing at an annual rate of 2.5 percent, had to increase the area cultivated with millet, from 392 000 hectares in 1960 to 1 055 000 hectares in 1975. This expansion of cultivation meant a fresh wave of desertification.... The increasing persistence of the inhabitants in tilling the land despite lack of sufficient rainfall proves that they are not able to keep pace with the natural fluctuations any more. Instead of shifting southwards [i.e. away from pastoral zone] the peasants try to enlarge the area cultivated to be able to exist. This explanation of cultivation to counteract the decrease of rainfall works as a catalyst for the process of desertification.* (110-18)

In pre-colonial Africa, people reacted to land and political pressure by migrating to open spaces. The creation and maintenance of colonial-national boundaries and its political institutions,

population growth and land misuse created new challenges.

Environmental crises that are apparent in Africa are essentially the result of retrogressive political and economic decisions. The creation of game parks in societies where so many landless people exist, is a clear illustration of the nature of the state and the lopsided land policies in the region. Under the notion of comparative economic advantage, fertile lands are designated for production of export crops. The result is that peasants are forced to expand and overwork the land. Large-scale irrigation schemes, either for export production or hydroelectric power, not only lead to mass displacement and exodus of people, but also force peasants to claim and overwork delicate tracts of land. All these point to the nature of both the regional and global political economy.

### The Need for Change

The first step should be a substantial, indeed, radical change in land-use policies in the region. Land distribution and tenure should address the fundamental needs of the sub-Saharan dwellers. Economic policies that favour export crops and agriculture at the expense of food crops and pastoralism need to be re-examined. For these changes to be explored, there is an urgent need to develop viable civil institutions that can effectively articulate and meet the socio-economic and political demands of the people. This will also require putting in place accountable democratic governments that respect human rights. Involuntary resettlement and the production of environmental refugees, who are often the victims of dam constructions and major projects funded by the World Bank and other financial institutions, must be avoided. Since environmental degradation is a significant threat to economic and social development, environmental concerns must become an important and integral part of economic and social policies on a national, regional and global scale. As far as Africa is concerned, environmental degradation is both a cause and an effect of poverty. It is around this issue of

poverty and underdevelopment that the nature of neo-colonial states and the international economic system must be overhauled. The current politics of Structural Adjustment in sub-Saharan Africa, for example, have led only to more political, social, economic and environmental crises for the majority of the people. The way out is not more doses of the same politics of economic reform. The need for collective international actions is illustrated by the emergence of the global commons: the greenhouse effect, the deterioration of the ozone layer, the international movements of hazardous wastes and tropical deforestation. An understanding of climatic behavior that allows for early warning systems to operate adequately is urgently required for the region; and finally, the very word 'refugee,' given its meaning under international law, is too inadequate to accommodate environmental refugees. Therefore, there is urgent need to legally recognize environmental refugees so that they may be accorded necessary assistance through the UNHCR and other programs. ■

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# ENVIRONMENTAL DISPLACEMENT IN MALAYSIA

## The Effects of the Development Process on Rural and Native Communities

Sahabat Alam Malaysia

Malaysia is a land endowed with exquisite natural beauty and plentiful natural resources. With an annual rainfall of around eighty inches and the perpetual greenery of the rainforest, Malaysia is also spared the extremities of weather conditions and natural disasters such as earthquakes, volcanic eruptions or hurricanes. The most debilitating natural phenomenon is flooding that occurs during the monsoons in the east coast of peninsular Malaysia and in some parts of East Malaysia.

In Malaysia, the Malays make up the majority of the population (sixty percent) and have mainly been agriculturalists who till the soil to grow fruit trees, rice and other crops. Chinese and Indians, brought in during the colonial period, originally laboured in the tin mines and in plantations.

### Respect for Land

Human beings through the ages regarded the land as a source of their sustenance, a renewable resource to be cultivated, reaped and nurtured. Land has been regarded as a source of livelihood as well as a traditional heritage to be passed down from generation to generation. Those that fed from the land learned to respect and worship it. People learned to return to the earth what had been taken from it. We can recognize this reverence in cultures of the indigenous people and natives of all the continents.

In recent times, land began to acquire a new worth. No more did humanity accord it the reverence and mysticism as did their predecessors, or to regard the earth as a source of

rejuvenation, a sustainable cycle that allows them to reap from it but yet requires their constant nurturing. Land began to be regarded as a commodity. Its value in monetary terms began to be coveted. With the increasing sophistication of the economy, the business of making money became the order of the day. Land was increasingly viewed as a good investment and something to be used for development.

In cities and towns, land began to be more and more utilised for housing, commercial and industrial uses. With this centralisation of facilities, business investments — both local and foreign — increased, while services and other facilities were upgraded. Increased sophistication and material success of the residents resulted in demand for better housing, shopping centres, recreational and entertainment amenities, etc. All this required land space and land became not only a commodity for development but also for speculation. The price of houses, factories and commercial buildings began to escalate and those with money to spare found investments to be made in real estate, a profitable enterprise. The price of property in Malaysia was still relatively low compared to other countries in East Asia, but then there was a speculative trend and rush by foreigners, especially from Singapore, Hong Kong, Taiwan and Japan, to buy up available land in Malaysia. This led to escalating property values, making housing less affordable for the locals. The government's policy of encouraging industrialization and achieving the status of a "developed country" by the year 2020 has also meant pressure for further land development and increased the demand for land in outlying areas

that were previously reserved for agriculture and plantations.

As the country concentrates more on manufacturing and production ventures, the need for expansion is inevitable and more and more agricultural land is slowly being converted for housing and industrial projects. Reports in local papers confirm such trends:

- Plantation companies will benefit from expected increases in the value of agricultural land following the increased demand for industrial land in the Klang Valley.
- Plantation owners have converted their agricultural lands for residential purposes.
- All industrial land sold out in Selangor. Tan Sri Muhammad Taib would not allow factories to be built on former agricultural lands.
- Industrial land to cost more in Klang Valley in 1990.
- Malacca, running short of land, will be offered to foreign companies flocking to invest there.
- Syndicates acquire property for speculation in Gelang Patah, Johore, near the site of the second link to Singapore.
- Reclamation project of the Perlis coast for a free trade zone will start soon.
- Pahang will open more land for industrial sites.

Thus, we can see how land is no longer viewed as a resource to be nurtured and respected, but as a commodity for exploitation and rape. Agrarian policies are regarded as a retardation to growth unless done on a large scale, while industrialisation is favoured. In decisions about land use, first priority is mainly given to economic profitability; i.e., profit maximization is the basis for decision-making.

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Sahabat Alam Malaysia (*Friends of the Earth*)  
is a Malaysian Environmental NGO

## Erosion of Values

With the erosion of values that we have for the land, land used for small holdings, small-scale agriculture, land left fallow for regeneration, forests left untouched in their pristine state and undeveloped lands are now regarded as being underutilised.

The eagerness to profit from the environment takes many forms:

- Mining the land for natural resources such as tin, oil and coal;
- Stripping forests of valuable timber;
- Draining and cutting mangrove areas for aquaculture;
- Megaproject development of beautiful unspoiled beaches; islands and hill resorts to bring in tourist dollars; and
- Large-scale plantations and industrial estate development.

Choice lands are being developed by big corporations and large sections of real estate are being bought up by rich foreign speculators. This has resulted in the shift of land ownership from the bulk of the population to export orientated foreigners and the local elite. The bulk of the population, especially the poor and indigenous people, suffer the consequences of such "progress."

The rapid modernisation and neglect of ecological principles during the past two decades has led to the creation of poverty and new under-privileged groups. The poor communities like farmers, fishermen, natives living in the forests and estate workers, suffer the loss or deterioration of their resources (soil, land, water and forests) on which their livelihood and well-being depend.

Major causes of poverty and environmental displacement of persons can be traced to these factors:

- Logging of forests that affect farmlands and forest resources of villagers living near forest areas including the indigenous people of Sabah and Sarawak, and rural communities in Peninsular Malaysia;
- Silting of rivers due to deforestation, hill cutting, housing or construction projects, resulting in the increased incidence and severity of

floods in rural as well as urban areas. This human-made disaster has caused damage in the millions of dollars to crops, houses and property;

- Development of large-scale projects, such as highways, dams, buildings and tourist projects, have brought about evictions and displacement of those living in the vicinity;

- State acquisition or landowners' repossession of rich farmlands create a loss of livelihood and displace farmers. The recent proposal to amend the Land Acquisition Act 1960 makes it easier for the government to acquire land for development without having to be challenged in a court of law, and may further aggravate the issue of internally displaced persons.

- Pollution of rivers and seas, destructive methods of fishing, trawlers and depleted fishery resources reduced fish catches and the incomes of fishermen. Fishermen have been watching their daily catches gradually decrease as rivers and seas become more and more polluted.

The encroachment upon their fishing waters by large trawlers, with their destructive methods of fishing, further reduces the fishery resources. The livelihood of 3,000 fishermen in Kuala Muda, Kedah, is threatened by the influx of aquaculture projects into the area. Thousands of acres of rich mangrove forests have been cleared for fish and shrimp cultivation. This destruction has resulted in river pollution and a disturbance to the delicate mangrove ecosystem leading to a drastic drop in river resources such as fish, prawns, crabs and shellfish. Kuala Muda is not the only place to be affected by the negative impacts of aquaculture projects; other states — Selangor, Perak, Johore, etc. — have also experienced such adverse results.

The fishermen have found their daily income decrease from U.S. \$30.00 to \$5.00 a day. They are finding it extremely hard to support their families on such a meagre income. They say that their problems arose with the advent of the aquaculture projects.

## Development, Displacement, Degradation

As plantations in outlying city centres are converted to housing and industrial estates, we find groups of estate workers being displaced. Even though estate conditions are terrible, workers are at least given a house on the estate premises and a typical estate will provide other facilities, such as a school, a recreation hall, a playing field, a temple, a grocery co-operative or shop and dispensary for

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*"No more did humanity accord it the reverence and mysticism as did their predecessors, or to regard the earth as a source of rejuvenation, a sustainable cycle that allows them to reap from it but yet requires their constant nurturing. Land began to be regarded as a commodity."*

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basic medicines. Whole communities exist in the estates; when plantation displacement occurs, the lives of these communities are disrupted.

In 1969, the Bukit Jelutong Plantations had to make way for the new township of Shah Alam. The workers were removed and some went their separate ways. However, a majority of them built squatter settlements near the railway tracks and found work as contract or factory labourers. They were promised low-cost housing and other retrenchment benefits, which many of them did not receive. Finally, after 20 years of waiting and living in squalid conditions, some families were allocated low-cost homes or empty land on which to build.

Recently, the government announced that estate lands in the Klang Valley will be converted for industrial and other development projects. This will result in the displacement and loss of

jobs for more than 35,000 estate workers. Many of the young and strong labourers may be able to work in the factories, but for the older ones who have lived and worked for most of their lives in estates, adjusting to life outside the estates without a job, home or future prospects will be extremely difficult and dismal.

Not only are plantations affected by urban renewal programs, but farmlands in and around cities are also not spared by progress. In Penang, 73 acres of rich fruit-farming land in Kampong Pondok Upeh was acquired by the state government in 1973, despite fervent protests from farmers, to make way for the Balik Pulau-Relau road. The Thean Teik Estate dispute between a landowner and 12,000 residents, who faced eviction from their rich farmlands, culminated in the death of an innocent woman. The residents, who had been farming on this fertile, agricultural land for generations, face dislocation because the owner wants to turn the land into a township.

Squatters in settlements in the Sungai Buloh forests, who had previously been displaced from Kampong Sungai Damansara, face the daunting prospect of being relocated once again. Though their present longhouses are dismal and without basic amenities, they do not enjoy being moved around with no promise of permanent homes. They feel that their rights are being disregarded. They tell of an instance where the developer had dumped sand residues into a pond that the residents had dug themselves for rearing fish. The government, they say, has plans for golf courses and parks but no alternative housing for them.

Squatters in Kampong Bukit Sungai Putih in Selangor had built decent homes around the hilly region, blending in perfectly with nature. Their idyllic existence was destroyed one day in February this year when the demolition squad from the district office came and tore down their homes because they were squatters.

Large-scale tourism is another factor that brings about major changes in the lives of the natives and rural Malaysians. Redang Island, site of one of the most beautiful marine ecosystems in the

world, is in the process of being developed for tourism. Golf courses, five-star hotels and condominiums are presently being constructed. The fishermen's village at the edge of the island, which houses around 300 families, is to be relocated further inland to make way for the development project. Limited water resources on the Island will be further strained when water is channelled to green the golf course and to fill the needs of the hotels and condominiums. Hill clearings have disrupted small streams, accelerated soil

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*"Large-scale tourism is another factor that brings about major changes in the lives of the natives and rural Malaysians. Redang Island, site of one of the most beautiful marine ecosystems in the world, is in the process of being developed for tourism."*

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erosion and caused silting in the river. These infractions will definitely affect the well-being of the villagers.

