

# The Ecologist

Vol 26 No 5 September/October 1996

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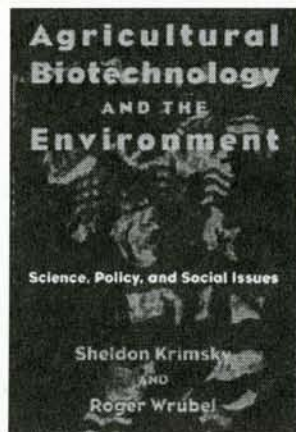
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**The Ecologist is published by Ecosystems Ltd.**

**Editorial Office and Back Issues:** Agriculture House, Bath Road, Sturminster Newton, Dorset, DT10 1DU, UK.

Tel: (01258) 473476, Fax: (01258) 473748, E-Mail <ecologist@gn.apc.org> Send sae for full list of back issues

**Subscriptions:** The Ecologist, c/o Cissbury House, Furze View, Five Oaks Road, Slinfold, W. Sussex RH13 7RH, UK  
Tel/Fax: (01403) 782644

**Retail Distribution:** Central Books, 99 Wallis Road, London E9 5LN, United Kingdom.

Tel: (0181) 986 4854, Fax: (0181) 533 5821.

### Annual Subscription Rates

**£24 (US\$35)** for individuals and schools;

**£50 (US\$90)** for institutions;

**£18 (US\$28)** concessionary rate (subscribers in the Third World and Eastern Europe; unwaged—ID required).

Air mail **£11 (US\$19)** extra.

Concessionary rate only available from RED Computing and The MIT Press and not through other subscription agents.

*The Ecologist* is published bi-monthly. The rates above are for six issues, including postage and annual index.

Subscriptions outside North America payable to *The Ecologist* and sent to the Subscriptions address above. We welcome payment by UK£ cheque drawn on UK bank, US\$ check drawn on US bank, eurocheque written in UK£, banker's draft payable through a British bank, UK or international postal order, Access, Visa or MasterCard.

North American subscriptions payable by check drawn on US banks in US funds to: **MIT Press Journals, 55 Hayward Street, Cambridge, MA 02142.** Fax: (617) 258-6779; E-mail: journals-orders@mit.edu

*The Ecologist* is available on microfilm from University Microfilms International, 300 North Zeeb St., Ann Arbor, MI, USA

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Up to 265x185mm, not more than 10g each:  
£45 per thousand, full run, plus VAT; £60 per thousand, part run (minimum 4,000), plus VAT.  
Further information from the Editorial Office.

#### Classified

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*The Ecologist* International Serial Number is: ISSN 0261-3131.

Printed by Penwell Ltd, Station Road, Kelly Bray, Callington, Cornwall, PL17 8ER, UK.  
Tel: (01579) 383777

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*The Ecologist* is a member of the Independent News Collective (INK)

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# Democratic Genocide

If a democratic country is found to have aided the killing of hundreds of thousands of people, how should its institutions respond? While Western leaders and the media pronounce on the importance of tribunals for war criminals in Rwanda and Bosnia, mere silence has greeted evidence from recently-declassified secret government files which shows that in 1965 Britain aided the slaughter of over half a million people in Indonesia.

The killings started when a group of left-wing army officers loyal to the government of President Sukarno assassinated several Generals on 30 September 1965. They believed the Generals were about to stage a coup to overthrow Sukarno. The instability, however, provided other anti-Sukarno Generals, led by General Suharto, with an excuse for the army to move against a powerful political faction, the Indonesian Communist Party (PKI). It did so swiftly: in a few months hundreds of thousands of PKI supporters and ordinary people were killed and the PKI destroyed.

Suharto's rule was soon consolidated, and he remains in power today. His regime is one of the world's most repressive, notably in East Timor, which it invaded in 1975 and where over 200,000 people have died as a result. Suharto is a key British ally and the recipient of increasing British aid and major weapons such as Hawk aircraft. Military contacts between London and Jakarta, which include training in the UK, are "reasonably extensive and gradually increasing", noted then Foreign Secretary Douglas Hurd in 1994. Since then, huge arms sales have been in the offing. The evidence uncovered in the declassified files suggests that the closeness of today's relationship may owe something to the British role in 1965.

## Wiping Out Opposition

The secret files reveal three crucial aspects of the British role. The first is that Britain wanted the anti-Sukarno Generals to act against the PKI and welcomed it. Both Britain and the US were keen to see the fall of the Sukarno regime. It was a non-aligned, independent nationalist government which by the early 1960s was, in a policy of military "confrontation", claiming parts of Malaya, a British ally which had recently become independent. British forces had been deployed in Borneo to prevent Indonesian encroachments. The US and Britain saw great economic opportunities in Indonesia, provided the right regime was in power. According to a CIA memorandum of June 1962, Prime Minister Harold Macmillan and President John Kennedy "agreed to liquidate President Sukarno, depending on the situation and the available opportunities". In the late 1950s, Britain had aided covert US attempts to organise a guerilla army to overthrow Sukarno.

The newly-released British government documents show British concerns in 1965. The British Ambassador in Jakarta, Sir Andrew Gilchrist, informed the Foreign Office on 5 October that year that "I have never concealed from you my belief that a little shooting in Indonesia would be an essential preliminary to effective change". On 6 October, the Foreign Office in London stated that "the crucial question still

remains whether the Generals will pluck up enough courage to take decisive action against the PKI". Gilchrist noted that the army was "full of good anti-communist ideas", but lamented the fact that, a week after the assassinations of 30 September, the Generals were "reluctant to take, or incapable of taking, effective action in the political field".

On 16 October, the Foreign Office noted that "we must surely prefer an Army to a Communist regime" and declared:

"It seems pretty clear that the Generals are going to need all the help they can get and accept without being tagged as hopelessly pro-Western, if they are going to be able to gain ascendancy over the Communists. In the short run, and while the present confusion continues, we can hardly go wrong by tacitly backing the Generals."

The Indonesian army's actions soon involved carrying out and facilitating mass killings. The Foreign Office stated on 19 October that "the Generals are now trying to demolish the political organization of the PKI . . . and to eliminate its political influence". The US embassy in Jakarta reported on 22 October that "the army has moved swiftly in the first half of October to crack down on the PKI" and continued: "Now is the ideal time in some ways for the army to be committed to a struggle to the death with the PKI".

A month later, a British official reported on 25 November that "PKI men and women are being executed in very large numbers". Some victims "are given a knife and invited to kill themselves. Most refuse and are told to turn round and are shot in the back". One executioner considered it "his duty to exterminate what he called 'less than animals'". (Interestingly, the file this statement is taken from — housed at the Public Record Office — is only partly declassified. It states: "This is a copy: The original has been closed under section 5 (1) of the Public Records Act 1958 until 2006".)

In mid-December 1965, the British embassy noted that the "PKI and its affiliates have now been dissolved" in one province and that the military commander in another "said that the dissolution of the Party in his area presents 'no basic problem' because the whole region has been purged already". By this time, the US embassy estimated that over one hundred thousand people had been killed. An official in the British embassy wrote to the Ambassador on 16 December:

"You — like me — may have been somewhat surprised to see estimates by the American embassy that well over a hundred thousand people have been killed in the troubles since 1 October. I am, however, readier to accept such figures after [receiving] some horrifying details of the purges that have been taking place . . . The local army commander . . . has a list of PKI members in five categories. He has been given orders to kill those in the first three categories. So far, some 2,000 people have been killed in the environs . . . A woman of 78 . . . was taken away one night by a village execution squad . . . Half a dozen heads were neatly arranged on the parapet of a small bridge."

It was not only PKI supporters who were the targets of this slaughter. As the British files show, many of the victims were

the "merest rank and file" of the PKI who were "often no more than bewildered peasants who give the wrong answer on a dark night to bloodthirsty hooligans bent on violence" with the connivance of the army. The campaign was against all opposition; it was aimed at wiping out all prospects of any form of political development outside the control of the army. In the meantime, Indonesia's economic riches continued to be eyed by both the leading Western powers.

## Covert Operations

The second British role concerns support for the campaign through covert operations. On 5 October 1965, the British political adviser to the Commander-in-Chief in Singapore (the main British military and intelligence base in the region) reported to the Foreign Office in London:

"We should not miss the present opportunity to use the situation to our advantage . . . I recommend that we should have no hesitation in doing what we can surreptitiously to blacken the PKI in the eyes of the army and the people of Indonesia."

The Foreign Office replied:

"We certainly do not exclude any unattributable propaganda or psywar [psychological warfare] activities which would contribute to weakening the PKI permanently. We therefore agree with the [above] recommendation . . . Suitable propaganda themes might be . . . Chinese interference in particular arms shipments; PKI subverting Indonesia as agents of foreign communists . . . We want to act quickly while the Indonesians are still off balance but treatment will need to be subtle . . . Please let us know of any suggestions you may have on these lines where we could be helpful at this end."

On 9 October, the political adviser confirmed that "we have made arrangements for distribution of certain unattributable material based on the general guidance" in the Foreign Office memo, although the files do not reveal what these were.

Other files allude to a plan, instigated by the US to which the British pledged support, to propagandize the links between PKI leader, Aidit, and China after Aidit's arrest had become public knowledge. The Foreign Office wrote: "We are willing to cooperate with the Americans in using Aidit's arrest when confirmed to further our policy of blackening the PKI and emphasizing Chinese interference".

However, there is an even more sinister side to covert British support for Suharto's Generals. Britain was engaged in "confrontation" with Indonesia over Malaya. On 6 October, the Foreign Office stated that British policy "did not want to distract the Indonesian army by getting them engaged in fighting in Borneo and so discourage them from the attempts which they now seem to be making to deal with the PKI". The US was worried that Britain might take advantage of the instability in Indonesia by launching a "counter-offensive from Singapore to stab the good Generals in the back", as Ambassador Gilchrist described the US fear.

The British political adviser in Singapore wrote to the Foreign Office:

"We have considered Gilchrist's suggestion . . . that we should get word to the Generals that we shall not attack them whilst they are chasing the PKI. The C-in-C [British military commander in Singapore] thinks that this has some merit and might ensure that the army is not distracted [sic] from what we consider to be a necessary task. I hope that you are urgently considering whether something of the kind can be done. Clearly to be effective

any message should be delivered within the next day or two. Our views are that the message should be oral (and therefore deniable)".

Gilchrist confirmed that he would "pass a carefully phrased oral message about not biting the Generals in the rear for the present". A file of 20 October shows that the message went ahead, noting that "the secret communication was made to the Generals, through the American contact."

## US-British Connivance

The third British role concerns its relationship with the United States. It is known from declassified US records that the US covertly provided arms to the Generals to aid their campaign of slaughter. The US embassy in Jakarta also gave the Indonesian army a hit list of thousands of PKI supporters, who were subsequently hunted down and killed. The British files reveal extremely close relations between the US and British embassies in Jakarta. "Everything of significance from the American embassy . . . is being reported to their embassy in London", one UK official noted. Also, US "sit-reps [situation reports] of intelligence go back to" the Foreign Office in London.

Britain was initially reluctant to see US equipment go to the Generals lest it be used in the "confrontation" against British forces in Borneo. Thus the British files show that the US State Department has "undertaken to consult with us before they do anything to support the Generals".

The first US supplies to the Indonesian army were radio equipment "to help in internal security" and to help the Generals "in their task of overcoming the Communists", noted Ambassador Gilchrist. Patrick Dean, the British Ambassador in Washington, wrote that such supplies would be a "short-term gesture of encouragement" from the US to the Generals. "I see no reason to object or complain" to these supplies, Gilchrist commented. Later, he noted that the equipment "had been very gratefully accepted".

The story goes further. The secret US files — documented by historian Gabriel Kolko — show that, in early November 1965, the US received a request from the Indonesian Generals for equipment "to arm Moslem and nationalist youths . . . for use against the PKI". The US promised to supply such covert aid — dubbed "medicines". In the British files, the British Ambassador noted on 14 November: "Agreement has been reached on the supply in the near future of medicines and communications equipment to the value of something under one million dollars".

The British files do not reveal whether British officials knew that these "medicines" were weapons. It is possible that the US reneged on its undertaking to consult the British about arms transfers; however, in earlier discussions about this possibility, a British official at the embassy in Washington noted: "I do not think that this is very likely". Given their close relations, it is likely that the US did inform the British of the true nature of these supplies and that the British approved them. The approval of radio sets to the army for "internal security" already showed British willingness to aid the Generals' campaign, as did their other covert operations.

No wonder close military, diplomatic and economic relations have developed between London and Jakarta over the past 30 years; the bloody beginnings of Suharto's rule owe at least something to British foreign policy. A memo written by then (Labour) Foreign Secretary Michael Stewart to Prime Minister Wilson during the killings is apt today:

"It is only the economic chaos of Indonesia which presents that country from offering great potential opportunities

to British exporters. If there is going to be a deal with Indonesia, as I hope one day there may be, I think we ought to take an active part and try to secure a slice of the cake ourselves."

## The Pursuit of "National Interests"

Britain has in fact played a significant supportive role in some of the world's worst acts of mass killing. Together with the US, Britain helped to legitimize the Khmer Rouge in the late 1970s and early 1980s, following their genocide of over one million people in Cambodia, by continuing to recognize at the United Nations the Khmer Rouge as the legitimate government of Cambodia. In the 1980s, the SAS also covertly trained guerillas allied to the Khmer Rouge (and the Khmer Rouge directly, according to journalist John Pilger) in the use of weapons and mine-laying techniques.

The worst recent example is Rwanda in 1994 where a million people were killed in a planned strategy of mass murder. Britain was a key member of the UN Security Council which reduced the UN's troop presence in Rwanda in April 1994, effectively sending a green light to the killers. As the killings mounted, the government — followed by the media — carried on identifying the war as "civil strife" when what was taking place was a planned strategy of mass killing. Terming it "civil war" served to absolve external actors of responsibility for helping to stop it, as in Bosnia. Britain also helped the Security Council to reject describing the killings as "genocide" — to have done so would have compelled them, under the terms of the Geneva Convention, to "prevent and punish" those responsible. Along with other states on

the Security Council, Britain also allowed the Rwandan government to retain its seat on the Council during the massacres, even as its ambassador delivered a speech blaming the victims (by then numbering around 200,000) for the killings.

What these events have in common is the usual pursuit of "national interests" (that is, the interests of the ruling groups that control policy) in the face of the grossest crimes. This is systematic and consistent rather than evidence of occasional "double standards". This systematic British role is rarely exposed. British academics rarely consult the declassified files, many of which have simply been sitting in the Public Record Office for years, apparently untouched; when researchers do look at them, the reality of policy rarely emerges.

Neither does the conservative or liberal media betray much interest in exposing the topical realities of British policies. There are few sources for discovering the current role of the SAS in Colombia, for instance, or the nature of the close relations between London and a Turkish government engaged in gross abuses against Kurds, or the intelligence and military relations with the Persian Gulf states.

The truth is that our so-called democratic governments have little concern for protecting civilized values; neither do those other institutions — media and academia — which are, in theory, in a position to counter, rather than aid, official power.

Mark Curtis

Mark Curtis is the author of *The Ambiguities of Power: British Foreign Policy since 1945*, Zed Books, London, 1995 (see p.213 to order). For a referenced version of this editorial, please send a stamped addressed envelope to *The Ecologist*, Agriculture House, Bath Road, Sturminster Newton, Dorset DT10 1DU, UK

# The Potential of Eco-Taxes

Five years ago, anyone arguing the case for eco-taxes was regarded as a hippie. Today, it is hard to find anyone who will dispute the principle for them. The idea behind an eco-tax is to shift the burden of taxation from labour onto resource use and pollution on the assumption that raising the financial costs of harm to the environment will deter polluters while lowering taxes on labour will encourage people to create more employment. The landfill tax, introduced in Britain on 1 October 1996, is the first example of this thinking in the country. Every tonne of waste deposited in a landfill site is now subject to a charge of £2 for inert material and £7 for other waste. In announcing the new tax, UK Chancellor of the Exchequer Kenneth Clarke said:

"By raising revenue from waste disposal, we will be able to make further cuts in employers' insurance contributions and so create more jobs. We will tax waste more and jobs less."

But do eco-taxes really unite everyone in common concern for ecological sustainability, or are we hippies being taken for a ride?

## One Policy, Different Worldviews

To date, there has been more talk than action. Carbon taxes, for instance, have been on the European Union agenda since 1992, but Britain remains implacably opposed to them. Finland introduced one in 1990, the first country to do so, even though it accounts for no more than 0.3 per cent of global carbon dioxide emissions. Norway, Sweden, Denmark and

The Netherlands now have energy taxes with environmental objectives. Other taxes, such as on petrol, have been widely applied for much longer, but have rarely been seen as environmental measures. In fact, 20 years ago, taxes on resource use in industrialized countries were proportionately higher than they are today.

The rationale for eco-taxes is couched either in the language of environmental ethics — "the polluter pays", for instance — or in the language of economics. Dominant economic thinking understands environmental damage as a market failure due to the absence of individual property rights or the presence of "externalities", factors which have an economic effect but not a price in the marketplace. The willingness of economists to view complex geophysical processes, such as climate change, through the narrow prism of property rights and market pricing is well-documented.

On this view, taxation could alter market prices in line with these externalities. But what is the right price? At this point, the discipline of environmental economics comes into play, offering a hundred and one ways to set this "shadow" market price.

The limits of this thinking, however, become evident the further one takes it. Modern economics relies on a set of assumptions about people, society and ecology that are simplistic and inaccurate. Simplicity is convenient if it can guide decision-making. It is dangerous if it is wrong. Much of what passes for environmental economics today is simply a *reductio ad absurdum* of initial starting premises.

Does this make eco-taxes a flawed project? Not necessarily. No law of logic says that if your assumptions are wrong, your conclusions will necessarily be wrong. Environmental

economists could be right — but for the wrong reasons.

A second view of the need for eco-taxes comes from a school of thought that might characterize itself as ecological economics. Again, externalities are invoked to explain why, among other reasons, free markets will breach sustainable scales of economic activity. But rather than searching for a "shadow" market price through the arcane tools of environmental costing, ecological economics seeks to set the price that is appropriate to achieve the change required to bring economic activity within sustainability constraints.

Thus, eco-taxes represent the same policy tool, but are heralded by advocates from radically different worldviews. As such, they could potentially unite disparate voices in a search for the holy grail of modern environmentalism — a sustainable world. Even more, eco-taxes could bring in new social movements behind a sustainability agenda, because the considerable tax revenues they would generate could help deliver social goals such as tackling unemployment.

## Potential Flaws

The new UK landfill tax, however, exemplifies the dangers of eco-taxes that raise prices but fail to meet environmental objectives. Waste is on the rise across the world. In industrialized countries, the low proportion of total waste that household waste account for — 20 million of the 400 million tonnes produced in the UK each year, for instance — masks high consumption patterns. Every kilogramme of waste generated by a household is associated with another five kilogrammes of waste generated during production and a further 20 kilogrammes at the site of initial resource extraction.

A vast number of consumer durables are discarded annually in the UK: around two million vehicles, six million large kitchen appliances, three million vacuum cleaners, a substantial quantity of audiovisual equipment, and millions of small appliances such as kettles, toasters and irons. In addition, a considerable amount of furniture, carpet and other bulky household waste is thrown out. Much of this waste reflects simple profligacy. One study found that a quarter of electrical appliances discarded at civic amenity sites were still functioning and a further quarter could have been repaired at minimal cost.

The priorities for environmental policy in relation to waste are relatively clear. A "waste hierarchy" sets out options (with some variations) from the least preferred — landfill, through energy recovery, materials recycling and re-use of products — to the most favoured, a reduction in the use of energy and materials. The new landfill tax aims to provide a price incentive to push behaviour up this hierarchy. But the tax is simply too low to do this. A study by accountants Coopers & Lybrand for the British government estimated that the tax would increase incineration of domestic waste by eight per cent and raise the overall recycling rate by just one per cent.

The potential flaw of eco-taxes lies in the extent to which environmental objectives are lost in the process of negotiating with powerful interest groups. For example, when energy taxes were first introduced in Scandinavia, the most energy-intensive industries were exempted. Belgium's pesticides tax exempts farmers. As with any management-oriented system, the process is

subject to the distorting influence of elites who dominate the underlying system of decision-making.

For individual consumers, the wallet is a powerful educator, but price signals alone will not encourage radical changes in culturally-embedded behaviour. For example, simply raising household energy prices through the tax mechanism can lead to a paradox: those with the greatest interest in responding to it by investing in energy efficiency (low-income households) are those least able to do so; those most able to respond (richer households) are those least likely to be interested in doing so because they can more easily absorb the extra cost.

Governments, meanwhile, may introduce eco-taxes to finance their growing deficits. The actual pattern of government spending may not change: it may still go on trying to cope with the social costs of economic growth or providing subsidies for free trade in the form of corporate welfare or infrastructure development. In the context of free trade, corporations simply pass on the costs of eco-taxes in the form of lower wages. All these considerations imply that the scope for eco-taxes to bring about environmental sustainability is limited unless they form part of, or help to bring about, a shift in the underlying pattern of institutions and ownership within society.

## Coherent Proposals

A more radical approach would be to bring together proposals for income, tax, consumption and ownership into a coherent strategy and vision. The aim would be to re-establish a balance between markets and the commons — resources which have been created by nature or society as a whole. On this basis, people would be rewarded, not taxed, for the work they did for one another, for the value they added and for what they contributed to the common good. What they paid to the public revenue would reflect the amount they took out of common resources.

Two proposals which would start to achieve this are worth further in-depth consideration: first, to introduce an energy tax at source and a land-rent tax and to remove current taxes on incomes (including social security contributions); and, second, to introduce a citizen's income (a fixed payment that every member of society receives) and to remove existing tax allowances and social security benefits. The results of changes such as these, achieved over a period of time, would be to

decentralize economic activity and to discourage energy-intensive activities, including high-input farming, long-distance freight transport and long-distance commuting to work. The shift in taxation to energy and land would encourage an increase in employment. The citizen's income would reduce people's dependence on "jobs", making it easier for them to take up part-time paid work or unpaid work for their families and local communities. The land-rent tax would, within the constraints of a democratic planning system, encourage a more efficient use of land, including of housing which is at present kept empty.

There is, however, no "magic bullet" to change patterns of over-consumption and exploitation. Eco-taxes should be welcomed not for what they promise, but for where they lead.

Ed Mayo

Ed Mayo works with the New Economics Foundation.

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# Pulping the South

## Brazil's Pulp and Paper Plantations

by

Ricardo Carrere

*To feed growing paper consumption worldwide, vast tree plantations are being established in the South. Brazil is now home to the second-largest area of industrial, fast-growing tree plantations, primarily of eucalyptus, in the world and has become a major supplier of eucalyptus pulp. The industry has had a great impact not only on land, vegetation and water, but also on people and their livelihoods. An examination of the history, claims and records of three of the most frequently-praised of Brazil's pulp operations — Aracruz, CENIBRA and Jari (Monte Dourado) — reveals the extent of this impact.*

Paper consumption is rising worldwide: 80 years ago, 15 million tonnes were consumed; in 1994, that figure had leapt to 268 million tonnes. If current consumption patterns remain unchanged, it is predicted to increase by another 80 per cent by the year 2010, with more than 60 per cent of the rise taking place in Europe, North America and Japan. Also increasing is the amount of pulp made from waste paper — recycled paper now accounts for over 30 per cent of the material input for the world's paper. But other sources, mostly trees, still have to provide the rest of the pulp. Roger Olsson of the Taiga Rescue Network calculates that, even if recycling rates go up to 50 per cent by the year 2010, world pulpwood consumption will still increase by 33-41 per cent over 1990 levels.<sup>1</sup>

To feed pulp and paper mills, vast monocultures of conifers, eucalyptus, acacia and other tree species are being established, particularly in the South where fast tree growth, inexpensive land and labour, and lavish subsidies combine to make wood especially cheap. (Wood represents 40 to 70 per cent of the variable cost of making pulp which is, in turn, the most important cost in making paper.) The industry is also shifting its pulp and paper mills to the South where environmental regulation, particularly of air and water pollution, tends to be looser than in many Northern countries.

As exotic trees invade native woodlands, grasslands and farmlands, impoverishment, environmental degradation and rural strife have invariably resulted. In addition to confrontations with local people over pollution and the use of land and water, negative publicity about the pulp and paper industry's deforestation, dioxin emissions and landfills has threatened the industry's market share and profits.

