The Ecologist

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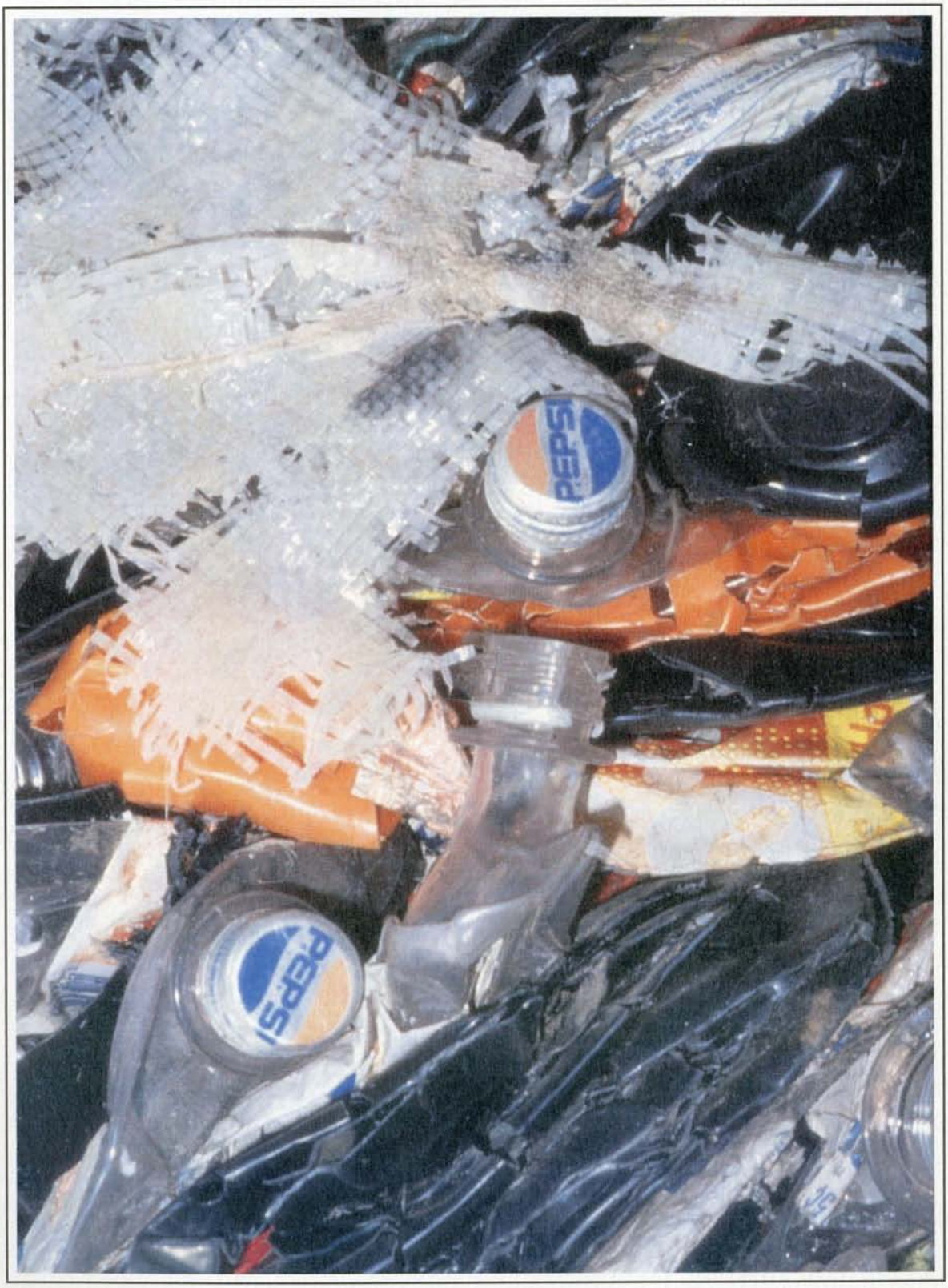
- Clearcutting Canadian Forests
- Logging in Siberia
- India Under the IMF
- Community Initiatives in Mexico



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Recycling

The Hidden Agenda

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See inside back cover

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The
Ecologist

Vol. 22, No. 6, November/December1992

Editorials

Feature Articles

The old-growth forests of British Columbia are being systematically destroyed by the clearcutting techniques of the logging industry. The selective cutting practised by some small-scale initiatives offers a sustainable alternative.

To attract foreign exchange, Siberia's forests are being opened up to multinational logging ventures, with dire consequences for the environment and for the livelihoods of indigenous people.

The conditions of structural adjustment under which India has contracted loans with the IMF and the World Bank are undermining the democratic process and imposing an intolerable burden upon poor people.

Industry promotes recycling rather than reuse for two main reasons: recycling is a strategy better suited to centralized, long-distance markets; and it can be used as an environmental justification for short-life products.

Three examples of community initiatives in Mexico illustrate the growing assertiveness with which Indian people are confronting the complex social and ecological problems that "development" has caused them.

Report

Cover photo: Plastic waste exported from the US to Indonesia for recycling. (Ann Leonard/Greenpeace).

The Ecologist is printed on recycled paper whitened with hydrogen peroxide.

The Greening of Global Reach

The green movement grew out of *local* awareness and *local* efforts to resist environmental degradation. Peasant women voiced concern over Himalayan deforestation; housewives at Love Canal protested against the health effects of dumped toxic waste. Such resistance has not only revealed the social and environmental costs of maldevelopment, but has also focused attention on the pre-eminent role in environmental destruction played by such globally-powerful institutions as multinational corporations and multilateral development banks. But as the resistance and power of the environmental movement has grown, so has the language of environmental dissent been coopted, redefined and transformed. Within the dominant discourse on development, the "local" has been written out of environmental concerns: now all environmental problems are portrayed as *global* problems requiring *global* solutions.

As environmental degradation now affects virtually every corner of the globe, stressing the global nature of environmental problems may seem a useful step towards tackling them. But the way "global environmental problems" are now being projected and analysed by institutions such as the World Bank and others is deliberately misleading. This supposed concern with "global" issues does not arise out of a concern for all humanity or for all life on earth: instead it refelects a concern to protect the interests of particular local and parochial interests which have become globalized through the scope of their reach. The "global" is the political space which enables such dominant local interests to free themselves from local, national and international restraints.

By projecting environmental degradation as a global problem requiring global solutions, the globally-powerful have been able to disguise the role and responsibility of *globalizing* local interests in the destruction of the environment on which the local people depend. The blame is shifted onto those communities which have no global reach.

Consider ozone depletion. CFCs are a primary cause of ozone depletion and are manufactured by a handful of transnationals like Du Pont, which have locally identifiable manufacturing plants. By casting ozone depletion as a "global environmental problem", the local aspect of CFC production is totally eclipsed. It is conveniently forgotten that CFCs are produced by specific companies in specific plants and that the first (and most urgent) task in "solving" the ozone crisis is to halt production of CFCs at those plants: instead, the problem is shifted to the future use of refrigerators and air-conditioners by millions in India and China. Through a shift from the present to the future, the North gains new political space in which to control the South. The "global" thus creates the moral base for green imperialism.