On Langkawi Island, physical development to cater to the tourism industry, has destroyed catchment areas and small streams, drastically reducing the water resources of the island. This has resulted in crop failure and flooding during the rainy seasons. Destruction of Gunung Raya, a major catchment area, has caused farmers in the lowlands to suffer the effects of massive soil erosion, sedimentation and slope failure. Vested interests in developing Langkawi as a major tourist destination have put pressure on landowners to dispose of their lands. Due to persuasion or intimidation, many locals have reluctantly sold their lands, their heritage. At Pantai Kok in Langkawi, enterprising islanders had built quaint chalets and rented them out to tourists. Their thriving business received a blow

when they were informed that the state government had given the area to a French company to be developed.

Unsound agricultural projects have also brought hardships to farmers involved in government padi-growing schemes. In Sungai Manik and Kerian, the Integrated Agriculture Development Project failed because of irrigation problems. Serious flaws in the irrigation schemes implemented made farmers doubt the effectiveness of the project. In Kampong Bagan Hulu, the digging of two nearby rivers by the Malaysian Fisheries Development Board to breed prawns and fish has disrupted the water flow and led to the flooding of padi fields with salty water, especially during a storm or high tide. This calamity destroyed their crops and jeopardised their main source of income. Lamented one Lebai Talib Ali, a wizened hundred-year old man,

I personally cleared and cultivated the land during the pre-Merdeka period [pre-independence period]. It took four years of toil to turn this barren earth into sustainable land for farming. Our padi, sugar-cane, corn and coconut trees which we depend on for a living, are all gone now.

### **Disruption of Indigenous Communities**

Finally, we come to the true environmental refugees of our region — the natives or indigenous people. The Orang Asli, endemic to peninsular Malaysia, have traditionally lived in or near forests and have gathered all their nutritional requirements and basic needs from the forests. They hunted as well as collected rattan, bamboo and bertam palms to build their houses and relied on a nearby river, which was often clean and clear, for drinking and washing purposes. They also earned some money by selling jungle products and fruits collected from the forests. However, the Orang Asli have been unable to preserve this lifestyle free from external pressures.

The construction of the Simpang Pulai Pos Slim Highway to take tourists to the proposed mega-tourist project on

the Kinta Highland in Perak has affected the environment and brought great hardship to the Orang Asli living in the vicinity. The communities have been dwelling there for many generations. Six Orang Asli villages along the Sungai Raia rely on the river for their water and fish supply. They also cultivate padi, tapioca, keledak, corn, medicinal plants, fruit trees, chili and pepper. From the forests, they collect rattan, bamboo, mengkuang leaves and tree bark resins. Commercial logging and highway construction have depleted the forests' natural resources and destroyed large tracts of land cultivated with cash crops. Their crystal-clear river has been muddied and silted. Now, the natives of some of the villages have to walk a mile to collect drinking water. There was blatant disregard for the possible impact the road construction would have on the Orang Asli living in the area. Such encroachments on their environment have brought poverty, hunger and ill-health to these people.

The love and respect for their land is expressed by an elder of one of the villages:

*When we lose our land we are forced to move up into the hills. We know that those uplands are the vital source of water besides being burial grounds of our ancestors. Do you want us to drink the blood of our ancestors? Our newborn babies are raised on the water originating from the hills and, if polluted, they will get sick and die. If the air gets contaminated, it will affect the water and we will all get sick!*

The government's decision to build a second international airport at Sepang in Selangor is causing the Orang Asli in that region much anxiety over their future. The Orang Asli are quite happy with their present living conditions in the district and have no wish to move. They had been forced to move from their original settlement during the Second World War and yet again during the Communist insurgency. They object to being moved around like excess baggage, indignantly declaring, "We are not nomads!"

In Johore, the Linggiu dam project to supply water to neighbouring Singapore will affect the livelihood of 300 Orang



PHOTO:SAHABAT ALAM

**Fig. 1: Home to the Orang Asli Tribe, this Malaysian forest is being cleared for a highway**

Asli in the Ulu Sungai Linggiu, Kampong Pasir Assam, Kampong Semengor and Kampong Sayong Pinang areas. Construction of the dam will destroy valuable forests, and many animals and birds will perish from loss of habitat. When the dam is completed, 5 000 hectares will be submerged underwater and another 14 614 hectares will be set aside as water catchment areas. The natives' fruit orchards, hunting grounds and forest resources will all be submerged or, if located in catchment areas, they will not be allowed free access. The remaining forest lands will be taken up by government land development schemes, leaving nothing for the Orang Asli. "Everything needs to live, be it the elephant or ants or trees or tigers or the fish in the rivers and us too, the Orang Asli," said an Orang Asli medicine man, Abdul Rahman.

The Batang Ai power project in Sarawak was constructed in the heartland of the Iban tradition and culture. The project covered some 40,000 acres of land, of which 21,000 acres were eventually flooded, destroying large areas of forests and lands held under customary tenure, which include swidden farms, crops and ancestral lands. The project involved the resettlement of about 3,000 people. The resettled Iban natives face many problems and say that they had been treated unfairly. Instead of the eleven acres of cleared land that they said they had been promised, each family only received one acre. It also turned out that they had to pay for their new longhouses when they were informed earlier that they would be free. While some families received cash compensation, they did not know how to deal with their newfound wealth and squandered it away.

Most families were in shock over the new system and new way of living; many could not cope.

At Bukit Peninjau, Sarawak natives were encouraged to move from their lands which were converted into plantations. Relocated in nearby settlements, these Ibans were recruited to work on the plantations. They were attracted by promises of being given free land and housing after ten years of

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***“Unrestricted development in a country anxious to progress and achieve the status of a newly developed nation has caused environmental degradation, which has brought on poverty, displacement and the uprooting of communities faced with an uncertain future.”***

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service as well as schools and medical services, etc. The Ibans found that they were settled in small, single-family homesteads dispersed within the estate, very much different from life in the longhouses. To their dismay, they also found that they had to pay rent for their “free” housing. They experienced problems with their water supply and medical facilities. They had to spend a lot on travelling expenses to distant hospitals. Workers who became ill, were injured during work, or who retired, were not compensated or paid wages. Schools were provided but no church, despite the fact that most Ibans are Christians. Ten years of waiting passed and they were not given any free land to cultivate crops. After a trail of broken promises, when Sime Darby took over the plantations and wanted to make massive cuts in their pay, the natives went on strike. When police intimidation failed, the management sought to evict the workers and brought in labourers from Kalimantan.

### **The Penans of Sarawak**

The most well-known Sarawak tribe today must be the Penans, who gained international recognition for their widely publicised barricades against loggers in an attempt to protect the destruction of their traditional lands, the rainforests, where they have lived, hunted and survived since time immemorial. Peace-loving, gentle people, it has been said that a Penan would rather shoot his blowpipe at a tree than aim it at his aggressor. With the advent of logging, the Penans began to suffer its consequences: polluted rivers, decreased wildlife, game and fish and depleted forest resources. The community experienced a drop in the quality of living and health. They brought their complaints to the government authorities but nothing was done. Finally, when they had exhausted all avenues in trying to protect the destruction of the forests and their very survival, they decided to blockade the logging roads that went through their customary lands. The subsequent arrests evoked worldwide public sympathy for these forest people.

A recent proposal for a Penan Biosphere Reserve at Malana Protected Forests in Ulu Baram was opposed by the Penans because the area had been logged and the land was barren and depleted of resources such as wildlife, fish and jungle produce so vital to the survival of the tribe. Some Penans feel that they should be given land in an untouched, virgin forest as a biosphere reserve, if the government really cared about their welfare.

These are the harsh realities of life for the poor, rural and indigenous communities who try hard to eke out a living directly from the land and waters. Unrestricted development in a country anxious to progress and achieve the status of a newly developed nation has caused environmental degradation, which has brought on poverty, displacement and the uprooting of communities faced with an uncertain future. Farmers, fishermen and indigenous people are losing access to the natural resources of Malaysia which are slowly, but surely, coming under the control of a few.

One final comment must be directed at the First World nations with their strong network of world banking systems, multinational corporations and large scale agricultural policies; they are the initial purveyors of policies that encourage environmental destruction. Aggressive promotion of grandiose schemes and moneymaking ideas enthusiastically embraced by Third World elites, eager for a share in the spoils, sets the process of environmental degradation in motion. As long as economic growth remains the main indicator of gauging a country's progress or growth, the environment, and those that depend on it for their livelihood, will always be affected.

The suffering and misery brought about by environmental degradation is here expressed in the words of a young Sarawak native:

*For ages, our people have been collecting gaharu and rattan to be exchanged for money. Now the timber companies have entered and logged the forest. We don't have any money as our source of income is gone. Our food comes from the forest; the different types of sago are our staple diet are now gone too. We the Penan do not have farms. If the forest is gone, we don't have food. How are we to survive? When we travel through the forests, we don't carry heavy loads, as whatever food and utensils [we need] are found in the forest. But not now. Gone. Everything is gone.*

Nevertheless, native communities are looking ahead and working to shape a better future for the coming generations. During the largest ever native gathering in Sarawak in 1989, a resolution was drafted which declares: “We are not against development when we refuse to move out of our land and forests, but we are against theft of our land, our rights and cultural identity. It is our right to decide what kind of development we want and to develop at our own pace.” ■

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# NOT SEEING THE PEOPLE FOR THE FOREST

## Thailand's Program of Reforestation by Forced Eviction

Dave Hubbel and Noel Rajesh

Thailand's Royal Forestry Department (RFD) and the Royal Thai Army are planning to evict or redistribute the land holdings of over ten million people from the country's National Forest Reserves to enable Thai and foreign corporations to lease land for fast-growing tree plantations, mostly of Eucalyptus camaldulensis. These plantations will be leased and planted under the auspices of the National Forest Policy as commercial reforestation and harvested to provide raw material for the country's pulp and paper industry. The main obstacle to the RFD's plans for 30 000 square kilometres of eucalyptus plantations is opposition from over one million farming families living in village communities located inside the reserves.<sup>1</sup>

Khor Jor Kor,<sup>2</sup> as the eviction program is known in Thailand, is a "response to the national forest policy ... [whereby] forests in the country will be saved and expanded," according to Major General Vimol Wattavanit, the Army's Deputy Supreme Commander.<sup>3</sup> The 1985 National Forest Policy mandates the conservation of natural forest covering twenty-five percent of Thailand's land area and commercial reforestation by the private sector and state agencies to establish economic forests of fast-growing tree crops covering fifteen percent of the country.

Village leaders from all regions of Thailand are opposing the Forestry Department's plans for eucalyptus plantations and Khor Jor Kor. According to Buddhist monk Pra Paisal Wisalo, an advocate of forest conservation:

The push for eucalyptus plantations and the Khor Jor Kor eviction programme are in one and the same package. The evictions are the culmination of the conflict [between villagers and the RFD]. The authorities resorted to force in order to get the land they need for their profit-making commercial plantation scheme.<sup>4</sup>

The villagers' contend that Khor Jor Kor will only provide financial benefit for the RFD and the pulp and paper industry — a claim supported by the vast areas of land to be cleared of villages. In

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*"The destruction of village people's means of livelihood by agencies of the Thai state reveals its position that villagers are expendable in the interest of the country's present direction of economic development."*

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Thailand's northeastern region, the RFD and the Army have targeted 250,000 families living in 2,500 village communities that the Forestry Department contends are encroaching on 22 530 square kilometres of protected forest land in 352 forest reserves. The RFD and the Army have begun resettling these families on 5 920 square kilometres of land. Another 1 760 square kilometres are being cleared of villages to make way for infrastructure projects. The remaining 14 720 square kilometres are to be commercially reforested, mostly with eucalyptus.

The Forestry Department claims that eucalyptus plantations constitute

"forest." In fact, a monoculture crop of eucalyptus is completely different from a natural forest ecosystem; the plantation destroys biological diversity and villagers' means of livelihood. Since 1985, approximately 1 100 square kilometres of eucalyptus plantation has replaced or damaged farmland, fruit orchards, communal grazing areas and community-managed natural forests. Villagers say that eucalyptus exhausts the soil, disrupts local water regimes and is useless as livestock fodder or fuelwood. Native tree species, fruit trees, mushrooms and food crops do not grow in eucalyptus plantations. As for animals, villagers point out that even red ants do not inhabit eucalyptus plantations.

The Forestry Department also claims that villages in the reserves are responsible for deforestation throughout Thailand. But some of the village communities the RFD labels as 'encroachers' were established decades before the RFD delineated the boundaries of the Reserves in the late 1960s. These villages and other communities that settled in the Reserves after delineation, have traditions or community rules that conserve their community forests. Several of the village communities are known throughout Thailand for their efforts to conserve natural forest and protect it from illegal loggers. The forests and woodlots of these communities provide natural forest products, including mushrooms, firewood, building materials and livestock fodder. The forests' native tree species and flora are habitat for birds, insects and small mammals. This forested land may also serve as an abode for spirits of place. The natural forest products and the cultural significance of the forest are essential for the survival of people living on the margins of Thailand's market economy. In effect, the

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Dave Hubbel is affiliated with the Faculty of Environmental Studies, York University, Toronto, and is working with a Thai environmental NGO.