The industry has learnt to take the offensive on social and environmental issues, one of its favoured tactics being to "greenwash" its activities. In particular, companies deploy bite-sized "messages" — plantations relieve pressure on natural forests; plantations increase overall tree cover; plantations use only degraded or unoccupied land; plantations help curb global warming; plantations create employment — in public debates,

newspaper columns and government negotiations with the aim of reaching consumers, environmentalists and officials whose day-to-day lives are not affected by production operations and who have little time to acquaint themselves with the technical issues and particular facts. As a result, they may be less inclined to forge alliances with grassroots groups fighting monoculture pulpwood plantations.

### Brazil — A Eucalyptus Pulp Giant

Brazil is the South's pre-eminent pulp and paper exporter.<sup>2</sup> The country first began making pulp and paper on a considerable scale in the 1950s, when annual pulp production reached 280,000 tonnes. During the 1960s, the figure rose to 780,000 tonnes, but it was in the 1970s that the sector really took root. In 1980, more than three million tonnes of pulp was produced, with short-fibre eucalyptus predominating over long-fibre conifer pulp. In the 1980s, when export pulp production became the industry's driving force, total output rose to four million tonnes. By 1994, Brazil was supplying half the world's eucalyptus pulp.<sup>3</sup>

Today, the country is home to what are considered outstanding examples of large-scale, industrial, fast-growing tree plantations, harbouring the second-largest area of such plantations in the world. Publicized as the "leading supplier of eucalyptus market pulp in the 1990s", Brazil ships nearly two million tonnes abroad each year<sup>4</sup> and boasts pulp-making costs among the lowest anywhere in the world.<sup>5</sup>

The pulp mills can be found from north to south, but the majority are in the east and north near large plantations. Such locations enable the industry to avoid large-scale popular resistance to the pollution which would have resulted if factories were located near major urban centres. In addition, by building mills near the coast, transport costs from plant to port, from where the pulp is exported abroad, can be kept down.<sup>6</sup>

The pulp and paper industry has had a great impact not only on land, vegetation and water in Brazil, but also on people and their livelihoods. An examination of the history, claims and records of three of the country's most frequently-praised pulp operations — Aracruz, CENIBRA and Jari (Monte Dourado) — reveals the extent of this impact.

**Ricardo Carrere**, a forester by training, works at the Instituto del Tercer Mundo in Montevideo, Uruguay. He is coordinator of the World Rainforest Movement and co-author of *Pulping the South: Industrial Tree Plantations and the World Paper Economy*, Zed Books, 1996.

## Aracruz

Aracruz is not only Brazil's foremost pulp and paper producer; it is also the largest producer of bleached eucalyptus kraft market pulp in the world and operates the world's largest pulp mill. In 1978, it inaugurated its first 400,000-tonne-per-year plant (later enlarged to 500,000 tonnes per year), followed by a second one in 1991.<sup>7</sup> The company accounts for more than half of Brazil's pulp exports — more than 850,000 tonnes<sup>8</sup> — with Europe as the main destination, followed by the United States and Japan.<sup>9</sup>

Aracruz's mills feed off its extensive eucalyptus plantations in the coastal states of Espírito Santo and Bahia, where rapid growth rates have been achieved through the selection and cloning of the fastest-growing species and the individual trees best suited to the needs of industrial processes (those with the least bark and branches). Thus Aracruz's wood consumption per tonne of pulp produced dropped between 1985 and 1991 from 4.5 to 4.1 tonnes<sup>10</sup> while average tree growth in the plantations rose from 25 to 35 cubic metres per hectare per year.<sup>11</sup>

Aracruz's pre-eminent position in Brazil and the world is often ascribed to its being a highly-successful private undertaking. In fact, the organization was conceived and developed through direct and indirect state assistance. One of Aracruz's original partners in 1967<sup>12</sup> was the ECOTEC consultancy company which had strong government links. It not only pressed the government into approving fiscal incentives for plantation forestry, but also advised the state government of Espírito Santo to promote the activity. In 1974, the government approved a decree allowing an 80,000 hectare afforestation project to be set up in Espírito Santo. One of the signatories was the then Minister of Mines and Energy, Antonio Dias Leite Jr. — an ECOTEC partner.<sup>13</sup>

By the middle of the 1980s, Aracruz had acquired so much land in Espírito Santo that the state government was forced by the public to come to a "gentlemen's agreement" with the firm to prevent it buying any more. Aracruz's response was to invest in 80,000 to 100,000 hectares in the neighbouring state of Bahia. A new Forest Development Programme, moreover, allowed the company and the state to promote eucalyptus planting on the land of third parties.<sup>14</sup> As of 1994, Aracruz owned 1.86 per cent of Espírito Santo's territory; it commanded, in total, 203,000 hectares there and in Bahia of which 132,000 hectares had been planted with eucalyptus.<sup>15</sup>

Aracruz has also benefited from direct state subsidies. In 1975, for instance, Brazil's National Economic Development Bank (BNDE) agreed to contribute US\$337 million to the construction of Aracruz's first paper mill. The financial package, granted on exceptionally favourable terms and the largest ever offered to a private firm in Brazil, provided 55 per cent of the support needed to build the mill.<sup>16</sup> The state became the company's main shareholder, with a 40 per cent stake (followed by British American Tobacco with 30 per cent).

Following further BNDE loans to increase plant capacity, Aracruz was privatized in 1989 and the majority of state-held shares sold. The current main shareholders are Souza Cruz (a subsidiary of British American Tobacco), the Norwegian Lorentzen Group and the Brazilian Safra Group, with 28 per cent each; the holdings of the state BNDE (now renamed the National Economic and Social Development Bank or BNDES) have been reduced to 12 per cent. According to the research findings of two major Brazilian NGOs (FASE and IBASE),



Richard Disbrow

privatization "represented a good deal for those groups assuming control of the company", but was an "absurd move" from the point of view of the state, which thereby abandoned its strategic position in a lucrative undertaking, handing the taxpayers' inheritance over to the private sector.<sup>17</sup>

Aracruz, perhaps more than any other large pulp producer, has taken seriously the need to respond to pressure from the environmental movement — above all through its publicity materials which have been widely disseminated by the company itself, through the Business Council for Sustainable Development (big business's lobbying group set up for the 1992 "Earth Summit")<sup>18</sup> and by friendly journalists and researchers.

In its publicity, the company claims not only that it uses "clean" industrial processes but also that it has planted eucalyptus only in areas where the natural forest was cleared before its arrival and that it is making every effort to conserve remaining native stands. It states that 27 per cent of its land has original forest cover and that for every 2.4 hectares of eucalyptus, one hectare of natural forest is preserved.

Aracruz highlights the fact that it has always used wood from its own plantations or has bought eucalyptus wood from farmers provided with free seedlings by the company.<sup>19</sup> At the same time, it states that its plantations do not compete for land with agriculture or other activities.<sup>20</sup>

This image has been best promoted by two British researchers, Caroline Sargent and Stephen Bass, in their 1992 book *Plantation Politics*. After describing the panorama of desolation in Espírito Santo and Bahia, they state that:

"Aracruz Celulose SA, with government support, took control of much degraded land within the tattered fragments of natural forest, and has established major eucalyptus plantations. In doing so, it has begun to improve the local environment and social conditions."<sup>21</sup>

This chorus of praise has little factual foundation. Aracruz's tenure of land has had deleterious effects on local people and their livelihoods and on soil, water and forests.

## State Support for Plantations

Brazil has a long experience in planting eucalyptus for charcoal production and conifers for pulp. Indeed, the country's largest plantation area is still occupied by eucalyptus charcoal plantations. By the mid-1960s, however, the area planted with exotic species was relatively small and concentrated mainly in the state of São Paulo, where wood consumption was highest and where deforestation had necessitated costly imports of raw materials from elsewhere in Brazil.

The situation changed radically when a military dictatorship came to power in 1964. New policies favouring large-scale capital were implemented, forming part of a modernization strategy seeking to gain the Brazilian economy access to the international scene. A new forestry code was developed and fiscal incentives given to promote tree plantations.

Large plantations quickly sprang

up in many regions of the country, in many cases without the developers having much idea of what the trees planted would finally be used for. Poor location and poor maintenance led to the loss of many plantations. Of the six million hectares planted under the government incentive system, only 2.3 million hectares of eucalyptus and 1.6 million hectares of pines survived.

Years later, however, the pulp industry was able to take advantage of these extensive sources of raw materials — although to what extent is unclear, since in 1994 the total pulp plantation area was estimated by industry sources at only between 1.2 and 1.5 million hectares (three-fifths of which was eucalyptus).

Despite the apparent anarchy in the plantation sector, the military government clearly aimed to establish a large export pulp industry. A late-1960s package of tax breaks promoting pulping machinery imports was followed by National Paper and Pulp Plans I

(1974) and II (1979/80). The industry became one of the main beneficiaries of the official developmentalist policy.

A National Economic Development Bank resolution gave priority to financing huge projects with a daily pulp production capacity of 1,000 tonnes or more. Such lending arrangements favoured big plantations. Indeed, loans were to be made available for mill construction only in those cases in which half of the fibre required was already available.

In addition to investing public funds in the pulp industry, the state also played a central role in creating institutional and legal conditions necessary for plantation development and in spreading the idea that pulp projects would guarantee progress wherever they were set up. In some cases state companies and cooperative ventures between the state and private capital have also been involved.

Contrary to company claims, the enormous area of land bought by the company from the 1960s onwards was not empty: thousands of indigenous people and subsistence farmers lived there. To overcome local resistance to its takeover, mainly from black communities and small agricultural producers who had recently migrated from other states, the company used physical violence joined with symbolic violence. Land purchases were made through two people: a military officer and a local black leader, a combination which had a clear meaning at a time of military dictatorship.<sup>22</sup> Approximately 7,000 families are reported to have been removed, through violence and coercion, from the areas Aracruz occupied for its plantations, including several thousand people who received no compensation.<sup>23</sup> Crucial to these expulsions was the negligence or collaboration of local authorities, including the then governor of Espírito Santo state, Artur Gerardt, who later became president of Aracruz.<sup>24</sup>

In 1967, recalled José Luis Ramos, the head of Caieira Velha village in Espírito Santo, Aracruz, with the support of the state government:

"felled large areas of forest and planted eucalyptus across the region, including on our land. In a little time, this company destroyed around seven Tupinikim villages, expelling us, and today we are surrounded by a sea of eucalyptus in three discontinuous areas. Now there is no forest or game left. The valley's rivers disappeared following the planting of the eucalyptus."<sup>25</sup>

Three options were left to the people expelled: emigrate to other rural areas; move to a life of underemployment in the *favelas* or shanty towns of cities; or work for the company, mainly on the plantations.

Aracruz plantation work has been described as near-slave labour, with conditions so dangerous and unhealthy that few

workers can remain on the job for more than ten years. Over 50 per cent of those who have worked long-term on the plantations suffer from serious work-related health problems as a result of their tasks. The company tends to dismiss long-term plantation employees without compensation, replacing them with younger people.<sup>26</sup> The abundant reserve army of unemployed — whose numbers have been swelled by the crisis of another export monoculture crop, coffee; by the company's dispossession of local people; and by migrants attracted to the Aracruz "development centre" — helps to keep salaries low.

Yet opportunities for even low-paid, health-endangering jobs have become limited as tree harvesting and other plantation work has become increasingly mechanized.<sup>27</sup> During the first few months of 1993, Aracruz dismissed 20 per cent of its employees, reducing the workforce from 7,000 to less than 6,000, with forestry jobs being most affected. In 1993, the indigenous people who had lost their land to Aracruz started a new struggle to get it back. (See Box, p.210)

Aracruz attempts to divert attention from its record by advertising that it has voluntarily built several recreation centres, schools, vocational training centres and health centres, at a cost of over US\$15 million. What the company does not mention, however, is that, as part of the state-funded expansion of Aracruz's plants, the BNDES not only demanded that Aracruz reinforce social structures in the regions where it operated but also put up 80 per cent of the money required to do so.<sup>28</sup>

The company's insistence that its activities are compatible with agriculture makes little sense given its propensity for buying the best agricultural land on the grounds that it makes mechanization easier. Aracruz owns 15 per cent of the plains in Espírito Santo.<sup>29</sup> In Bahia, the company bought up land previously dedicated to small-scale cultivation of *mamao*, a local fruit. Although a company director suggested that *mamao*

production was in decline, it had provided a viable livelihood for local farmers.<sup>30</sup>

On the environmental side, Aracruz has been accused of having felled and burned more than 50,000 hectares of forest during its first phase of tree planting.<sup>31</sup> It has also been fined by Brazil's environmental protection agency for planting eucalyptus in protected areas. Rogério Medeiros, National Coordinator for the Environment of the National Federation of Journalists, who has been monitoring Aracruz's activities since its beginnings, states that 156 streams have disappeared in the area of Aracruz's plantations during that period; wells are drying up in a number of areas, and that the San Domingos river has stopped flowing. In the words of Joao Pedro Stedile of the Landless Workers Movement:

"50,000 people in the area used to eat fish every day. Now they eat fish no more; some fishermen have stopped fishing because there are so few fish to catch."<sup>32</sup>

The Tupinikim Indians, meanwhile, found that scattered parcels of land in Espírito Santo which had been planted to eucalyptus and were grudgingly returned to them in 1983 did not return to their previous level of agricultural productivity, their soils having become sandy. Indiscriminate use of the herbicides, glyphosate and Goal, and the ant killer, Mirex, was blamed for poisoning animals in the region.<sup>33</sup> According to local NGOs, Aracruz has been "constantly fined" for industrial contamination. Local people have testified that:

"near the factory it is nearly impossible to breathe. The majority of the people working in the factory probably have no nasal mucous left . . . Pollution emitted by Aracruz reaches distances of more than 100 kilometres, depending on the wind."<sup>34</sup>

The Pulp Industry Workers Union has accused Aracruz of incorrect management of both waterborne and airborne emissions.<sup>35</sup> Local activists claim that chemical releases into the Atlantic have poisoned fish and vegetation.<sup>36</sup>

Moreover, Aracruz's professed concern with implementing "clean" industrial processes cannot lead to consistent environmental results if such concern is driven by profit margins. When the company incorporated new technology for non-chlorine pulp bleaching in late 1993, it was simply responding to foreign consumer demand for chlorine-free pulp. A company directive stated that

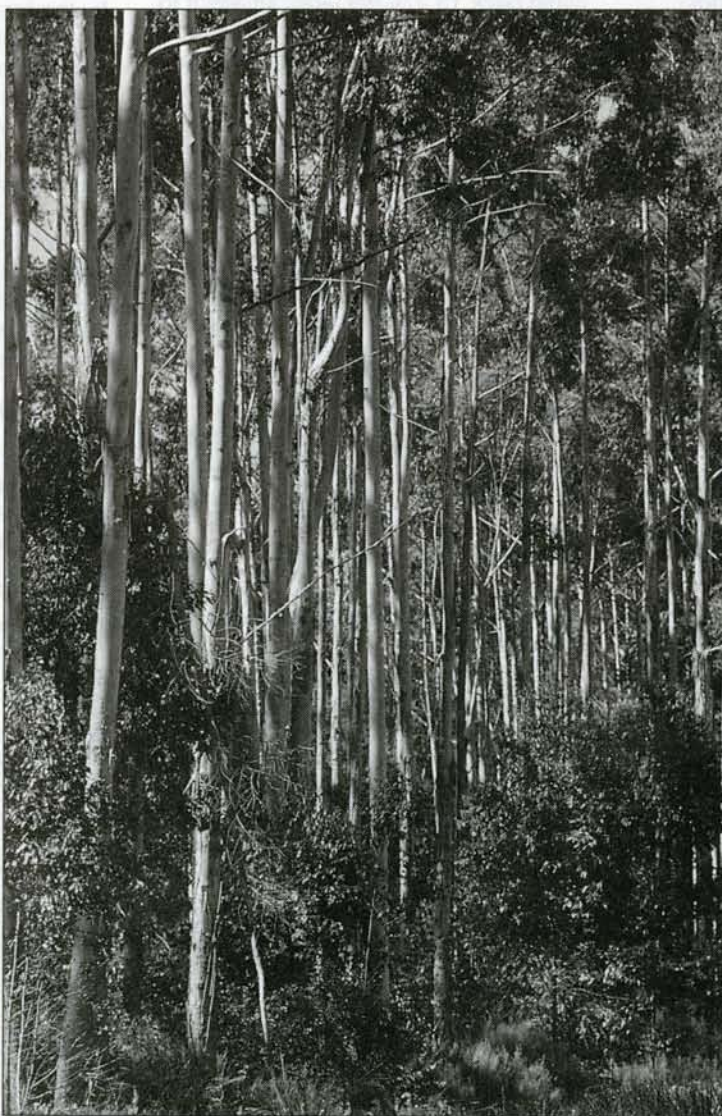
"without the new technology, we would lose sales of 150,000 tonnes of pulp on the international market".<sup>37</sup> The firm runs three different types of industrial process among its four production lines: one uses chlorine gas, two are elemental chlorine free, and only the newest one is totally chlorine free.<sup>38</sup>

Small wonder that in May 1992, on the eve of the Earth Summit, the Brazilian NGO Forum organized a public event denouncing the "Aracruz farce" and criticizing a proposal to present the company's activities as a model of sustainable development.<sup>39</sup>

At the same time, Greenpeace symbolically closed Portocel, the firm's export port, in protest at the environmental and social damage the firm had inflicted during pulp production, including its destruction of native forest.<sup>40</sup> As one group of researchers concluded, Aracruz:

"assumes the image of protector of the environment, but its eucalyptus trees have dried streams, destroyed the local fauna, impoverished the soil, impeded the regrowth of native plant species, and drastically reduced the area available for cultivating basic foodstuffs (in a country where many people die of hunger). This is not to mention land concentration and the expulsion of the rural population, which has contributed to increasing the urban population and the degradation of living conditions in the cities. Where is the sustainable development here, we might ask?"<sup>41</sup>

*A eucalyptus plantation*



David Reed/Panos Pictures

## CENIBRA

Whereas Europe is the principal destination of Aracruz's pulp, Japan is the main customer of Brazil's second-ranked pulp exporter, CENIBRA, a Brazilian and Japanese joint venture.<sup>42</sup> The firm's stronghold is in the state of Minas Gerais which borders Bahia and Espírito Santo where the first eucalyptus plantations were established in the 1940s for charcoal. By the 1970s, the state boasted the largest eucalyptus plantation area in Brazil,<sup>43</sup> much of it planted by the state-owned Companhia Vale do Rio Doce (CVRD) with the aim of supplying the pulp, iron and steel, and cement industries with raw materials or energy.

In 1972, CVRD, whose biggest customer was Japan, signed an agreement with the Japan-Brazil Pulp Resources Development Company (JBP) to set up Cellulose Nipo-Brasileira — CENIBRA — to produce eucalyptus kraft pulp for export, half of which would go to Japan. CVRD

# Tupinikim and Guarani Indians Claim Their Land

In May 1996, the Tupinikim and Guarani Indians started an international campaign for the extension and demarcation of their traditional lands, much of which have been taken over by Aracruz Celulose and planted to eucalyptus. FUNAI (the official institution in charge of the demarcation of indigenous areas) had begun the process of demarcating the land they are claiming when the Brazilian government brought in a new decree allowing third parties (such as Aracruz in this case) to contest demarcated indigenous territories.

## Dispossession

Some 500 years ago, the Tupinikim Indians, at least 55,000 of them, occupied a large territory covering what is now the southern part of Bahia state, and the states of Espírito Santo, Rio de Janeiro and São Paulo.

Their numbers dwindled after various conflicts with the Portuguese colonists, but in the year 1610, the Portuguese crown granted a "sesmaria" to them, the northern part of which was officially demarcated 150 years later in 1760.

In 1940, the Vitória Iron and Steel Company or COFAVI arrived in the Tupinikim territory and took over 10,000 hectares of forest in order to fell the trees for charcoal. In 1967, however, Aracruz Celulose bought these 10,000 hectares and another 30,000 from the state government at a token price, eight tenths of one hundredth cruzeiro per square metre. Aracruz began to clear the forest and plant eucalyptus. The acquisitions are of dubious legality because, since 1934, the Brazilian constitution has guaranteed the rights of Indians to the possession of their lands which cannot be given to third parties.

The takeover by Aracruz Celulose resulted in up to half the Tupinikim then resident in Espírito Santo being displaced from their lands. Older Indians still recall some 32 village sites which had to be abandoned to make way for the eucalyptus plantations and other land acquisitions. Those that remained soon found their livelihoods diminishing because of the effects of the eucalyptus monoculture plantations.

Also in 1967, a group of Guarani Indians, which has a long history of

migrating to search for the "land with no evils" arrived from the south of Brazil and were welcomed by the Tupinikim.

The Indians have resisted their dispossession from the beginning and persistently raised their concerns with the Indian Protection Service (SPI) and its replacement, the National Indian Foundation (FUNAI). However, it was not until 1979 that FUNAI first surveyed the land claim and proposed allocating 6,500 hectares of land to the Indians. Under pressure from Aracruz, this was reduced to the present total of 4,492 hectares in three separate areas — Caieiras Velhas, Pau Brasil and Comboios — which do not border each other and which were finally demarcated in 1983.

## Claiming Back

In 1993, the Tupinikim and Guarani let FUNAI know that they had decided to claim back 13,274 hectares adjacent to their existing reserves, land which forms part of the core area of their ancestral territory and includes many of the last remaining fragments of native forests in the area. Some 1,400 Indians are now resident in the three recognized reserves, but many more Tupinikim live scattered throughout the state in other rural communities and urban areas, some of whom have expressed an interest in returning to their ancestral lands.

The Indians require their lands in order to continue their way of life which relies on the forests for hunting, fishing, gathering of fruits, honey and materials for utensils and houses, and subsistence farming. In the case of the Comboios Indian Reserve, the present area that they have been granted is mainly sand and is inadequate for even their basic needs.

The Indians want to restore their forests for future generations, but realizing that the land claim by itself will not ensure the survival of the remaining fragments, they have begun to plan how to safeguard the remnant forests and regenerate more.

FUNAI set up a Working Group in 1994 to reexamine the boundaries. In collaboration with the Tupinikim and Guarani, the group identified an area of 13,579 hectares which would unify two of the existing areas and extend the third. Of this, about 20 per cent is still native forest, the rest being eucalyptus.

The Working Group's report was sent to FUNAI in January 1996 and would have been published (the first phase of official demarcation procedure) had it not been for the Brazilian government issuing Decree 1775/96 in the same month. This decree allows third parties to contest proposed land allocations to Indians and all Indian lands not yet legally 'registered'. Over 1,700 "contestations" have now been filed with FUNAI, effectively paralysing the processing of land claims. The President of FUNAI has a pile of unpublished land claims on his desk, including the Tupinikim case.

Their claim is supported by the State Governor, the State Finance Secretary, the local Labour Party, representatives of the state parliament, the main social movements and NGOs of the state and the local church through the bishop.

The land claim is also supported by the forestry workers on the Aracruz plantation. Due to heavy retrenchment of the workforce Aracruz is not locally popular.

The main obstacle to the land claim is Aracruz itself which has denied that the Indians have rights to the land. The company is trying to get certification for its forest products and has approached the Forest Stewardship Council. Its principal customers are the UK, US, Japan and Germany.

The Tupinikim and Guarani have asked that letters in support of their claim be sent to the Brazilian authorities responsible for the demarcation, Aracruz and Aracruz's customers.

FUNAI, Júlio Gaiger-Presidente, SEUP Sul 702 Bl. A-Ed. Lex-3 andar, 70330-Brasília-DF, BRAZIL.

Chair of the Board of Directors Erling Sven Lorentzen, Aracruz Celulose SA, Rua Lauro Müller 116-21e22 andares, 22299.900-Rio de Janeiro-RJ, BRAZIL; Aracruz International Ltd, 1 Blagdan Road, New Malden House, 4th floor, New Malden, Surrey KT3 4TB, UK.

For more information, contact CIMI-ES, Caixa Postal 30, 29190.00-Aracruz-ES, BRAZIL. Tel/Fax: +55-27-256 2374.