Similarly, with regard to biodiversity, "globalization" ensures an erosion of local rights and shifts control over, and access to, biological resources from the gene-rich South to the gene-poor North. The "global environment" thus emerges as a principal weapon for the North to gain worldwide access to natural resources and raw materials on the one hand, and, on the other, to force a worldwide sharing of the environmental costs it has generated whilst it retains a monopoly on the benefits reaped from the destruction .

The old order does not change through environmental discussions. It gets more entrenched. Through its global reach, the North exists in the South. The South, however, exists only within itself since it has no global reach. The South can only exist "locally", while only the North exists "globally".

Having screened out the "globalized local" as a cause of local environmental destruction worldwide, the World Bank and other dominant institutions transform the many facets of environmental destruction — rising poverty, the growth of population, the polarization and conflict between genders and ethnic communities — from *consequences* to *causes*. Poverty and overpopulation become causes of environmental degradation rather than consequences of the extraction and destruction of resources which force the poor to generate economic security through large families. Diversity, rather than the collapse of social cohesion and economic stability, is identified as a cause for ethnic conflict.

With false causality come false conclusions. Population growth becomes a cause of the explosive growth in the use of toxic chemicals. A problem caused by an irresponsible chemical industry is converted into a problem caused by fertility rates in the poor countries of the South.

Global is Not Planetary

The now familiar image of "Planet Earth" in the discourse on global ecology hides the fact that the global does not symbolize planetary consciousness. In fact, the "global" excludes the planet and its peoples and includes global institutions. The rapacious and greedy invoke the planet to destroy and kill cultures which do use planetary consciousness to guide their daily actions. The ordinary Indian woman who worships the *tulsi* plant worships the cosmic as symbolized in the plant. The peasant who treats seeds as sacred makes a connection between the seed and the universe. In most sustainable traditional cultures, the large and the small have been linked. The large exists in the small, and hence every act has not just local, or even global, but cosmic implications. Treading gently on the earth becomes the natural way to be. Those who have this sense of planetary consciousness make demands on the self, not on others.

By contrast, those with global reach have no such reciprocal relationship with the planet or with people. Industrialized countries can demand a forest convention which imposes obligations on the Third World to plant trees. The Third World cannot demand of the industrialized countries a reduction in the use of fossil fuels and energy. In the way the "global" has been structured, the North (as the globalized local) has all the rights and no responsibilities, while the South has no rights and all responsibility. "Global ecology" at this level becomes a moralization of immorality. It is empty of any ethics for planetary living. It is based not on concepts of universal solidarity but on universal bullying.

Democratizing "Global Institutions"

The roots of the ecological crisis lie in the alienation of the right of local communities to have a say in environmental decisions. The reversal of ecological decline depends upon strengthening local rights. Every local community equipped with rights and obligations constitutes a new global or planetary order for environmental care. However, the trend in global discussions and negotiations is to take rights further away, towards higher, non-local centralization in agencies such as the World Bank.

Democratizing the "global" is the next step. The global is not the democratic distillation of all local and national concerns worldwide. It is the imposition on a world scale of a narrow group

of interests from a handful of nations. Democratizing international interests is essential if democracy is to exist at local and national levels. Multilateralism in a democratic system must mean a lateral expansion of decision-making based on the protection of local community rights where they exist, and the restitution of rights where they have been eroded.

The global must bend to the local, since the local exists with nature, while the "global" exists only in offices of the World Bank and IMF and the headquarters of multinational corporations. The local is everywhere. The ecological space of global ecology is the integration of all locals. The "global" in "global" reach is a political space, not an ecological one.

Vandana Shiva

Lies, Fantasy and Cynicism

In our last issue, in support of tens of thousands of protesting Indian villagers, we published an open letter to Lewis T. Preston, President of the World Bank, demanding that the Bank cease funding the Sardar Sarovar Projects. This dam and canal complex, we wrote, would displace over 100,000 people, ruin the lives of thousands more, and destroy land, forests and fisheries in one of the greatest human and environmental disasters ever supported by an international agency (see "Withdraw from Sardar Sarovar, Now", The Ecologist, Sept/Oct. 1992). Ours was just one of thousands of protests and actions against the dam launched by groups around the world.

Nonetheless, despite this international outcry, the World Bank's Board voted in October to continue funding the project.

Since June, when a damning 363-page report on Sardar Sarovar by an independent team headed by Bradford Morse was published, the Bank's staff has used every trick available to it to shield the project against an unrelenting stream of outside criticism. Morse's verdict was blunt. Neither the Bank nor the Indian authorities had nearly enough data to assess Sardar Sarovar. They had failed to consult local people. And they were facing such heavy resistance from villagers that progress in implementation and even research had become "impossible except as a result of unacceptable means." It was therefore time for construction to halt while the Bank took a "step back" to reconsider what it had got into.

Unable to ignore the Morse Report, Bank management deliberately misinterpreted it in an attempt to save careers, contracts and the Bank's lucrative relations with the government of India. A mendacious response to the Report was presented which pretended to take into account its findings but which promoted precisely the incremental "build now, fix the problems later" approach the Report had condemned. Ignoring the seven-year history of non-compliance with Bank conditions and directives on the part of the Indian authorities, Bank officials whipped up yet another set of environmental and social "benchmarks" for the project to meet by March 1993 which would enable the Bank to say that the project was being "reformed" — although according to sources within the Bank, these benchmarks were never even sent to the relevant state governments in India, much less agreed to by them.

Shortly before the Bank's Executive Board — an overseeing body of representatives of government shareholders — was set to vote on the project, these tactics began to backfire. In a letter of reasoned rage, Bradford Morse and his deputy Thomas Berger threw aside habits of diplomacy ingrained during long and distinguished careers in legislatures, on the bench, and in the UN, and tore into the Bank's deliberate misconstrual of their Report. The Bank's response, they said, "not only ignores our conclusion on the failure of the incremental strategy, but even seeks to enlist our report in furthering the strategy", thereby putting the "well being of tens of thousands of people . . . at risk." "Misleading as to almost every component of the environmental preparations" for Sardar Sarovar, the Bank's response had made no mention of how the "project continues to disregard the environmental requirements of both India and the Bank." Instead of replying to the Morse Report's analysis of environmental data, Bank staff had merely asserted that an Environmental Work Plan — which is already six years overdue and whose elements the Morse team found to be "seriously flawed" or "only marginally relevant" — would become available in 1993. Averting its gaze from the fact that land compensation for Madhya Pradesh oustees was inadequate, the Bank had also failed to acknowledge that dealing with the problems of thousands of people slated to lose land to the Sardar Sarovar main canal is "not a question of doing a quick survey . . . and proposing that the new survey will be used to devise a sound policy". At a meeting with the Executive Directors, the Morse team set the seal on their indictment of the Bank's attempt to defend Sardar Sarovar by stating explicitly what everyone knew already: that the benchmarks hurriedly cooked up by Bank staff to provide a rationale for continued support for the project could never be met.

Funding the Impossible

Adding to the Bank staff's discomfiture was the leak of a report by the Bank's Portfolio Management Task Force headed by W. A. Wapenhans. While Morse had detailed the failures of a single set of Bank projects, Wapenhans showed that such failures are common, now accounting for more than one third of Bank-supported projects, and that this ratio is increasing, due to the fact that the pressure to lend takes precedence over all other considerations. In the subculture which prevails at the Bank, Wapenhans said, staff appraisals of projects tend to be perceived "as marketing devices for securing loan approval (and achieving personal recognition)"; no one bothers to take governments' implementation capacity into account when calculating economic rate of return; and "little is done to ascertain the actual flow of benefits or to evaluate the sustainability of projects during their operational phase". In this atmosphere, it becomes difficult to admit that certain projects are simply unimplementable. "Poor policy environments", "institutional constraints", lack of "sustained local commitment" — all of these are often simply ignored in the rush to push projects through and keep them going.