Noel Rajesh works with a Thai Environmental NGO

Forestry Department could destroy village models of ecologically *sustainable human-forest* coexistence. Not surprisingly, villagers stridently oppose the Forestry Department's efforts to exercise control over the natural environment.

Village people's opposition to Khor Jor Kor is also due to their knowledge of the program's most obvious shortcomings. Villagers know from personal experience that "land suitable for agricultural use has now almost completely been utilized."<sup>5</sup> In Northeast Thailand, the RFD expects to resettle or redistribute 250,000 families on an area of land one-quarter the size of that from which they once sustained themselves. Of this area, land suitable for agriculture is often already owned and farmed by other villagers.<sup>6</sup> In fact, a recent study of villagers displaced by a private company's eucalyptus plantation found that a few people became plantation workers while the rest were forced to clear forest for farmland or migrate to the slums of Bangkok.<sup>7</sup> Villagers are also aware of the hardship encountered by people evicted by the Army — crops have been ploughed under only weeks before harvest,<sup>8</sup> soldiers have threatened and beaten villagers resisting eviction.<sup>9</sup> Delays in distribution of new land has made some evicted villagers dependent on a monetary compensation equivalent to U.S.\$80 and a package of one and a half sacks of rice and canned fish produced in 1982.<sup>10</sup>

The Khor Jor Kor program reflects the Royal Forestry Department's policy resolution that the interests of Thailand's pulp and paper industry are more important than conservation of the environment and the means of livelihood for ten million Thai citizens. The destruction of village people's means of livelihood by agencies of the Thai state reveals its position that villagers are expendable in the interest of the country's present direction of economic development. The Forestry Department's program of eviction and land redistribution is evidence of the growing intensity of the conflict between state agencies and village people over control of Thailand's environment and its dwindling natural resources. ■

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## CONFERENCE/CALL FOR PAPERS

### GENDER ISSUES AND REFUGEES: Implications For Development

The Centre for Refugee Studies and the Centre for Feminist Research at York University will be hosting a conference in May 1993 focusing on *Gender Issues And Refugees: Implications For Development*.

A primary objective of the conference is to establish a deeper understanding of the current research and analyses being undertaken in the field of gender and refugee studies. The conference will embody a North/South feminist perspective on refugee issues. Paper presentations and panel discussions, in either French or English, will address issues of a timely nature, and will stimulate broader cross-cultural analysis in this area.

Abstracts (100 words) are invited from academics, service providers, policy makers, and, particularly, former refugees. Subject areas may include:

- Feminist inquiry and refugee studies
- Cultural issues (in asylum, settlement, resettlement, repatriation, reintegration)
- Environment; ethnicity/race; work; political persecution; human rights; the state
- Family reconstitution; health; sexuality; violence
- North/South feminism

Some travel funding will be available for paper presenters and discussants from Africa, Asia, the Middle East, Latin America, and the Caribbean.

Deadline for receipt of the abstracts is December 1, 1992, and should be forwarded to:

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York University  
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For registration information, and for inclusion in a subsequent bibliography, please submit your name, address, research interests, precis of published/unpublished research, and/or research in progress.

# ENVIRONMENTAL DISASTERS IN THE WESTERN REPUBLICS OF THE COMMONWEALTH OF INDEPENDENT STATES

Renate Rybizki

In the Commonwealth of Independent States (CIS), there are about 300 regions where at the moment there are acute dangers to human life due to environmental pollution. These areas comprise about four million square kilometers, which corresponds to twenty percent of the former U.S.S.R. Boris Kochurov, a researcher at the Geographical Institute of the Academy of Sciences in Moscow, estimates that already every third citizen of the CIS lives in an "ecologically critical region."

In the overcrowded regions, where heavy industry is concentrated, people inhale industrial exhaust gases and drink polluted water. The health of the millions of inhabitants of such big cities as Moscow and St. Petersburg, as well as the cities of the Donets Basin, the Urals, Azerbaijan and Krivoy Rog in Ukraine is directly threatened.

But the catastrophe not only concerns the industrial areas. The fifth edition of the document, "The Most Critical Ecological Situations in the CIS," shows forty-seven sites of underground nuclear testing and twenty underground atomic waste disposal sites. The Russian atomic scientist, Andrei Solotkov, maintained that for years the U.S.S.R. probably sank the atomic waste from the reactors of scrapped Soviet atomic submarines and ice-breakers in the Kara Sea, west of Murmansk. According to KGB documents, from 1964 to 1986, 17,000 containers were thrown into the sea. The disposal, however, was not undertaken according to international rules for putting radioactive materials into a 'coffin' or a coat of concrete, by bitumenizing, or by vitrification. The



PHOTO: ©DAVID BLUMENFELD

Fig. 1: A Chernobyl victim; girl from Soligors being treated for a brain tumor.

containers that were used consist of corrodable metal, so one day radiation will leak out. A large portion of the atomic waste consists of worn out combustible rods. If they were to come into contact with sea water, a further contamination of areas of north European seas will have to be reckoned with. Since the Soviet Union used the west coast of Novaya Zemlya as a testing ground for fissionable material, this region is potentially one of the most dangerous in the world.<sup>1</sup>

Until now, two areas were listed under the rubric "Regions of Catastrophe:" the surroundings of Chernobyl and the area around the Aral Sea (chemical contamination mixed with faulty irrigation). A resettlement of the inhabitants from these areas of catastrophe to "ecologically clean" regions, however, is something Kochurov considers plainly not possible because of the number of people involved. Due to the Chernobyl catastrophe on 26 April 1986, an area of

*Renate Rybizki is a research fellow at the Berlin Institute for Comparative Social Research.*

*Translation from German by Sheila Embleton, Department of Languages, Literatures & Linguistics, York University, Toronto.*

over 10 000 square kilometers was contaminated with radioactive materials. Here lie 640 towns with 230,000 inhabitants. According to publications of the Kiev Health Ministry, of the roughly 120,000 people living in Ukraine who directly took part in the clean-up work at Chernobyl alone, more than one thousand have died from effects suffered from that work. It is said that fatalities actually number from

installations on Russian soil represents a potential danger. Each year about 700 explosions take place in gas and oil pipelines, which results in the waste of many millions of tons of fuel, often up to twenty percent of the whole gas and petroleum production of the country. This is above all because of the emigration of highly qualified researchers and the dearth of spare parts. Appraisals from Bonn estimate the

soiling of the fresh water" must be faced. Most rivers are heavily to very heavily polluted; a few bodies of water, for example Lake Ladoga near St. Petersburg, have already lost their meaning as resources.

The ecosystem of the White Sea has been destroyed. Huge ice-breakers cut through the lairs of seals. This happens exactly when the animals have brought forth their young onto the ice. Thousands of seals have been annihilated.

There is the danger that under the conditions of economic independence the Republics will conclude agreements with foreign firms, that at first sight appear advantageous, but from ecological points of view are intolerable. Thus the resolution of the European Community Cabinet Council, that includes a prohibition on ecological dumpings and the export of unclean technologies, is welcomed. It also appears necessary to translate into action two especially important measures: the introduction of fines for the pollution of natural resources as well as fees for their use. It is hoped that such measures raise environmental consciousness.

If not, in the CIS, as a result of the ecological issue, a social bomb ticks, which will make the large refugee movements produced by interethnic rivalries seem miniscule in comparison. ■

## Notes

1. The London Convention of 1972 fixes the categories of radioactive materials that are allowed to be sunk in the ocean. The Soviet Union subscribed to that agreement four years later. In 1983 the decision was taken to suspend the sinking of radioactive material for two years. In 1985 this moratorium was prolonged for an indefinite time. The stipulations of the convention did not hold for ships, that according to common law enjoy immunity. Those are, according to the Foreign Ministry, the ships of the navy.

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This article is based on material in *Die Welt*, 21 February 1992, 27 February 1992, 26 March 1992; *Moscow News*, December 1991; and *Berliner Zeitung*, 30 January 1992, 27 February 1992, 25 March 1992.

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***"The whole shore region of the Black Sea is classified as an ecological crisis region: effluent water from nuclear power stations, oil sludge from refineries, the heavy metal cargo of the Danube and nuclear waste buried by the military have brought the whole ecosystem here to the brink of collapse."***

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seven to ten thousand. According to municipal officials in Murmansk, 120 cases of leukemia in children were ascertained and attributed to the effects of atomic radiation. Nevertheless the director of the agency for atomic protection in Murmansk, Alexander Mikhailov, disputed such a connection.

Alexei Yablokov, adviser to the President of Russia, says the following about the problem of the North: the peculiarity of this region is that the majority of the population lives there only temporarily and should not be troubled by the environmental situation. There, completely monstrous installations have come into being, for example the Norilsk enterprise and the Nordnickel enterprise on the Kola Peninsula. And recently diamond deposits have been discovered in the Archangelsk area. This area must be saved, as long as it is still not too late, otherwise the profit exploited from the diamonds will be minimal in comparison to the ecological damage caused.

According to the words of the Russian Minister for Civil Defence, Sergei Shoigu, each of the about 400 atomic plants and atomic research

technical repair needs of all nuclear power plants of Soviet design to be at least twelve to fourteen billion Deutschmarks.

Today eighteen further regions of the CIS are classified as "very critical;" here international limits for air, water and soil pollution are far exceeded. In the zones where intensive agriculture is carried out, for example in the North Caucasus, around Lake Baikal (annually the destruction of Lake Baikal strides forward, with more than 100 million cubic meters of polluted run-off water) and in the Moldavian region in the Southwest of the CIS, the ground- and drinking-water are ruined by the massive application of pesticides and fertilizers, the humus largely destroyed and the forests diminished.

The whole shore region of the Black Sea is classified as an ecological crisis region: effluent water from nuclear power stations, oil sludge from refineries, the heavy metal cargo of the Danube and nuclear waste buried by the military have brought the whole ecosystem here to the brink of collapse. In an area of about 370 000 square kilometers, "an impoverishment and

# THE THREE GORGES PROJECT IN CHINA

Joseph Whitney

## Introduction

In China, the idea of constructing a major dam on the mighty Yangtze (Changjiang) River (Figure 1) dates back to the early part of this century when Dr. Sun Yat-sen, the founding father of the Chinese Republic, first suggested the feasibility of this project. Present plans under consideration in the People's Republic of China call for the construction of a mega dam 1 924 metres long, the installation of twenty-six 500-megawatt turbines and the creation of a gorge-type reservoir that will extend some 600 kilometres upstream from the dam. When completed, the Three Gorges Dam with a proposed generating capacity of 13,000 megawatts (about equal to all the generating capacity of Phase I of Canada's James Bay Project) will be the largest single hydro project in the world. Apart from the generation of electricity, the purpose of the dam is to control flooding downstream in the most densely populated region of the middle Yangtze and to improve navigation in the gorge area upstream of the dam site.

The proposal to construct a dam of such magnitude in one of the most scenic and historically important reaches of the Yangtze, with so many unknown environmental and social costs and at the huge expense of some U.S.\$12 billion, has generated a great deal of controversy both within China and internationally. To allay the suspicions of many that the feasibility studies conducted by the Chinese authorities may have been biased in favour of the project, the Chinese government invited international agencies to conduct their own independent feasibility studies. In 1986, a Canadian consortium, CIPM Yangtze Joint Venture (CIPM), was

commissioned by the World Bank and the Canadian International Development Agency (CIDA) to conduct a fifteen-million-dollar feasibility study of the Three Gorges Project (TGP). The final reports, prepared by both the Chinese and the Canadian team, were submitted to the Chinese government in 1988. The Chinese government announced plans for commencing work on the dam in 1992.

## Resettlement

Depending on the dam height selected, the area inundated by the TGP varies from 335 square kilometres for a 150-metre dam to 737 square kilometres for a 180-metre structure. The population to be resettled ranges from 539,000 for the former to 1.2 million for the latter. In addition, ten to thirteen county seats and 400 to 600 industries will be displaced. While this type of resettlement is not new in modern Chinese history, the scale involved surpasses that of major

reservoirs constructed in China at Sanmenxia, Danjiangkou, Wujiangdu, etc. Given the numerous problems, many still unresolved in these other projects, it is questionable whether the fate of the displaced population will be any better this time. Moreover, not only is the life and livelihood of thousands of resettled families involved, there are also hardships imposed on the host population already living in the area targeted for resettlement; a situation of extreme stress and potential conflict between the two groups is always present.