Contact *The Ecologist's* editorial office to write to Aracruz's major customers in your country. A 42-page, large format booklet with maps and photographs, *International Campaign for the Extension and Demarcation of the Indigenous Lands of the Tupinikim and Guarani*, is available from *The Ecologist's* editorial office, £5.

held 51.5 per cent of the shares.<sup>44</sup> JBP, the minority shareholder, was over 36 per cent owned by Japan's bilateral foreign "aid" agency, the Overseas Economic Cooperation Fund.<sup>45</sup>

Some 4,600 people are now employed on CENIBRA lands, not only in Minas Gerais but also in Espírito Santo and Bahia. Among other tasks, they plant 6,000 hectares of eucalyptus per year.<sup>46</sup> CENIBRA's pulp mill, which employs around 1,300 people, increased production from 116,000 tonnes in 1978 to 376,000 in 1993 and plans to double that figure.<sup>47</sup> Fully 80 per cent of the company's pulp is exported (50 per cent to Japan and 30 per cent to Europe and the US).<sup>48</sup>

The firm's mill, inland in Minas Gerais, can compete with coastal export pulp operations such as those of Aracruz because it uses CVRD's high-quality railway which was improved and adapted to transport pulp when the plant came on line in 1977.<sup>49</sup> CENIBRA is also able to keep its costs down through being co-owner with Aracruz of Portocel, a port especially adapted for pulp handling.<sup>50</sup> In 1975, moreover, CENIBRA received US\$128 million in state financing, supplemented by another \$14 million in 1976, \$16 million in 1981 (to reduce energy consumption), \$6.6 million in 1982, and \$15 million in 1985.<sup>51</sup>

CENIBRA's claim to green credentials comes in the form of a five-year strategic plan developed in 1991 to assure "sustainable development".<sup>52</sup> As a result of this plan, 240 hectares of pine and eucalyptus surrounding the pulp mill were to be enriched with local species so as to encourage the return of other indigenous species. In addition, some 1,000 hectares of native forest were to be preserved, while company land on the banks of the Rio Doce was to be reforested with native species. At the mill itself, the plan called for company-monitored measures to control effluents and a start to production of chlorine-free pulp.

Several aspects of this plan call for comment. First, the planting of indigenous species and the preservation of a few areas of native forest (the latter a legal obligation) are essentially cosmetic measures to pacify local people increasingly concerned by the advance of eucalyptus, as well as environmental groups in the North.<sup>53</sup> Second, effluent-treatment systems were installed only in 1988 — 11 years after the mill came on line — and only after heavy pressure from local people.<sup>54</sup> As with Aracruz, chlorine-free bleaching techniques began to be used only as a result of demand from the European Community and are used exclusively with pulp destined for the European market.<sup>55</sup>

Like Aracruz's "greenwashing" efforts, CENIBRA's "sustainable development" plan fails to mention a number of destructive realities about the company's operations. One of these is the way in which CENIBRA's projects and those of associated companies such as CVRD concentrate vast swathes of land in a few hands in a process often marked by violence. According to a Japanese NGO, the Japan Tropical Forest Action Network (JATAN), company associates "used whatever methods were available to acquire land for its plantations":

"sometimes it purchased land at above market prices; at other times residents were chased away with violence. It also often resorted to deception; for instance it would first move a [company] insider onto land adjacent to the farmer's

land and set up a local conflict; then a third party would be sent in who would act as a 'mediator' between the two and offer to purchase the farmer's land."<sup>56</sup>

As elsewhere in Brazil, the concentration of land with good soils in a few hands has undermined subsistence agriculture and led to increased urban migration and the weakening of autonomy and local social ties.<sup>57</sup> Wage labour has proved an inadequate substitute for small-scale farming in both economic and cultural terms.<sup>58</sup> As a result of large plantations taking over agricultural areas, Minas Gerais has had to import food from other regions. As the holdings of plantation firms accumulate, the dependence of local towns on a few businesses grows, and the influence of such companies on decision-making processes increases. One result is yet more industrial projects and tree plantations.<sup>59</sup>

CENIBRA's relationship with its workers has been authoritarian and exploitative. According to one interviewed worker, wages were initially good and there was a strong trade union, but



*Eucalyptus logs waiting to be pulped.*

Ricardo Carrere

salaries declined considerably after CENIBRA stepped in to manipulate union elections through pressure and fraud. The company also dismissed unionized workers and started contracting out both industrial and forestry tasks to other firms. This move, aimed at reducing costs, resulted in even lower wage levels and a smaller number of workers, making unionization even more difficult.<sup>60</sup>

CENIBRA is also moving into contract farming through a programme, operated in conjunction with a state agency, through which seedlings, fertilizers and ant poison are provided to individual farmers if they plant eucalyptus on their own land. This allows the company to augment its forestry base without acquiring land directly. Farmers are contractually obligated to sell wood to CENIBRA at the "market price", which is set by the company itself.<sup>61</sup>

Not only does CENIBRA use non-"degraded" land such as fertile farmland; it also plants, contrary to stated policy, on pronounced slopes.<sup>62</sup> Soil ecology has been affected by the plantations. Because the thick layer of plant material associated with plantations cannot be mineralized rapidly by microorganisms, organic acids are formed and calcium, potassium and magnesium ions are replaced by hydrogen ions in the upper

layer of the soil. This implies a lower pH, which affects the availability of nutrients to plants. The long-term productive capacity of the soil is endangered and it is not known how much longer the same land can keep on producing eucalyptus wood.<sup>63</sup> Tree bark, which, according to the UN's Food and Agriculture Organization (FAO), contains the best part of the nutrients taken from the soil by the tree, is removed from the site and used in the pulp mill for energy generation, further reducing soil fertility.<sup>64</sup>

Local people have observed, moreover, that the rate of replacement of underground water tables has slowed. This is attributable to the increased surface runoff associated with plantations and with eucalyptus's high water consumption. Pesticides such as aldrin and Mirex have contaminated soils and watercourses, with proven high fish mortality.<sup>65</sup> The company has even begun to spray herbicides from the air, endangering local agriculturalists.<sup>66</sup>

At CENIBRA's pulp mill, complaints about water pollution have been continuous since the plant started up in 1977. Yet only at the end of 1986 did the company formally commit itself to installing an industrial and sanitary effluent treatment system, and then it gave itself a 30-month deadline to do so. Although scientific data on air pollution around the mill is unavailable, JATAN members visiting the plant in 1992 remarked that:

"we couldn't avoid noticing the horrible smell present in all of the plant and we felt sorry for the people who had to work there."<sup>67</sup>

## Jari (Monte Dourado)

Third place in the ranks of Brazilian bleached eucalyptus pulp production and export goes to Jari (Monte Dourado).

As with the other pulp giants, Jari's origins stem from the

expansion of eucalyptus plantations in the late 1960s (see Box, p.208). In 1967, United States shipping magnate Daniel Ludwig paid the Brazilian military dictatorship US\$3 million for 1.6 million hectares of tropical forest on the Jari River in the north of the country near the frontier with French Guyana. A year later, he began planting vast homogenous masses of fast-growing trees for pulp.

Ludwig's project was similar to others at the time in Brazil, except for the species chosen: instead of eucalyptus, he went for *Gmelina arborea*, a tree indigenous to Indonesia. The plantations failed: in addition to common problems experienced with eucalyptus and pine (leaf-cutting and ants), the gmelina was afflicted by a fungus which delayed tree growth and reduced wood quality.<sup>68</sup> These difficulties caused Ludwig great losses — by 1978, his company had planted 64,000 hectares of gmelina<sup>69</sup> — so he switched to a type of pine already tried in the area.

By 1982, Ludwig could no longer count on the support of the country's military dictatorship which was beginning to lose its influence.<sup>70</sup> He decided to sell his company, Jari, to a consortium of 23 Brazilian companies, led by the CAEMI group, which acquired 40 per cent of the shares.<sup>71</sup> The state BNDES supported the operation through a US\$180 million loan.<sup>72</sup>

One of the main new shareholders was AMCEL (Amapá Florestal e Celulose), owner of some 90,000 hectares of pine plantations near Jari's plant which were critical to Jari's future. As its own plantations were so unproductive, it had no other raw material sources until its new pine (and subsequently eucalyptus) plantations matured.<sup>73</sup> Jari now owns some 90,000 hectares of plantations, including a 2,000 hectare remnant of gmelina, but eucalyptus dominates, (60 per cent grown from selected clones and 40 per cent from seed). More trees are being planted at a rate of 13,500 hectares per annum.<sup>74</sup>

Jari's pulp mill — originally constructed in Japan, taken by sea to Brazil and now operated by another company, Companhia



## TELEVISION TRUST FOR THE ENVIRONMENT

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Florestal Monte Dourado — produces 300,000 tonnes of pulp annually, 55 per cent of which is long fibre and 45 per cent short. Some 65 per cent of its output goes to Europe, 14 per cent to the US, and another one per cent to increasingly important markets such as Japan, Indonesia, Korea and China.<sup>75</sup>

Jari has not lagged far behind its fellow firms in attempting to “greenwash” its activities. As journalist Richard Higgs writes, “Jari is very proud of its almost surgical blending of plantation species in among the predominant and thriving natural forest” — a practice which helps “to prevent the spread of pests and disease”. It also maintains reserve areas and carries out research into native species which may be of economic use. Jari’s own public relations efforts have received a boost from Paulo de T. Alvim, a leading Brazilian agricultural planner, who claimed that Jari plantations reduce global warming because they grow, whereas the tropical forest that occupied the site previously had been in equilibrium with the atmosphere, neither absorbing nor emitting carbon.<sup>76</sup>

Yet again, such claims conceal more than they reveal. For example, although the company is legally obliged to preserve 50 per cent of the native forests it controls, it has felled around a third of them to supplement shortfalls in gmelina. Some 1,200 hectares of the forests Jari claims to be protecting are being felled each year,<sup>77</sup> mostly to generate energy and to expand its plantations.<sup>78</sup> In 1992, Brazil’s official environmental conservation organization rejected the company’s request to cut 5,000 hectares of dense forest which it wanted to replace with plantation.<sup>79</sup> Felling such native forests has resulted in loss of native trees and habitat for many other species.

Other environmental problems centre on Jari’s continuing reliance on monoculture. Forestry experts never tire of pointing out Ludwig’s serious mistake in choosing gmelina as his plantation species.<sup>80</sup> This “error”, however, is merely one instance of a more general problem which foresters seem far less eager to acknowledge and which current Jari plantings exemplify: namely, that in a large-scale monospecific plantation of any fast-growing species, a fungus, virus, insect or other animal pest may decimate the entire plantation in a short time.

Pest infestation, moreover, was only one of the environmental problems afflicting Jari. When the gmelina felling rotation was shortened to three to four years to avoid fungus attacks, nutrients began to be extracted from the soil at a higher rate. It is estimated that most of the potassium and phosphorus will have disappeared from the estate by the end of the twenty-first century.<sup>81</sup> The use of heavy forestry machinery, meanwhile, has caused soil compaction and erosion.<sup>82</sup>

Effluents from the Monte Dourado plant are dumped directly into the Jari river, resulting in fish kills downriver. Fertilizers and agrochemicals used by the company also contaminate local watercourses.<sup>83</sup> Jari’s “environmental answer” to its energy needs — a hydroelectric dam on the Jari river<sup>84</sup> — would destroy one of the most beautiful and historic sites of Amapá state, Cachoeira Santo Antonio.<sup>85</sup>

The claim that Jari’s plantations help alleviate global warming, finally, has been convincingly refuted by scientist Philip Fearnside who points out that “the much greater standing biomass of the forest [replaced by Jari] as compared to the plantation means that the effect of Jari is emission rather than removal of atmospheric [carbon dioxide]”.<sup>86</sup>

Jari’s public relations exercises also conceal a pattern of widespread social abuse. When it was first set up, the company had to invest in social infrastructure to attract the huge workforce

it needed. Some 3,000 housing units were built, as well as four schools, a 1,100-bed hospital, clinics, supermarkets, a radio station and 11,000 kilometres of roads.<sup>87</sup> Despite these investments, “work-crew contractors were notorious for their treatment of workers brought in from the poor north-eastern states”. Staff turnover was constant at all levels, reaching rates of 200–300 per cent per year.<sup>88</sup>

After Ludwig sold the company, new social problems emerged. Between 1988 and 1993, worker numbers fell from 8,000 to 4,500. Many forestry labourers were replaced with machines. Many migrants were thus left unemployed in a region with few other potential employers. Meanwhile, the company began to pass responsibility for hospital, school and restaurant management onto local and federal authorities;<sup>89</sup> having attracted a large number of workers and their families to work on the project in its initial stages, it wound up shunting the long-term costs of their welfare onto the state. According to a local journalist, “the legacy of the Jari project has been a shanty town in the middle of the jungle”.<sup>90</sup>

## Minority Benefits

The Brazilian government is pouring billions of dollars into developing the export pulp sector and its enormous industrial plantations. These plantations, which are often held up as a triumph of private-sector development, would not have been possible without massive direct and indirect state intervention in the form of fiscal incentives, soft loans, support from BNDES and similar agencies, and the involvement of the state’s CVRD. The coercive power of the state has also been extremely useful in transferring the land of indigenous peoples and small farmers who have no title to their property into the hands of large forestry concerns. The 1964–84 military dictatorship’s developmentalist vision of “progress” as filling “empty spaces” has been critical in enlisting popular support for large pulp and plantation projects in the “backward” regions of the country. It is no coincidence that the period of greatest growth in Brazil’s forestry sector was precisely this 20-year period.

The “progress” associated with plantations, however, has benefited only a minority. Concentration of land and power, migration, social disruption, a worsening of the quality of life, and long-term environmental degradation have been the results for Brazil as a whole. Environmental arguments adopted by pulp and plantation businesses cannot entirely hide this reality, though they do succeed in confusing public opinion both nationally and internationally.

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1. Olsson, R. (ed.) *The Taiga Trade: A Report on the Production, Consumption and Trade of Boreal Wood Products*, Taiga Rescue Network, Jokkmokk, Sweden, 1995.
2. As of 1994, Brazil was the fourth ranked pulp exporter in the world behind Canada, the US and Sweden. As of 1993, it was the sixth ranked paper exporter behind Canada, Finland, Sweden, Austria and Norway.
3. Gonçalves, M.T. et al., *Exploração florestal no norte do ES e sul da Bahia — impactos e alternativas. Estudo de caso: exploração florestal, indústria de celulose e ocupação do espaço regional. Relatório final*, FASE/IBASE, Rio de Janeiro, May 1994; Associação Brasileira de Exportadores de Celulose (ABECEL) (nd) Rio de Janeiro.
4. *Know-How Wire 2* (Jaakko Pöyry Client Magazine), 1993, ABECEL, op. cit. 3.
5. Shell International Petroleum Fund and World Wide Fund for Nature, *Tree Plantation Review*, 11 vols, Shell/WWF, London, 1993. Ironically, the enormous expansion of the pulp sector in Brazil has taken place in a country with a per capita paper consumption well below the world average: while annual per capita paper consumption in the United States is 332 kilogrammes and in Switzerland 216, Costa Rica 55 and Argentina 45, in Brazil it is only about 28. See *Pulp and Paper International* 7, 1995.
6. Gonçalves, M.T., "Aspectos gerais de expansão do reflorestamento no Brasil" in for.plantation (APC electronic conference, March 1992).
7. Willums, J-O. and Goluke, U., *From Ideas to Action: Business and Sustainable Development*, ICC, Oslo, 1992.
8. Miranda, M., "Papel e celulose no Brasil: novos projetos, velhos dilemas", IBASE, Rio de Janeiro, 1993; ABECEL, op. cit. 3.
9. European customers include Jamont, Arjo Wiggins Appleton, Sappi, Inveresk, Tullis Russell and UK Paper.
10. Swann, C., "South America: The Promise and the Problems", *Papermaker*, August 1993.
11. Willums, J-O. and Goluke, U., op. cit. 7.
12. Aracruz Florestal was set up in 1967 to establish the plantations. Aracruz Celulose, the pulp and paper company, was set up in 1972 and Aracruz Florestal became its subsidiary. The first shareholders were a widely varied group of banks, oil firms, construction companies and other businesses, none of which had any previous experience in pulp production. To boost its expertise, Aracruz formed an association with the Swedish Billerud firm, which had some experience in eucalyptus pulpmaking and which took responsibility for marketing half of Aracruz's output in Europe. See Gonçalves, M.T. et al., op. cit. 3.
13. Gonçalves, M.T. et al., op. cit. 3. When the plantations established in Espírito Santo fell victim to disease, Aracruz responded by sinking money into research on seeds of various provenances, becoming a recognized authority on the subject from the 1980s onwards.
14. Centro de Estudos e Pesquisas para o Desenvolvimento do Extremo Sul da Bahia/ Centro de Defesa dos Direitos Humanos (CEPEDES/CDDH), *Eucalypto: uma contradição, impactos ambientais, sociais e econômicos do eucalypto e da celulose no Extremo Sul da Bahia*, CDDH, Eunápolis-BA, 1992; Federação de Órgãos para Assistência Social e Educacional (FASE), *Inquérito civil sobre fomento florestal*, FASE, Vitória, 1993.
15. Instituto Brasileiro de Análises Sociais e Econômicas (IBASE), "Cronologia sobre a indústria de celulose no Brasil", in for.plantation electronic conference, 10 October 1994; Aracruz Celulose, The Eucalyptus and Sustainable Pulp Production, Aracruz Celulose, Rio de Janeiro, 1996.
16. Gonçalves, M.T. et al., op. cit. 3.
17. Ibid.
18. Aracruz's directors played a leading role, through the Business Council for Sustainable Development, in preparing business for the 1992 "Earth Summit" in Rio de Janeiro. This resulted in a book, *Changing Course*, which was distributed to all government delegations before the conference. Aracruz has also supported the London-based non-governmental International Institute for Environment and Development in a large study on the "sustainable paper cycle". See International Institute for Environment and Development, *The Sustainable Paper Cycle: A Report for the Business Council on Sustainable Development* (draft), IIED, London, 1995.
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21. Sargent, J. and Bass, S. (eds.) *Plantation Politics: Forest Plantations in Development*, Earthscan, London, 1992.
22. Miranda, M., "Nas pontas do extremo: outras histórias, outros tempos", FASE/IBASE, Rio de Janeiro, April 1993.
23. FASE, op. cit. 14; Valarelli, L.L., "Complexos Florestais de Celulose: O Mito da Modernidade", *Proposta* 53, May 1992; *International Agricultural Development* 7/8, 1992.
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27. IBASE, op. cit. 15.
28. Gonçalves, M.T. et al., op. cit. 3.
29. FASE, op. cit. 14.
30. Gonçalves, M.T. et al., op. cit. 3.
31. FASE, op. cit. 14; Miranda, M., op. cit. 25; *IAD*, op. cit. 23.
32. *IAD*, op. cit. 23.
33. FASE, op. cit. 14. Since 1993, it seems that all major pulp companies have used Mirex-S, a less harmful piretroid, instead of Mirex, an organochlorine. See Fanzeres, A., personal communication, 1995.
34. CEPEDES/CDDH, op. cit. 14.
35. FASE, op. cit. 14.
36. *IAD*, op. cit. 23.
37. IBASE, "Cronologia sobre a indústria de celulose no Brasil" in for.plantation electronic conference, 6 November 1993.
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39. As a result of Aracruz's public relations, the company was singled out in 1991 by the United Nations for its "rigorous commitment" to sustainable development. See IBASE, "Cronologia sobre a indústria de celulose no Brasil" in for.plantation electronic conference, 3 March 1993.
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41. Gonçalves, M.T. et al., op. cit. 3.
42. JATAN, "Report on Eucalyptus Plantation Schemes in Brazil and Chile by Japanese Companies, JATAN, Tokyo, 1993; Miranda, M., op. cit. 8.
43. Gonçalves, M.T., "Pau que nasce certo e entorta a vida dos outros: Monocultura de eucalypto d produção de celulose no Vale do Cao", Comissão Pastoral da Terra/Centro Mineiro de Estudos e Pesquisa sobre Ambiente e Florestas/Pacific-Asia Resource Center, Belo Horizonte, 1995.
44. JATAN, op. cit. 42.
45. Other JBP shareholders included Oji Paper (nearly ten per cent); Jujo Paper, Honshu Paper and Itochu (over eight per cent each); Tokai Pulp, Daishowa Paper, Hokuetsu Seichi Paper Mills, Mitsubishi Paper Mills, Daio Paper, and Sanyo Kokusaku Pulp (over 3.5 per cent each); and, with smaller stakes, Kanzaki Paper, Daiko Paper, Chuetsu Pulp, Nippon Kakou Sheisi, Abegawa, Kishu, Sanko, Juban and Mishima. See Gonçalves, M.T., op. cit. 43.
46. JATAN, op. cit. 42.
47. Ibid., Gonçalves, M.T., op. cit. 43. When CENIBRA began operating in 1974, its pulp mill was supplied with wood from Florestas Rio Doce, the CVRD subsidiary. At the same time, another firm called Florestas Nipo-Brasil, or FLONIBRA, was created, with the aim of acquiring an additional 400,000 hectares of land for pulp plantations in Bahia and Espírito Santo, the areas where Aracruz was active. In 1984, the 155,000 hectares which had actually been acquired — including 88,000 planted with eucalyptus and 48,000 given over to "conservation areas" — were passed to CENIBRA Florestal, the firm now responsible for supplying the CENIBRA mill with pulpwood and energy. See Gonçalves, M.T. et al., op. cit. 3.
48. JATAN, op. cit. 42; Miranda, M., op. cit. 8.
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50. Knight, P., "Brazil: A Growing Force in World Pulp and Paper", *Pulp and Paper*, August 1991.
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53. They may also limit, to a small extent, the risk of pests.
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60. Gonçalves, M.T., op. cit. 43.
61. Ibid.
62. Guerra, C., op. cit. 57.
63. Ibid.
64. JATAN, op. cit. 42.
65. Guerra, C., op. cit. 57.
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67. JATAN, op. cit. 42.
68. Higgs, R., op. cit. 52; Shell/WWF, op. cit. 5.
69. Shell/WWF, op. cit. 5.
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73. Knight, P., op. cit. 50.
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82. Sargent, J. and Bass, S., op. cit. 21.
83. Shell/WWF, op. cit. 5.
84. Knight, P., op. cit. 50; Higgs, R., op. cit. 74.
85. Fanzeres, A., op. cit. 33.
86. Fearnside, P., op. cit. 76.
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# Siam Mapped

## The Making of Thai Nationhood

by

Thongchai Winichakul

*The recent civil wars in former Yugoslavia and elsewhere illustrate how boundaries can violently and arbitrarily divide ethnic peoples into different nationalities. Yet boundaries are integral to the present-day concept of a "nation". As the example of Siam makes clear, however, the concept of the "bounded" nation is a modern one. Before the late nineteenth century, overlapping or multiple sovereignties were common in Siam. The making of modern Siam required the imposition of a new political geography in which nationhood was defined, at least in part, through the creation of rigid borders. Mapping, as much as force, played a crucial role in this process. Indeed, Siamese nationhood has, to a considerable extent, emerged through the mapping of Siam.*

A nation touches everyone's life. Not only do nations provide the institutional and economic framework for public life; nationhood also provides a powerful sense of shared identity even among those who have never met each other. Indeed, nationhood can inspire such a strong sense of community that those who share a common nationality are often assumed to share common interests as well and even a common "nature".<sup>1</sup>

Yet the definition and domain of nationhood is not pre-ordained: nations have always been culturally and historically-specific constructs. What appears (or is claimed) to be a "nation" at one moment in history can suddenly turn out to be a fabrication. The USSR and Yugoslavia — single "nations" a few years ago — are now a host of separate new "old nations" called Russia, Lithuania, Ukraine, Croatia, Bosnia, Serbia and so on. Indeed, the violence that can accompany attempts to establish new nations highlights the arbitrariness of nationhood.

One example of that arbitrariness concerns the conceptualization of territory, boundaries and sovereignty. Boundaries are integral to the present-day concept of a "nation". Without clearly delineated borders, a nation is not held to "exist".

Yet, as the example of Siam (the former name of Thailand) makes clear, the notion of the "bounded" nation is a modern one as far as Siam is concerned. Before the late nineteenth century, overlapping or multiple sovereignties were common in Siam, with small states paying tribute to two or more overlords and yet still remaining sovereign themselves. Areas over which no country claimed sovereignty also existed. The making of modern Siam, one consequence of European imperialism in the region, required the displacement of such conceptions of territorial sovereignty by a new political geography in which sovereignty and nationhood were defined, at least in part, through the creation of rigid borders. Mapping played a crucial role in this process. Indeed, Siamese nationhood today has, to a considerable extent, emerged through the mapping of Siam.

**Thongchai Winichakul** was a prominent leader of the student movement in Thailand in the 1970s. He is assistant professor of Southeast Asian history at the University of Wisconsin in Madison, USA, and author of *Siam Mapped: A History of the Geo-body of a Nation*, University of Hawaii Press, 1994, (2840 Kolowalu St, Honolulu, HI 96822, USA).