Small wonder, then, that Bank loan agreements, instead of improving project performance, "do not induce the behavior expected and their credibility as binding documents has suffered". When borrowers disregard Bank conditions, as they do with financial covenants 78 per cent of the time, the typical response of Bank management is to look the other way or waive the relevant requirement. Thus failed projects drag on for years without their problems being resolved. Echoing Morse's indictment of the a priori assumption that all problems with a project can be fixed without having to step back from it, Wapenhans warned that "the Bank's limited use of remedies is sending the wrong signals to both borrowers and staff", adding ominously that the

costs of the Bank's increasing lack of realism was falling more on borrowers than on the Bank.

With the warnings of Morse and Wapenhans ringing in their ears, and under an intense international spotlight, the Bank's Executive Directors could hardly proceed to give their usual rubber stamp to Sardar Sarovar. When the Board met on October 23, the clamour for a suspension of loans for the project had reached an unprecedented level. Several Directors pointed out that Bank management had lied about project failures and Indian support for the environmental action plan. Frank Potter, representing Canada and several Caribbean countries, rounded on Bank staff for not providing information on the financial implications of stepping back from Sardar Sarovar. Yasuyuki Kawahara of Japan stated that his government, having already withdrawn bilateral aid for the project, could not consistently turn around and vote for World Bank support. Other votes to suspend Bank funding for Sardar Sarovar came from Jorunn Maehlum, representing the Nordic countries, and Patrick Coady of the US, who pointed out that a failure to suspend would signal that:

> "no matter how egregious the situation, no matter how flawed the project, no matter how many policies have been violated, and no matter how clear the remedies prescribed, the Bank will go forward on its own terms."

Several Directors from the South, although yielding to heavy pressure to vote in solidarity with the Indian government, were also concerned at the loss of Bank credibility over the project.

In the end, however, the opposition of six Directors was not enough. In the face of the most painstakingly comprehensive compilation of evidence of Bank lying, vested interest, incompetence, sloppy thinking and shoddy execution ever assembled, the Board voted 55 per cent to approve continued funding for the inexpressible misery of a project which will never work and which will take away lives, livelihoods, jobs, water, forests and land alike — the keystone of what Indian activists call "the greatest planned environmental disaster in history."

The failure of a handful of Directors to draw the logical conclusion from their own criticisms of the project made all the difference. Eveline Herfkens of The Netherlands, who last year turned a deaf ear to the pleas of thousands of Thai villagers and voted for more money for the unnecessary and costly Pak Mun dam, revealed once again that she attaches greater weight to the status and comfort of a handful of top government élites than to the welfare of the tens of thousands of people directly affected by Bank projects. Bank management had made mistakes, she said, but the new government of India should not be punished for them. Despite similar demurrals, Jean-Pierre Landau of France and Rosario Bonavoglia of Italy continued their countries' tradition of approving anything set before them by Bank staff.

No less shameful was the performance of the UK's David Peretz. Knowing he was under scrutiny from independent critics in India and Britain, Peretz made a hopeless attempt to justify at length an unjustifiable decision, thereby sinking at every step deeper into a mire of self-contradiction. On the one hand, he admitted that the Morse team, which had been convened because of the Board's distrust of Bank staff, had provided a clear indictment of the Bank's and the Indian government's performance on Sardar Sarovar. On the other, he said that the Bank should never turn to outsiders like Morse again for a review of a project and should rely instead only on Bank management. While agreeing with the Morse Report's conclusion that the Bank's "build now, do environmental impact studies later" approach was wrong, he acquiesced in the Bank's refusal to call for a halt to construction. Although he referred worriedly to the findings of Wapenhans, Peretz also insisted that Sardar Sarovar would turn out better if the Bank stayed involved — a conclusion which flies in the face of the Wapenhans finding that, having been flouted with impunity for so many years, Bank guidelines have lost any force. Finally, contradicting Wapenhans's point that it is a "conflict of interest" which "may dilute borrower accountability" for the Bank to make "substantive managerial and/or professional inputs to implementation", Peretz asked for and received a commitment from the Bank to provide technical assistance to enable the Indians to meet the new "benchmarks".

Those who believe that rationality, realism and social concern have a place in the politics of international development institutions may despair at how willingly Executive Directors seemed to lap up the concoction of fantasy, deceit and cynicism served up by Bank staff. What more evidence, after all, did the Executive Board need that Bank involvement must be halted? No more devastating list of violations of the Bank's own rules are likely ever to be compiled, nor any more wrenching annals of abuses committed in the name of "development".

For those already looking ahead to the next battles in the politics of development, however, the Board's decision at least has the advantage of discouraging illusions. The governments of the UK, France, Italy, The Netherlands and the rest, in their decision to stay behind Sardar Sarovar, have in effect confessed that the rhetoric they use to justify their involvement in the Bank's version of "Third World development" amounts to no more than a cover for profiteering, porkbarrel, geopolitics, careerism and bureaucratic survival. Opponents of Sardar Sarovar and the hundreds of other bundles of death and destruction the World Bank has helped bring into being can now concentrate their minds more clearly on what matters: cutting off the funds for this monstrous colonial institution and closing it down.

The Editors

WHAT YOU CAN DO

In the new atmosphere which the Executive Directors' decision has created, the following steps can help in the continuing battle over Sardar Sarovar.

1. ***Drive home the message of disgrace.*** Write to Executive Directors who voted to continue funding for Sardar Sarovar, and their superiors, expressing your disgust at their and their governments' actions: **David Peretz** of the UK and his colleagues **Peter Freeman**, **Michael Powers**, and **Baroness Chalker** at ODA, **Douglas Hurd** at the Foreign Office, **Norman Lamont** at the Treasury, and **Robin Leigh-Pemberton** at the Bank of England; **Eveline Herfkens** and her superiors in the Dutch Ministry of Finance; **Jean-Pierre Landau** and his superiors at the Ministries of Environment and Development in France; **Rosario Bonavoglio** and his superiors in the Italian government; and **Walter Rill** and his superiors in the Austrian government. At the same time, express your support for those who voted for a suspension of funding: **Jorunn Maehlum** of Norway; **Patrick Coady** of the US; **John Cosgrove** of Australia; **Yasuyuki Kawahara** of Japan; **Fritz Fischer** of Germany; and **Frank Potter** of Canada. The Bank's address is 1818 H Street NW, Washington, DC 20433, USA.

2. ***Take advantage of the fact that the real basis of World Bank politics has been exposed widely enough for a campaign to cut off funding for the institution to take hold.*** Referring to Sardar Sarovar, write to parliamentarians to urge investigations of the World Bank and its soft-loan window, the International Development Association (IDA), which, as it is currently being replenished by governments, is vulnerable. Call attention to the outrage of the Bank's current attempt to raise an additional $5 billion for IDA on the ground that additional "environmental" lending is needed.