It is disturbing that of the studies and proposals focusing on the project, Chinese or foreign, none present any evidence that the people affected by the scheme, as opposed to local authorities, have been or ought to have been consulted in any way about the impact the move will have on their lives. In fact, perhaps with a few exceptions, virtually none of the authors opposed to the TGP



PHOTO: JOSEPH WHITNEY

Fig. 1: The Three Gorges Project site on the Yangtze River in China

*Prof. Joseph Whitney is the Director of the Department of Geography at the University of Toronto, Canada.*

cited population displacement as a major argument to support their opposition to the project.

In the TGP proposal it was suggested that the displaced population can migrate upslope, so that even though they have to abandon their hometowns or villages, they can remain in the same county (Tian and Lin, 1989). On paper, this may seem feasible, but when the conditions in the upland areas are examined, it becomes obvious that this scheme is not likely to be successful. Fundamentally, the problem is that the best land in the reservoir area is located in the valleys which will largely be inundated; the remaining land upslope is of much inferior quality. Apart from the steeper slopes, the soils in these upland areas are infertile and productivity is many times lower under natural conditions. Currently, this upland area has a per capita cultivated land of 0.07 hectares and per capita grain production of 340.5 kilograms. Relative to the national average of grain production, Chen (1987) suggested that this area is already fifteen percent overpopulated. Thus, increasing the population density is not viable. Moreover, although the CIPM report indicates that the amount of "claimable" land far exceeds that inundated (CIPM, 1988-9: 11-19), the aerial survey upon which this assessment was made was confined to only 43 "typical" *xiang* (rural districts) out of a total of 600. As the CIPM report admits (CIPM, 1988-9: 7-7), there are discrepancies in the definition of "claimable" in the Chinese reports; it is by no means clear how the "typical" counties were selected. A proper method would have chosen the *xiang* in a random fashion, since there is always the chance that unconscious biases may be present when "typical" examples are selected.

The project proposal emphasized integrating resettlement with resource exploitation (Tian and Lin, 1989), but the availability of capital for development and suitable resources for exploitation are questionable (Chen 1987). For instance, the development of salt mines may have to face stiff competition from well established facilities in Sichuan. The development of tourist industries will be

in conflict with the establishment of certain types of industries that will cause serious pollution problems.

One important aspect of resettlement is the impact on land degradation in the resettled areas (Wang, 1988). Detailed research on this topic has been conducted by Professor Shi and his colleagues at the Nanjing Institute of Pedology (Shi, et al. 1987). It was suggested that to replace the 400,000 *mu* (1 hectare = 15 *mu*) of prime agricultural land inundated, new land up to 2,000,000 *mu* had to be provided. This is because of the lower productivity of the upslope areas. The clearing of new land and demand for firewood fuel will lead to an additional sediment production of four to seven million tonnes per annum. In addition, other activities, including mining and extraction of building materials, will yield at least another five million tonnes. This total erosion of ten to twelve million tonnes, assuming a sediment delivery ratio of 0.5, will add some six million tonnes of sediment per annum to be deposited in the reservoir, an increase of fifteen percent over current rates. The actual increase may be much higher.

According to the CIPM report, after the construction costs of the dam,

resettlement costs come second at 34 percent of the entire project if the dam is built to a height of 160 metres — the alternative favoured by the CIPM consortium. High as these values are, it is not apparent that they cover the full costs of relocation. This is revealed in the following considerations:

- (1) According to the CIPM report (CIPM, 1988 9: 7-10), one half of the claimable land is situated at elevations above 800 metres where development is potentially more expensive due to the cost of access and the fact that cultivation is limited to a smaller range of crops than at lower elevations. It is not clear that these additional costs have been included in the estimates.
- (2) As many as 30 percent of the urban population residing in the inundated area belong to the so-called "floating" population, that is, illegal residents who have come to the cities from the countryside in defiance of government regulations restricting such moves. The government does not want to "reward" these illegal residents by bearing the costs of their resettlement (Fearnside, 1988), which

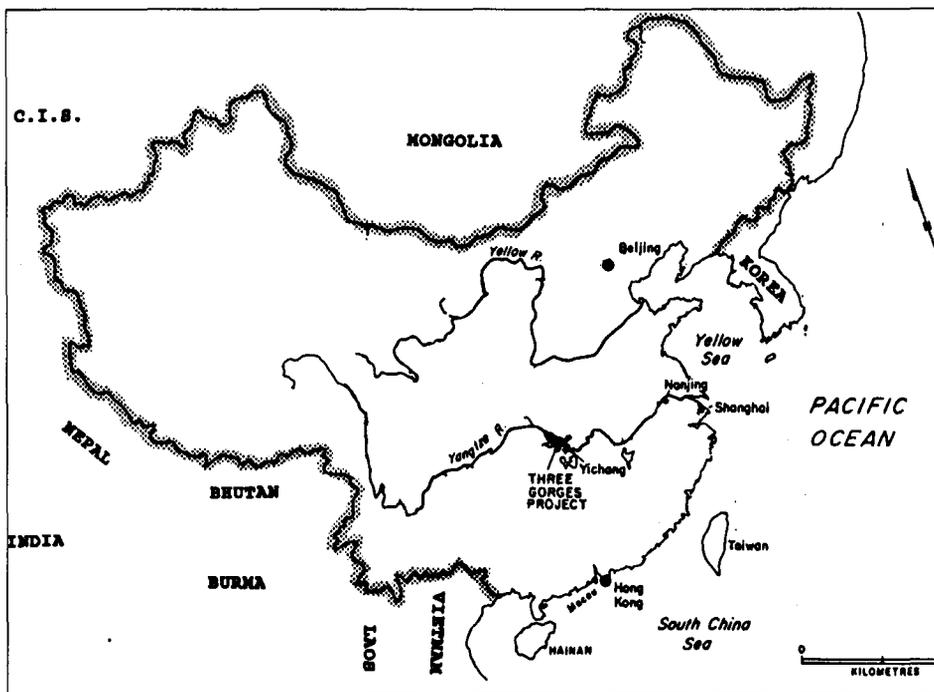


Fig. 2: The Three Gorges Project

have not been included in the cost estimates.

- (3) The additional costs of erosion control, brought about by the conditions described above, have not been included.
- (4) The cost of relocating cities and towns has almost certainly been underestimated. The CIPM report estimates (CIPM, 1988 1: 17-19) that the cost of relocating urban areas is about 3.1 billion yuan per square kilometer, or approximately the same per unit area cost as the rebuilding of Tangshan, a northeastern city totally devastated by an earthquake in 1976. However, as Fang and Wang point out (1989: 85), the latter city was built on level terrain compared to the rugged terrain in which nearly a dozen county seats and scores of towns will have to be relocated together with their infrastructure of roads, water supply, etc.

### Conclusion

Despite the major investment of time and effort by Chinese and foreign experts in determining the feasibility of the TGP, serious conceptual, informational and moral shortcomings remain, particularly with respect to the problem of resettlement. From the cursory cost-benefit study that was made (Luk and Whitney, 1988), it is by no means clear that the benefits of the TGP outweigh the costs. The large number of potential costs that have not been acknowledged or evaluated in the resettlement proposal must be included in any adequate evaluation of the TGP. These will undoubtedly make the scheme even less economically attractive than its proponents maintain.

There is also the human rights question. Should hundreds of thousands of people be moved against their will and with inadequate compensation to less attractive and economically inferior upland areas? Specifically, should they be moved when most of the benefits derived from the flooding of their ancestral lands and towns will be allocated to people in distant provinces downstream?

Despite these objections there is, as is often the case with large projects in other parts of the world, the symbolic benefits of a large dam which has a nonmonetary value perceived to exceed all other costs. Such may be the case in China and the dam will be constructed regardless of the monetary, environmental and human costs involved. ■

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## CALL FOR PAPERS SPECIAL ISSUE ON SOMALI CRISIS

The Centre for Refugee Studies intends to publish a special issue of its periodical *Refuge* on the Somali crisis.

The issue will primarily be dealing with the following topics:

- the root causes of the present crisis
- the country's disintegration and the mass exodus of refugees
- the refugee situation, the support of the international community, and resettlement
- an assessment of the present situation of the Somali people, inside and outside

Papers are now being invited on these issues, but other areas could also be considered. Submission date is now extended to July 30, 1992.

### Procedure

A 200-word abstract should be sent to the editor by end of June '92 and the deadline for submission is July 30, 1992.

The paper length may not exceed 15 pages (double-spaced).

Please send two copies of each paper. Submissions may also be sent on disc or by E-mail.

For further details please contact:

Dr. Saeed Mohammed  
*Refuge*, Somali Special Issue  
Centre for Refugee Studies  
Suite 351, York Lanes,  
York University  
4700 Keele Street, North York  
Ontario, Canada M3J 1P3

Tel: (416) 736-5663

Fax: (416) 736-5837

E-mail via BITNET, address:  
REFUGE@YORKVM1

# COUNTER-INSURGENCY, ECOCIDE AND THE PRODUCTION OF REFUGEES

## Warfare As A Tool of Modernization

Jim Glassman

In a much-quoted article written during the height of the U.S. war in Vietnam, Harvard professor Samuel Huntington made the following observations:

*The most dramatic and far-reaching impact of the war in South Viet Nam has been the tremendous shift in population from the countryside to the cities. In the early 1960s it was still accurate to speak of South Viet Nam as 80 to 85 percent rural. Today no one knows for certain the size of the urban population, but it is undoubtedly more than double and perhaps triple what it was a few years ago.*

He went on to note that "The principle reason for this massive influx of population into the urban areas is, of course, the intensification of the war following the commitment of American combat troops in 1965." Deducing the implications of this for wars against rural revolutionary forces, Huntington suggested the need to qualify Sir Robert Thompson's claim that People's Revolutionary War is immune to the direct application of military force. "If the 'direct application of mechanical and conventional power' takes place on such a massive scale as to produce a massive immigration from countryside to city," Huntington argued, "the basic assumptions underlying the Maoist doctrine of revolutionary war no longer operate. The Maoist-inspired rural revolution is undercut by the American-sponsored urban revolution."

Buoyed by the fact that the National Liberation Front's 1968 Tet Offensive had not galvanized support for the revolution among Vietnamese urban dwellers, Huntington went on to summarize the implications of urbanization for the future of Vietnam:

*[H]istory — drastically and brutally speeded up by the American impact — may pass the Viet Cong by. Societies are susceptible to revolution only at particular stages in their development. At the moment the rates of urbanization and modernization in the secure rural areas exceed the rate of increase in Viet Cong strength. At a time when the South Vietnamese Army is beginning to show signs of being able to operate on its own, the Viet Cong are becoming increasingly dependent on North Vietnam for manpower as well as supplies. A movement which once had the potential for developing into a truly comprehensive revolutionary force with an appeal to both rural and urban groups could now degenerate into the protest of a declining rural minority increasingly dependent upon outside support.*

*In an absent-minded way the United States in Viet Nam may well have stumbled upon the answer to 'wars of national liberation.' The effective response lies neither in the quest for conventional military victory nor in the esoteric doctrines and gimmicks of counter-insurgency warfare. It is instead forced-draft urbanization and modernization which rapidly brings the country in question out of the phase in which a rural revolutionary movement can hope to generate sufficient strength to come to power.<sup>1</sup>*

Huntington's remarks were rightly reviled by many critics who found his callousness to Vietnamese suffering and social dislocation appalling. But I want to suggest that his argument is quite important — both because it correctly identifies the demographic shifts which have undermined rural revolutionary movements in the past few decades and because it exemplifies the conscious appropriation of "forced-draft urbanization and modernization" as weapons in the arsenal of imperial warfare.

I want to go further than this, however, and point out that contrary to what Huntington coyly suggests, counter-insurgency "gimmicks" have themselves become part of the arsenal that helps produce urbanization. And I will show that ecological destruction is one substantive means by which U.S. planners have furthered their counter-insurgency goals. Thus, ecological destruction has become integrated into counter-insurgency as a method of producing the refugees necessary for effective control of the countryside by imperial powers and their local allies. The process, as I will show, is not one that either began or ended with the U.S. wars in Southeast Asia; but it is precisely because of this that Huntington's perspective is instructive, for counter-insurgency, rather than being seen as an esoteric bag of gimmicks, should be seen as a conscious application of force to the project of furthering the Eurocentric project of modernization. And in this sense, I will argue, the ecological destruction and social dislocation caused by counter-insurgency is contiguous with the much larger patterns of ecological destruction and social dislocation caused by the rise of capitalism from the sixteenth century onwards.