### Western Boundary on the Western Frontier

The difference between nineteenth-century Siamese concepts of sovereignty and Western notions of nationhood is illustrated in the diplomatic exchanges that took place between Siam and Britain in the first half of the nineteenth century as the British began to expand their influence from India into Burma. In late 1825, the British conquered the southern part of Burma and called it the British Tenasserim Province. The western frontier of Siam then became an issue for the British. Where was the boundary between Burma and Siam?

The British envoy assigned by the East India Company to the court of Siam, Captain Henry Burney, requested the Siamese to negotiate the boundaries between the newly-acquired British territory and Siam. The court, however, was decidedly uninterested in the matter of boundaries. Only after repeated urgings from Burney did it issue a simple and straightforward reply:

"No boundaries could ever be established between the Siamese and the Burmese. But the English desire to have these fixed. Let them enquire from the old inhabitants residing on the frontiers of Mergui, Tavoy and Tenasserim what they know respecting the contiguous territories, and let what they point out be the boundaries between the English and Siamese possessions."<sup>2</sup>

For Burney the notion that boundaries should be a matter for local people to decide was absurd.<sup>3</sup> For the Siamese, however, a local judgement was the only one that made sense since

"the boundaries between the Siamese and the Burmese consisted of a tract of Mountains and forest, which is several miles wide and which could not be said to belong to either nation."<sup>4</sup>

When, in 1826, a treaty was finally agreed between Siam and Britain on the border question, the best compromise that Burney could manage was the inclusion of a note that if either side doubted any boundary, it should depute some officials and people from the frontier posts to inquire and settle mutual borders in a friendly manner.<sup>5</sup>

This sufficed until the 1840s when "unsettled boundaries"



again became an issue for the British. Wanting to decide a "boundary line" all the way from Chiangmai, the centre of the Lanna kingdom in what is today northern Thailand (whose timber resources the British coveted), down to Tenasserim, the British sent a letter in April 1845 to the Siamese court:

"It is very desirable that there should be one uniform rule as regards the boundary line from north to south, and that by adhering to that rule, all causes of misunderstanding should be forever removed.

It is advisable that the Court of Bangkok issue strict orders along their frontiers so that all subordinate authorities may clearly understand the line of boundary . . . The boundary is clear and mistakes [such as incursions] must in future be inexcusable.

Within this boundary, no Siamese authorities are to exercise any jurisdiction, levy any revenue, and beyond this boundary no British authorities are to [do so]."<sup>6</sup>

The court's answer was no less didactic, insisting that each area was under the jurisdiction of a local authority and that the methods of boundary marking were anything but uniform from north to south.

For several years thereafter, the British persistently ordered local chiefs to provide any treaty or document identifying the boundaries. The responses were often perplexing. One local chief replied that, as his neighbours were friendly and did not forbid people to trespass or to earn a living in their area, no document had ever been made. According to the local chiefs, the borders were "golden, silver paths, free for traders".<sup>7</sup>

Clearly a "boundary" as understood by the British, on the one hand, and their Siamese counterparts, on the other, was a similar thing — but not the same.

## The Non-Bounded Kingdom

Many people today, and very probably the British in nineteenth century Siam, would concur with a contemporary authority on political geography who states that "boundary refers to a line".<sup>8</sup>

The Siamese court, however, had a different understanding of boundary. This did not mean, however, that it had no knowledge of the extremities of its sovereign territory, nor that it lacked the terminology or concepts for dealing with the British proposals for boundaries. In the Bangkok Thai language spoken at the Siamese court, there were many words meaning something similar to boundary — *khopket*, *khetdaen*, *anakhet* and *khopkhanthasima*, the prefix *khop* and *khet* meaning "edge", "rim" or "fringe", the word *daen* meaning "area" or "territory". All the Thai words, however, tend to signify areas, districts or frontiers, not lines. They do mean a "limit", but a limit as an extremity without a clear-cut edge and without the sense of division between two realms or powers.

The characteristics of a boundary in Siam's conception were several. First, a boundary was not determined or sanctioned by any central authority but was the responsibility of local people to protect — the guards, hunters and inhabitants who earned their living by collecting honey or hunting elephants in the frontier zones.

Second, the *khetdaen* of each town was determined primarily by the extent of the surrounding area it could protect. A town might or might not have had a common border connecting it with another town. A kingdom, as a conglomeration of towns, was thus composed of political-territorial patches with a lot of blank space in between.

Third, the *khetdaen* of a kingdom extended to the extremity of outlying towns and the areas over which their power could be exercised. Beyond these limits, there could be vast areas of forests and mountains forming a corridor between two kingdoms. This was a border, but one without a boundary line — or at least the line was a very thick one.

Fourth, only sections of this border, not the whole of it, were regarded as being under a kingdom's sovereignty. As the Siamese court wrote in a letter of 28 August 1845 to the British, "whenver there are roads or passes employed by travellers, there are built watch houses for the protection of said roads and places."<sup>9</sup> It was these passages (marked by trees or piles of stones) through the thick forest and mountain border zones that Siam meant when it talked about boundaries — not the whole frontier zone, let alone a "line". Moreover, it was only the inhabited areas of these passageways through the frontier zones that were protected by local guards. The position of a guardhouse and the distance the guard patrolled defined the extent of space under the sovereignty of Siam. Each portion of this boundary was prescribed independently by a local authority and might or might not connect to another portion of boundary. The "boundaries" of Siam were therefore discontinuous, yielding a non-bounded kingdom.

Fifth, in some areas, a guardhouse meant nothing at all because people both sides of the border zone were allowed to travel through the areas between two frontier towns or to settle indiscriminately in the frontier zone. When trying to determine

the boundaries between Lanna and Upper Burma, for instance, British officials were puzzled by the fact that many subjects of the Burmese town of Kengtung had settled near Chiang Saen, a frontier township of Chiangmai. The Siamese official pointed out that they were not forbidden to do so and that it did not matter whether they settled there or not because Chiangmai and Kengtung were not hostile to each other at the time.

Sixth, if two realms were hostile to each other, people on one side of the corridor border were allowed to earn their living in the area by hunting and gathering food but were not allowed to trespass into the areas under the other's authority. In this case, the guards' patrol zones were significant and had to be defined. On an unfriendly border, it was the

duty of local officials to monitor the enemy's movements by undertaking spying missions into the opponent's territory and, at the same time, to guard the boundary against the enemy's spies.

Seventh, open or closed borders signified the health of relations between two realms, as they do today — but in a different manner. On the one hand, the "golden, silver path" never prevented people from travelling across the border, earning their living on it, or even settling close to one another's frontier towns without permission. On the other hand, there was the border where the enemy was forbidden to trespass. Rivals generally preferred to leave the space unsettled since it served as a buffer to keep a distance between them. For friendly countries, a prohibition on trespassing, such as the British had prescribed in its Burmese territory, was probably seen by Siam as an unfriendly act since it was considered just one step short of attacking the enemy. The prohibition also caused confusion among local people, who were used to travelling through friendly borders without permission.

## Overlapping Sovereignty

Not only did the Siamese court hold a different concept of boundaries to the British, its concept of sovereignty was also different. For the British, a boundary implied not only a line but also notions of absolute and exclusive territorial sovereignty. For the politics of pre-nineteenth century Siam, however, sovereignty was "overlapping". At Muang Sing, for instance, a small town at the junction of Laos, Burma and China today, the chief and his people belonged to three overlords at the same time; two of these overlords in turn paid tribute to Siam while the other was a tributary of Burma.

The relationship between the various political powers was hierarchical. A ruler whose authority prevailed over several local rulers or chiefs of tiny townships was himself submissive to another lord. This pattern of relations prevailed all the way up the pyramid to the most powerful kingship of the realm. It also applied to the relationship between kingdoms, including that



*The present day border post in the Thai town of Maisai, the Burmese town of Thakhilek.*

between a major regional kingdom like Siam or Burma and its tributary kingdoms such as Lanna, Lan Sang (Laos) and the Malay states. Each king of a tributary had his own court, administrative and financial system, tax collection, army and judicial system and regarded himself as the lord of his own realm but nonetheless subject to the supreme overlord.

The rationale for this relationship is usually explained as the necessity for a weaker state to seek protection from a more powerful one against another powerful state; in return, the weaker state had to repay the benevolence of the protector. The submission was voluntary, the protection requested. Yet the fierce punishment meted out to any tributary who wished to quit the relationship indicated that it was not always an arrangement of mutual agreement or a relationship sought by the weaker. Sometimes, the overlord forced a weaker state to become and remain his protected tributary. Submission and protection in these circumstances were unavoidably compulsory.

Tribute, which was paid in money, valuable goods and *Bungamas*, small trees fashioned from gold and silver leaves, could therefore be a token for protection of both the voluntary and the compulsory kind. The receiver might regard it as evidence of submission, while the giver might argue that it was simply an indication of alliance and friendship, "a mere exchange of civility".<sup>10</sup> In cases where rulers of tributary states could not prevent mafia-like protection from being imposed, they could at least resist by using the same medium — tributes and gifts — to obtain protection from another power.

Indeed, unlike the present-day concept of a sovereign state, a tributary's overt and formal submission did not prevent it from attempting to preserve its own autonomy or "independence", nor did the quest for autonomy prevent a state from submitting itself to more than one supreme power at any one time. Indeed, the practice of multiple submissions was often indispensable if the state was to save its "independence". Cambodia, for instance, was a powerful kingdom along the southern part of the Mekong situated between two more powerful kingdoms, Siam and Vietnam. Caught in between, it had no choice but to accept the overlordship of both superior neighbours.<sup>11</sup> Yet while both Siam and Vietnam claimed suzerainty over Cambodia, the

Cambodian monarch always considered himself independent.

Meanwhile, the *raja* of Kedah, one of the small, disunified principalities that comprised the northern Malay states, cultivated at different times British, Dutch and Burmese interests in his realm so as to restrain Siamese overlordship. Without current notions of patriotism, foreign interventions were sometimes welcomed and sought as protection among the ruling people. It was a significant strategy for survival.

Thus the sovereignty of a state was neither single nor exclusive. It was multiple and capable of being shared, not in terms of a divided sovereignty but rather one of hierarchical layers.

## The Contest Over Multiple Sovereignty

Although tacit "influence" over another state is part of international politics today, the sovereignty of a state is, formally, exclusive, not hierarchical or multiple. Overlapping frontiers are not permissible. Yet, in nineteenth century Siam, a boundary line could be anywhere within an overlapping arena. Mathematically speaking, the more tributaries and more overlords involved, the greater the number of possible boundaries. Accordingly, the possibility of disputes over territories was infinite.

By the closing decades of the nineteenth century, the regime in Bangkok had themselves begun to deploy the modern, Western concept of a boundary. In contrast to their counterparts at the beginning of the century, many of the Siamese elite had become familiar with Western concepts of political geography, including those of boundary lines and exclusive territorial sovereignty. The ruling circle was now concerned to secure every bit of soil — the land which their ancestors had never worried about and had even given away to other kingdoms as gifts.<sup>12</sup> Sovereignty would now prevail over territory rather than over a governed town and its ruler.

Thus as the British worked their way through from the west and the French from the east, Siam itself joined the contest to conquer, secure and incorporate marginal states into its exclusive sovereign territory — even though it was aware that, according to the tributary relationship, they did not really belong to Siam. The difference from the previous overlord protection it had provided was that this time Siam came equipped with new mechanisms of control: military force, administration, boundary demarcation and mapping.

The areas along the Mekong river were particularly full of tiny tributary states. As frontier towns on the margins of many spheres of overlords' power, they had been left more or less independent and neglected as long as there was no war between the overlords of the region. During the 1870s and 1880s, Chinese bandits who had fled southern China in the mid-1860s and were known to local people as the Ho, plundered, destroyed or occupied the numerous tiny chiefdoms in the region.

From 1884 onwards, Siam sent out expeditions, ostensibly to suppress the Ho disturbances but actually to conquer the tiny chiefdoms. Previously, a conquest would have involved submission and, in most cases, temporary exclusive control over the town — the ruler of the town might submit and pay tribute to another overlord to ensure its survival after the conquering forces had departed. In the conquests of the 1880s, however, the Siamese forces stayed.

They then introduced various administrative measures in an attempt to secure Siam's exclusive and permanent sovereignty

over the conquered state. In some cases, previous rulers were replaced by figures loyal to Siam. In others, Siamese officials were appointed to govern the towns. Wherever local rulers were allowed to administrate, Siamese officials were appointed as supervisors.<sup>13</sup> All new local regimes were directly administered by military commanders from Bangkok. Border surveillance became stricter and disciplined. Some empty border lands were filled by rotating corvée labourers who drew lots to camp there temporarily. The battlefield moved from the defence of a town's fortress to wastelands where no one lived and which no one possessed. Both the military and administrative operations established a new kind of political geography in which neither overlapping margins nor multiple sovereignty was permitted.

But military force and the new administration were not the only means of fixing the ambiguity of space. The form in which sovereignty was represented had to shift from the traditional rituals and practices of submission and tribute to a representation which dealt directly with territory — a map. Surveying and mapping thus came to play a central role in establishing the new "nation" of Siam.

## Space Encoded: The Modern Map

Since the mid-nineteenth century, the Siamese had actively used mapping in certain aspects of state affairs. Modernization projects such as roads, railways and telegraph lines all required mapping technology. From the mid-1880s onwards, the need for mapping increased rapidly, the main impetus being not the construction of infrastructure but the need to integrate marginal states into the Siamese realm.

Through their encounters with the Europeans, the Siamese rulers had realized that mapping was a powerful means of dealing with the issue of boundaries. They had come to believe that modern geography was the only language the West would hear; in particular, they considered that only a modern map could counter French claims to the areas along the Mekong river which Siam wanted for itself. To define their margins for exclusive sovereignty, the French and the Siamese fought both with force and with maps.<sup>14</sup>

Thus during January-July 1884, Bangkok troops were accompanied for the first time by a group of mapping officials, headed by British technician James Fitzroy McCarthy in the employ of the Siamese government to survey and map the territories around Luang Phrabang and Vientiane.<sup>15</sup> From then until mid-1893 (when the French blockaded the Chao Phraya river in Bangkok), the Siamese expeditions "to suppress the Ho" were always accompanied by surveyors and mapping technicians trying to cover the areas claimed by Siam as extensively and quickly as possible. The king's instruction to the Siamese troops in 1885 was straightforward:

"The king would like to know all the localities under his sovereignty . . . For this reason, His Majesty has commissioned a team of mapping officials to explore all localities for accurate information. Hence all commanders and chief officers must support these mapping officials to carry out their mission."<sup>16</sup>

Force defined the space, mapping vindicated it. The losers in the contest were not Siam or France but those tiny chiefdoms along the routes of both the Siamese and the French forces. Not only were they conquered; they were also transformed into integral parts of the new political space defined by a new notion of

sovereignty and boundary. The ultimate conqueror was the modern discourse of mapping. Without military force, mapping was inadequate to claim a legitimate space. But military presence was always legitimized and substantiated by a map. Mapping and military force became a single set of mutually reinforcing technologies to exercise power over space.

Indeed, a map which provided crucial evidence to support Siam's claims to territory is the so-called 1887 McCarthy map, regarded in Thailand today as the first modern map of Siam. A coloured line, marking the desired boundary, was drawn from Chiang Khaeng (on the Burma-Laos border today) eastwards covering the whole of the plateau north of Luang Phrabang (now in Laos) and southwards until it reached Battambang, the boundary between Siam and Cambodia agreed between France and Siam in 1867. The McCarthy map in fact was more a rendering into map form the conviction and desire held by the Siamese elite to see the territory "Siam" on a map.

The map of bounded Siam appeared for the first time in 1897. It was based on the surveys and maps Siam had carried out; missing sections, however, were filled in by copying from maps drawn by Britain or France. The geo-body of Siam went on to be reshaped over the subsequent decade by means of maps and various treaties with Britain and France.

## The Construction of Thainess

A new "geobody" — that of Siam — was thus established, its domain and its peoples determined not by a common culture, language or religion but by the boundary lines laid down as a result of the encounter between the European imperial powers and the Siamese court in the nineteenth and early twentieth centuries.<sup>17</sup> The Siamese authorities then went on to attempt to engender a sense of nationhood among the people under their domain. Indeed, many of those who identify themselves as Thai today perceive themselves as the possessors of a common "nature" — *khwampenthai* or "Thainess" — even though such Thainess is never clearly defined. A prominent statesman and scholar of modern Thailand, Kukrit Pramoj, confessed that he was not quite sure what identity means, yet he was confident that it was imbued in him.<sup>18</sup> And despite the widespread belief that "Thainess" is rooted in long-standing traditions, it is an identity that has been actively constructed over the last century or so.

The government of 1938–1945, for example, established several commissions to stipulate what Thai culture should be and to supervise its dissemination. A number of detailed practices — from private affairs to public ones, from domestic matters to social ones — were prescribed for people to follow. Ironically, traditional clothing and the traditional practice of chewing the betel nut were prohibited, while trousers, skirts, and kissing some family members before going to work in the morning were prescribed.<sup>19</sup>

In 1941, one of the government's more chauvinistic *rathaniyom* (state prescriptions) was to call all people within the nation "Thai" regardless of their regional or ethnic background.<sup>20</sup> In 1967, however, it is reported that people on the right bank of the Mekong (within Thailand) still identified themselves as Lao, although they were more and more becoming "Isan" (Thai northeasterners).<sup>21</sup>

Still today, Thailand concerns itself with the preservation and promotion of the national culture. The Commission for National Identity, for instance, defines Thainess so as to plan,



After a French cartographer travelling with the French envoy to Siam drew this map of the kingdom of Siam and adjacent countries in 1686, Siam became prominent on all maps of the region drawn by European mapmakers. Before the second half of the nineteenth century, however, detail was limited to the coastal areas — the interior was terra incognita to the Europeans. Sir John Bowring, the British envoy to Siam in 1855, believed there was a desert between the kingdom's central plain and Lanna in the north, while the whole northeastern region of present-day Thailand was almost non-existent, appearing as a mere narrow strip of land between the Mekong and a mountain range along the eastern part of Siam. The course of the Mekong river was believed to be directly southeast from its headwaters — the great bend, south of Luang Phrabang, where the river moves east before bending south again, was unknown until the work of Frenchman Francis Garnier was published in 1864. These European maps were based on information obtained from local people who did not have a global reference and who may have had little knowledge of the geography of the hinterland and the Mekong.

coordinate and consult on the security of the nation, religion and monarchy. The commission has concluded that the nation is composed of eight elements: territory, population, independence and sovereignty, government and administration, religion (Buddhism), monarchy, culture and dignity. It has expressed its concern, however, that:

"the meaning of the term 'national identity' is quite broad, covering all aspects of the nation to the extent that it may cause some confusion and unclear understanding. Even the eight elements as defined are not agreed upon by everyone [in the commission]".<sup>22</sup>



*Troops in front of democracy monument, Bangkok*

Since the late 1970s, a network of army-owned radio stations, which comprise two-thirds of the radio stations in the country, has broadcast a programme every morning and evening calling for order and unity so as to stimulate nationalism and the awareness of national security amidst threats inside as well as outside the country. Often the legitimization is no more than "according to Thai . . . [culture, values, tradition, history]"<sup>23</sup>

The domain of Thainess is also defined by what is "non Thai". Once the un-Thainess can be identified, its opposite — Thainess — is apparent. According to a Thai historical perspective, for example, the Burmese were aggressive, expansionist and bellicose, while the Khmer were rather cowardly but opportunistic. The Thai, unsurprisingly, are taken to be the mirror image of these traits — a peaceful, non-aggressive but brave and freedom-loving people, precisely the description in the Thai national anthem. The existence of un-Thainess is as necessary as the positive definition of Thainess.

Un-Thainess is sometimes not a matter of nation or ethnicity. A reporter said that he once teased a Thai person about being a communist; unamused, the Thai quickly replied "I am not a communist. I am a Thai", a statement which reflects the Thai state's views on communism.<sup>24</sup>

The creation of "Otherness", the enemy in particular, is necessary to justify political and social control against rivals from within the nation as well as without. Without this "enemy", all the varieties of coercive force, from a paramilitary organization on every border of Thailand to the professional army, would be redundant. For instance, two months after the October 1976 student massacre in Bangkok, the king said:

"At a time when our country is being continually threatened with aggression by the enemy, our very freedom and existence as Thais may be destroyed if Thai people fail to realise their patriotism and their solidarity in resisting the enemy . . . Accordingly, the Thai military has the most important role in defence of our country at all times, ready always to carry out its duty to protect the country."<sup>25</sup>

One of the main counterinsurgency bodies is the Border Patrol Police, which was one of the main forces involved in the 1976 student massacre. For this group, the term "border" signifies the demarcation of otherness from Thainess as much as a

geographical boundary. Thus the Border Patrol police the border of Thainess well inside the geo-body as well as on its boundaries — whether among minorities (teaching them the central Thai language and introducing to them the Thai flag, a Buddha image and pictures of the king and queen) or in villages deep within Thai territory (organizing a counterinsurgency unit) or in urban centres like Chiangmai. Charges of communism, subversion, rebellion and lèse-majesté are not uncommon.

Maps too have played a part in actively structuring Thailand in our minds as it has come to represent not only territory but also nationhood and its many of its accompanying meanings and values. The map of Thailand (taken out of its context of the earth's surface and simply floating as if an island) has become one of the most popular logos for organizations, political parties, businesses and trademarks.

The symbol of the Saichaitai Foundation, for instance, under the patronage of the Thai royal family, is the map of Thailand, a pagoda, the royal emblem and a heart with blood. The foundation works for soldiers, police and members of other paramilitary forces who have been injured or disabled in the course of fighting all sorts of "enemies" to protect the nation.

The Village Scout emblem, meanwhile, is the map of Thailand with the word "Thai" emblazoned across the map. This popular royalist organization was active in Thai politics in the late 1970s, especially in the massacre of the student movement in October 1976.<sup>26</sup>

Maps such as these no longer represent the nation's territoriality. They are signs of the map, loaded with the meanings and values of nationhood.

## Changeable Identity

Thainess, like other nationhoods, is a construct. Its unity is not a given. It is always unfixed, ambiguous, self-contradictory, too restricted, yet too extensive. Identity is always in a crisis of contention and displacement: thus it is always changeable. It is full of moments of shift, disruption and displacement.

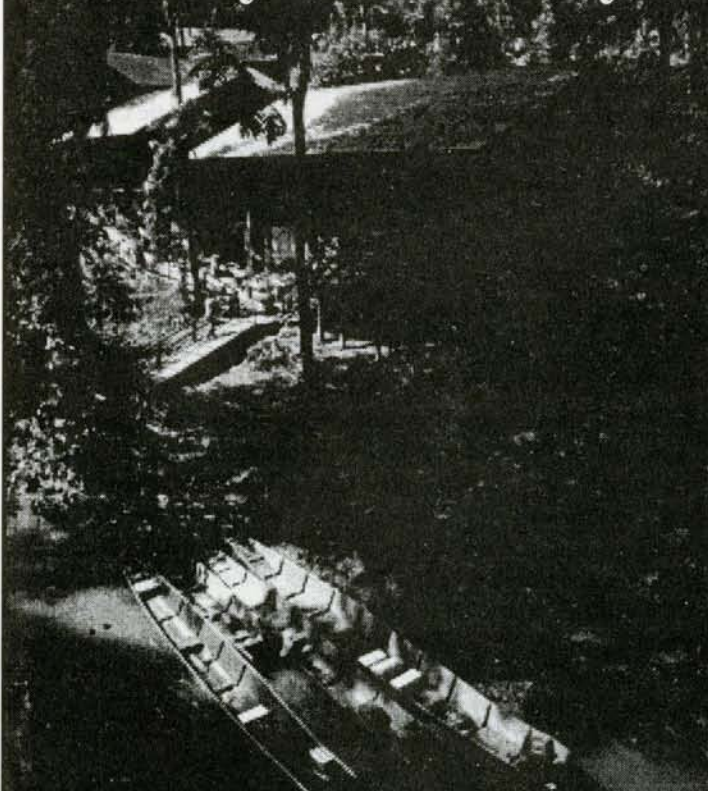
Indeed, the domain of what is Thainess — and the power relations arising from it — have always constituted an arena over which different interests struggle to gain hegemony. Along the frontiers of Siam, there are many ethnic peoples who are considered as Thai nationals as opposed to Burmese, Laotian, Cambodian or Malaysian — or, in fact, as opposed to being Mon, Karen, Kayah, Shan, Lao, Hmong, Lu, Lua, Phuan, Khmer or Malay. What has been believed to be a nation's essence, a justifiable identity, could suddenly turn out to be fabrication.