3. ***Take advantage of the public exposure of Bank lying and incompetence which the Sardar Sarovar story and the Wapenhans Report have provided.*** Write to Executive Directors demanding that an independent team, and not the usual prevaricating Bank "mission", be entrusted with the task of evaluating compliance with the Bank's new Sardar Sarovar "benchmarks" in March 1993. Demand also that the Bank call for a halt in dam construction and irreversible project work during the period until March; that further documentation on technical and financial issues connected with Sardar Sarovar be obtained before then; and that preparation of related projects such as the Narmada Basin Development Loan and Sardar Sarovar Canals II be halted indefinitely.

Aubrey Diem

The aftermath of clearcutting and slashburning, north of Avola, British Columbia.

Clearcutting British Columbia

by

Aubrey Diem

Old growth forests are disappearing rapidly in British Columbia because large timber companies almost invariably use clearcutting methods, rather than logging selectively. The immediate consequences have been a rise in the number of floods and forest fires, and an increase in erosion, while in the long term the survival of the forests themselves has been put in jeopardy. However, there are many initiatives by local communities and small-scale foresters to revive selective logging methods that preserve the forest ecosystem intact.

The Canadian west coast province of British Columbia (BC), more than half of which is afforested, is being ravaged by logging. Almost 95 percent of the province is open to logging. Just 5.6 per cent is protected parkland, and some of this has been logged or inundated by reservoirs.[1] Four multinational forestry companies, which have received licences from the government, control most of the available forested lands.

Nearly 90 per cent of all logging in BC involves clearcutting. Traditionally, forests were logged selectively, singling out the most suitable trees for felling, and leaving younger or healthier specimens to mature. This form of management is too labour-intensive for modern industry, which prefers to raze a stand of trees to the ground, and replant a new crop of trees of a single species and the same age. Over 200,000 hectares of forest are clearcut every year, mostly, but not all from Crown lands.[2] East of the town of Prince George, there is one clearcut area that is over 42 kilometres long by 40 kilometres wide. A large variety of coniferous trees, up to 1,500 years old, are being indiscriminately clearcut for pulp and for lumber, or are sold cheaply as whole logs to Japan and Western Europe. In the coastal rainforests, these species include Western and Mountain Hemlock, Western, Red and Yellow Cedar, Amobilious, Sub-Alpine and Douglas Fir, and Lodgepole Pine. In the drier interior, White and Englemann Spruce, Ponderosa and White Pine, and Grand Fir are being felled.[3]

In a few decades, this form of forest exploitation has radically altered the physical geography of British Columbia and caused serious economic and environmental problems. Yet clearcutting continues at an increasing rate; between 1960 and 1988, the annual rate of logging in BC almost tripled to 88 million cubic metres. Critics charge that not only is

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cutting outstripping new growth but that much of the forest land has been mismanaged. They point to Fletcher Challenge, the New Zealand-based company that controls the largest slice of BC's forests, which closed a sawmill in Victoria in 1989, citing a shortage of suitable logs, at a time when the industry had been posting record profits. Local environmentalist Vicky Husband claims that loggers have taken more trees from the area in the last 14 years than in the preceding 80 years.[4] According to a Sierra Club study, more than half the ancient temperate rainforest that existed on Vancouver Island in 1954 has been liquidated and at present rates all will be gone by 2022.[5]

Alan H. Graham

Erosion and Fires

Little thought has been given by industry or the provincial government to the environmental impact of clearcutting. The landscape throughout British Columbia is scarred by soil erosion, avalanche tracks, landslides and burned-out areas, all directly related either to the removal of all forest cover on steep slopes in mountainous areas or to the building of wide logging roads. One particularly bad section is above the Trans-Canada highway in the Fraser Canyon where massive erosion screes resulting from the construction of logging roads are visible. Erosion begins above the roads where excavations have cut deep into the mountainside; the eroded material slides over the roads to the valley floor, wiping out large tracts of forest and rendering the mountainside unfit for any use. There is a great risk that major slides near the erosion zones will block the railroads and the Trans-Canada highway.

The Slocan Valley provides a striking example of the effects of clearcutting on steep slopes. Situated in the mountains of the Kootenay in eastern BC, the valley has had a long tradition of selective logging; but since the advent of clearcutting, there have been avalanches, rock slides, and sections of the forest washed away because the slopes have been denuded of trees. Along the edge of clearcut areas are fallen trees that could not withstand the increased wind pressure once the forest had been clearcut. Everywhere there is evidence of wasted timber and soil erosion, some caused by the construction of the logging roads that climb the mountainside. Clearcutting took place in the summer of 1987, on the east side of Slocan Lake in a zone of known instability high on the mountainside. The following winter, avalanches occurred that originated on the clearcut slopes. In spring, the valley's only highway was blocked by a slide of mud, earth and rock. To prevent further highway blockage from slides, a large diversion dyke has been built to channel debris to the side of the road. Whether this will be effective remains to be seen, as the newly formed ravine will funnel tons of rock and soil down the mountainside after heavy rains or when the snowpack melts. In the spring of 1990, following several days of heavy rain, more slides, originating from clearcuts in other locations above the lake, again smashed down the mountainside, blocking the highway.

Across the valley in another area of clearcutting, in the autumn of 1987, fires which had been lit to burn the slash from the clearcut areas got out of control. Large stands of 200 and 300 year old cedars were destroyed right to the top of the mountain. Today, all that remains of the former forest is a barren rockfall that has not been replanted. The questions remain: why were the trees on the rockfall cut in the first place? And once cut, why was the slash burned on a barren area? Reforestation on such slopes would be difficult, and the trees would grow very slowly, if at all. Near the area of the fire, erosion that in one year has climbed 50 meters above a logging road, continues to eat into the mountainside. Some metres below, a landslide, originating from a plugged culvert on the same road, has crashed 150 to 200 metres down the mountainside, wiping out the forest. The clearcutting and forest fire has exposed a formerly intact forest to the non-stop ravages of severe erosion.

Residents of the Slocan Valley, besides witnessing the ruin of their hillsides, have had to endure considerable air pollution from the smoke of the fires. Eventually they confronted the district forestry officer at his Castlegar office, reminding him that all of the village councils had voted against clearcutting and that civil disobedience would be necessary if the Ministry of Forests and Lands in Victoria continued to ignore the collective decision of the valley's inhabitants. In the late summer of 1991, 83 inhabitants of the valley, were jailed for blocking a logging road that entered the Hasty Creek watershed, an area where 20 households, a tofu factory and an independent hydroelectric producer depended on a supply of clean water that might have been threatened by clearcutting. As a result of their resistance, a newly formed governmental body, the Commission on Resources and Environment, has recommended that for the next few years the Hasty Creek watershed should not be clearcut; however this resolution is not binding.

Flooding

Another effect of clearcutting is flooding. Whereas one hectare of soil covered by coniferous forest will absorb more than 1.1 million litres of rain in an hour, soil exposed by clearcutting absorbs as little as 62,500 litres.[6] The absorbed water is slowly released to recharge springs and aquifers, but the surplus runs off down the mountain scouring out gulleys and eroding the soil.