One of the most spectacular forms of environmental destruction visited on Vietnam by the U.S. military was the use of herbicides as part of the defoliation campaign. Use of defoliants was nothing new: the U.S. had used napalm extensively in Korea, for example.<sup>2</sup> In Vietnam, however, the use of new and experimental chemical defoliants was intensified. During August 1961, in the context of the counter-insurgency war and the project for rural "Pacification," the U.S. began using herbicides on an experimental basis. Both forests and

*Dr. Jim Glassman is associated with the Community Faculty of Metropolitan State University, St. Paul, Minnesota, USA.*

food crops were targeted, with the purpose being to deny the rural population cover and subsistence so that they could be forced either to urban centers or to the concentration camps euphemistically dubbed "strategic hamlets." As the official U.S. Air Force history puts it in describing the Joint Chiefs of Staff (JCS) position at the end of 1967, "[a]fter crops had died in target areas, groups of civilians had moved to areas under government control, further aggravating the guerrilla's manpower problems."<sup>3</sup> Furthermore, as the JCS' counter-insurgency head observed in December 1967, "[a]lthough the policy to create refugees for military purposes does not, in so many words, appear in any MACV [Military Assistance Command, Vietnam] document, the necessity is openly recognized as a realistic requirement ...."<sup>4</sup>

The herbicide program, Operation Ranch Hand, operated with the catchy motto "Only We Can Prevent Forests," and it did much to live up to this motto: between the beginning of 1962 and the beginning of 1970, the U.S. dropped one hundred million pounds of herbicides on over four million acres of South Vietnam.<sup>5</sup> The combined effects of napalm, white phosphorous and Agent Orange (comprised of 2,4-D and 2,4,5-T) were environmentally devastating and led to the coining of the term "ecocide." Between one-fourth and one-half of Vietnam suffered defoliation at some point during the war. As much as 41 percent of South Vietnam's mangrove forests were denuded. Other scorched earth tactics included direct attacks on animals and the use of giant bulldozers, "Rome Ploughs," to clear forests.<sup>6</sup>

The environmental destruction caused by this policy of "drying up the sea to catch the fish" is a legacy with which Vietnam continues to live.

One expert in agricultural economics who had lived in Vietnam for many years told me that the flooding of rice lands continues to be a major problem in Vietnam because so many hillsides are denuded of foliage that rainfall is not absorbed adequately and rushes down onto the plains.<sup>7</sup> A report on Vietnam issued by the International

Union for the Conservation of Nature says of the environmental situation that "much of the damage can probably never be repaired."<sup>8</sup>

The success of U.S. warfare in swelling urban centers with refugees also had social costs: a whole generation of Vietnamese youth grew up without learning farming skills or developing other abilities that were essential to traditional Vietnamese society. Meanwhile a culture of prostitution, drug addiction, racketeering and petty commerce blossomed, leaving revolutionary Vietnam a social reconstruction project every bit as daunting as its task of environmental restoration.<sup>9</sup> But the dislocations were not seen by U.S. planners as a reason to reconsider either strategy or tactics; rather, the dislocation of the rural population became a central ingredient in fighting counter-insurgency wars.

The herbicide program was by no means the only (or even the major) component of this approach. In fact, RAND corporation studies conducted during the 1960s suggested abolishing the herbicide program in Vietnam, arguing that it was often counterproductive because it alienated peasants from the South Vietnamese government and the U.S. military. The U.S. military rejected these arguments and continued using herbicides until the Nixon administration finally ended the program because it left insufficient supplies for U.S. domestic users.<sup>10</sup> But whatever the actual impact of herbicides on peasant attitudes and behavior, "forced-draft urbanization and modernization" was also produced simply by massive bombing, which left enormous environmental damage in its own right.<sup>11</sup> In Cambodia, to cite another case for purposes of comparison, bombing by itself led to much of the urbanization that occurred during the early to mid-1970s, when Phnom Penh's population grew from about half a million to over two million.<sup>12</sup>

In Vietnam, the effects of bombing cannot be disentangled from all the other tactics used to create new demographic realities, so the three million refugees created by the end of 1967 and the ten

million created by 1973 cannot be seen narrowly as the result of one or another form of warfare.<sup>13</sup> But the proportional responsibility does not matter. What matters is that all tactics were either explicitly or implicitly environmentally destructive, all either explicitly or implicitly aimed to create refugees from rural areas and all were consciously adopted precisely because they either actually did or were thought to successfully undermine rural support for revolution.

The success of environmentally destructive counter-insurgency tactics in creating refugees — if not necessarily in creating allies in the counter-insurgency struggle — helps account for its continuing role in U.S. warfare. U.S. policies in Central America during the 1980s have often been compared to earlier policies in Southeast Asia and justifiably so.<sup>14</sup> In El Salvador, for example, the U.S.-backed regime used napalm and other defoliants extensively throughout the 1980s, leading to the destruction of large amounts of forest. Fragmentation and incendiary bombs also caused severe environmental damage. According to a Salvadoran priest, "these bombs leave craters fifteen feet deep and sever trees too thick to encircle with one's arms." In some regions, bombing created a food crisis, causing shortages of corn, beans and rice.<sup>15</sup>

The destruction of Salvadoran forest as counter-insurgency policy exacerbated the already severe deforestation that has occurred over the years as a consequence of U.S. and Salvadoran "development" policies, which have emphasized export crops like cotton and coffee.<sup>16</sup> Over 95 percent of El Salvador's original tropical deciduous forests are gone and only 7 percent of the country has forest cover today.<sup>17</sup> Meanwhile, loss of foliage on hillsides has led to severe erosion, which affects more than 77 percent of the country. Topsoil loss reaches rates of 20 percent annually.<sup>18</sup>

The war between indigenous guerrillas and the U.S.-backed Salvadoran government produced a tidal wave of refugees along with (and because of) this environmental

destruction, but most of these refugees have not gone to San Salvador. Rather, they have migrated within the country or left entirely: displaced persons within the country have been estimated at 200,000 to 500,000; as many as 750,000 Salvadorans fled to the United States, with another 250,000 fleeing to Mexico and 50,000 to 100,000 going elsewhere in Central America.<sup>19</sup> This means that up to a fifth or more of the Salvadoran population has been displaced by war and environmental destruction, a higher proportion than the Vietnamese displaced at the height of the Vietnam war.<sup>20</sup> Counter-insurgency has not contributed as much to urbanization and modernization in El Salvador as it did in Vietnam; but it has helped "dry up the sea" in which the Salvadoran rural insurgency hoped to swim, thus denying the rebels the possibility of a military victory.

In Guatemala, to cite one more case, in an effort to quell the country's insurgency, U.S.-backed armed forces destroyed forests, fields and livestock, displacing one million Guatemalans. Fire is used to destroy the environment and displace people. Most of the refugees are of Mayan Indian ancestry and the army intentionally targets their corn crops for destruction because, along with destroying a vital food source, this practice undermines the Indians' psychological resistance by breaking an age-old and symbolically loaded bond — based on the production and reproduction of life — between their communities and the earth. Crop destruction also leads to serious erosion problems and renders agricultural land useless.<sup>21</sup>

The army relocates the refugees into "model villages" reminiscent of Vietnam's "strategic hamlets."<sup>22</sup> Others leave the country entirely, many heading to Mexico, the United States or Canada and some 40,000 inhabiting UN-sponsored camps.<sup>23</sup>

Not satisfied with the "success" of its counter-insurgency campaign, the U.S. developed a new program in 1987 and 1988, invoking the "War on Drugs" to justify spraying vegetated areas in

Guatemala with glyphosphate herbicides such as Round-Up — despite the fact that Guatemala does not appear on the UN's list of drug-growing nations.<sup>24</sup> The real target of the spraying, the Guatemalan government later admitted, was not marijuana or poppy but rather the insurgents.<sup>25</sup> In the meantime, the sprayings produced human deaths, deformed children, ulcerations of the mouth and throat from drinking sprayed water sources, an increase in infant mortality, deaths of whole herds of livestock as well as honey bees and scores of endangered quetzals, destruction of an entire season of corn and tomato crops and widespread defoliation.<sup>26</sup> Whether this use of toxic chemicals against a largely contrived pharmacological threat will also result in more human displacement, more urbanization, or more "modernization" remains to be seen; but the production of refugees through a herbicidal "War on Drugs" would certainly not be inconsistent with the *modus operandi* of U.S. counter-insurgency as it has been practiced in Central America and elsewhere.<sup>27</sup>

On a moral level, the appropriate response to the social and environmental destruction caused by counter-insurgency tactics is repugnance and political opposition. But on a more analytic level I would argue that it is important to frame opposition to the production of refugees through ecocide with an understanding of the ways in which counter-insurgency fits into the context of development as it has been carried out by U.S. and other Western forces. For far from being an anomalous feature of development, ecocide and "forced-draft urbanization" represent simply the acceleration of tendencies that are already present in the broad process of modernization as they have evolved over the centuries. Thus, the suggestions of Samuel Huntington and other U.S. planners, far from demonstrating mere moral depravity, demonstrate a sharpened consciousness of the developments that have propelled capitalism and simultaneously undercut — particularly in recent decades — the

more agrarian alternatives to it which had been posited in much of the "Third World."

A starting point for this line of analysis is to acknowledge that all transitions from one form of society to another involve at least ecological transformation and most likely, given the trends of history over many millenia, environmental destruction. The enclosure of the commons during the long centuries of capitalism's rise in England transformed much farmland into pasture for sheep.<sup>28</sup> The "Columbian exchange," which occurred in 1492 and subsequently, brought new crops, animals and diseases to the Americas and others back to Europe, Asia and Africa, set off a quite traumatic transformation of American ecology and societies.<sup>29</sup> The Europeans who killed American Indians and displaced them from their homelands simultaneously transformed the natural environment, often tearing down forest and transforming wooded areas and grasslands into farmland.<sup>30</sup>

Furthermore, crop destruction has always been an integral part of the warfare by which subjugation and displacement of indigenous peoples is promoted. Seventeenth-century North American colonists destroyed Indian corn and other crops as a routine part of warfare.<sup>31</sup> Destruction of a basic food source for the Plains Indians, the bison, was accomplished later through both conscious and unconscious means.<sup>32</sup> Kit Carson destroyed the food supplies of the Dineh (Navajo) people as he waged war against them during the 1860s, earning their ultimate enmity by destroying their peach orchards — more than five thousand trees.<sup>33</sup> In such developments, ecological transformation and the uprooting of an indigenous population resistant to modernization were always implicitly intertwined.

In the twentieth century, the interconnections between environmental destruction and population transfer simply became more plain — in large part because more advanced technologies of destruction (both military and nonmilitary) made the

possibility for massive environmental destruction and population dislocation more obvious. Counter-insurgency planning, which incorporates ecocide as a tactic, merely acknowledges this obvious connection and attempts to spur on the generation of refugees.

In a sense, then, one could say that the reflections of Samuel Huntington and those like him show an awareness of trends that facilitate the capitalist development project: uprooting of resistance to modernization by warfare and concomitant environmental transformation has been a trend of history for centuries; urbanization and modernization have been trends within the capitalist world economy for at least the past one hundred years. The application of military power to the furthering of these trends, then, is very much like swimming downstream. For those who have attempted to stem the tide of this sort of rural social dislocation and environmental destruction, on the other hand, the situation has been much more vexed. Maoist revolutionaries, who saw wars of national liberation succeeding because of the strength of peasant resistance rather than merely because of the strength of the industrial proletariat, have proven to be right — in their time. But Huntington may well have been correct when he argued in 1968 that their time is short and passes with the demographic transformations that turn formerly rural societies into urban ones.<sup>34</sup>

From this perspective, the production of environmental refugees through ecocide is not something that can be fought merely by opposition to militarism. Rather, the roots of social and environmental transformation in the development of capitalism must be addressed. The story of counter-insurgency as a tool for producing environmental refugees is only the history of capitalism “drastically and brutally speeded up.” Eurocentric modernization has produced environmental destruction and refugees for the past 500 years; counter-insurgency and its unique forms of

ecocide are only an intensification of the old battle using newer weapons. ■

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# COPING WITH MINES

## A Critical Risk For Repatriating Kurds

John R. Rogge

The risk to civilians from mines and unexploded munitions is a problem common to most areas subject to prolonged warfare and insurgencies. Afghanistan has been attempting to deal with the problem for some time, while countries like Angola, Cambodia, Ethiopia and Mozambique will certainly need to address the issue in the near future. So must Iraq. Not only are the immediate border areas with Iran, Syria and Turkey heavily mined, but mines have been sown throughout much of Iraqi Kurdistan over the past two decades. Many of these mines are in areas currently being repopulated and the death toll and maiming of civilians caused by mines and other unexploded ordinance is a critical problem throughout much of the region. While some limited mine clearance was undertaken by the U.S. military in the immediate vicinity of Dohuk and Zakhō, mine-clearance activities by the allies was suspended with their withdrawal from Iraq in late summer of 1991 and there are no other agencies currently addressing the issue.

There are basically three groups of areas where mines are widespread. The first is along the border and especially in those regions along the Iran-Iraq border where extensive fighting took place during the eight year war and where territorial advantage shifted frequently. Both sides laid extensive mine fields, often well into Iraqi territory. It is doubtful whether the Iranians made maps of the fields they sowed, or, if they did, whether such maps would ever be released to a prospective mine-clearing

agency. Likewise, the Iraqi military maintains that while maps were made, these were kept locally and were destroyed during the recent Kurdish uprising (the same position is maintained by Iraqi government authorities with regard to the other two groups of minefields described below). Areas falling into this category include the region around Choman and the upper reaches of the Hamilton Road leading to the Haj Omer border point, the areas around Panjwin and especially throughout the pedicle that extends into Iran and the areas from Halabsha to the border.