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12. When Siam was a discontinuous, patchy arrangement of power units where people of different overlords mingled together in the same area and only spies worked close to the frontier towns of one another, areas far from the centre of a kingdom might be generously given away to other kingdoms for the sake of friendship. The border would then shrink a bit, but it did not matter. In fact, throughout South-East Asia, as one scholar remarks, "marginal territorial concessions were not viewed as fatal to the kingdom. As long as the essence of sovereignty [the centre] was unimpaired, such concessions were a legitimate instrument of policy." The political sphere could be mapped only by power relationships, not by territorial integrity. See Solomon, R.L., "Boundary Concepts and Practices in Southeast Asia", *World Politics*, 23, 1970, p.15.
13. Siam had first tested its reform of provincial administration in the 1870s in Lanna before developing and applying it to the Lao region along the Mekong. From 1892 onwards, it was implemented in other regions, including the inner provinces of Siam. It was a gradual process of displacing the traditional local autonomy by the modern mechanism of centralization such that Bangkok controlled revenue, taxes, budgets, education, the judicial system and other administrative functions. The whole country shifted from the traditional hierarchical relationships of rulers to the new administration on a territorial basis.
14. Bangkok never thought of itself as similar to the European imperialists. The most significant distinction in Siam's view was probably that the French and other European powers were alien or foreigners or "They", but Siam was "We" to native peoples in the region. There were thus two types of conquest: one by "We", the other by "They". The chiefdoms being conquered, however, might not consider Siam as much "We" as "They".
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20. In May 1939, however, the government changed the name of the country from Siam to Thailand to promote the domination of the ethnic Thai people (who lived in the central part of Thailand including Bangkok) and their culture over others in the country. I use the terms Siam and Siamese to refer to the country and its people before 1939 and Thailand and Thai after 1939. Despite the racial prejudice expressed in the name's etymology, it is no longer the dominant signification of the term. "Thainess" is not meant today to denote the characteristics of the ethnic Thai exclusively, but of the country's nationals as a whole. See Thamsook Numnonda, op. cit. 19, chap.2; Thak Chaloemtiarana, (ed.) *Thai Politics: Extracts and Documents 1932-1957*, Social Science Association of Thailand, Bangkok, 1978, pp.246-247.
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# Biopatenting and Biodiversity

## Comparative Advantages in the New Global Order

by

Ruth McNally and Peter Wheale

*Over the last two decades, the biotechnology industry has been stretching the interpretation of patent law in order to obtain intellectual property rights over genetically engineered living organisms. Such patent rights, coupled with moves to gain exclusive access to the biodiversity of the South, are leading to a new global order. Opposition to such "biotechnological imperialism" is gaining in momentum.*

In the early 1970s, a new genetic engineering technique — recombinant DNA technology — was developed which enables genes to be transferred between species. Totally unrelated species of plants, animals and micro-organisms that cannot interbreed can now be engineered with one another's genetic material. Genes can be transferred from bacteria to plants, from plants to bacteria, from humans to mice, and from humans to bacteria. For instance, the gene for human insulin has been inserted into bacteria and yeast so that they produce insulin to treat diabetes; the gene for the cattle growth hormone, BST (bovine somatotrophin), has been incorporated in the bacterium, *E. coli*, so that it produces the hormone; and plants have been engineered so that they are more tolerant to frost or resistant to the application of specific herbicides.

Through the use of recombinant DNA technology, more organisms of novel genetic composition are being produced, and at a much quicker rate, than would ever have been possible with conventional breeding practices or through the natural processes of evolution.<sup>1</sup> In addition, proponents claim that the identification and isolation of certain genes will transform the diagnosis and treatment of human conditions and diseases related to these genes.<sup>2</sup> Such is the euphoria over the promise of biotechnology that many policymakers regard biotechnology as an important new source of financial prosperity. Within the European Union, for example, the European Commission maintains that:

"Biotechnology is a key technology for the future competitive development of the Community and it will determine the extent to which a large number of industrial activities located within the Community will be leaders in the development of innovative products and processes."<sup>3</sup>

The Commission also identifies biotechnology as one of three key technologies for future European economic growth, competitiveness and employment.<sup>4</sup> To stimulate technological innovation, it has recommended the public funding of research and development, training and information sharing on biotechnology; the harmonization of legal and regulatory frameworks; the creation of a bioethics advisory committee; and the creation

of Community legislation on intellectual property rights.<sup>5</sup> Some members of the Commission consider "the harmonization of patent protection in the Commission's proposal for a Directive on patents" to be the most urgent.<sup>6</sup>

### Monopolistic Rights

A patent is a form of recognition of "intellectual property"; it gives the patent holder a monopoly to exploit the invention without competition for a set period of time, for instance, 20 years from the application date in most European countries, and 17 years from the granting of the patent in North America.<sup>7</sup> Patent law, first introduced during the nineteenth century, lays down three criteria for patentability: novelty; a non-obvious inventive step; and utility — the product or process must have a known purpose which it will perform. Patent holders can charge others a licence fee for the use of their patented product or process and extract a royalty on any commercial applications they derive from it. By providing for monopolistic control and a financial reward to inventors, patenting is considered to encourage corporate investment in research and development leading to the invention of products and processes which form the basis of innovation. In the words of an employee of SmithKline Beecham, one of Europe's largest pharmaceutical companies:

"We would not be prepared to pour in the time and effort and the money if there was no possibility of securing adequate patent protection."<sup>8</sup>

The absence of patent protection is considered to be a disincentive for industry to invest in new technology and an obstacle to innovation.<sup>9</sup> Thus, if biotechnological innovation is to stimulate economic growth, it is argued that biotechnological products and processes have to be patentable. Industry will then invest in the research and development leading to biotechnological innovation in the knowledge that they may ultimately obtain monopoly control and earn a financial return on their investment.

### Patents on Life Forms

During the last two decades, the biotechnology industry and its allies have made a concerted effort to establish the patentability of biotechnological products and processes. A key part of this

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effort has been to extend the boundaries of existing patenting laws worldwide so that living organisms — plants, animals and microbes — and the parts and the processes that go towards creating them, including the cells and genes of humans, can be considered patentable if they have been genetically engineered.

When recombinant DNA technology was first developed, it was not clear whether its “inventions” — genetically engineered organisms and processes — met the criteria for patentability or not, since the discovery of a previously unknown object or chemical property was not considered grounds for a patent, the reasoning being that the “object” already existed in nature and no inventive step had taken place. Genetic traits, even if newly identified, seemed to fall within this category.

In 1980, however, in the case of *Diamond v. Chakrabarty*, the US Supreme Court ruled that engineered “living things” could be classified as “inventions” rather than “products of nature” — inventions can be patented, products of nature cannot. Ananda Chakrabarty, a scientist working for General Electric, had applied for a patent in 1972, on a non-naturally occurring bacterium engineered to contain enzymes for the break down of oil spillages. Against the background of recombinant DNA research, this application was viewed as a test case for genetically engineered organisms, and was referred by the US Patent and Trademark Office to the US Supreme Court. The Court ruled that the important distinction for patentability was not between living things and inanimate things, but between products of nature, whether living or not, and human-made inventions. Thus, this ruling rendered “anything under the sun” patentable in the US, provided it was a human-made invention. Patents on genetically engineered micro-organisms have since become routine.

The interpretation of patenting law was further broadened in 1983 when the Technical Board of Appeal at the Munich-based European Patent Office granted Ciba-Geigy a Europe-wide patent on seeds protected against certain herbicides through treatment with a chemical agent, an oxime derivative.<sup>10</sup> Its ruling hinged on an interpretation of Article 53(b) of the 1973 European Patent Convention which all EU countries, except Finland, are signatories to. (The Convention is not part of the European Union legislative framework.) Article 53(b) states that patents cannot be granted in respect of:

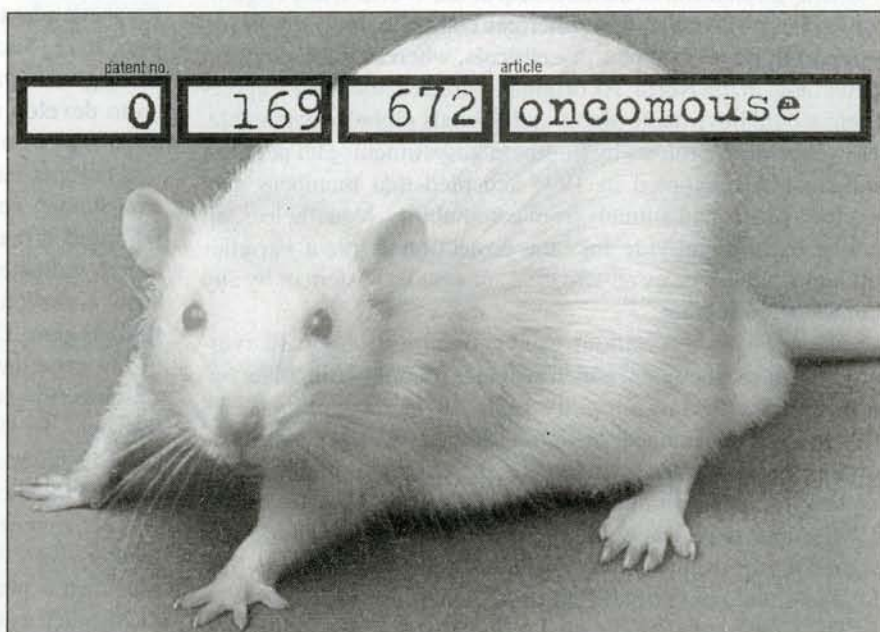
“plant or animal varieties or essentially biological processes for the production of plants or animals; this provision does not apply to microbiological processes or the products thereof.”

The word “variety” was crucial. A narrow interpretation of the term would hold that a bar to patents on varieties did not extend to higher categories — for examples, species — of which varieties are sub-sets. The logic is analogous to a bar on the patenting of fingers but not on the patenting of hands on the grounds that hands are not fingers. The Board of Appeal opted for this narrow interpretation of plant varieties and Ciba-Geigy was awarded its patent claim on the seeds.

Five years later, in April 1988, the US Patent and Trademark Office issued the world’s first patent on a mammal, a transgenic

mouse, known as the “oncomouse” because a breast cancer gene had been spliced into its genetic makeup. The mouse had been developed by a research fellow at Harvard Medical School and is capable of breeding more oncomice.<sup>11</sup> Although referred to as the “oncomouse” patent, the patent covers *all* non-human “onco-animals”.

Meanwhile, in October 1988, the European Commission published the first draft of its Directive on the patenting of biotechnological inventions.<sup>12</sup> This Directive incorporated many of the recommendations of the World Intellectual Property Organization made earlier that year in favour of patent protection for biotechnological inventions as long as the usual criteria for patentability — novelty, non-obviousness and utility — were met.<sup>13</sup> The Directive was designed to establish once and for all that genetically engineered living organisms are patentable



inventions and to resolve the ambiguities in Article 53(b) of the European Patent Convention whereby biological processes cannot be patented but microbiological ones can.

Article 3 of the Council of Ministers’ Common Position on the draft Directive stated that “biological material, including plants and animals, as well as parts of plants and animals, except plant and animal varieties, shall be patentable”, and Article 4 maintained that “uses of plant or animal varieties and processes for their production, other than essentially biological processes for the production of plants or animals, shall be patentable.”<sup>14</sup>

In 1989, having gained its US patent on the “oncomouse”, Harvard University filed a similar patent under the European Patent Convention. The application was initially rejected by the Examining Division on the grounds that the patent was too broad and that animal varieties were excluded from the Convention. The Technical Board of Appeal overturned this decision in 1990, sending the application back to the Examining Division for re-examination, including consideration of whether or not the “invention” contravened Article 53(a) of the Convention which forbids patents on any inventions deemed to be contrary to public order or morality. The Division compared the suffering inflicted on the animal and possible risks to the environment with the potential benefits to humankind — and decided that humankind’s

interests took priority. The patent, granted in 1992, was the first European patent on an animal.

## Patents for All

While these national and supranational interpretations of existing patent legislation were being made, the biotechnology industry was lobbying in other fora to ensure the international patentability of biotechnological "inventions". In the Uruguay Round of the General Agreement on Tariffs and Trade (GATT), Trade Related Intellectual Property Rights (TRIPs) were extended to less developed countries in an attempt by the North to create a uniform and global intellectual property regime. The new measures would effectively require Southern countries to bring their patent protection systems into line with those of the North as a condition of membership of the World Trade Organization (WTO). Many Latin American countries, for example, do not permit patents on pharmaceuticals, whereas these are fully patentable in the North. As originally drafted, the GATT agreement would have made plants and animals globally patentable. However, after protests by Southern governments and peoples, the final text adopted in 1994 accepted that members may exclude plants and animals from patentability. Nonetheless, all countries must provide for "the protection of plant varieties either by patents or by an effective *sui generis* system or by any combination thereof."<sup>15</sup>

The 1993 United Nations Convention on Biological Diversity is another document which provides for international recognition of intellectual property rights in biotechnology. This Convention was opened for signing at the 1992 UN Conference on Environment and Development, the "Earth Summit", in Rio de Janeiro. It came into force in November 1993; by September 1996, more than 150 countries and the European Union had signed the Convention and ratified it in their parliaments. The US has signed but not ratified the Convention.

The Convention is both an environmental treaty and a trade document. On the one hand, it outlines a broad plan for designing national conservation priorities. On the other, it deals with access to genetic resources and the transfer of technology, including biotechnology. Article 16(2) of the Convention states that:

"In the case of technology subject to patents and other property rights, such access and transfer shall be provided on terms which recognize and are consistent with the adequate and effective protection of intellectual property rights".

The precise interpretation of Article 16, particularly the term "effective" is the source of fierce North-South controversy. At the heart of the debate is the desire of Southern governments to gain access to technology and the stronger desire of the North to maintain its competitive advantage provided by this technology.<sup>16</sup> As Vandana Shiva, the Indian environmentalist, has argued:

"If patent holders or traders feel that a country's patent system is 'ineffective', their country may try to use the 'counter-retaliation' clauses in GATT to block trade in other products from the offending country."<sup>17</sup>

## Monopoly Control

Having stretched the interpretation of patent law so that it covers genetically engineered living organisms, companies have been

busy patenting. Many of the patents now being applied for and granted are for whole, genetically engineered species.

In October 1992, for example, Agracetus, a company owned by the US chemical company, W.R. Grace & Co. was awarded a patent by the US Patent and Trademark Office on all genetically engineered cotton. Although the patent application was based on just one method of transferring genes that endow antibiotic resistance into cotton cells, the patent gives Agracetus rights over all transgenic cotton, irrespective of how the genes are inserted. For the life of the patent, 17 years from when it was granted, all those doing applied research on cotton should hold a licence from Agracetus. Some 250 million people worldwide depend on cotton production for all or part of their income.<sup>18</sup>

In 1994, Agracetus was awarded a soyabean patent by the European Patent Office covering all genetically engineered soyabean plants and seeds and their natural offspring until the year 2011. Such "species" patents have been likened to Ford being given a patent on the automobile: other companies may go on to develop a different kind of automobile, but they would have to pay Ford a royalty for doing so.

Attempts have also been made to obtain monopoly rights over human genes, such as the gene sequence linked with the inherited disease, cystic fibrosis, isolated in 1989. DNA research indicates that 70 per cent of people with cystic fibrosis have a particular gene sequence, which is called the cystic fibrosis gene. Using this gene sequence, tests to identify carriers of the gene have been developed. A company formed by the Toronto Hospital for Sick Children has applied for a patent on the gene. In 1994, Manchester Regional Genetics Centre received a letter sent on behalf of the Toronto company demanding a \$5,000 licence fee, plus a royalty of four dollars per test or two per cent of the fee charged to the patient (whichever is the greater) for every time that a screening test using this gene sequence is performed.<sup>19</sup>

Another example of "genes as currency" concerns Human Genome Sciences, Inc. in the United States whose Institute of Genome Research has compiled a databank of 150,000 fragments of human DNA sequences — between one third and one half of all human genes. The main condition of research access to the database is that the organization for which a researcher works must sign an agreement giving Human Genome Sciences an exclusive option on any patents arising from the research.<sup>20</sup>

Meanwhile, in March 1995, the US National Institutes of Health was granted patents over all *ex vivo* techniques used in gene therapy — that is, over all manipulations in which malfunctioning human cells are genetically altered outside the body to produce therapeutic levels of protein and then replaced in the body. The National Institutes of Health assigned an exclusive licence for the technology to Gene Therapy, Inc. which had co-funded the research.<sup>21</sup>

The very patentability of genetically engineered life forms is increasing patenting activity, even amongst those opposed to the principle of patenting. Many scientists do not agree with the patenting of human genes, but because others are patenting them, feel obliged to do the same. If they do not, others could patent their work; they could also find themselves paying royalties to other patent holders yet not be receiving any themselves. As Professor Martin Bobrow of Guy's Hospital said:

"We, and many other university departments and public research institutions, are having to spend money taking out patents because we cannot afford not to."<sup>22</sup>

## Genes 'R' Us

Much as patent law might imply that genetic engineers create life, they do not; they engineer pre-existing life forms. To do so, they need to get hold of the raw materials which are genes and living organisms — genetic diversity and biological diversity.

Genetic diversity is the variety of genes within a species; human genetic diversity, for instance, refers to all the various genes — the genomes — within human beings. The genomes of indigenous peoples are considered to be valuable sources of human genetic diversity because these peoples have been relatively isolated genetically from other peoples. "Harvesting" the diversity of

722 indigenous groups is the objective of the Human Genome Diversity Project (HGDP) which has received \$20 million from the US National Institutes of Health and other agencies and governments.<sup>23</sup> Luigi Luca Cavalli-Sforza of Stanford University, supported by the Human Genome Organization (HUGO), has proposed to expand the project into a \$5 million a year enterprise to sample about 10 per cent of the world's 5,000 ethnic groups and make their genetic information available for research.<sup>24</sup>

Through the collection of blood, tissue and hair samples, researchers are collecting genetic material from a number of indigenous peoples, including the San peoples of the Kalahari in southern Africa, the Penan of Sarawak, Australian aborigines, peoples of the Sahara, Latin American Indians, and the Saami of northern Norway and Sweden.<sup>25</sup>

The samples are collected and studied not only for their historic significance, but also for their commercial potential as pharmaceutical products.<sup>26</sup> The commercial value does not depend on conserving indigenous peoples and their way of life but only in conserving their extracted genes. The interests of the "gene prospectors" are different from those of the indigenous peoples. As Leonor Zalabat Torres of Sierra Nevada in Northern Columbia puts it, "We're not interested in patenting and commercialization of our genes, so we're against it". According to Abadio Green Stoce, President of the National Indigenous Peoples' Organization of Columbia, genetic samples were given on the basis that they would be used "to analyse the health of the communities". They ended up in gene banks at the US Centers for Disease Control and the National Institutes of Health.<sup>27</sup>

Patents on the genes of indigenous peoples collected under the Human Genome Diversity Project have been applied for. In 1995, for example, the US Department of Health and Human Services was granted a patent on a Human T-Lymphotropic Virus Type I (HTLV-I) derived from the Hagahai people of Papua New Guinea.<sup>28</sup> Research on their genomes indicated that the Hagahai people have an unusually high incidence of this virus which is linked to a type of leukaemia. Commercial interest stems from the discovery that this leukaemia is virtually



*A scientist at Roche Molecular Systems, Inc, a subsidiary of pharmaceutical giant Hoffman-LaRoche, is funded by the US National Institutes of Health as part of the Human Genome Diversity Project to research DNA samples from the Asario Indians of northern Colombia.*

unknown among the Hagahai people, suggesting that their strain of the virus could be used to make a vaccine against the illness.

## Global Biodiversity

Whereas genetic diversity is the variety of genes within a species, biodiversity, or biological diversity, refers to the whole range of different species. Some 90 per cent of the earth's remaining biodiversity is in the less developed countries of the South, particularly in Asia and South America.

Less developed countries are "gene rich" but "technology poor", while advanced industrial countries are "technology rich" but "gene poor".

The biodiversity of the South is thus considered to be a new "comparative advantage" for less developed countries which they could trade on the world market in exchange for the biotechnology of advanced industrial countries. This notion is set out in the 1993 UN Convention on Biological Diversity which maintains its objective as not only "the conservation of biological diversity" but also:

"the sustainable use of its components and fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including appropriate access to genetic resources and by appropriate technology transfer."

But whereas the patenting system, as internationalized under GATT, ensures that advanced industrial countries reap the benefits of the transfer of their comparative advantage — gene technology — there is no equivalent international system whereby less developed countries can ensure they gain the benefits of their comparative advantage, biodiversity. There is no equivalent international system to protect them from "bio-piracy", which the Rural Advancement Foundation International (RAFI) estimates is costing developing countries US\$5.4 billion a year through lost royalties from food and drug companies which use farmers' folkseed varieties and medicinal plants.<sup>29</sup>

Although biodiversity is unique and the result of the stewardship of indigenous peoples who have recognized, protected, developed and utilized its potential over many years, it cannot be left alone and patented *in situ*. The patent system rewards extraction, not conservation and stewardship.

While Article 15 of the UN Convention on Biological Diversity recognizes the sovereign rights of states over their natural resources and the authority of national governments to determine access to their resources, it does not provide a mechanism for the exercise of those rights. It merely suggests that the results and benefits of the research and development and the commercialization of genetic resources should be shared in a fair and equitable way among the contracting parties upon mutually-agreed terms.

Private companies are already entering into deals with

The Gene Hunters/Zel Productions/TVE/Channel 4

Southern countries to establish rights over their genetic resources. For instance, in 1991, the National Biodiversity Institute (INBio) of Costa Rica signed a biodiversity prospecting contract with the US-based company, Merck Pharmaceuticals. This contract gives Merck the rights to screen, develop and patent new products from the resources (plants, micro-organisms and animals) in Costa Rica's rainforests. In return, Merck has paid US\$2 million towards Costa Rica's conservation programme and has agreed to give INBio five per cent of any royalties.

These sums may seem generous but should be viewed in context. Merck's annual sales in 1991, for instance, were US\$8,600 million.<sup>30</sup> Costa Rica's biodiversity can only be sold once, but the number of genetically engineered innovations that can be made from it is, theoretically, limitless; in addition, the innovations can be sold or licensed many times over to many buyers. If the Costa Rican example became a model for countries elsewhere, the world's stock of biodiversity would become the monopolistic property of the handful of companies rich enough to purchase exclusive rights to it. Given that Costa Rica is estimated to hold five per cent of the world's biodiversity, the entire global stock could be sold for just US\$20 million.

Shaman Pharmaceuticals has similar agreements with a dozen countries, including a cooperative research and development agreement with the bioresources development and conservation programmes of five Central African countries.<sup>31</sup>

Furthermore, the International Finance Corporation (IFC) of the World Bank has proposed a "biodiversity venture capital fund" to provide start-up money for biodiversity prospecting.<sup>32</sup>

## A New Global Order

As companies gain control over biological and genetic resources, plants and animals which previously held no commercial value are transformed into commodities, triggering a process that favours the industrialized use of species.

The neem tree, for example, is widely used for medicinal, contraceptive and pesticidal purposes by many communities in Asia and Africa and people have traditionally had free access to the tree.<sup>33</sup> But in 1992, W.R. Grace & Co. patented a process with the US Patent and Trademark Office for extracting and preserving a powerful insecticide, azadirachtin, found in seeds of the neem tree. Grace and the US Department of Agriculture also have a patent from the European Patent Office on a technique for using a fungicidal extract from the tree.<sup>34</sup>

To produce azadirachtin commercially, Grace is building a plant in Tumkur, India, to process neem seed extract for export to the US and is buying up neem seed in India. Critics allege that demand from Grace's plant has caused such a jump in neem seed prices that those who cannot afford the higher prices Grace is willing to pay are denied access to neem. Even though Grace does not hold a patent over the neem tree *per se*, a process of commodification and enclosure has been set in motion such that access to neem will increasingly depend on ability to pay. In the process, the monopolistic power already enjoyed by companies such as Grace will be considerably enhanced.

Indeed, the control that companies currently exert over the processes of production, distribution and consumption leaves many farmers with little or no option but to accept the new products and techniques that biotechnology is introducing. Within Northern agriculture, for example, a small number of transnationals produce almost all the seeds used commercially, and the majority of them are involved in developing genetically

engineered seeds. Given that the companies have such control over the seed industry, farmers may soon have no option but to use only the genetically engineered seeds that the companies are developing. That pressure is exacerbated by regulatory systems preventing farmers from using and saving particular seeds unless such practices have been approved by the authorities. In addition, the formal and informal links that biotechnology companies have forged with agricultural colleges and research stations creates peer pressure to grow genetically engineered crops.