The sparsely peopled mountains north of Terrace in the watershed of the Cedar River and Kitsumkalum lake are subject to heavy rains and deep snows. In the

autumn of 1978, the rains were exceptionally heavy and a rise in temperature caused a lot of snow to melt; because so much of the protective forest had been clearcut, excess water could not be absorbed. A major flood resulted that changed the course of the Cedar River, destroyed spawning beds, eroded large tracts of the mountainside and washed away numerous sections of the valley bottom. The deposition of the eroded earth and dead trees is still visible in a large extension to the delta that enters Kitsumkalum Lake on its north shore. Compared to the slow process of delta building that normally evolves in areas similar to the Cedar Valley, this was cataclysmic — a vivid example of what lies in store for British Columbia as more of the mountain forests are clearcut. In the autumn of 1990, serious floods ravaged the Fraser Valley and landslides blocked the coastal highway to Whistler Village. In the summer of 1991, floods inundated Squamish north of Vancouver and again the coastal highway was blocked.

Destroying the Ecosystem

Besides the immediate problems of fire and flood, clearcutting has more serious long-term effects. It involves nothing less than the destruction of an entire ecosystem. After clearcutting, all that remains of a complex forest system that has evolved since the last ice age is a barren wasteland of stumps and slash; at best it is replaced by a plantation of young trees of uniform age and species.

Old-growth coniferous forests differ greatly from young-growth forests and plantations in species composition, structure and function. There are four main structural components: large live trees, large snags (standing dead trees), large fallen trees on land, and large fallen trees in streams. The dead woody mass, that takes hundreds of years to decompose, provides nutrient matter and a medium for micro-organisms essential to new growth. The living trees provide shelter for saplings and a habitat for birds, rodents and larger animals such as the grizzly bear, elk and cougar. These animals play an important role in maintaining the ecological balance: the northern flying squirrel, for example, by eating, digesting and excreting fungi, redistributes fungal organisms, yeasts and nitrogen-fixing bacteria back into the trees through their root systems.[7] Selective logging, when practised properly, attempts to maintain this complex web of symbiotic relationships in a healthy stand of forest.

Modern practitioners of "intensive timber management", by contrast, aim to replace the forest with a monoculture plantation. Prevailing economic models say that this is the way to grow trees and the industry claims that it is sustainable. For T.M. Apsey, President of the Council of Forest Industries of BC (COFI), it is a form of sound agriculture:

Aubrey Diem

Nothing is growing on this area of replanted clearcut, north of Rosewood, BC. This site is typical of hundreds throughout the province.

> "If the forest is logged, reforested and tended — what we in the industry call intensive forest management — the eventual result is a cycle of planting, tending, harvesting, and replanting that can go on forever — without a reduction in log harvest — forever. There is another term for this latter condition: it's farming. So, when some of the industry's critics claim that we are cutting down too many trees to sustain the resource, the industry and the economy, I take it to mean that they are criticizing our dedication to farming the forests. And they're wrong about that."[8]

Superficially reassuring though this analogy may be, it in fact raises further questions about the sustainability of intensive management. Since prehistoric times, farmers have known that it is unwise to plant the same crop year after year on the same ground; and today farmers are becoming increasingly concerned that measures adopted to maintain continual monocropping, such as the use of fertilizers, herbicides and pesticides, are responsible for loss of soil fertility and pollution of groundwater. "Three crops of corn take only three years to harvest," observes Chris Maser. "Three 80-year rotations of timber, at the same volume of woodfibre per acre, take 240 years to produce. If three crops of corn are not considered to be a sustainable crop because the yield drops and the soil is finally exhausted, why are three crops of trees considered to be sustainable forestry? The only difference is the length of time it takes to grow three crops — three years instead of 240 years".[9]

The difference is nonetheless crucial. The declining yields or deterioration of soil quality that an observant farmer would notice over a 50-year working life are less likely to be noticed by the forester. If something malfunctions in the growth of new forest plantations, neither the forester nor the public may notice until it is too late; all the plantation trees of the same age can be lost. Already there are warnings signs in reports from Europe and China that show a marked reduction of growth in third generation plantation forests.[10]

Bad Husbandry

Intensive foresters work in ignorance. They have little understanding of how old-growth forest evolves and sustains itself, because they chop it down. And they will never know whether their monocultural plantations are sustainable, since they will probably not live to see the first harvest. Indeed, because they have only a short-term stake in a long-term operation, they are unlikely even to care. Such a combination of ignorance and

lack of concern can only lead to bad husbandry. The forestry industry is not just "farming"; it is bad farming.

The giant timber firm, MacMillan Bloedel, claims that the forests of BC are being replanted as fast as they are being cut.[11] This statement is simply not correct: there is an enormous backlog of land waiting to be reforested, nearly 850,000 hectares in 1989 according to the then provincial Forest Minister, Dave Parker.[12] High altitude forests on thin soil bases and with a short growing season that have been clearcut will most likely never be reforested, both because of micro-climatic changes that preclude the growth of new trees and because returns from investment will be higher in faster-growing plantations at lower elevations. Although obliged to replant, and subsidized by provincial and federal funds to do so, reforestation in many cases has not been successful.

The practice of "taking the best and leaving the rest," is common in the forestry industry.[13] MacMillan Bloedel has been accused by *The Globe and Mail* of Toronto, on the evidence of the company's own reports, of wasting almost one-quarter of the Crown timber it cut on the mainland, Vancouver Island and the Queen Charlotte Islands in 1986. Much of the waste was considered by the BC government to be unavoidable; however, a substantial amount consisted of old growth trees or perfectly good timber that could have been used for pulp or lumber. Other companies accused of wasting wood included Crown Forest Industries Ltd. and Western Forest Products Ltd.

Even when replanting of clearcut zones does take place, it has been at best only partially successful and certainly does not result in a reconstituted forest. First, because labourers are paid by piecework, they are careless, and will, for example plant seedlings that arrive from the nursery already dead. Other trees die soon after planting because of a lack of moisture due to micro-climatic changes. Compared to the cool of the forest, clearcuts which expose the rock and earth can reach temperatures of well over 50 degrees Celsius. In addition, many slopes are so steep that soil has been eroded away by the time replanting takes place. According to the Western Canada Wilderness Committee, the failure rate of the 200 million seedlings planted in 1988 is as high as 40 per cent. Some areas of the province, such as those near Ucluelet on Vancouver Island, have been replanted three or four times with little or no effect. One side of the steep valley above Lion's Bay on the coastal highway 20 minutes north of Vancouver was clearcut over 15 years ago and is visible from a satellite image taken from 750 kilometres above Vancouver. All that remains today is an eroding scrub-like slope, scarred by forest roads, that is reminiscent of a Mediterranean mountain landscape.

Collusion between Industry and Government

Plantation forests have one main function: to produce wood fibre for the forest industry. This generates a short-term profit for the companies involved, and since much of the timber is exported, provides a welcome contribution towards Canada's balance of payments. With the exception of the years 1972-1975 when the New Democratic Party was in power, Social Credit governments have given unconditional support to the forest industry.