Second, are areas surrounding military installations, especially in remote regions and including the many strategic mountain-top observation positions. The density of Iraqi military installations is one of the features of Iraqi Kurdistan that astounds most first-time visitors; there can be few areas in the world so heavily militarized as this region. These mines were laid for defensive reasons and the locations of such fields are usually known to local people. No clearing, however, has been begun in any of these areas. Since many are on steep mountain sides, there is the attendant risk of mines being washed down the mountain sides by either snow-melt or soil-creep.

A third group of mine fields are the most problematic; these may be referred to as *opportunistic mine-fields*. They were sown specifically to terrorize the Kurdish population. Their locations vary, but are widespread throughout the former so-called *free-fire zones* where all civilian movements were prohibited. Sites of such mines include the verges along roads, in orchards and in vineyards, around springs and wells and along mule tracks. The purpose of such mines was to discourage people from inhabiting the regions or attempting to

return to their original villages. The extent of such minefields remains a matter of conjecture; their incidence is perhaps somewhat less than that proposed by Kurdish militants but nevertheless, the frequent accidents they produce suggests that they are anything but uncommon and must, therefore, be dealt with if people are to safely return to their villages and farms.

Aside from the widespread distribution of mines, the problem is further complicated by the deployment of a great diversity of mines. One reliable source suggested that at least fourteen different types of mines have been deployed. They fall into two basic groups, namely, anti-personnel mines which deliver only an explosion and more often maim than kill and shrapnel-loaded mines which are much more deadly. The latter are often wired together to explode in clusters. While not the most deadly, the small plastic coated mines (mostly of Italian origin) are of special concern because they are impossible to detect with standard mine-clearing devices and their small size makes them difficult to spot. Moreover, some mines are set to detonate only at pressures exerted by humans; thus sheep and goats grazing an area without incident does not necessarily mean that mines are absent. The longevity of most mines, especially the plastic type, is more or less indefinite and thus this is not a problem that will diminish in severity over time.

The incidence of mine deaths and injuries is very high, particularly in areas falling into the first group above. For example, it was suggested by one otherwise reliable informant that in the fifteen-kilometer stretch along Hamilton Road between Choman and the Iranian border, at least 500 mine-related deaths had occurred in April and May this year and a much larger number had been

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*John Rogge is the Coordinator of the Disaster Research Unit at the University of Manitoba and recently undertook an assessment of reconstruction and rehabilitation needs for returning Kurdish refugees and other displaced persons in Iraqi Kurdistan for the United Nations Development Program.*

maimed. Such a figure may be somewhat inflated; doctors with a small German NGO in Choman were unable to confirm the statistic. However, they were able to confirm that in the month following their arrival in Choman, there had been between three to five mine injuries per day, of which about half were fatal. At the time of my visit to their hospital there were five cases in their surgical ward, all of which had required amputations and three of which were children. Some fifty mine amputees were known to be residing in Choman in late June.

At the hospital at Diyana (Saddam Hospital), to which most cases in the

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***“Consequently, it is incumbent upon the UN system to initiate, as soon as possible and in conjunction with other appropriate agencies, a major mine-awareness and mine-clearance program throughout Iraqi Kurdistan.”***

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region were referred, mine injuries were the major cause of surgical procedures. About a dozen cases, again half of which were children, were resident at the hospital at the time of my visit. While no specific statistics on mine injuries had been kept by the hospital, the senior surgeon suggested that there had been between 800 to 1,000 mine and ordinance injuries in the Diyana basin during May and June, of which about twenty percent had been fatal. Records of mine injuries were kept at the Panjwin hospital — another high risk area — where, during the period 1 April to 6 June 1991, a total of 262 ordinance-related injuries and 160 mine-related injuries had occurred, of which seventy were fatal.

Persons most at risk from mines and other unexploded ordinance are those collecting firewood — which, as spontaneous settlements grow, means

that people must venture further into the hills to find supplies; persons getting clean water from mountain springs; people scavenging for building materials or other items of value among abandoned Iraqi army outposts; and shepherds. It is clear that children perform many of these tasks and are, therefore, especially at risk from mines. Aside from human casualties, there is also a high loss of livestock; shepherds will only walk behind their herds because of a fear of mines.

If, therefore, there is to be any extensive resettlement and a resumption of traditional agricultural pursuits by Kurds in the valleys from which they have been systematically displaced over the past decade, then there is an urgent need to develop both a mine-awareness campaign and a comprehensive mine-clearance operation. Whether the latter can or will ever be undertaken by the Iraqi military within the framework of a negotiated autonomy agreement between the government and the Kurdish Front clearly remains a matter of conjecture. Even if the will were there at some time in the future, there is some question about whether the Iraqi military has the necessary skills or capacity to mount an extensive campaign. High-level U.S. military respondents suggested that the Iraqi military's experience is limited to mine-sowing and it would be ineffective in any clearing operation. As for the Peshmerga (Kurdish Front guerrillas), their skills and experience with mine clearing is essentially limited to a few deserters from the Iraqi army.

The risks to returning Kurds from mines and other unexploded ordinance will, therefore, remain high throughout much of the region for many years unless a concerted effort is made to generate more awareness of the hazard and, in areas close to current habitation, to undertake a systematic mine-clearance program. Consequently, it is incumbent upon the UN system to initiate, as soon as possible and in conjunction with other appropriate agencies, a major mine-awareness and mine-clearance program throughout Iraqi Kurdistan. Such a

program should possibly be modelled on the program recently implemented in Afghanistan and the one designed and ready for implementation in Cambodia. Indeed, a Kurdish program has the advantage of drawing on the experiences garnered in Afghanistan. Moreover, while there appears to be little expertise or equipment in Iraqi Kurdistan to undertake a major mine-clearance program and hence technical assistance for such a task will need to be provided by outside agencies, the capacity in terms of human resources to provide a comprehensive mine-awareness program in high-risk areas can readily be put in place by the Kurdish Front, providing some basic training and the appropriate literature is made available. Moreover, with adequate technical assistance, small village-based mine-clearance teams could also be trained and equipped. ■

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REVIEW ESSAY  
**DAMMING THE NARMADA AND THE THREE GORGES**

Michael Zmolek

**I. Damming the Narmada —  
India's Greatest Planned  
Environmental Disaster**

by Claude Alvares  
& Ramesh Billorey,  
© 1988 Third World Network,  
Malaysia, 196 pp.

**II. Studies In Ecology and  
Sustainable Development 3:  
High Dams on the Narmada —  
A Holistic Analysis of the  
River Valley Projects**

by Vijay Paranjpye, © June 1990,  
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**III. Damming the Three  
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Don't Want You to Know**

Edited by Gráinne Ryder,  
© December 1990 Probe International,  
Toronto, 124 pp. plus index.

**Introduction: Recent Events**

On April 3 this year, China's National People's Congress approved the building of what could be the largest dam ever built, the Three Gorges Dam on the Yangtze River in China. While this decision was no surprise, since the People's Congress is normally little more than a rubber-stamp parliament, what is surprising is the fact that about one-third of the committee members abstained or voted against the project. Also notable was that no time was set for completion of the project, something normally expected from such a vote. Opposition to the vote has been both domestic and foreign, both lay and scientific.

At the same time as the world's largest dam is being approved for China, all sides anxiously await the World Bank-funded report by Thomas Berger, who in the late 1970s and early '80s led an investigation of the proposed MacKenzie Valley Pipeline Project in Canada's Northwest Territories, which was subsequently halted. He has been travelling independently in India with interpreters to interview locals in all three states involved in the Narmada project. As resistance to the project has been high, his report is expected to be a "damning" one; yet it is tragic and telling that while the protests of thousands who are going to be ousted are ignored or downplayed, the report of one western expert might

have the clout to get the whole thing called off. Publication of Berger's report is expected at the end of May.

**The Narmada Project**

Resistance to the Narmada Project has centered around the issue of resettlement and rehabilitation (R & R). While work on the dam has begun (with delays due to demonstrations by oustees and also strikes by workers who have been protesting the slave-like conditions of their jobs), plans for R & R are barely in existence. World Bank installations earmarked for R & R have been used to pour more concrete and raise the Sardar Sarovar Dam in Gujarat (now said to be seven percent completed), necessitating more money earmarked for R & R, which the Bank is all too willing to send. In the low-lying town of Manibeli, meanwhile, villagers have made "drowning pacts," vowing to stay in their homes even as the waters rise to flood the town. In 1990 the waters did not rise and flood the town as expected. During the next monsoons, these villages will likely be flooded, adding to the numbers of those who died as a consequence of World Bank-funded development schemes. Police have reportedly been using force and violence to drag people out of the village.

*Damming the Narmada* begins with a straightforward argument in Part One, entitled "The Narmada Project and Why It Should Be Cancelled." In six succinct

chapters the background of the project, the projected numbers of persons to be resettled, the impact on forests, farms and wildlife to be submerged, and the cost-benefit analysis used to push the project through parliament are all assessed; alternatives are suggested, and the authors conclude that if carried out, the damming of the Narmada will result in "the world's largest planned, environmental and human tragedy" (:59).

The holy Narmada River in India stretches from the Plateau of Amarkantak in what is actually the Eastern half of India, in the state of Madhya Pradesh, flowing 1 300 kilometers across Madhya Pradesh and Gujarat, emptying into the Arabian Sea. Over 20,000,000 persons inhabit the Narmada Valley. The proposed project involves a series of about 3,200 major and minor dams, submerging a total of about 350 000 hectares of forest lands and 200 000 hectares of cultivated land, and eventually displacing over a million persons. The number of dams is astronomical, the authors claim, because the Narmada Water Dispute Tribunal, set up in 1969, provided a forum for the Gujarat and Madhya Pradesh governments to compete in convincing the Tribunal that each "had the best, and the most extensive plans for using the river's waters in their states, and therefore should be given a greater share

**Table I: Some World Bank-Funded Dams Involving Displacement**

Country	River	Dam	Area Flooded Sq km	Persons Displaced	Height (meters)	Power (MW) predicted/actual	Construction Dates
Egypt/Sudan	Nile	Aswan	6 500	120,000	121	2100/1815	1967-69
Ghana	Volta	Akosombo	1.1m ha	80,000+	134	1824/760	1964-66
Ivory Coast	Bandama	Kossou	1 750	75,000	-	175/-	1970
Zambia/ Zimbabwe	Zambeze	Kariba	5 300	57,000	-	-	1959
Brazil	Uruguai	Itaparica	-	45,000	-	-	1985-90
Nigeria	Niger	Kainji	1 250	44,000	66	1000/760	1967
Indonesia	Serang	Kedung Ombo	(postponed) <sup>†</sup>	25,000	-	-	-
Brazil	Tocantins	Tucuruí	2 430	24,000+	106	8000/4000	1983-84
Brazil	Uruguai	Balbina	4 000	- <sup>††</sup>	-	-/112	1985-

<sup>†</sup>After funding 75 percent of the project, the World Bank dropped it in 1985, while 25,000 people waited for proper resettlement and rehabilitation. In 1989 1,500 families refused to leave the submergence area, prompting the World Bank to investigate.

<sup>††</sup>This project forced one-third of the Waimiri Atroari Indians from their land, producing such social and economic disruption that more than half the population died within a few years.

in the river's resources" (:11). Such a project would take a century to complete, or in other words, many of the proposed dams are merely projects designed to impress the Tribunal.

The most striking presentation in this book is an interview with S.C. Varma, who was at that time (1987) chairman of the Narmada Valley Development Authority (NVDA) — he has since resigned. From the interview we learn that even though the project had begun, no botanical survey had been carried out, that no study for compensatory afforestation had been carried out, that the study to examine the possibility of wildlife extinction had not surveyed the entire catchment area, and that no serious problems regarding seismicity are foreseen for the project, in spite of a report that mentions the possibility of earthquakes up to a magnitude of 6.5 occurring in the valley. Varma responds to this point by saying: "I know that what you are saying is quite clear. But, you see, the earthquake that was last seen was several kilometres away from the place where we are going to build the dam" (:71).