Moreover, the ability of the biotechnology industry to impose genetically engineered products and process has been greatly enhanced by the emergence of a few "bioagro-pharmaceutical" multinational giants as pharmaceutical, agribusiness, chemical and food processing companies merge to take maximum advantage of gene technologies.<sup>35</sup> This worldwide complex of scientific expertise, technological capability and transnational capital accumulation constitutes a "bio-industrial complex".<sup>36</sup>

From the moment when biotechnological "inventions" became patentable, there were two types of life forms: those which can be patented and those which cannot, the difference being that some life forms, in most cases genetically engineered ones, are "inventions" while others are not. The legal distinction between the patentable and the unpatentable creates a hierarchy of life forms with a premium on genetically engineered life forms over others. It also creates a hierarchy among social actors, favouring those who have gene technology over those who do not. These hierarchies shape social relations.

Biotechnological innovation constitutes a new "regime of accumulation" while the globalization of intellectual property rights in genetically engineered life forms constitutes a new "mode of regulation".<sup>37</sup> The combination of the two is creating a new global order dominated by the bio-industrial complex.

## Contesting the Bio-industrial Complex

The concerted moves by the biotechnology industry, Northern governments and patent offices to extend the boundaries of patentability to genetically engineered life forms have not gone uncontested. A broad range of interest groups has mobilized and coalesced to oppose the patenting of biotechnological inventions and challenge the power structures of the bio-industrial complex.

Such opposition has, to a certain extent, put the brakes on the headlong trend towards the patentability of genetically engineered life forms. At the end of 1993, for instance, the US Centers for Disease Control dropped its patent claim on a cell line of an indigenous Guyami woman from Panama after protests from the World Council of Indigenous Peoples and the Guyami General Congress.<sup>38</sup> The government of the Solomon Islands has demanded that the patents taken out by the US government on the cell lines of some of its citizens be retracted.<sup>39</sup> A group of countries in the South Pacific, alarmed by reports such as that concerning the Hagahai of Papua New Guinea from whom genetic samples were sent to the US without informing the government of Papua New Guinea, are considering asking the UN General Assembly to seek an advisory ruling on the morality of human gene patents from the International Court of Justice.<sup>40</sup>

At the end of 1993, UNESCO's international bioethics com-

Monsanto, described as the "Microsoft of engineered foods", recently acquired a majority interest in W.R. Grace, whose subsidiary, Agracetus, owns the broad-based patent on genetically engineered soyabean. In June 1996, the European Patent Office granted Monsanto a patent on a soyabean into which a gene making the plant resistant to Monsanto's glyphosate weedkiller, Roundup, has been spliced. The herbicide cannot be sprayed on the conventional crop because it would kill the crop as well as the weeds. Glyphosate is known to cause liver and eye damage, reproductive problems in animals and genetic damage to human blood cells. Roundup is Monsanto's best-selling herbicide, providing 40 per cent of its operating profit; its patent runs out in the year 2000.

Monsanto's new patent includes the gene for Roundup resistance, all plants containing this gene, "planting said crop seeds" and "applying to said seed crop and weeds in said field a sufficient amount of glyphosate". Farmers could thus be prohibited from saving seed from one



*Harvesting soyabeans.*

harvest to the next, and Monsanto could retain control over farmers' use of Roundup.

The first crop of genetically engineered soya grown on a commercial scale was harvested this autumn in the American Midwest. Although only two per cent of this year's harvest, an industry source has predicted the proportion could rise to around 80 per cent of all US soyabean exports by the year 2000.

In April 1996, the EU gave permission for imports of the genetically engineered soya. Soyabeans, and the meal and oil made from them, account for 25 per cent of US agricultural exports to the EU. The first imports,

expected in Europe by the end of 1996, will be mixed with non-genetically engineered soya rather than being segregated out. Labeling of the genetically engineered version will thus be impossible. As crushed soyabeans are used in 60 per cent of processed foods — bread, confectionery, frozen meals, pizzas, packet sauces, desserts, mayonnaise and babyfood — consumers will not be able to avoid the genetically engi-

neered version if they wish to. Monsanto maintains that segregating the bean would be physically and economically impractical for farmers, grain companies and shippers.

Critics maintain that the environmental risks of engineered crops have not been fully investigated. Opposition to the genetically engineered soya is widespread and growing. Not only are environmental, consumer and food groups opposed to the product; so too are European food processors and retailers. It seems that only the three main potential users of the genetically engineered soya are in favour — Nestlé, Unilever and Danone.

mittee, rather than endorsing the Human Genome Diversity Project, endorsed the criticisms of the project raised by indigenous peoples and their governments, thereby impeding the project's prospects for increased funding. In particular, the bioethics committee wanted clarification of how intellectual property rights would be claimed on biological material derived from peoples.<sup>41</sup>

In 1994, the US Patent and Trademark Office provisionally revoked Agracetus's patent on all genetically engineered cotton as a result of formal opposition lodged by RAFAI (although the patent remains in force whilst the opposition is considered). In the same year, the Indian government revoked the company's application for a patent in India on its genetically engineered cotton. In 1995, in response to a formal objection by Greenpeace, the European Patent Office ruled that a patent granted to Plant Genetics Systems, a Belgian biotechnology company, and Biogen, Inc. for a patent on oil seed rape genetically engineered to be resistant to the herbicide, Basta (glufosinate), cannot cover the plants and seeds, only the cells. The Office maintained that genetically engineered seeds do constitute a variety and cannot therefore be patented under Article 53(b) of the European Patent Convention.<sup>42</sup> This decision could have a major impact on the scope of the 100 or so patents already granted by the European Patent Office on other genetically engineered plants.<sup>43</sup>

Moreover, opponents of the "oncomouse" patent argue that the broad interpretation of "variety" should cover patented

animals as well.<sup>44</sup> In 1993, 17 formal legal oppositions, from more than 200 groups in total, to the oncomouse patent were filed at the European Patent Office. These oppositions mostly challenged the patentability of the oncomouse under Article 53(a) of the European Patent Convention, the morality clause. Opponents also claimed that the patent is invalid because it is too broad; it covers any mammal genetically engineered for increased susceptibility to cancer, including an "oncogiraffe", for example, for which there is insufficient disclosure of information, no moral justification and no known industrial application.

In November 1995, the European Patent Office appeared to indicate that the challenge to the validity of the oncomouse patent had some legitimacy; while no final decision has been yet given, the challenge has effectively halted the granting of patents on genetically engineered animals by the European Patent Office. More than 300 applications for patents on animals have been filed since the oncomouse patent application; only three, including the oncomouse, have been granted.<sup>45</sup> Decisions on the remainder are effectively blocked pending the outcome of the oncomouse case.<sup>46</sup>

As a result of these challenges, the European Patent Office "now finds itself back to the beginning in its struggle to interpret its own rules laid down in the European Patent Convention".<sup>47</sup>

Meanwhile, on 1 March 1995, after a seven-year campaign by environmentalists, human rights groups, animal welfare

activists, women's movements, farmers, Third World development agencies and other NGOs, the European Parliament voted against the EU draft Directive on the Patenting on Biotechnological Inventions, the first time it had exercised its powers of co-decision-making as laid out in the 1992 Maastricht Treaty which established the European Union. According to the UK group, the Genetics Forum, the defeat dislodged the main plank of the bioindustrialists' campaign to get the promotion and protection of genetic engineering written into the centre of European industrial policy-making and was "probably the most surprising setback for the pro-biotechnology lobby in recent years".<sup>48</sup>

Unsurprisingly, the industry has fought back. At the end of 1995, the European Commission published another draft Directive having revised the most controversial parts of its first version.<sup>49</sup> Opponents of



CWI/BUAV Genetic Engineering Tour September 1995

for the renegotiation of the rules governing biodiversity, genetic diversity, individual autonomy and genetic sovereignty.

patents on living material claim that most of the changes are cosmetic. For instance, human genetic material in its natural state is considered unpatentable — but if it is isolated from the body, it becomes potentially patentable, even if it is identical to the natural material.

The actions of the social movement against the patenting of life forms have not only been successful in challenging particular patent laws and the legitimacy of individual patents; they have also made the power of the bio-industrial complex visible, eroding the neutrality and anonymity which masks its power and forcing it to justify its decisions, which thereby reveal the inequality of trading relationships. By unmasking the "hidden face of power", the social movement is creating the conditions

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6. Lex, M., "Public policy issues relating to animal biotechnology", in Wheale, P.R. and McNally, R., 1995 op. cit. 1, p.235.
7. When the patent is granted, the inventor has to publish the details of the invention. Others can then use this information to undertake further research and development but cannot make any commercial gain from it without a licence.
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# Private Profit at Public Expense

## The Bakun Hydroelectric Project

by

Laurens Bawe

*The huge Bakun Hydroelectric Project in Sarawak, Malaysia, is being promoted as a private sector project. But despite promises that no government monies will be spent on the dam, it has conspicuously failed to attract enough private sector finance. The project is now being bailed out through direct and indirect government subsidies made possible by the political connections enjoyed by the project's promoter, the Malaysian company, Ekran. As a result of the Bakun dam, Malaysians are likely to have to pay higher prices for electricity with implications for the economy as a whole, while Ekran and its associates may well make sizeable profits. Many Malaysians have expressed concern at this consequence of "privatization" and the way in which the project has entrenched unaccountable political-corporate networks that have increasingly come to dominate public life in the country.*

In the early 1990s, at a time of significant economic growth in Malaysia, the country experienced a series of power shortages which threatened investor and public confidence. In response, the Malaysian government took away the monopoly over power generation held by the national power agency, Tenaga Nasional, and granted licences to Independent Power Producers (IPPs). It also announced plans to revive a shelved hydroelectric dam — the Bakun Hydroelectric Project (HEP) — on the Balui river in Sarawak. The dam was to be built with private monies, the first privatized large-scale dam project in the world.

The Bakun HEP was originally proposed in the early 1980s,<sup>1</sup> but was cancelled in 1990 because of opposition to its social and environmental impacts and its expense. One of the largest proposed infrastructure projects in the world — it would flood an area the size of Singapore — the Malaysian government has estimated that it will cost RM15 billion (US\$6 billion). It involves two main elements: a 205-metre-high dam with 2,400MW of generating capacity; and a 1,350-kilometre-long transmission line (half of it a submarine cable under the South China Sea) to carry most of the electricity generated from Sarawak to Peninsular Malaysia. Necessary infrastructure for the project, including roads, an airport and a new township, will open up a relatively inaccessible part of Sarawak. An oil palm estate and large pulp factory have already been established in the vicinity. Some 9,500 indigenous people — including Kenyah, Kayan, Kajang, Ukit and Penan — will have to be moved to make way for the dam, while the livelihoods of thousands of people living downstream will be severely affected. The dam also threatens large tracts of forest and some 115 animal species, designated "protected" under Malaysian law, including the great leaf monkey, Bornean gibbon and Malayan sunbear.

The project is opposed by a coalition of more than 40 environment and human rights groups in Malaysia. Within the country, the debate over Bakun centres as much on the conduct of business and government as on the social and environmental

impacts. Concern is growing in particular over the role that privatization is playing in undermining the accountability of development agencies and encouraging undemocratic political-corporate networks. Such concerns were also raised in the 1980s. As one Malaysian environmentalist commented, "nothing has changed in the last ten years: indeed, we can say it has got worse".<sup>2</sup>

### Intense, Complex and Secret

The official announcement in the Malaysian parliament in September 1993 that the Bakun project had been resurrected and that it would be a privatized project was followed by "an intense, complex, secret and ambitious interplay between rival corporate and political factions to secure the contract".<sup>3</sup> Out of such manoeuvrings, which lasted several months, a Sarawak-based development company, Ekran, led by Sarawak-born and bred Ting Pek Khiing and backed by key members of the ruling party in Malaysia, UMNO Baru, won exclusive rights to the contract for the Bakun HEP.

Early on in the negotiations, however, Ekran had not been a favourite. Instead, it seemed that the ambitions of Sarawak's Chief Minister, Abdul Taib Mahmud, would hold sway. Taib wanted to use the Bakun project to carry out his long-held plans to privatize Sarawak's state utilities and to secure as much of the project as possible for Sarawak companies. His idea was to privatize the Sarawak Electricity Supply Corporation (SESCO) which would then bid for the Bakun project. However, for SESCO to be able to provide quickly the relevant support and guarantees that a huge contract such as Bakun would require, it needed to obtain a controlling interest in a company listed on the Kuala Lumpur Stock Exchange.

Links were therefore established with a prominent Peninsular-based businessman, Lim Thian Keat. Within Lim's stable was Dunlop Estates Bhd, an ideal vehicle for SESCO's plans.<sup>4</sup>

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A Memorandum of Understanding, presented in December 1993, suggested that the Sarawak state government would buy a controlling interest in Dunlop, while Dunlop would obtain a 45 per cent stake in SESCO. The deal was reported to be worth RM1.4 billion (US\$560 million).

Taib had not foreseen, however, the sharp reaction within political and business circles in Sarawak to a Peninsular Malaysian, rather than a Sarawakian, playing a key role in the scheme. Almost immediately, rival factions emerged, chief amongst which was Ekran, led by Ting. Not only was the company led by a local person; it had also completed several construction projects for the national government quickly and successfully, which had impressed Prime Minister Mahathir Mohamad. After several rounds of proposals and counter proposals, including a suggestion that the Bakun project should be shared between Ekran, SESCO and Dunlop, Ting persuaded Prime Minister Mahathir and Sarawak's Chief Minister Taib to give exclusive control of Bakun to his company, Ekran. On 30 January 1994, the deal was signed at a ceremony in a beach resort near Kuching, Sarawak.

According to this deal, Ekran would set up several subsidiary companies to build and run the dam. It seems to have agreed that the Sarawak state government would be given substantial equity in the Bakun Hydroelectric Corporation, the subsidiary that would implement the whole project. The fact that some of Taib's family were shareholders in Ekran and that key business supporters were involved in other companies which would receive lucrative sub-contracts for the project, may have helped Ting to secure the Bakun contract.<sup>5</sup> What certainly aided his cause was his promise to both the Malaysian and Sarawakian governments that no government funds would be needed and that the project would be built within "six or seven years".<sup>6</sup>

The public, however, have had great difficulty in obtaining any clear information about the project. As an article in a Malaysian magazine states:

"One of the reasons we know so little about the costs of the project is because the Bakun contract was awarded . . . in a process that saw no open tender system, no transparency of contract submissions, and no details of the terms and conditions by which Ekran was awarded the contract."<sup>7</sup>

## Uncontrollable Risks

Initially, the impression was given that finance would not be a problem. Ekran assured the investment community that monies for the Bakun project were largely secured. In April 1994, Ting told a Malaysian business magazine, *Corporate World*, that "facilities in excess of RM10 billion [US\$4 billion] have been lined up and can be signed within six months".<sup>8</sup> He also insisted that the monies would be from "all local" sources, and that Ekran would not be getting "a government grant".<sup>9</sup>

Yet more than two years on, the project has still to raise the finance it requires. Ekran has repeatedly changed its corporate mind as to the terms under which it will be financed. For example, it stated originally that 80 per cent of the money for the project was to be raised through loans (debt finance), leaving the remaining 20 per cent to be raised by issuing shares in the Bakun Hydroelectric Corporation (equity finance), a typical financing structure for a large private-sector project. By July 1996, however, this had changed to a 60:40 debt-equity ratio. More recently, Ting has announced that "the Bakun project will be financed entirely through shareholders' funds after the listing of

Bakun Hydroelectric Corporation". This is now planned for late 1996 or early 1997, having been postponed from April 1996. The exclusive reliance on equity finance strongly suggests that would-be debt financiers consider the project too risky for their money.

The claim that funds are to be locally sourced conflicts with Ekran's efforts to attract foreign investment. "Roadshows" have been held in various countries, and Ting has flown in fund managers from abroad to impress upon them the viability of the scheme. The fact that ten per cent of the equity of the Bakun Hydroelectric Corporation is now earmarked for foreign investors indicates on the one hand that sufficient monies cannot be raised domestically and, on the other, that there is limited enthusiasm for the project abroad.

The failure to attract private capital reflects in large part investors' concern over the risks involved with large-scale dams in general and Bakun in particular. A recent investment analysis of the project by London-based financial consultants Delphi International stated that the Bakun HEP "appears to carry far greater risks" than other private power projects in Malaysia and elsewhere. These risks include "probable" cost overruns; a "substantial risk" that the dam will produce less power than forecast (partly because of uncertainties in future rainfall projections due to climate change); possible technical problems with the dam structure, reservoir sedimentation and the unprecedented underwater power line between Sarawak and Peninsular Malaysia; and other risks, including the possibility of the dam collapsing — "for which only limited insurance is likely to be available".

Delphi calculates that the likely returns to equity investors in the Bakun Hydroelectric Corporation range from 9.7 per cent to as low as 3.9 per cent — well below the 11.5 per cent claimed by Ekran. Even at 11.5 per cent, the project would still compare unfavourably with other power projects in Asia, which currently yield around 16 per cent. The Delphi analysis concluded:

"The project carries an abnormal level of risk, much of it uncontrollable, and thus is not suitable for project lending."<sup>10</sup>

The wariness expressed by the analysis was already apparent locally and internationally. Thus, despite strenuous earlier official denials, much of the money for the Bakun HEP will have to come from public funds. It now seems that the Sarawak state government will hold 19 per cent of the shares in the Bakun Hydroelectric Corporation; the state-controlled Sarawak Electricity Supply Corporation (SESCO) nine per cent; the national government agency, the Employees' Provident Fund five per cent; and five per cent each for two partly privatized companies still controlled by the national government, Tenaga Nasional and the Malaysia Mining Corporation. Bakun is clearly not a true "private sector project".

## Pressuring the "Private" Sector

On the basis of the committal of such public funds, it seems that the Bakun HEP will now go ahead. Malaysian critics, however, are still asking whether the project is necessary, viable, or environmentally and socially justifiable. There have been persistent calls for more detailed information to be made publicly available, wider public discussion, and for a more intense debate over the implications of the project as far as the Malaysian public is concerned.<sup>11</sup>

The publicly-stated premise of the project when it was resurrected in 1993, for instance, was that it would supply Malaysia with the cheapest electricity. But after the signing earlier this year of the power purchasing agreement, which set the price at which electricity from Bakun will be sold to the national electricity utility, Tenaga Nasional, it is apparent that it will be the most expensive. During protracted negotiations, it seems that Ekran initially sought to sell the electricity at 19.8 sen per unit, reduced this to 18.5 sen, and finally had to settle for a price of 16.5 sen per unit for the first five years and 17 sen for the subsequent 25 years. This is still far higher than the price Tenaga pays for electricity from other independent power producers or from its own plants.<sup>12</sup>

Tying Tenaga Nasional to such a price for such a length of time carries serious implications for its financial future, inflation in the country and the competitiveness of the Malaysian economy as a whole. Indeed, it seems that the government has steam-rolled Tenaga into participating in the project, despite the views of many within the company that Tenaga's own profitability would be affected unless the government agreed to a series of price hikes. Such evidence, argue critics, indicates that the Bakun HEP is being implemented not to supply electricity at the cheapest price for the nation, but to guarantee profits for the individuals and companies involved in its construction and management.

## Lack of Public Accountability

There has not been much public confidence either in the procedures for public accountability. For instance, many Malaysians are dismayed that monies from the Employees' Provident Fund, the Malaysian government's savings and pension scheme for workers, are being used in such a risky project. As nine Malaysian NGOs asked in a joint letter to *Aliran Monthly*:

"How can the EPF Board justify sinking so much of the funds belonging to ordinary Malaysians into such a controversial project which is almost devoid of any meaningful public accountability?"<sup>13</sup>

Indeed, it may be claimed that the scramble to attract private monies has led to exactly the kind of flawed planning procedures which gave large dams a bad name in the first place. For example, to ensure rapid returns on investments for potential investors and Ekran, the project was "fast-tracked". This led to any pretence at public accountability being abandoned. The lack of an open tender process meant that certain information is unavailable to the public, while the use of the Official Secrets Act has prevented public access to the mass of feasibility studies conducted with public monies since the late 1970s on the project.



As a result of the separation of the Environmental Impact Assessment into four parts, Ekran gained approval to clearcut the reservoir area before any decision had been made on the desirability of the dam itself. The catchment area now accounts for 16 per cent of Sarawak's log production.

All of these considerations make:

"a mockery of Mahathir's claim that the government has 'nothing to hide' and instead seems designed to 'fuel unhealthy speculation, fear and uncertainties which will undermine the credibility of the government'."<sup>14</sup>

The Environmental Impact Assessment (EIA) procedures for Bakun have been handled in a similar way. Under the Malaysian Environmental Quality (Prescribed Activities) Order 1987, the EIA for major infrastructure projects such as large dams includes a mandatory period for public comment and feedback prior to approval by the national Department of the Environment. This procedure had been respected since the Act was introduced, but for Bakun, the cabinet approved "a new approach to speed up the construction of the dam".<sup>15</sup> The EIA was divided into four separate parts, each of which could be approved independently of one another. This, commented one Malaysian NGO, was tantamount to "having one

piece of the jigsaw but the other bits missing".<sup>16</sup> In addition, the national law was amended retrospectively to allow the EIA process to be transferred to the Sarawak state government which made no provision for public participation.

Three of the indigenous people who will be forcibly evicted to make way for the Bakun HEP petitioned the Malaysian High Court, arguing that the lack of public participation made the EIA illegal because they had been denied their right to be heard. In June 1996, the High Court upheld their petition, although this judgement has been set aside pending disposal of an appeal by the defendants, Ekran and the Malaysian and Sarawakian governments. Nevertheless, commenting on the ruling, the usually government-friendly *New Straits Times* wrote:

"Whether they [the authorities] heed the lessons to be learnt or continue to believe in their own invincibility is a choice only they can make. Here is a case in point of the particular folly associated with resorting to administrative shortcuts without due regard for rules and procedures . . . [The judgement] is not an issue of victory or loss, but still stands as an indictment of the administrative system . . . The wiser of government agencies will read the situation as an imminent warning to rethink their position, to be able to transact business with a higher level of accuracy and transparency. Procedures should not be taken for granted, let alone bent with impunity."<sup>17</sup>

## Political-Corporate Networks

Such lack of transparency is by no means unique to Malaysia. Nonetheless, many Malaysians are concerned that efforts to achieve greater accountability by citizens over both government and the private sector will be harder as a result of the

## Western Involvement in Bakun

A number of Western companies are actively involved in the Bakun project. Chief amongst these is the Swedish-Swiss engineering giant, ABB Asea Brown Boveri, which heads the consortium that won the contract to build the dam, and two engineering firms — Lahmeyer International of Germany and Harza Engineering Company of the US — which have advised Ekran and the Malaysian government on feasibility studies, dam design and overall project supervision. A number of equipment manufacturers have also bid for the contracts to

build the 1,500 kilometre transmission line and submarine cabling. These include Italy's Pirelli and Japan's Fujikura.

ABB — recently voted Europe's "most respected company" in a *Financial Times* survey — makes much of its commitment to the environment and is a leading member of the World Business Council on Sustainable Development. Its involvement in the Bakun project has caused an international outcry from environment and human



*In November 1995, a groups of villagers managed to meet with potential British corporate investors at the Bakun site to make clear their opposition to the dam. They presented a letter which stated "we do not want to be resettled from our native lands . . . [and] will die with this our ancestral land".*

rights groups worldwide.

In September 1996, over 200 groups wrote to the company protesting at the company's signing of the contract, despite the project being in legal limbo as a result of the High Court ruling that the Environmental Impact Assessment had been improperly conducted. A memorandum was also delivered to the company by a coalition of Malaysian groups opposed to the project, detailing the adverse environmental and social impacts and urging the company to withdraw. ABB refused to take delivery

of the document, despite a stated commitment to dialogue with those affected by its projects.

European and US groups have accused ABB of "environmental dumping" and double standards. They point out that the project would not be permitted in ABB's home countries and that large-scale hydroelectric plants are increasingly viewed within industrialized countries as outdated, inefficient and uneconomic. Sweden, for instance, prohibits any hydropower exploitation of the country's last four free-flowing rivers.

The groups concluded:

"We respect the sovereign right of Malaysia's peoples to decide their own development path, whilst honouring the international agreements to which Malaysia is a party. However, we find it deeply hypocritical that . . . ABB should be involved in actively transferring technologies which are no longer considered acceptable in its home countries."