There is no question that the forest industry, forestry schools and the government work as one. Industry donates money to the government and helps fund research projects at the University of British Columbia School of Forestry. T.M. Apsey, President of the Council of Forest Industries of BC (COFI), a trade association whose members and affiliates produce over 90 per cent of the total product value of the forest industry in BC, is a former Deputy Minister of Forests and Lands who helped write the Forest Act of 1979. As Jeremy Wilson states:

> "Operating with a yearly budget of about $10 million, COFI provides its members with services in a variety of areas including trade, promotion, product research, statistics gathering, and government relations. Its Government and Public Affairs division includes lobbyists responsible for both the Ottawa and the Victoria scenes. It shares a Victoria office suite with MacMillan Bloedel, whose Victoria lobby operation was estimated in 1987 to cost about $150,000 per year. Officials from other major companies make regular calls in Victoria. The industry enjoys good access to all levels of the Ministry of Forestry power structure. Perhaps the most telling way of making this point is to focus on the career moves of the man who heads COFI, Mike Apsey. Over the past decade he has engaged in a classic bit of élite-hopping. After a stint in the government-appointed advisory committee that translated the recommendations of the Pearse Royal Commission into the new Forest Act of 1978, Apsey left his position as a COFI vice-president to become Deputy Minister of Forests in mid-1978. After six years in that position, he returned to COFI, assuming the presidency in mid-1984. There is also considerable lower level personnel interchange between companies and the Ministry of Forestry. And close ties between government and industry foresters are fostered by common values and educational experiences, along with membership in the foresters' organization, the Association of BC Professional Foresters (ABCPF)."[20]

The logging establishment is keen to forestall any criticism of its activities. Whenever an article or a letter to the editor appears in the press or magazines attacking industry policy, an industry spokesperson immediately replies, extolling the benefits of policies such as clearcutting.[21] Advertisements paid for by the industry in the few national magazines covering the environment effectively muzzle them from presenting the truth about the terrible irreversible destruction that has occurred in British Columbia.

Nevertheless, the movement to save BC's remaining old-growth forests is growing. The booming tourist industry, which between 1964 and 1984 accounted for 80 per cent of all new jobs, has realized that the ugliness of clearcutting will deter visitors. And groups as disparate as the Trucklogger Association, the woodworkers' union, various churches, Indian communities whose land claims have never been settled, Greenpeace, the Western Canada Wilderness Committee, the Sierra Club of Western Canada and the Valhalla Society have all demanded a public inquiry or Royal Commission concerning the management of BC's forest.[22] To date neither has been set in motion.

Even if seedlings do take hold, bush or faster growing but less valuable trees such as cottonwood and alder retard their growth. Foresters would like to control the undesirable species with herbicides and use fertilizers to boost the rate of growth of the planted trees. However, this would be a serious threat to local drinking water supplies and would pollute the streams, rivers, lakes and ground water, affecting the spawning grounds of fish, and ultimately contributing to the pollution from pulp and paper plants that has already rendered fish from the major rivers and large areas of coastal BC unfit for human consumption.

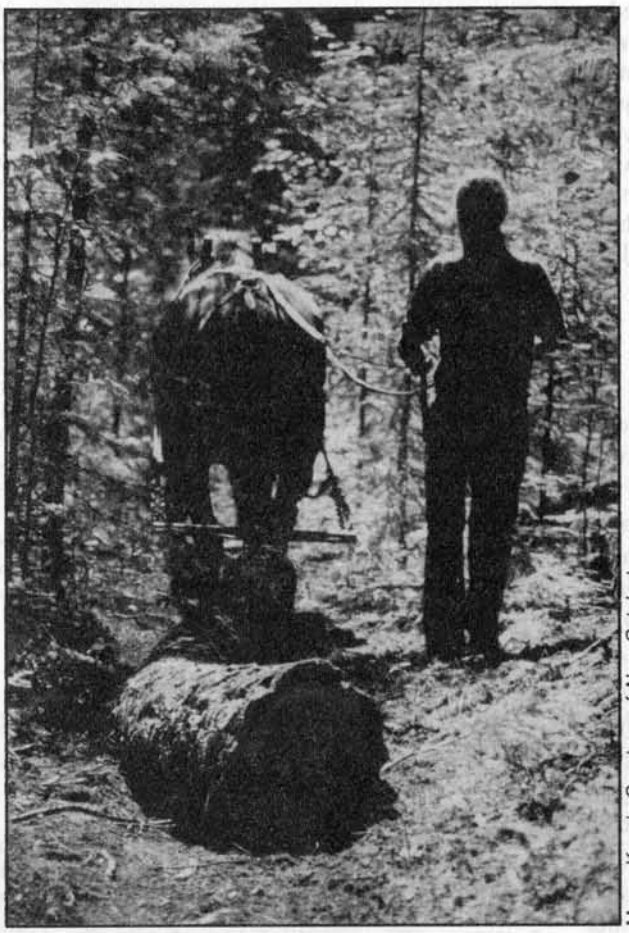
The net result of all these practices is that more timber is being extracted from BC forests than is being replaced. The BC Department of Forestry claims that in 1988 the forests grew by 74 million cubic metres, while the cut during the same year was 88 million cubic metres, if not more.[14] Deficit farming such as this cannot be sustained.

Alternatives to Clearcutting

MacMillan Bloedel, in its 1988 annual review, claims that clearcutting is the generally accepted method of logging conifers worldwide. Again, this is not the case. France, Italy, Austria and Germany rarely clearcut in their Alpine regions, and the Japanese do not clearcut at all.

Switzerland has a federal law that prohibits clearcutting because of the obvious erosion and avalanche dangers.[15] The Val d'Anniviers in the canton of Valais, for example, has had a forest industry for centuries. The forest, composed of larch, spruce, and pine up to two and three hundred years old, reproduces itself naturally; it maintains avalanche protection, is used for summer and winter recreation, shelters wildlife, grows mushrooms that are picked by the locals, and supports the valley's economy. Annual timber cut is used for the manufacture of chalets, kitchens, and furniture.

The BC industry also justifies clearcutting by claiming that it provides employment — 86,000 people worked in logging in the province in 1987. Yet the techniques used are dependent on heavy machinery which is designed to drive down labour expenses. In the past ten years, 20,000 jobs were lost in logging and milling because of improved technology. Selective logging operations are more labour intensive, and there are numerous examples of individuals or communities in BC deriving an income from sustainable logging techniques.



Myron Kozak. Courtesy of *New Catalyst*

One of the Cariboo Horse Loggers: "Horse logging is one of those soft technologies that considers the needs of communities. It gives us more room to use less."

One such is Merv Wilkinson who has been selectively logging his 136 acres of forest on Vancouver Island since 1938. Over that period, he has extracted 1,378,292 board feet of timber from a living stand which totalled about 1.5 million board feet in 1938 — and still does today. He estimates to have earned a third of his income from the forest, whilst only investing 20-22 per cent of his time.[16]

Mr. Wilkinson's success derives from a thorough observation of the trees in his care and an understanding of how the system maintains equilibrium. When he cuts a tree, he examines carefully its rings to deduce, for example, the effect that a road built ten years previously has had upon the moisture content of the soil. Trees are removed in order to allow new growth the correct amount of shade and light. Diseases are combatted, not by the use of chemicals, but by ensuring that the trees have optimum growing conditions. The result is a healthy sustainable ecosystem — in the words of Tim Foss of the US Forest Service, "the best managed forest I have ever seen."