Indian authorities and the World Bank recognize that this project will be the largest river basin population resettlement to date (Three Gorges aside). The authors claim that 47 percent

of the people will be "tribals," the indigenous peoples who are the most marginalized segment of Indian society, not incorporated into the Hindu mainstream.<sup>1</sup> The evacuees have been categorized into groups and are to be given three years' annual income, and new land to replace lost lands. The land was not yet located as of 1988, though construction had begun. A proposal to give villagers money so that they would have to buy land on the market was opposed by researchers in Delhi, who claim that while the government would tend to undervalue land to be submerged in villages where people were forced to migrate, land prices would be inflated in areas where oustees would be seeking to buy. Studies cited show "an abysmal lack of information among the Sardar Sarovar oustees about their impending displacement and relocation" (: 22). At the Narmada Sagar site in Madhya Pradesh the situation is far worse due to the large number of people to be ousted and an absolute scarcity of land. The authors quote S.C. Varma's own study that concedes that after their highly fertile plots along the river have been flooded, the land that will be provided for the oustees will not even be suitable for crop production! Furthermore, in the catchment areas of the two major dams, the numbers of

landless families constituted 30 percent and 43 percent respectively. If landowners will not be compensated with even modestly adequate land, landless families are in a worse position. Varma pontificates that the landless will have to be absorbed into non-agricultural activities, whilst acknowledging that they have no skills beyond cultivation. The authors conclude Varma could only have perennial unemployment in mind for these landless persons.

Further, Varma is cited as writing that: "the whole gamut of resettlement needs very careful planning and execution" because "human beings have feelings; they cry and laugh, they can organize and also show their anger. If not handled properly, these human beings could even impede the progress of project building. They could constitute pockets of protest, unrest, and dissatisfaction..." These human beings have been doing just that, and the police response to numerous protests to the project has involved violence.<sup>2</sup> The World Bank has apparently ignored the protests, while it and the Indian government are cooperating in full violation of international law, which protects the rights of tribal peoples to maintain ownership of the land they have traditionally occupied, and both are

**Table II: Some World Bank-Funded Dams Scheduled to be Built**

Country	River	Dam	Area to be Flooded	Persons to be Displaced	Cost (US\$)	Height (meters)	Power (MW) Predicted
China	Yangtze	Three Gorges	44 000 ha.+	1.5 million**	\$12 bil.	185	13,000
India	Narmada	Narmada Sagar	91 348 ha.	170,000	\$13.7 bil.	177	223
China	Yellow River	Xiao Langdi	-	140,000	\$2.3 bil.	171	1,800
India	Narmada	Sardar Sarovar	39 134 ha.	100,000	\$8.8 bil.	139	300
China	-	Shuikou	-	63,000	\$250 mil.	101	1,400
India	Subernarekha	Icha/Chandil	30 000 ha.+	68,000	\$127 mil.†	-	-
Argentina /Paraguay	Paraná	Yacyretá	1 700 sq.km.	40,000	\$12 bil.	43	2700
China	-	Ertan	-	30,000	\$1.885 bil.	240	3,300
China	-	Daguangba	-	21,400	\$255 mil.	56	240
Thailand	Mun	Pak Mun	-	20,000*	-	-	-
Lesotho	Orange	Katse High Dam	-	-	\$1.828 bil.	-	-

†with another \$480 million in loans pending.

\*\*50,000 have already been relocated.

\*Now estimated at only 2,500

also in violation of the International Labour Organization's Convention 107, relating to Tribal and Indigenous Populations.<sup>3</sup> The World Bank has itself admitted: "The odds are high that the majority of oustees will be worse off following the removal." (:22) Amen.

So why, you may ask, and how do such plans get ratified? The answer is simple. It lies in that holy of holies of modern economics, the cost-benefit analysis. Alvares and Billorey carefully critique each point in the benefit-cost (B/C) analysis done by the Indian government, and rather than showing a B/C ratio of 1.52:1, they incorporate such considerations as environmental destruction and loss of wildlife into their own B/C analysis, and calculate a 0.11:1 ratio for the four major dams. The Indian officials estimated the human suffering as three years' annual income of each family, a total of Rs. 20 crore (about U.S. \$8 million).<sup>4</sup> Reading this book gives the reader a clear indication of how the variables on the cost side were played down to an extreme, and the benefits were exaggerated, sometimes simply by changing the numbers!<sup>5</sup>

The Alvares and Billorey book also provides numerous appendices on a variety of topics, including a list of suppressed facts, a discussion of the environmental impacts of the major dams, extensive data on plant and

animal species to be affected, a report on the loss of archaeological monuments, an analysis of irrigation, newspaper clippings, and most notably an article by the late Venishankar M. Vasu entitled "Alternatives to Major Dams." Vasu declared that:

*The need for dams was created by systematically eliminating or crippling the very basic systems of nature which contribute to availability of water. [India] never needed the modern type of dams which we have been building. A void was created to make room for dams and plans to construct them were pushed into that void. (:145)*

Vasu examines the history of the Saurashtra region of Gujarat, telling of its abundance of forests and streams, and high water tables which were virtually dried up in just one century. He asks how this could happen, and gives a straightforward answer: "The British started animal slaughter in this country on a mass scale in 1859. As a result, the free source of dung fuel available to the rural population was curtailed. Hence, people had to turn to the forests for firewood." The result was deforestation, flooding, soil erosion, siltation of rivers, shallower rivers, shorter banks, lack of shade, which caused rapid evaporation of soil moisture, and dwindling water tables made all the more rapid by consumption of huge quantities of water

by new industries. Vasu suggests a six-point plan to reverse this devastation, which includes halting the destruction of animals, digging the streams deeper, planting trees and grass on the banks, building series of small bunds to collect monsoon waters, clearing sediment from ponds and lakes to increase their storing capacity, and putting local village committees in charge of this operation. This procedure would be far simpler and cheaper, he writes, than building the high Narmada dams.

Another book about the Narmada project, *High Dams on the Narmada*, is an extensive study of the project prepared by a research team under the guidance of Vijay Paranjpye.<sup>6</sup> This work sets a new standard for critique of development projects. It begins with a history of development projects in India, and a history of the evolution of the Narmada project. In a section entitled "The Backlog Mountain," we are informed that in India as of 1989-90, there were 168 major and 330 medium dams yet to be completed, of which 73 major and 138 medium dams are being constructed without approval from the Planning Commission of India, some of these being three-quarters completed. Meanwhile thousands of minor irrigation schemes throughout the country are stranded without funds. The spillover cost of completing the major dams alone will be a staggering Rs. 16,482

**Table III: Some CIDA-Funded Dams and Problems:**

Country	River	Dam	CIDA Contribution	Problems
Sri Lanka	Mahaweli	Madura Oya	\$71.5 million	Poor Resettlement and Rehabilitation program <sup>†</sup>
India	(in Kerala)	Idukki	\$51.0 million	Earth tremors, environmental problems
Colombia	-	Guario	\$29.0 million	Cost overruns*
Pakistan	Indus	Tarbela	\$29.0 million	Will last only 50 years
Honduras	Humuya	El Cajon Dam	\$27.8 million	Built on a fault, cracks in the dam
Ghana	Volta	Akasombo	\$17.2 million	Erosion
Brazil	Parana	Itaipu	\$ 3.0 million	Inadequate land compensation.**

<sup>†</sup>Funded, in '79, by 1984 60% of the 200,000 oustees still had inadequate water for their crops though they were supposed to be the beneficiaries of the dam's irrigation water. It flooded 263 000 hectares of land, including part of a wildlife sanctuary.

\*The dam cost more than half of Colombia's budget for all social programs.

\*\*The Guarani Indians lost 1 500 ha. of land and were given 210 ha. "with poison and malaria" as they described it in a letter to the World Bank.

crore (about U.S.\$6.6 billion), over a third of which are in Gujarat and Madhya Pradesh, the two states hosting the Narmada Project. The authors conclude that the approval of the Narmada project, including the B/C analysis was political, and was "reduced to an entirely farcical exercise" (:7).

The authors' portrayal of the R & R aspect of the project concurs with the Alvares and Billorey study: it is abysmal. Although much of the legislation around the project was an improvement over other projects, actual implementation of R & R has been a "dismal reality." Research clearly shows that villagers are ill-informed, misinformed, and that none had been apprised of the full extent of their rights. For example, not one villager had seen a posting of the mandatory Land Acquisition Act of 1894. The chapter on resettlement includes an eight-page assessment of the project by a World Bank appraisal team as well as other World Bank memos. The team concludes that the Bank has only two options concerning the unsatisfactory nature of R & R at the Sardar Sarovar site, to withdraw altogether or to stop disbursements until the state governments are in compliance with the standards set by the World Bank. Though construction continues, World Bank funding is on hold, apparently pending the Berger report. Yet there are reports to suggest that

Japanese investors are considering financing the project.

Paranjpye's study also concludes with a discussion of alternatives. One forgotten alternative in this study noted that the use of tanks to store surplus water, a tradition going back 2,000 years. The use of tanks during British rule was neglected in some states, expanded in others. Since independence the use of tanks has been largely neglected as a water resource.

### **The Three Gorges Project (TGP)**

It is ironic, in fact, that both books just reviewed praise the low-tech, holding pond and small dam construction in China as highly successful and cost effective, for we now turn to a potentially greater calamity: the construction of the world's largest dam... in China. *Damming the Three Gorges*, edited by Gráinne Ryder, is a well-rounded collection of articles covering the major aspects of the Three Gorges Project. It is made up of articles that focus on critiquing the Canadian International Project Managers' (CIPM), CIPM Yangtze Joint Venture (CYJV) feasibility study, commissioned by CIDA and the World Bank in 1989. Joseph Whitney, one of the contributors to the Ryder book (and to this issue of *Refuge*), has already given us an overview of some of the problems with the study. My purpose is to recount some of the problems foreseen

in light of the concerns cited with the Narmada project.

The CYJV study claims that the intent of building the dam is to protect 20 000 square kilometers of downstream floodplain inhabited by roughly ten million people from the disastrous flooding that has occurred throughout China's history. In chapter 8 Phillip Williams<sup>6</sup> criticizes this claim. Only fifteen percent of the projected benefits of the dam are to be realised in flood control. He finds the need for such a large dam to be based on subjective analysis;<sup>7</sup> costs of R & R, upstream flood damages, downstream dyke erosion or failure, coastal erosion, and the possibility of catastrophic failure,<sup>8</sup> were all ignored in the study. Flood reduction strategies, such as ring dykes and refuge centers, provide reasonable alternatives that were not considered. The report also fails to consider the possibility of catastrophic failure.

Regarding seismic activity, Williams finds the CYJV's conclusion to favour the more optimistic view of the risks. Recognizing the weight of the water in a large reservoir can induce earthquakes, CYJV stresses the need for careful assessment of this problem, which apparently has not been undertaken. Only faults near the dam site proven to be active are identified in their study, and "the length of faults passing under the dam itself and the

displacement that would occur if these were activated are not identified. Therefore, it appears that the dam design is based on the optimistic assumption that no movement would occur on these faults..." Williams also questions the study's estimation of the dam's structural stability, the risks caused by catastrophic landslides, and the risk of spillway failure.<sup>9</sup> Incredibly, the CYJV study recognizes the probability of a cofferdam failure during the 20-year construction period, which could result in the deaths of hundreds of thousands of people, as about one in twenty. Needless to say, Williams finds this an unacceptably high risk.

The environmental impacts of the project are discussed in chapters 4 and 5, where it is concluded that the TGP would deter fish migration, would silt up quickly, accelerating water evaporation and rising temperatures, eroding the banks, and altering the river's chemical and organic composition.<sup>10</sup> The issue of sedimentation releasing harmful chemicals into the water is discussed in detail.<sup>11</sup> The editor discusses China's environmental crisis in the introduction, a crisis precipitated by massive deforestation and conversion of all available lands to agriculture under Mao's "grain-first" policy. Many Chinese scientists began to speak out for the first time in opposition to the government on the proposed TGP. But after the crackdown on the Beijing uprising of 1989 the postponement of the dam was scrapped, and the TGP was put back in motion.<sup>12</sup> Nevertheless several organs within the Chinese government itself remain opposed to the project. The Ministry of Communication argues that the dam will disrupt traffic on the Yangtze during construction, and will increase the cost of shipping after the dam is built. The Chinese People's Political Consultative Conference (CPPCC), the group of noncommunist opposition parties with 410,000 members is opposed on financial and technical grounds. The Municipality of Shanghai meanwhile remains undecided, as it weighs the benefits of more electricity with the risks of

damaging the stocks of fish for its commercial fisheries, and of salt water intrusion into the river from the sea.

The last chapter is by none other than Vijay Paranjpye who points out that no systematic analysis of the entire river basin, considering the interrelationships between the various dams and hydrological systems has ever been done. This is surprising since more than 700 tributaries with development potential for hydropower, irrigation and flood management flow into the Yangtze. But rather than explore the

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***"Minorities have little political or economic power, and as they often have no certificates of land ownership, minority areas are perfect for making an argument that a chosen few will have to do without for the benefit of the majority. Such is the logic of Canada's James Bay Project, a project that threatens the habitat of the Cree people."***

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alternatives first, the CYJV financial analysis begins with the statement: "The Three Gorges Project will be the only economical way to significantly increase flood protection in the middle reaches of the Yangtze." (p. 113) Paranjpye notes that "no analysis was given to support this assumption."