Write to Goeran Lindahl, ABB Asea Brown Boveri AG, PO Box 8131, 8050 Zürich, SWITZERLAND.

privatization process. As Professor Jomo of the Universiti Malaya in Kuala Lumpur has written:

"In the increasingly authoritarian and centralized Malaysian polity, with public accountability and governmental transparency considerably diminished deliberately by those in power, the strengthening of private business interests, especially of those who are politically well-connected, is very likely to transform, and even increase . . . the opportunities for rent appropriation."<sup>18</sup>

Privatization in itself is nothing new in Malaysia. Prime Minister Mahathir has long preached its benefits — principally greater efficiency and choice — and the government has undertaken a number of major privatization initiatives since the mid-1980s. But, as elsewhere, the process has been inextricably linked with the public and private agendas of the national government. Many large contracts, including that for the Bakun HEP, have been awarded not as the result of open tendering but purely on the basis of personal contact and/or ethnic criteria.<sup>19</sup> As Terence Gomez, a lecturer at the Universiti Malaya, argues:

"It is questionable whether Malaysians were being well served when the government awarded contracts without competitive bidding . . . leading the country perilously close

to a situation where private monopolies were being created to gradually replace public ones."<sup>20</sup>

Gomez's and others' writings describe how the present political leadership has given contracts to hand-picked business connections on terms which encourage unproductive and wasteful profiteering as well as allowing political and business practices which are increasingly unaccountable to the public. Contracts have also been given for private political party reasons. For example, Prime Minister Mahathir openly admitted that the granting of the contract for the North-South Highway, a major road project to run from the Thai border in the North all the way down to Johor in the South, was tied to the need to clear the outstanding UMNO Baru debt on its building in Kuala Lumpur. More recently, however, Mahathir, along with others inside and outside his party, have expressed concern over the prevalence of what is now termed "money politics" within the Malaysian polity and the malpractice that it encourages.

This has an effect on investors, too. The granting of larger and larger projects to a politically-favoured corporate elite may, in the long run, mean that political rivalries and changes could threaten projects or monies invested. In the case of Bakun, for example, Ting has sought to secure as many as possible of the

project's benefits for himself and his corporate and political allies.<sup>21</sup> This has been overtly criticized by Malaysia's Deputy Prime Minister, Anwar Ibrahim, who has castigated those who have been given opportunities to undertake large projects and who then monopolize them by awarding sub-contracts to their own subsidiaries. He has called on them to distribute the contracts equitably instead, not only as their social duty but also to be accountable for equitable distribution of opportunities.<sup>22</sup> Such pressures may encourage Ting to sub-divide already agreed contracts so as to make as much work as possible available to local business connections. Significantly, he is on record as saying:

"We will also talk further with ABB-CBPO [the foreign consortium awarded the largest contract for the project, RM13.6 billion/US\$5.44 billion] to see if we can take out more portions for local firms to participate in."<sup>23</sup>

Undoubtedly, the award of valuable construction-related contracts for the Bakun project will realize significant profits for the directors and shareholders of the companies involved, irrespective of Bakun's performance. But as a prominent Malaysian academic has pointed out:

"You can have the best engineering brains in the world working on the Bakun project, but if it lacks proper management of communication and interpretation of its benefits to the people, then unforeseen and unfortunate things are bound to happen . . . A project of this magnitude, and the attention that it can generate worldwide, should have a

commensurate and sound management strategy that would be able to cushion or, at least, ricochet brickbats and criticisms levelled at it."<sup>24</sup>

He argues that Bakun has not had this. On the contrary, the true worth and financial viability (or otherwise) of the project is becoming increasingly obscured as the project becomes enmeshed in political-corporate rivalries. For investors, this means that political allegiances and in-fights have to be tracked at least as much as economic performance in order to ensure that a contract is given on the basis of economic viability rather than political expediency.

## The Dam That Damns

Bakun represents exactly the kind of large dam project that damns anyone involved in its promotion. The false promises, the vague announcements, the lack of public discussion, the flawed EIA process and the lack of consideration of alternatives have seen Malaysian and international campaigners unite in a call for it to be halted. The way the project has been privatized and the procedures followed since then would make it illegal in many countries around the world. It even has a court ruling against it in Malaysia at present. As one (disillusioned) project consultant wrote, "Nobody has shown that the Bakun Dam needs to be built . . . [but] some want to build it as a monument to Malaysia. It will be a monument to greed, arrogance and selfishness."<sup>25</sup> And built with public monies.

## Notes and References

1. It followed the commissioning of the "Electricity Masterplan for Sarawak", produced by the Sarawak Electricity Supply Corporation (SESCO) in 1979 which identified 155 potential dam sites with a total capacity of over 80,000MW.
2. Gurmit Singh, ex-President of the Environment Protection Society Malaysia and Director of the Centre for Environment, Technology and Development, quoted in Institute of Social Analysis (INSAN), *Power Plays: Why the Bakun Hydroelectric Project is Damned*, INSAN, Kuala Lumpur, 1996, p.51.
3. *Ibid.*, p.6.
4. Dunlop Estates had originally been set up in 1967 to take over the plantation assets of the British-owned Dunlop Company and had later been acquired by Lim. The assets were sold off in 1991, leaving Dunlop seeking new partners to revitalize the company and protect its valuable listing on the KLSE.
5. Ting's sons have probably sold their shares after adverse publicity, but the prevalence of nominee shareholding in companies like Ekran makes it very difficult to know just who does hold the shares.
6. Quoted in the *Asian Wall Street Journal*, whose articles of 31 January 1994 and 2 February 1994 are instructive in describing the deals. The SAMA Consortium, which conducted the feasibility studies on the Bakun HEP in the early 1980s, estimated that the project would take 10 to 12 years to build.
7. Devi, J., "The Bakun HEP" in *Ethos* (Journal of the International Malaysia Forum), Kuala Lumpur, June 1996, p.30.
8. *Corporate World*, April 1994.
9. *Malaysian Business*, 16 March 1994.
10. Mansley, M., *Bakun: High Dam, High Risk*, Delphi International, London, 8 July 1996.
11. See, for instance, "Joint Statement on Bakun Dam Plays", signed by nine NGOs on 1 June 1995 and the Joint Statement by the "Concerned NGOs on Bakun", 11 September 1995, signed by 33 NGOs.
12. An article in *Malaysian Business* states "Tenaga people privately maintain that they face intense competition on an uneven playing field, which forced the company to buy electricity from fresh entrants . . . The cost of so doing ranges from 13 sen to 16 sen per KWh at a time when Tenaga faces excess capacity of its own while able to generate power at roughly 8 to 9 sen per KWh." The price from Bakun is higher still. See *Malaysian Business* 1 December 1995, p.20.
13. *Aliran Monthly*, 15 (5). *Aliran Monthly* is published by the Malaysian social reform group, Aliran.
14. Devi, J., op. cit. 7. The second quote is of Sim Kwang Yang, then opposition MP for Kuching, reported in the *Borneo Sun* 2 February 1994.
15. Lim Keng Yaik, Minister of Primary Industries, quoted in INSAN, op. cit. 2, p.64.
16. WWF-Malaysia's Sabri Zain, quoted in the *Sunday Star*, 30 July 1995.
17. Editorial in *New Straits Times*, 22 June 1996.
18. Jomo, (ed.), *Privatising Malaysia: Rent, Rhetoric and Realities*, Westview Press, 1995, p.58.
19. Awareness of Malaysia's multi-ethnic demographic composition is crucial in understanding its politics. Political parties are predominantly communally based. The Malays form the majority of the population, with those of Chinese origin (some 30 per cent) and Indian origin (10 per cent) forming sizeable minorities. Following ethnic rioting in 1969, the government introduced the New Economic Policy (1970-1990) which aimed to restructure the economy so that the Malays in particular would have a greater share. Privatization has been one way of redistributing wealth to this ethnic group (through a Malay elite).
20. Gomez, T., "Political Business", James Cook University, Australia 1994, p.19.
21. Ting has been setting up a network of companies to which Ekran has been able to sub-contract work. The sale of part of the timber rights of the reservoir area to Pacific Chemicals, a company controlled by Ting in which Taib's two sons have considerable interest, was a first example. Subsequently, Ekran awarded subcontracts worth RM4.5 billion (US\$1.8 billion) in total to its four listed firms: Wembley Industries Holdings Bhd, PWE Industries Bhd, Pacific Chemicals Bhd and Granite Industries Bhd. Ekran has been appointed the turnkey contractor by Sarawak Pulp Industries Sdn Bhd to develop the RM20-billion (US\$8 billion) Bintulu Baru Industrial Park over a 20-year period. Sarawak Pulp is 70 per cent owned by Ekran executive chairman Tan Sri Ting Pek Khiing and 30 per cent owned by Bintulu Development Authority, which in turn is owned by the Sarawak government, a key shareholder in the Bakun project. As *The Star* of 13 July 1996 commented, "Some of the manufacturing outfits which would make the components required for the Bakun dam project would be set up within this area".
22. *New Straits Times*, 13 July 1996. Ting's purchase of Wembley has already been interpreted by some as a sop to Anwar, but it seems this has not been sufficient to keep the pressure off.
23. *Ibid.* So far, the portion taken out of the main development contract amounts to almost 40 per cent local participation, and Ting has said this could probably be raised to 50 per cent at most.
24. Mara Institute of Technology, School of Mass Communication, Dean, Associate Prof Dr Baharuddin, reported by *Bernama*, 18 July 1996.
25. Jerome Rousseau, employed as a consultant to the Sarawak State Planning Unit, in a paper entitled "The Bakun HEP and Resettlement: A Failure of Planning", Kuala Lumpur, December 1995.



## Books

### Free Market Deep Ecology

#### CONTESTING EARTH'S FUTURE:

##### Radical Ecology and Postmodernity by

Michael E. Zimmerman, University of California Press, Berkeley, 1994, \$30/£25 (hb) 447pp. ISBN 0-520-08477-2

In *Contesting Earth's Future*, Michael Zimmerman takes the radical ecology bus and its complement of quarrelling passengers on an extended, fast-paced journey across a wide landscape of contemporary thought. The book presents a development and defence of deep ecology in relation to other major positions in radical ecology (ecofeminism and social ecology), and provides the most wide-ranging encounter to date between deep ecology and other contemporary currents of thought, including perennial philosophy, Heidegger, Nazism, New Paradigm, chaos theory, transpersonalism, post-modernism, liberalism and much more.

The book is in several respects a landmark. Zimmerman has a facility for encapsulating positions, and the dialogical and mapping project is valuable and important. But the author's political compass veers steadily towards the right so that, in the end, he strands most of his passengers at a point on the opposite side of the political map from their intended destination. One of the chief challenges *Contesting Earth's Future* presents for friends of radical ecology is to work out how Zimmerman achieves this remarkable feat of political inversion.

Zimmerman helped establish Heideggerian philosophy as a popular foundation for deep ecology. In this book, he strives to come to terms with recent revelations of the depth of Heidegger's

involvement in Nazism and to assess its implications for deep ecology. Zimmerman links Heidegger's support for fascism to his critique of modernity, in which he also implicates radical ecology. He thus manages to pose the central problem for radical ecology in general as the avoidance of ecofascism.

Even if Zimmerman's focus on Nazism as a political guidepost is too exclusive, he is surely right that the corrupted forms of Romanticism, anti-rationalism and anti-modernism espoused by Nazi ideologues present a cautionary tale for would-be critics of modernity. A major task now is, as he concludes, to develop a radical ecology which clearly discards these elements while retaining the valid elements in the critique of modernity (in his view, its control obsession, death denial and anthropocentrism).

However, Zimmerman reaches perversely conservative conclusions from his interrogation of Nazi ecologism, in part because he adopts oversimplified accounts of fascism and Nazism. He casts the Nazi relationship to modernity as an evil throwback to mindless collectivity and blood and soil tribalism, the dark binary of the white knights of individualism, private property, liberalism and Enlightenment rationality.

But, as critical theorists have shown, this portrait of Nazism as an irruption of "premodern irrationalism" obscures as much as it illuminates. Zimmerman's binary account assumes that the Nazi form of fascism remains the chief political danger we have still to fear, and that it is only in the Nazis' critique of modernity that we should seek the primary source of Nazi horrors.

His account overlooks analyses such as Zygmunt Bauman's which suggest that the Nazi extermination programmes were, in many respects, an extreme expression of modernity and its rational capacity to scapegoat, marginalize and eliminate. Both the programmes and Nazi thinking in general involved strong modernist elements of human/animal dualism, instrumental/bureaucratic order and hyper-rationalism. By ignoring this ambiguity of Nazism in relation to modernity, Zimmerman is able to ignore the more pressing contemporary danger represented by the flourishing of similar marginalizing tendencies within the *laissez-faire* liberal regimes he idealizes and tries to reconcile with deep ecology. Thus, he manages to cast these regimes, despite the social and ecological devastation they wreak on the

earth, as havens of political sanity and safety threatened mainly by radical critics within.

Zimmerman's intervention in the internal radical ecology debates is presented as an attempt to heal the divisions within radical ecology, but his resolution is similarly unfavourable to radical ecopolitical thought. He consistently favours deep ecology, the position within that grouping with the poorest connections to radical politics (as currently articulated), and his account retains and intensifies its most problematic elements, including the idealism, hyper-individualism and unexorcized rationalism which have troubled many of its critics. Zimmerman develops detailed responses to critics of deep ecology, but these are largely defensive and include a number of fanciful extrapolations of critics' objections (critics of the dualistic devaluation of particularity are identified, for example, with Rortyan relativists).

No one doubts that many deep ecologists have, as Zimmerman goes to some trouble to argue, deep experiences of nature. That does not mean they have theorized them satisfactorily in the impoverished and essentially one-place terms of self-identification, a conception which remains far too open to masculinist and egocentric readings. Undoubtedly a better human/nature relationship must revise both the dominant construction of the non-human other and that of the human self, but the emphasis in *Contesting Earth's Future* falls rather too exclusively on the second. When the other is left in the background and the recognition of nature and animals takes a back seat to the preoccupation with refurbishing the self, a diagnosis of spiritualized egocentrism continues to seem warranted.

In a major further development, Zimmerman grafts onto deep ecology transpersonal theorist Ken Wilber's narrative connecting degrees of individualism with separation anxiety and denial of death. Wilber provides a eurocentric and idealist framework of "consciousness stages" with progressive overtones of both Marx and the Nietzschean *obermensch*. Zimmerman retains these problematic elements, employing Wilber's account reductively to explain environmental destruction in highly individualistic terms, as the result of the arrest of individuals at the "primitive" stage of mental-egoic consciousness, but quietly drops Wilber's critique of private property.

There are some overlaps in this area, as

Zimmerman notes, with the concerns of ecofeminism and the critique of masculinity. Several chapters engage with ecofeminism, a welcome departure from the usual cursory treatment. But ecofeminism is called on for confirmation rather than for genuine dialogue, and the orientation remains consistently anti-radical in failing to concede clearly women's oppression.

By overlooking the way ecofeminism (including that form of Goddess spirituality which aims to unite the spiritual and the material) is at odds with his perennialist cultural values, Zimmerman inverts the cultural values of radical ecology in the same way as its political values. According to feminist cultural critique (which is not, as Zimmerman assumes, the same as "cultural feminism", the project of establishing a gynocentric culture), Western dualism has inferiorized the sphere of nature, traditionally including the feminine, the non-human, the body, the "primitive", particularity and materiality, as the lower half of two dissociated binary realms.

In contrast to those ecofeminists whose cultural project involves a reclamation (without reversal) of the inferiorized order constructed as nature, in the form of the devalued undersides of traditional dualisms, Zimmerman's philosophical bent leans toward affirming the traditionally superior side of these dualisms, opting systematically for mind over body, for idealist, individualist, transcendent and universalist solutions. We get an "ecology-speak" return to traditional Western values, presented as innocent of any hostility to nature.

Although the concept of non-dualism is often invoked, the implications of an anti-dualist analysis for cultural values are not followed through. This would involve at least distinguishing non-dualistic and dualistic solutions to death anxiety and rejecting those solutions which inferiorize nature and the "world of changes". Without some such distinction, it is unclear how Zimmerman's proposed solution to death anxiety — developing a "perennial" transcendental spiritual identity beyond the perishable sphere of nature and the body — escapes the masculinism, human/nature dualism and nature-rejection of the dominant Western tradition of transcendent perennialism.

In the end, Zimmerman abandons the radical ecology bus upside down in a ditch and exits right in line with the spirit of the times, warning of the futility of

challenging the framework and the dangers of environmental restrictions on private property. There are numerous difficulties in this marriage of deep ecology and contract liberalism, since liberal masculinism and hyper-individualism support death anxiety, and there is a clear contradiction between enjoining respect for nature and animals, on the one hand, and sanctioning their commodification via the market, on the other.

Zimmerman drapes these incongruities with a discussion of "evolutionary liberalism", in which enlightened individuals somehow participate in the market without commodifying nature, but he never develops sufficient detail to make this claim convincing, or to dispel the obvious parallel with attempts at kindly, "non-commodifying" slave-ownership.

The final pages reach the bleak conclusion that the best ecologists can legitimately expect, given the political constraints the argument assumes, is some eventual development toward Atman consciousness on the part of a few rare and privileged individuals. Ecologists should not accept this invitation to despair, concluding instead that a libertarian-individualist environmentalism, privileging the market over ecology and eschewing framework changes, can offer little in the way of hope and vision for a just and ecological society.

*Contesting Earth's Future* provides the strongest right-wing bid so far for the intellectual foundations of environmentalism, through the political realignment of deep ecology. It would nevertheless be wrong to conclude that this realignment confirms the suspicion held by many on the left that deep ecology itself is inherently reactionary and should be abandoned. By making explicit the hidden potential of some forms of deep ecology for alliance with right wing politics, *Contesting Earth's Future* should serve to stimulate a long-overdue radical counter-agenda to develop other forms of deep ecology which can be aligned instead with a genuinely radical politics that challenges the wider political frameworks supporting social and ecological destruction.

Val Plumwood

**Val Plumwood** is a feminist environmental philosopher and eco-activist. Her most recent book, *Feminism and the Mastery of Nature* (Routledge 1993), applies feminist and post-colonial theory to thinking about environmental ethics.

## Women's Movements in India

**THE HISTORY OF DOING: An Illustrated Account of Movements for Women's Rights and Feminism in India, 1800-1900**, by Radha Kumar, Kali for Women, New Delhi, and Verso, London, 1993, £12.95, 204pp. ISBN 0-86091-665-0

**WHERE WOMEN ARE LEADERS: The SEWA Movement in India**, by Kalima Rose, Zed Books, London, 1995, £12.95/\$19.95 (pb) 286pp. ISBN 1-85649-084-X

"The Indian feminist movement is one of the most sophisticated in the world. It is time for us to build on that." Thus does Radha Kumar conclude her history of the women's movement in India. Others could learn from it as well.

Today, international developments have a great, possibly unprecedented, impact on local developments in every part of the world. Looking at the complexity of problems and changes taking place in a vast country like India, one finds similarities with the tumultuous changes and tensions now prevailing in Europe. The attack on Muslims and other

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minorities by the Hindu fundamentalists for breeding irresponsibly and being anti-nationalist, for instance, are almost identical to accusations now being levelled at non-white, minority populations all over Europe.

Yet there is little serious debate among white women's organizations or writings to wrestle with these developments. It is here that the Indian women's movement can and should take credit for itself for the level of discussion and understanding it has generated on such diverse issues as tradition and modernity, the constitution of religious, ethnic and communal identities, and nationalism.

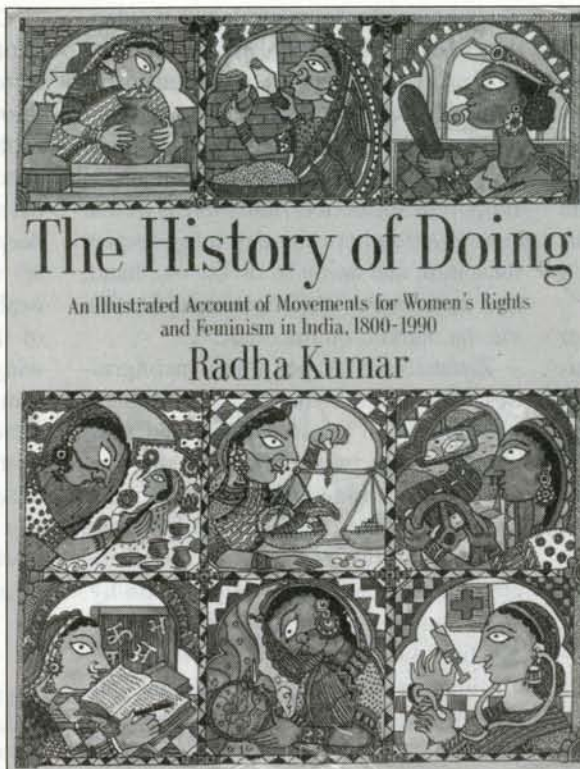
*The History of Doing* is an excellent introduction for the lay person, both in and outside the country, to the movement for women's rights and feminism in urban India. Its rich and rare collection of photographs adds life to descriptions of people such as Durgabai Deshmukh, Sarala Debi Ghoshal, the niece of Rabindranath Tagore and Preetilata Wadkar of the Chittagong Armoury Raid fame who have so far tended to be just names in history.

Since Kumar covers 100 years and has included so many illustrations and photographs, the space left for analysing in depth developments within the women's movement in India is limited. But by highlighting major issues, Kumar provides a good introduction to the issues.

The first part of the book gives an insight into the nationalist movement and the role of women within it. Descriptions are placed within their socio-political contexts, providing the reader with a broad idea of the interplay between several forces in India that combined in the nationalist struggle.

For instance, religion has always been invoked by traditionalists to keep women in their place; yet during the time of the nationalist movement, goddess-centred rhetoric gained new ground. It was, on the one hand, used to spawn revolutionary terrorism in Bengal, for instance, and, on the other, encouraged so that the image of the mother goddess came to be identified with that of Mother India.

Kumar shows that this was acceptable to nationalist leaders because they realised that the movement had to become more broad-based, effectively achieved by granting religious sanction to women to participate in popular movements.



The latter part of *The History of Doing* covers the contemporary autonomous women's movement, largely in urban India. Kumar presents some of the major issues as various autonomous women's groups tackled them: the campaign against dowry, the agitation against rape, the struggle around personal and communal identities and the uniform civil code, the agitation against *sati* (widow burning) and the campaign for a safe environment.

These groups, as the author herself mentions, have historically been urban-based, set up by women who initially broke away from leftist political parties and who were looking for feminist, democratic ways of functioning. The reader gains a good picture of the struggles taken up around these various issues and the intense debates they generated.

As often happens with attempts to pack a long and complex history into a few hundred pages, huge areas of the country are left out of the descriptions. The focus is mainly on discussions within the cities of Bombay and Delhi, primarily among urban, well-to-do women, with only passing mention of a few others. A great part of South Indian struggles do not feature at all.

For instance, women's organizing to demand better working and living conditions have been taking place for decades in several parts of India, for example, the fisherwomen's struggles in Kerala, the *beedi* makers of Karnataka and Andhra Pradesh and the construction workers of Tamil Nadu. These groups and issues

captured the sympathy and involvement of some urban women's groups, the subject of Kumar's study, but the credit for moving ahead in their organising efforts must go to the women themselves.

It is a shame that many women and men in India will not be able to own a copy of this interesting pictorial history of at least certain aspects of the women's movement in India just for the photographs because of its cover price.

Kalima Rose's book is also about women organizing themselves in India, but it deals with some of the groups skimmed over by Radha Kumar — the self-employed urban and rural poor women. Ela Bhatt, the founder of the Self Employed Women's Association or SEWA, says:

"I recognized that 80 per cent of Indian women are poor, illiterate and economically active. It is these working class women who should be taking a leading role in the women's movement of our country."

The book on SEWA — the word "sewa" also means "service" in a Gandhian sense — gives an inspiring account of the movement of self-employed women which started in Gujarat in Western India and spread to other parts of the country. With 40,000 members today, it has become an example for self-employed women in various parts of the world ranging from Women's World Banking, a New York-based bank set up to help women become economically independent, to changes in trade union structures in different parts of Latin America.

Rose gives precise details of how the various sectors of a huge organization like SEWA actually took shape. It started by taking up the cause of women cart pullers, weavers, rag pickers, incense stick makers and other self-employed women, seeking to strengthen the women not just in their bargaining power but also to improve their own and their family's quality of life.

By making their right to their work central to their lives and by not being welfare-oriented, SEWA made them recognize the power of organizing. For instance, vegetable vendors who wanted to carry on selling fresh vegetables in the open markets everyday without being harassed by the police were used to paying bribes to hold on to their right to sell.

Once the women joined SEWA, they not only stopped paying bribes to the police, but even got the police chief commissioner to grant the women the right to sell their provisions from places their mothers and grandmothers occupied as vendors.