A more recent undertaking is the Cariboo Horse Loggers Association, which has been operating near the town of Quesnel since 1984. Horses are adept at manoeuvring timber out of a stand with minimal damage to the soil and to other trees. They are also more labour-intensive and therefore conserve employment and money within the local community. "Conventional processes", the Horse Loggers write, "are more capital intensive, and so much of the resource money leaves the community to pay for the bank loan, to buy the machine and to purchase the fuel and maintenance. But it's not just the cost of the machines that pulls money away from the community. The forest industry operates with very little respect for local communities because it works in a centralized, corporate global economic structure."[17]

Further West, at Carrier, the Kluskus and Ulkatcho Indian communities combined to deal with the effects of clearcutting encroaching on their lands after the construction of a logging road from Quesnel in the early 1970s. The clearcutting destroyed the Indians' traplines and other forest activities, leaving them dependent on government handouts. The social degeneration that followed led to the death by suicide or alcohol of several young people.

In the 1980s, the Kluskus rejected federal funding and retreated into their home territories, relying on hunting and trapping for survival. But after continuing encroachment from clearcuts upon their traditional territiory, they realized that a broader approach was needed. They joined forces with the Ulkatcho band to hire Herb Hammond, a community forest consultant, to help them develop a selective logging plan that would take into account all the forest values.

"What eventually emerged was the West Chilcotin Resource Board, elected by each sector of the community

in the summer of 1990. Now when the Forest service asks to meet with the Ulakatcho band, it is faced with a whole community, all opposed to existing clearcut logging practices. The community is taking power back into local hands.

"As Chief Roger Jimmie of the Kluskus said, 'A few young people may be able to survive on logging, but the others need the hunting and fishing. They know about the waterways and animals. We had to accommodate that. The government says logging will happen anyway, so we had to come up with something agreeable to everyone, including the white people in the area, the ranchers, the lodge owners and the people who fish.'" [18]

Holistic Forestry

Groups and individuals such as these, influenced by foresters and scientists such as Chris Maser and Herb Hammond,[19] are reviving a holistic community-orientated approach to forest management. Forests are diverse, interconnected webs which sustain thousands of life forms, rather than simply producing timber. There is no part of the forest that is more significant than another, each playing its role in maintaining the balance of nature. Forests convert carbon dioxide to oxygen, provide water, protect lowlands from flooding, moderate the climate, provide a habitat for fish, wildlife and humans and are a place of recreation and spiritual renewal for people. When one part of the forest is changed, all parts are affected. Human interaction with forests must be carried out in a sensitive manner that not only protects their various functions and components but maintains their ecological systems and their genetic diversity.

Corporations, such as those running the Canadian logging industry, are too large and centralized to be sensitive to the demands of a particular forest. It would be far better for the province to allow local communities to be responsible for their forests. They have proved themselves to be capable of managing forests sustainably because they understand the area and have a stake in its continued existence. Clearcutting, reliant on a 70- or 80-year cycle, provides no stable employment in a locality, and thus undermines the local economy. Selective logging, on the other hand, is a continuous process which provides regular work for small communities. The loggers have an interest in maintaining the health of the forests, and they and their equipment are always on site, to cope with threats such as windstorms, fires, or insect infestations.

For centuries, prior to the arrival of white people, the North West Pacific Coast was one of the most populated and wealthy areas of North America. The Indians who lived there testified that their well-being relied upon respecting and conserving the forests. So-called modern methods of forest management were unknown and technology was extremely simple. It is to the credit of these Indian communities that about 25 species of the world's largest and longest-lived trees — including many specimens 500 or even 1,000 years old — have survived fires, insects, climatic changes and human activity. In a matter of decades, this priceless heritage is being systematically annihilated by an unscrupulous and short-sighted logging industry.

Humans must realize that "forests sustain people: people do not sustain forests". Historic examples of environmental degradation and disasters caused by forest depletion, such as the Mediterranean civilizations or China, should not be forgotten. In the harsh unforgiving realm of the mountains of British Columbia, there will be no second chance.

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Siberian Forests Under Threat

by

Divish Petrof

In the drive of the new Russian Republic to earn foreign exchange, logging in Siberia is likely to accelerate rapidly as multinationals gain access to vast "untapped" resources. This can only add to the ecological devastation caused by several decades of extraction of timber, oil and gas.

The vast expanse of Siberia is divided into three climatic zones: "tundra", the Arctic plains where the subsoil is frozen; forest-tundra, a transition zone; and "taiga" or coniferous forest. Its forests cover more than five million square kilometres, the size of the continental United States. They account for over half the world's coniferous forests, and over one fifth of all forest, being twice as large as the Amazon rainforests.

In contrast to the tropical forests, the taiga or boreal forests are dominated by only a few tree species — spruce, larch and fir — but also include pine, cedar, birch, aspen, ash and "Korean" pine. They are extremely fragile; in the subarctic climate, trees regenerate slowly, mature trees averaging only 20 to 30 centimetres in diameter after centuries of growth.

The forests are home to elks, bears, foxes, martens, ermine, a variety of birds and the Siberian tiger, numbers of which have dropped to 250 because of hunting and encroachment of their forest habitat. At present, about five per cent of Siberia is protected either as nature reserves or as wildlife preserves.

Although Siberia accounts for one-tenth of the world's land mass, only 30 million people live in the region, five per cent of whom are indigenous peoples, encompassing about 26 ethno-cultural groups. They live either by fishing and hunting in the forest, tundra and sea, or reindeer herding in the tundra.

Soviet Resource Exploitation

Resource extraction has been the main form of industrialization in Siberia since the mid-1950s. By the mid-1980s, partly as a result of the drive to fulfil production quotas set by the central Moscow administration and the internal colonization of the region by Russians, Siberia's natural resources generated roughly half the Soviet Union's hard currency receipts. All the Soviet Union's natural diamonds and over half of its gold came from Siberia; the region contains two-thirds of the former Soviet Union's gas and oil reserves, extraction of which began in the mid-1960s, and large quantities of coal and iron ore.

Logging in the Bikin Valley, Siberia

Unmilled timber from the Russian Far East used to supply the USSR's domestic market. By 1988, more than four million hectares of forest were being felled annually, yielding a wood harvest of 410 million cubic metres.[1] Ninety per cent of logging has been clearcutting, leading to loss of topsoil through erosion, which in turn has hindered natural tree regeneration, especially when combined with the cold climate and short growing season. The frozen, peat-rich forest soils thaw when they are directly exposed to the sun after logging, becoming weed-infested swamps. Forest has also been destroyed by fires which are becoming more frequent and which forestry officials can do little to stop because of a lack of funds; the organization of aerial fire-fighting operations has broken down with the demise of the Soviet regime.

In addition to the direct damage caused by logging, the effluent from gigantic saw, pulp and paper mills is threatening Lake Baikal in southern Siberia, the deepest freshwater lake on the Earth, which holds one-fifth of the world's freshwater and is home to about 1,500 plant and animal species, 1,200 of which are found nowhere else in the world.[2]

For the indigenous people of Siberia, logging has been just one cause of their dispossession of lands, cultures and languages, contributing to the present state of "ethnic catastrophe".[3] Siltation of streams because of topsoil runoff has destroyed fisheries and disturbed aquatic ecosystems.

New Pressures

Following the disintegration of the Soviet Union, tree felling in Siberia has dropped to about 300 million cubic metres each year; the cutting by state-owned companies has decreased by 30 to 50 per cent during the last three years as regional separatism, the collapse of industry and upheavals in society have weakened Moscow's central control.