Much like the Indian Officials at Narmada, the CYJV study lauds China's new "resettlement with development" policy as "among the best in the world." But Phillip Fearnside argues that China's resettlement record is not good, citing the case of the Danjiangkou Dam, where it took ten years to get "adequate" funds to the oustees, which may still not have been adequate for building decent infrastructure, including housing.<sup>13</sup> Fearnside criticizes the CYJV study for assuming that land found for relocation

will be equally fertile as the riverine lands flooded by the dam. A major concern to Fearnside is that the Chinese government has already attempted resettlement in Tibet, or along the Thai and Burmese borders, areas populated by minority groups, to populate the area with China's majority Han people. If plans to resettle the oustees of the TGP on higher regions and to intensify agricultural production in other areas prove less successful or more expensive than expected, the temptation would be to look for alternative location sites, possibly areas now dominated by minority groups, such as in Sichuan.

Another problem with R & R is that 10 to 30 percent of urban dwellers are illegal immigrants who are considered "nonpersons" to the Chinese government. This "floating population" is included in the CYJV study, though it keeps its numbers to the lower, 10 percent end of the range. The Chinese government has disputed with the World Bank that to provide R & R to these persons would reward illegal behaviour, but it has agreed to provide some assistance to those who have resided in county seats and towns for more than a year. Yet no housing is planned for them, and clearly many, perhaps most, are still excluded from the plans.

### **Conclusion: "...so that others may live in happiness"**

I have chosen to review works on these two projects for obvious reasons. The scale of both projects sets new levels for development projects, the numbers of "developmental/environmental refugees" to be ousted by the projects is enormous, the environmental costs will be enormous, and finally, both China and India are large, heavily populated countries with numerous minority and underprivileged groups.

Organizing opposition to central government projects such as these is not only difficult, but highly dangerous.

Tables I - III show some of the major dams funded by the World Bank and CIDA, comparing the Narmada Project

and the TGP with other dams. The World Bank recently earmarked \$1.3 billion for its "environmental defense" fund. This "green fund" is supposed to go toward pilot projects that are in the "global interest" (biodiversity, climate change, etc.). Critics say that most of this money is in fact going towards already existing projects, and is tacked on as an expense for "greening up" the projects. This fund would never have been created but for the pressure and criticism of environmental groups and local NGOs. It is quite transparent as an attempt at placation, to ease criticism of the World Bank's funding of environmental disasters. These three books provide a solid basis for the critique of projects (one ongoing, one proposed) funded by the Bank and other major lending institutions. Readers will find not just a resource of statistical data, but well-formulated, logical arguments that need to be developed further, and popularized in order to halt the projects. These arguments make it clear that the benefits of such projects go largely to western banks, local elites, or nearby urban populations, at the expense of indigenous and minority inhabitants of the land to be flooded.

Minorities have little political or economic power, and as they often have no certificates of land ownership, minority areas are perfect for making an argument that a chosen few will have to do without for the benefit of the majority. Such is the logic of Canada's James Bay Project, a project that threatens the habitat of the Cree people. When the project began, the Cree were given no warning that their lands were to be flooded. Phases I & II of the project will cost Quebecois \$11 and \$52.5 billion respectively. Such huge debt from foreign financing with huge environmental costs and impact on indigenous populations is familiar to Third World countries, but now we are seeing it in Canada.<sup>14</sup> Cree opposition to the project has been stiff, and as the project figures into the budget of Quebec, the project, which was recently dealt a major setback, is an important factor in Quebec's bid for independence.<sup>15</sup>

Every dam and every mega development project is different, but the attitude of the officials and planners towards the people whom they have to evict has been consistently callous. The following quote by S.C. Varma summarizes very well, I think, that attitude. One can easily imagine the same words coming from the lips of an official rationalizing the need for the TGP or the James Bay Project:

*No trauma could be more painful for a family than to get uprooted from a place where it has lived for generations and to move to a place where it may be a total stranger... Yet the uprooting has to be done. Because the land occupied by the family is required for a development project which holds promise of progress and prosperity for the country and the people in general. The family getting displaced thus makes a sacrifice for the sake of the community. It undergoes hardship and distress and faces an uncertain future so that others may live in happiness and be economically better off. (Alvares and Billorey: 18) ■*

## Notes

1. In Appendix 4 of the book, Medha Patkar claims that 99 percent of the oustees at Sardar Sarovar will be tribals, 25-50 percent of them being landless.
2. In the Paranjpye book to be reviewed below, pages 27-30 review the protest by oustees and their representatives. One mass rally on 28 September, 1989 drew over 30,000 oustees and concerned citizens at Harsud. Other protests have involved up to 60,000. These pockets of resistance would perhaps be even larger if the oustees had the means and the wealth to take more time off from their vital activities.
3. In the Paranjpye study, relevant articles from ILO Convention 169 of 1989 (nos. 1, 2, 7, and 15), are given on pp. ix-x.
4. One crore = 10 million; 1 lakh = 100,000; I am estimating 25 rupees to U.S.\$1, which was the rate when I left India last August, the rupee had devalued from 19:1 to 25:1 during the six weeks I was there. It has likely devaluated even more since.
5. An official document in 1984 gave a B/C ratio of 1.74:1, though its own numbers actually worked out to 1.52:1 (cf. p. 46).
6. Paranjpye is professor of economics at Ness Wadia College of Commerce in India.
7. The CYJV study claims a need to protect the flood plains from 1,000-year floods (the highest level of flooding expected in the course of 1,000 years), over the present protection against 250-year floods.
8. (which is easily as likely as a 1,000-year flood); 75 million people live downstream from the Three Gorges, including those in the cities of Wuhan and Shanghai. In the event of war, China's enemies could bomb the dam and cause untold destruction of life.
9. The dam will have the largest spillways ever, twenty-seven of them, each with the capacity of the average flow of the Missouri River in the United States.
10. Wegner points out the lack of sufficient research on the impact the dam will have on water and terrestrial wildlife. What I was unable to find in the book as a whole, however, was mention of the status of any botanical survey to examine danger to various plant species, or any mention of compensatory afforestation. Perhaps unlike the Narmada, there are no forests, or very few, to be compensated.
11. This is discussed by Alan Penn, an advisor to the Cree Regional Authority, who discusses how the inhabitants of the region face the same danger as Cree Indians in Quebec who were found to have large traces of the poison methyl mercury in their hair after the first phase of Hydro-Quebec's James Bay project. In 1984 a full two-thirds of the Cree in Chisasibi, Northern Quebec were found to be poisoned by the fish that they depend on. Some elders developed numbness of the limbs, shaking, neurological damage and loss of peripheral vision.
12. Opposition to the TGP is said to have added fuel to the student protests of 1989.
13. Fearnside is a research professor at Brazil's National Institute for Research in the Amazon.
14. Webster, P. "Quebec Inc. Unplugged," *The Nation*, April 27, 1992, p. 548.
15. Quebec's independence movement was recently dealt a blow when New York state pulled out of its \$12.5 billion contract for electricity from James Bay, possibly bringing about an end to the project, and relief for the Cree.

## BOOK REVIEW MIGRANTS ET REFUGIES

Par Jean-Luc Mathieu

Presses Universitaires de France,  
Paris, Collection "Que sais-je?," 1991.

Compte-rendu de  
Véronique Lassailly-Jacob

Ce petit livre, riche, clair et concis, traite d'une question brûlante de l'actualité, celle des réfugiés à travers le monde. L'auteur, conseiller maître à la Cour des comptes, apporte ici un éclairage historique, géographique, juridique et politique à ce douloureux problème évoqué presque quotidiennement par les mass-media.

Le titre choisi pour cet ouvrage, *Migrants et Réfugiés*, pourrait laisser croire qu'il traite des migrants en général en y incluant les réfugiés. Jean Luc Mathieu ne parle pas de l'ensemble des migrants volontaires, ceux qui décident de s'exiler pour connaître une vie meilleure et dont le comportement et le statut dans les pays d'accueil sont totalement différents de ceux des autres migrants. Il se penche sur la situation d'un certain type de migrants, les migrants forcés, ceux qui quittent leur lieu de résidence sous la contrainte. Ce titre, qui ne reflète pas précisément le contenu de l'ouvrage, est toutefois révélateur de la complexité de cette question. En effet, à partir de quel niveau de contrainte, une migration "volontaire" devient-elle une migration "forcée" ?

Par une évocation historique des mouvements de fuitifs, J. L. Mathieu nous rappelle que le phénomène de réfugié n'est pas né avec le XXème siècle mais qu'il fait partie de l'histoire de l'humanité: intolérance, ostracisme, haine de ce qui est "autre," guerres, misère ont existé de tout temps, de même que tolérance, pacifisme, dialogue, compréhension, partage, ont depuis toujours fait naître des terres d'asile.

Le XXème siècle a toutefois une spécificité, celle de l'ampleur croissante des exodes de populations. L'auteur en évoque brièvement les principales raisons: achèvement du cloisonnement du monde en Etats aux frontières étanches, aggravation des conflits qui "entraînent

dans la tourmente un nombre croissant de déracinés," croissance démographique galopante, accentuation des inégalités économiques, développement prodigieux des mass-media et des moyens de transport, "ce qui pousse des populations à se déplacer vers d'autres points du globe, réponse souvent mythique à leur misère." Autres spécificités du XXème siècle, celle des terres d'asile représentées en majorité par les pays les plus pauvres et celle de la complexité et de l'imbrication des causes de l'exil:

*La cohorte grandit des fuitifs, réfugiés, personnes déplacées, migrants économiques et demandeurs d'asile, toujours plus difficiles à distinguer les uns des autres, tant les causes économiques, sociales, militaires, religieuses, politiques et écologiques s'entremêlent de façon de plus en plus inextricables pour jeter sur les grands chemins les victimes d'un monde en déstructuration, qui court à sa perte.*

Eclairages historique et contemporain qui révèlent les racines, la complexité et l'ampleur actuelle du problème, sont ensuite complétés par un aperçu géographique des grands groupes de réfugiés à travers le monde: leur nombre, les causes de leur fuite et leur prise en charge. L'auteur évoque tour à tour les drames vécus par les Indochinois, les Afghans, les Palestiniens, les habitants de la Corne de l'Afrique et de l'Afrique australe, ceux de l'Amérique centrale et de la Caraïbe, enfin, ceux de l'Europe de l'Est.

Puis sont longuement décrits les droits des réfugiés, droits des Nations-Unies, droits conventionnels, droit international humanitaire, toutes ces législations et leur application constituant "un véritable puzzle composé d'autant de morceaux qu'il y a de pays au monde." Une large place est accordée au principal organisme international de protection des droits des réfugiés, le Haut Commissariat des Nations Unies pour les Réfugiés ou HCR, la nature de l'institution, ses fonctions, ses mandats, son organisation, ses moyens d'action .... L'auteur dénonce l'actuelle situation paradoxale de cet organisme qui d'un côté, voit ses fonctions s'étendre sous la pression des événements (pouvoir exécutif accru, nouvelle prise en charge des rapatriements) et de l'autre, dispose

de ressources de plus en plus réduites. Une situation, déplore l'auteur, qui n'est que le reflet de la faiblesse croissante du principe de solidarité internationale.

Revenons sur les termes utilisés dans cet ouvrage pour qualifier les réfugiés et les différentes formes d'assistance qu'ils reçoivent. Si l'auteur explique la différence qu'il introduit entre réfugiés (toute personne s'étant enfuie sous la contrainte de sa zone de résidence), personnes déplacées (celles qui ont fui mais qui sont restées dans leur propre pays), Réfugiés (ceux qui ont quitté leur pays pour cause de persécution et auxquels on a officiellement reconnu la qualité de Réfugié), il ne donne pas de précisions sur les autres termes utilisés. Quels sont les critères qui transforment un fuitif, un déraciné, un demandeur d'asile, un immigré en un réfugié?

Peu de détails également sur les politiques d'assistance menées dans les pays de premier accueil. On aurait aimé savoir plus précisément ce que recouvrent les termes de "camps de détention," "centres ouverts," "camps provisoires," "centres de transit," "villages de réfugiés" ou "zones d'installations rurales." Comment fonctionnent chacune de ces formes d'assistance, quelle est leur logique et leur impact sur la situation des réfugiés? Il aurait été intéressant aussi d'avoir un regard critique sur cette assistance (gaspillage, dissensions entre les différents organismes d'intervention, manque d'implication des réfugiés dans la gestion des lieux de regroupement etc), intéressant également d'évoquer la situation d'un grand nombre de réfugiés, les "non enregistrés," les "illégaux."

Deux millions et demi de réfugiés en 1970, 8,2 millions en 1980, 17 millions en 1990 ... et en 1990, le HCR qui dispose de deux fois moins de ressources par réfugié qu'il n'en avait en 1980. Ces chiffres parlent d'eux-mêmes pour dénoncer la gravité croissante d'une crise mondiale évoquée avec justesse par l'auteur en ces termes:

*La situation internationale des réfugiés est un miroir de la santé politique du monde, comme la capacité de la Communauté internationale de traiter comme il convient les problèmes de réfugiés est un miroir de sa santé morale. ■*

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