The struggle around setting up a credit system and later a poor women's bank are also exciting events; the ups and downs of the process are described with care. The bank's major achievement has been to provide 79 per cent of its lending as unsecured loans which helped poor rural and urban women to get their land or jewellery released from the clutches of money lenders.

By 1989, the SEWA bank was 15 years old and had over 11,000 shareholders. They had also provided 6,000 loans to their members — most of them are women who had never entered a bank before to borrow money or who had been refused a loan when they did dare to apply for one.

*Where Women Are Leaders* brings to life the reality of urban and rural poor women with a richness of detail. In the process of working out a union for the self-employed women, SEWA challenged the paradigms of welfare versus empowerment, of unions organizing only industrialized workers and a women's movement focused largely on issues of middle-class urban women.

What is missing in the book, however, is an attempt to look critically at the manner in which a movement becomes a national institution. What were the problems faced in the process? Did struggles for power at various levels arise? If so, how did the organization deal with them? How, in other words, did a rapidly growing and changing organization with various tasks continue to function democratically?

In many popular movements, the issue of democratic functioning, and sharing of power within the movement eventually becomes the main issue (apart from questions of perspective) around which divisions occur.

Rose does not go into these aspects, so we read only a glowing account of SEWA's work, which is well worth reading but, unfortunately, life tends to be more complex. More clarity on these issues would have been useful.

A fascination with the empowering process which the author witnessed time and again during her stay at SEWA may have made it difficult for her to look beyond the gains made by the movement. It could also be that as an American, she has not had the opportunity to see India

from within and place the SEWA movement within the perspectives of the various struggles that have taken place or are ongoing in the country around the lives of rural and urban poor women.

Sumati Nair

Sumati Nair is an Indian activist who focuses on issues of women's health and fertility control and lives in The Netherlands.

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## The Death Trade

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**GUNRUNNERS GOLD: How the Public's Money Finances Arms Sales**, World Development Movement, 25 Beehive Place, London SW9 7QR, UK, 1995, £3.50 (plus £1.50 p&p) (pb) 101pp. ISBN 0-903272334.

*Gunrunners Gold* is an easily readable account of the financing of the British arms trade (or death trade which seems a more appropriate description): how weapons, their components and military equipment are sold to countries which cannot afford to pay for them; how taxpayers have borne the costs of promoting sales and, when debts cannot be paid, of actually paying themselves for the arms sales. It is perhaps the report Scott should have written (it costs less and is only 100 pages long)

The British government stands accused of complicity in corruption by giving aid packages to persuade countries to buy weapons systems, of propping up brutal military dictatorships, and of sheer incompetence. The book is an indictment of the system, and of those complicit in it. To say it is easily readable, however, is not to say, that it is easy reading.

Indeed, *Gunrunners Gold* generates not only anger, but also a puzzling sense that the British government (and other Western governments) are embarked on a switchback ride which they do not know how to stop, even though they may want to. Why else would government ministers (and royalty) fly round the world desperately trying to sell military goods, services and training to countries who don't have the money to pay for them?

Campaigners against the death trade need to know how deeply the process is embedded in the government and financial structure of the country — and how its tentacles reach into our own friendly neighbourhood listening bank or building society. Bringing these facts together

as the World Development Movement (WDM) has done in this report (with the help of the Campaign Against the Arms Trade) makes a powerful impact.

The report contains useful detailed information on arms sales, in particular those to Indonesia, Iraq, Jordan and Nigeria. It also shows that it is no longer enough to look at the exports themselves, nor the export licences that are supposed to "control" them — the financing of the death trade is of equal, if not greater, importance.

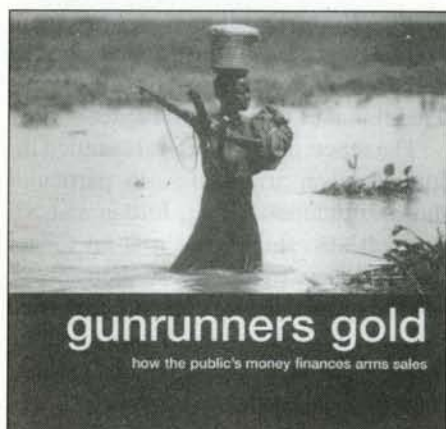
This importance has grown as countries find it harder to afford new weapons systems (partly with the down-turn in the price of oil from the mid-1980s onwards). So the government's Export Credits Guarantee Department (ECGD), from its pot of taxpayers' gold, underwrites the financing of arms deals by British banks — guaranteeing to repay them when the buyer defaults (as frequently happens). WDM estimates that the taxpayers' total effective subsidy for arms exports via ECGD is around £1.3 billion over the last five years, with "disastrous consequences for people in the Third World" and a major adverse impact on non-military exports.

WDM also estimates that the government is spending an average of £384 million a year on promoting Britain's arms exports through subsidies and promotions, sales trips by ministers and backhanders, and on covering losses incurred by the giving of export credits for arms. This means that over one-fifth of British arms exports are paid for by the taxpayer.

The biggest scandal is sales to Iraq of weapons it could not afford. WDM estimates that Iraq has defaulted on £652 million of medium-term export credits to Britain, plus nearly £30 million of short-term credits (exactly how much is military-related is not officially admitted). All the major British banks were involved in lending money to Iraq (backed up by the ECGD). The report quotes Secretary of State for Trade and Industry Nicholas Ridley who, just weeks before the invasion of Kuwait:

"warned against restrictions on military exports and funding to Iraq for fear of a systematic default on its debt with Britain which would clearly be extremely serious for ECGD and would have implications for the Public Sector Borrowing Requirement".

Military academic Lawrence Freedman charges that Iraq was tempted to invade



## gunrunners gold

how the public's money finances arms sales

"rich and tiny Kuwait" because it could not afford to pay for its military budget:

"The logic of [Saddam Hussein's] military build-up was that he eventually had to use his new arsenal in an attempt to pay for its purchase."

As Conservative Member of Parliament Alan Howarth, pointed out in *The Guardian* two years ago :

"The arms trade eventually devours itself. The global inflation caused by printing debt — significant amounts of it to finance arms purchase — had to be deflated, and in the process business and jobs in supplier countries were extinguished . . . Dependence on arms sales is not only imprudent economically, but also at odds with our strategic interests. The more successful ministers are as salesmen, the less independence they have as statesmen, as they are bound into contracts. The economic, strategic and ethical consequences of failing to get out of the arms sales trap will be grievous."

WDM has some specific suggestions concerning the ECGD, banks, the Overseas Development Agency and the European Union so as to regulate and control the death trade.

The book also proposes a European Code of Conduct on the Arms Trade, which neither CAAT nor the European Network on Arms Trade have felt able to endorse. A "code of conduct" for the death trade may stimulate informed public debate throughout Europe about greater regulation, but it misses the point of the economics of the arms trade which *Gunrunners Gold* highlights so well.

I am also concerned at the watering down of campaign demands by attempting simply to regulate rather than end a trade that, by any standards, is immoral, impractical, financially imprudent, encourages instability, supports military

dictatorships, corrupts all who have anything to do with it — and ultimately is largely financed by us all.

Lucy Beck

Lucy Beck works with *Peace Matters*, the magazine of the Peace Pledge Union, which published an earlier version of this review.

## Market Obsessions

**WHEN CORPORATIONS RULE THE WORLD** by David C Korten, Kumarian and Berrett-Koehler, West Hartford, Connecticut and San Francisco/Earthscan, London, 1995, \$29.95/£12.95 (hb) 374pp. ISBN 1-887208-00-03 (US) 1-85383-434-3 (UK)

David Korten's new book is generally persuasive in its analysis of what ails the world today. Less satisfying, however, are its suggestions of what to do about this.

Korten aspires to reach "a broader trade audience" with *When Corporations Rule The World*. This includes "thoughtful business executives" as well as the usual motley crowd of "social activists". Although he has not pulled his punches in his indictment of the corporate world, he is being a little wishful, however, if he really expects corporate tycoons to pick up and read what Archbishop Desmond Tutu calls "a searing indictment of an unjust international economic order".

The book describes the harmful effects of economic globalization and sets forth the underlying causes of the social, economic, environmental and political crises afflicting the late twentieth century world. In a section entitled "A Rogue Financial System", he points out that the global capital marketplace is driven by currency speculation on such a scale that it defies control by the central banks of even the largest industrialized economies. In the "race to the bottom", meanwhile, giant, footloose companies are searching the world for manufacturing sites with the lowest environmental standards and labour costs.

The author excoriates worship of free markets as extremist ideology, likening the practice to "a fundamentalist religious faith". This obsession with markets can be more accurately described as "corporate libertarianism" because it places "the rights and freedoms of corporations ahead of the rights and freedoms of individuals".

So pervasive has this obsession become that it is almost impossible to think of alternatives. It has led to an increasing concentration of economic and political power in a handful of giant corporations (including commercial financial institutions), the largest of which are now bigger than most nation states. Korten argues this thesis convincingly and documents it well.

Korten focuses on the United States, the world's largest economy and home to some of the most environmentally-destructive and socially-predatory corporations. He reveals a history, largely hidden in recent years, of citizen control of corporations in the early decades of US independence, control which has gradually been eroded as corporations managed to acquire more political rights than individuals. (He has missed, however, the real intent of anti-trust and other legislative "reforms" of the early twentieth century — namely, to divert and contain citizen pressure to subject corporate power to genuine democratic control.)

In a forbidding account of the state of today's world, there are occasional rays of sunlight. Citing the work of Gar Alperovitz, a long-time advocate of economic alternatives, Korten maintains that "a major restructuring of the American economy is already under way", with 10,000 worker-owned firms employing as many as 12 million people and 30,000 cooperatives ranging from credit unions to rural utilities. The bad news, though, is that from 1980 to 1994, the 500 largest US corporations more than doubled the size of their assets while they shed almost 30 per cent of their workforce.

The book concludes by outlining a strategy for creating localized economies which empower people and communities within a system of global cooperation. But this projection of a future dominated by highly-localized economies assumes a golden age of capitalism that never was. For better or worse, as Korten himself describes so vividly in the first section of his book, we live in a globalized world.

The central task is to break the backs of giant global corporations, a task which Korten recognizes the importance of but gives only sketchy propositions as to how to achieve. A sustained examination of the vulnerabilities of these corporations and ways of taking advantage of them is sorely needed. Taking power from the hands of the global corporate elite will involve a huge fight, a conflict which Korten glosses over.

Is there another possible future besides one dominated by giant corporations larger than most nation states or one of romanticized local communities? Attaining one necessitates that the productive capabilities of global giants are retained while effective community and worker control is established and real environmental sustainability achieved. Korten offers little help in addressing these admittedly difficult issues.

In a chapter entitled "Good Living", Korten describes his own lifestyle in Manhattan, a bastion of affluence, as a model for "overconsumers" everywhere, noting how much energy he is saving by not owning a car. Landless agricultural labourers in India have no cars either, but still use a fraction of the energy Korten consumes, even with no car, although they have no real choice as to alternatives. How are those who live so much closer to the edge of oblivion than those of us who write and review books about globalization likely to be affected by this ubiquitous phenomenon?

Gail Omvedt, a US sociologist who has lived for many years in India and has long been a close observer and champion of the most exploited and vulnerable segments of that country's rural population, argues that until nation-state sovereignty began to be eroded through the processes of globalization, local elites, backed by state power they largely control, were unchecked in maintaining their feudal dominance of those at the bottom of the heap. She says that, with the advance of globalization, "people everywhere have access to information and ideas — and to many of the lower classes . . . it's a bonus that helps in getting out from under local elite domination". She suggests that there may be ways in which "a market morality is superior to a feudal morality."

Even if one embraces many of the views of anti-globalists like Korten, the perspectives of the hundreds of millions of poor people in India and elsewhere in the world still need to be part of the debate about our collective future. Let us hope that books like *When Corporations Rule The World* will help, precisely because of their limitations, to open up that debate and lead to better answers than any of us anti-globalists have produced so far.

Ward Morehouse

**Ward Morehouse** is Co-Director of the Program on Corporations, Law and Democracy and co-author of *The Bhopal Tragedy and Abuse of Power: The Social Performance of Multinational Corporations*.

## BOOKS DIGEST

- **VOICES OF THE EARTH: *Indigenous Peoples, New Partners and the Right to Self-determination in Practice***, edited by Leo van der Vlist, International Books, Utrecht/Centre for Indigenous Peoples, Amsterdam, 1994, £18.50/\$26.00 336pp. ISBN 90 6224 983 3.

This book is an excellent survey of the main issues confronting indigenous peoples throughout the world today. It presents case studies from Australia to the Amazon illustrating the importance of the right to self-determination, linking political, economic, intellectual, cultural and scientific property rights and the right to self-development.

- **Toxics Watch 1995**, INFORM, 120 Wall St, New York, NY 10005-4001, USA, 1995, \$125 (\$15 non-profit groups, \$8 p&p) (pb), 816pp. ISBN 0-918780-64-0.

This compendium examines various databases to determine what is known and, more importantly, what is not known, about toxins in industrial waste, the environment and commercial products. It also looks at legislative developments in the US and new information on health effects.

- **SILENT TRAVELLERS: *Germs, Genes and the "Immigrant Menace"***, by Alan M. Kraut, The Johns Hopkins University Press, Baltimore and London, 1995, £13.00 (pb), 369pp. ISBN 0-8018-5096-7.

From an outbreak of cholera in the 1830s to the recent association of Haitians with AIDS, the US medical establishment has repeatedly identified immigrant groups as carriers of certain diseases — Irish with cholera, Italians with polio, Jews with tuberculosis. It has blamed epidemics on immigrants' traditions, ethnic habits or genetic heritage, ignoring the country's least sanitary conditions that these impoverished workers had to live in. Concludes the author, "it has always been easier to blame immigrants for epidemics than to attack the infrastructure of disease".

- **GREEN GUERILLAS: *Environmental Conflicts and Initiatives in Latin America and the Caribbean***, edited by Helen Collinson, Latin American Bureau, 1 Amwell St, London EC1R 1UL, London, 1996, £10.99/\$19.00 (pb), 250 pp. ISBN 1-899365-04-4. (SPECIAL OFFER to *Ecologist* readers: £10 inc. p&p UK; £12 overseas)

This collection details not only the severe threats indigenous peoples, forest settlers, fishing communities, peasant farmers, shanty town activists and others face to their land, livelihoods and their survival, but also their increasingly confident and militant responses.

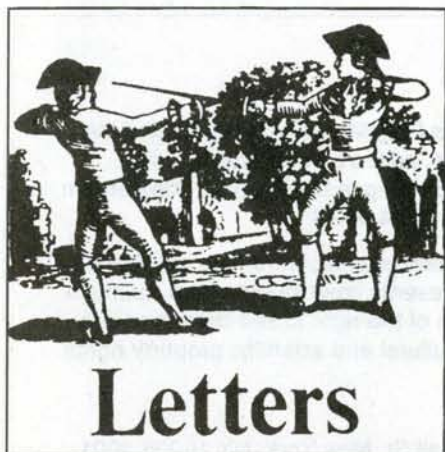
- **SMALL IS POWERFUL: *The Future as if People Really Mattered***, by John Papworth, Adamantine Press, London, 1995, £14.95 (pb) 232pp. ISBN 0-7449-0129-4.

Small may not be beautiful, suggests the author, but big is showing itself increasingly to be mad. Detailing the various ways in which private and public institutions and nation states have become "too big", he concludes that "it is vital for human survival to scale down our monster institutions to a size commensurate with our capacity to exercise effective control over them".

- **POVERTY AND POWER: *Energy and the South African State***, by Anton Eberhard and Clive van Horen, Pluto Press, London, 1995, £11.95/\$18.95 (pb) 228pp. ISBN 0-7453-1062-1.

This two-year study, carried out in the run-up to the 1994 elections in South Africa, aimed to develop policy options for improving social equity by widening the access of the urban and rural poor to energy. Many of the recommendations are now being implemented by the new government.

Books reviewed in *The Ecologist* available from WEC Book Service, c/o The Wadebridge Bookshop, 43 Molesworth St, Wadebridge, Cornwall PL27 7DR, UK.  
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## Letters

### Wal-Mart (Not) Worldwide

I read with awe and interest Kai Mander and Alex Boston's article "Wal-Mart Worldwide" (November/December 1995).

Having heard a rumour that my nearby town of Espanola in New Mexico might be negotiating to bring a Wal-Mart to its residents, mostly Spanish-Chicano and native people, I sent copies of the article to all the county commissioners, the planning department and the mayor.

About two weeks later, the 'phone rang, and I was surprised to find the mayor himself on the other end. He thanked me for the article. He said he had underlined its salient points in yellow marker and was circulating it among all the city councillors.

It turned out that the city had negotiated unsuccessfully with Wal-Mart over two possible locations for a store and was now approaching a third location. The mayor told me he felt that the delay was fortuitous, perhaps destined, so that he could receive the real story from *The Ecologist*.

Then the mayor revealed that he had been elected on a promise to bring Wal-Mart to Espanola and was now going to risk his political standing by beating Wal-Mart out of town!

A toast to you for making an impact.

**Chellis Glendenning**

Box 130  
New Mexico 87522, USA

### Cost Benefit Analysis

The contradictions running through John Adams's thoughts on Cost Benefit Analysis (CBA) (January/February 1996), and its role in decision-making, provide the rationale for its survival, evolution and growing popularity.

In considering those cases where Adams sees "entrenched conflict" between warring parties in some development

proposal, he states "The resolution of these debates depends not on capturing values at a moment in time [CBA], but on changing [peoples'] values." A laudable objective, but in the same paragraph, he writes "the participants [in such cases] were arguing from irreconcilable positions". Only one of these statements can be correct. In virtually all cases, at the end of a process of negotiation, compromise and changing values, we will still need to assess the depth of feeling of those in favour or against some project.

Adams recognizes the alternative: a political decision based on the relative strength and effectiveness of a plethora of pressure groups. But what of the credentials of these groups and how do the non-political public have a voice?

If this is the way forward, as Adams suggests, why does he also provide

examples of the inefficiency of such a system which has seen "development . . . encroaching on nature since before the industrial revolution"?

As Adams correctly identifies, CBA has not been an important part of the decision-making process until relatively recently, and this may be seen as a response to the continuing ineffectiveness of non-economic, purely political processes.

As J Levin and B Nalebuff conclude in their recent assessment of political (voting) methods, "a voting system can't find a consensus when none exists".<sup>1</sup>

**Richard O'Doherty**  
School of Economics  
University of the West of England  
Bristol, UK

1. Levin, J. and Nalebuff, B., "An Introduction to Vote-Counting Schemes", *Journal of Economic Perspectives*, Vol. 9, No. 1, pp.3-26.

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9 November 1996: **National Conference GREEN LEFT CONVERGENCE**. Conway Hall, Red Lion Square, Holborn, London. 10am-5pm. Free creche. For details, contact John Morrissey, 13 Shetland Drive, Nuneaton, Warwicks, CV10 7LA. Tel: 01203 325890; E-mail: jmorrissey@gn.apc.org

18 November 1996: **TOWARDS EARTH SUMMIT II**. The Commonwealth Institute, London. Further information from Carolyn McKenzie, UNED-UK Conference and Seminar Organiser, c/o United Nations Association, 3 Whitehall Court, London SW1A 2EL. Tel: 0171-839 1784; Fax: 017-930 5893; E-mail: una@mcr1.poptel.org.uk

20-25 November 1996: **WORLD CONGRESS OF BIOETHICS**. San Francisco, USA. Contact American Association of Bioethics, Pacific Centre for Health Policy and Ethics, University of Southern California, Los Angeles, CA 90089-0071, USA. Tel: +1(213)740 2541; Fax: +1(213)740 5502.

23-4 November 1996: **CND Annual Conference**. University of London Union, Malet Street, London. 9am-5pm. For further information, contact Tony Myers, CND, 162 Holloway Road, London N7 8DQ. Tel: 0171-700 2393.

23 November 1996: **JOBS, TRANSPORT AND THE ENVIRONMENT**. Merton Civic Centre, London (opposite Morden tube). 1pm-5pm. For further details, contact SERA, 11 Goodwin Street, London, N4 3HQ. Tel: 0171-263 7389.

2-6 December 1996: **CHILDREN'S HEALTH, CHILDREN'S RIGHTS: ACTION FOR THE 21ST CENTURY**, THAILAND. For further information, contact WABA, PO Box 1200, 10850 Penang, Malaysia. Email: secr@waba.po.my

2-6 December 1996: **PROTEST VIGILS** outside the Department of Trade and Industry, London to protest against the sale of arms to **Indonesia**. Further details from Angie Zelter, CAAT, 11 Goodwin Street, Finsbury Park, London N4 3HQ. Tel: 0171-281 0297; Fax: 0171-281 4369; E-mail: caat@gn.apc.org

4-5 December 1996: **COMMUNITY INVOLVEMENT AND ENVIRONMENTAL ACTION CONFERENCE**, Forte Crest Hotel, Bloomsbury, London. Contact Lynne Richardson, Community Development Foundation, Northern Office, Vassalli House, 20 Central Road, Leeds LS1 6DE. Tel: 0113 2460909; Fax: 0113 2467138.

4-8 January 1997: **KNOWLEDGE AND LIVELIHOODS IN THE TWENTY-FIRST CENTURY: a Cross-cultural Discourse from South Asia, NEPAL**. Contact Kalpana Das, Intercultural Institute of Montreal, 4917 Saint Urbain, Montreal, Quebec, CANADA H2T 2W1. Tel: +1 (514) 288 7229; Fax: +1 (514) 844 6800.

8 January 1997: **INTERNATIONAL CONFERENCE ON LAND MANAGEMENT**. Royal Institution of Chartered Surveyors, Parliament Square, London. Further details from Dr Richard K Bullard, School of Surveying, University of East London, Longbridge Road, Dagenham, Essex, RM8 2AS. Tel: 0181-590 7722; Fax: 0181-849 3618; E-mail: Bullard@UEL.AC.UK

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**FRUITS FROM THE FOREST; The First Steps in Developing Community Orchards and Edible Landscapes**. A different approach to environmental improvement. Send cheque/postal order for £8.76 payable to City of Salford to City Technical Services Dept., Swinton Civic Centre, Chorley Road, Swinton, Salford, M27 2BW. Fax: 0161-727 8269.

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## COURSES

**CEMP Training Programme**, Aberdeen, SCOTLAND. November 1996 **Landscape Analysis and Planning for Large Forest Areas**. For further information, contact Professor Brian D Clark, CEMP, AURIS Business Centre, 23 St Machar Drive, Aberdeen, AB2 1RY, SCOTLAND. Tel: 01224-272483; Fax: 01224-487658; E-mail: cemp@abdn.ac.uk

**AGRARIAN STUDIES**, Yale University. Postdoctoral Fellowships from September 1997-May 1998. Broad theme: Hinterlands, Frontiers, Cities and States: Transactions and Identities. Deadline for first stage of applications is 3 January 1997. For more information, contact James C Scott, Program in Agrarian Studies, Yale University, Box 208300, New Haven, Connecticut 06520-8300, USA. Fax: +1 (203) 432 5036.

## MISCELLANEOUS

**Green Events**, a monthly information and publicity calendar, distributed in and around Oxford, Bristol, Devon and London, listing events, services, businesses, organizations and individuals who consider themselves "green". Estimated readership 10,000. If you would like one to happen in your area, contact: Green Events, 10 Church Street, Bicester, OX6 7AZ, UK. Tel: 01869 252487.

**FASTING WALKS** (Groups). For rest, relaxation, weight loss and better health. Only liquids. Throughout the year in UK, Europe, USA. For more information, contact Una Murphy, 1 Stanley Road, London N15 3HB. Tel: 0181-3950 407; 0171-614 7221.

**The Landscape & Art Network** aims to raise the quality and awareness of the urban environment and natural landscape. Organises regular meetings, nationwide events, newsletters. The yearly Membership directory aids networking with other professionals and those with similar interests. Further information from Frank Hodgson, 58a Waldeck road, Chiswick, London W4 3NP.

Mature D-Phil student on very limited funds researching hazardous waste disposal along Mexican/US border Jan-April 1997 would benefit immensely from the loan or gift of a new or second-hand **laptop computer** and/or portable **printer**. Please contact Louise Sargent, Cherry Tree Cottage, Hooe, Nr Battle, East Sussex, TN33 9EP. Tel: 01424 893084.

Saturday 30th November—**INTERNATIONAL NO-SHOP DAY 96**. If you want to get involved, contact One World Centre, 6 Mount Street, Manchester, M2 5NS. Tel: 0161-237 1630.

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