Logging is set to increase, however, in the drive to establish a free-market economy in the new Russian Republic. Russian economists consider that large-scale harvesting and export of minimally processed Siberian timber would not only bolster the Republic's battered economy, but also provide funds to set up sustained-yield forestry over the next 30 to 50 years in the more accessible European Ural mountatins, denuded after continuous logging by the Soviet Union.[4]

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Joint logging ventures could provide capital investment in the industry and in infrastructure, and up-to-date technology. Until now, the logging industries in Siberia have been using old equipment, leaving half the clearcut logs behind on the forest floor, while the sawmills have been wasting an additional 20 per cent. Timber extraction, however, has not been easy because of the harsh winter conditions, sparse road network and remoteness from the few railroads.

Exporting logs, especially towards the Pacific Rim, could reap at least ten times as much profit as selling in Russia or to the Commonwealth of Independent States (CIS). The recently completed Baikal-Amur Mainline railway, linking Lake Baikal with the Pacific coast, will make such log transportation to the coast cheaper and easier than sending timber to the CIS — until now an extensive river network and a few roads have been used — and open up access to 1.4 billion cubic metres of high quality timber.

Foreign lumber companies hope Siberia's forests will boost the world's dwindling supplies of timber. Alexey Grigoryev of the Social-Ecological Union believes that, so far, small, foreign firms have cashed in, using hard currency to bribe local and regional bureaucrats, while large-scale multinational investors, hampered by working conditions and the lack or uncertainty of legislation, have been slower to venture in, a situation which is unlikely to last.

Korea — North and South

North Koreans have been logging in Siberia since the 1960s in the Khabarovsk region and northern Amur province, east of Lake Baikal. Each year, 20,000 North Koreans cut more than three million cubic metres of wood.

One North Korean timber company clashed with Soviet authorities in the late 1980s when it overcut the tracts assigned to it, violated Soviet environmental law and removed timber from unauthorized areas in Tynda in Amur. Ironically, the enforcement of environmental regulations against the company led to more timber being cut. As there was no provision to pay fines in cash, the North Koreans paid the penalty levied against them by cutting more trees for the Soviets.

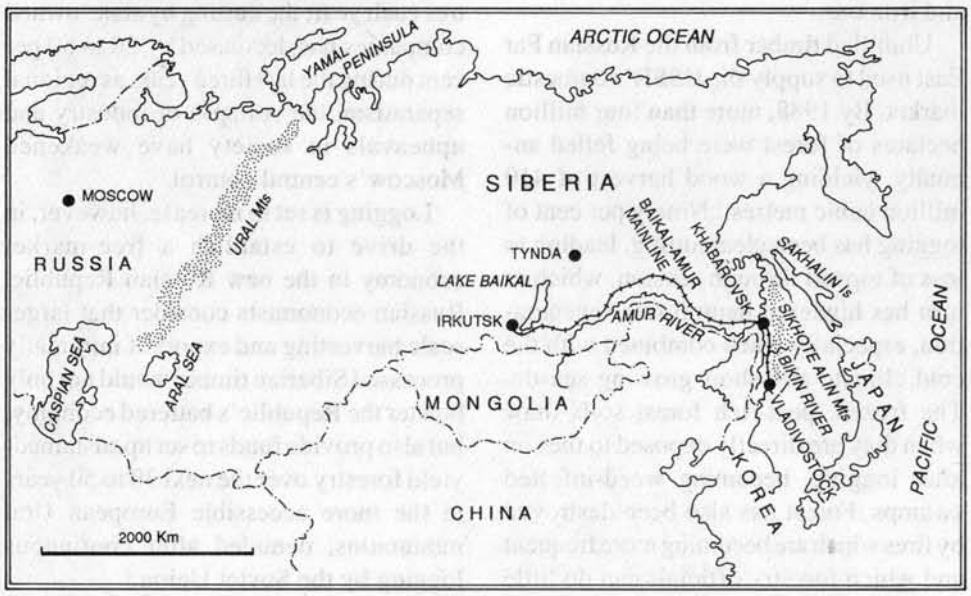
In another instance, however, when North Korean loggers encroached on a legally protected nature preserve, the Soviet authorities gave precedence to the logging agreement over local needs and state law.

Two years ago, the South Korean Hyundai Corporation, better known as a vehicle manufacturer, began to cut 300,000 cubic metres of wood each year along the mountainous coast of the Sea of Japan, about 500 kilometres north of Vladivostok. The logging has the support of the regional administration, although their operations have twice failed to receive a positive *ekspertiza* (environmental impact assessment) and the local administration opposes them.

Hyundai now wants access to the western side of the Sikhote Alin mountains to more than 300,000 hectares of the Bikin River watershed to cut one million cubic metres of wood each year for thirty years. Its efforts have been resisted by the local administration and by the 2-3,000 indigenous Udege who live, hunt and fish in these mixed coniferous-deciduous forests which are also inhabited by about 40 Siberian tigers. The *ekspertiza* conducted for the Bikin watershed expicitly forbids cutting, and the Russian Ministry of Ecology and the provincial legislative body have recommended that these lands be protected from cutting and transferred to the control of the Udege people.

Now, however, the Forest Service of the province has illegally given Hyundai permission to log, and trees are already being marked for cutting, although the Udege have set up peaceful blockades of these areas. The provincial governor has said he will support Hyundai, unless ordered not to by Russian President Boris Yeltsin. Legal permission would require a positive *ekspertiza* and permission from the local Udege.

Local and international pressure on Hyundai, however, may lead to the Corporation pulling out of the project. The chair of the Corporation considers himself an environmentalist and has professed to be unaware of Hyundai's intentions, but also claims that withdrawing would need the agreement of Hyundai's partner in the joint venture, Svetlaya.[5]



Alan H. Graham

Japanese Expansion

Although Japan imports most of its timber from Malaysia and the United States, international pressure to stop the destruction of South-East Asian rainforests and to preserve the last remaining stands of old growth forest in the western US is forcing Japanese timber companies to look elsewhere for their wood. Hoping to find in Siberia a cheap and reliable source of timber close to home, Japanese trading companies have launched several joint ventures in the Russian Far East, and the top six Japanese trading houses have opened offices in the Siberian town of Khabarovsk.[6]

The first Japanese joint venture sawmill, owned by logging company C. Itoh & Co., opened in 1990 in Lidoga near Khabarovsk. In contrast to Russian sawmills, this state-of-the-art production line is so highly automated that workers rarely touch the timber. Russian employees work under Japanese-style conditions, are paid twice-yearly bonuses adjusted to performance, and are liable to be suspended if they go on strike. Although the sawmill has reached only half its annual capacity of 9,000 cubic metres of hardwood lumber and 6,600 cubic metres of wood chips, the company intends to expand Lidoga in

the near future. Apart from this "small-scale" venture, in 1990, C. Itoh imported to Japan 100,000 cubic metres of Siberian softwood logs.

After several years of protracted negotiations, the first large-scale project between Japanese and Russian companies came on line in January 1992. KS Sangyo is a joint venture between the huge Japanese construction machinery company, Komatsu, and the Russian Far East Timber Exporters Association. In exchange for bulldozers, construction equipment and wood processing units, Japan will import some six million cubic metres of unprocessed wood from Siberia by the end of 1996. The architect of the project, Ryoichi Kawai, is the president of KS Sangyo and the Chair of Komatsu. Four of the largest trading companies — Mitsubishi, Nichimen, Nissho Iwai and Marubeni — are participating in the joint venture. Some Japanese companies, such as C. Itoh, are pressing for the removal of the minimal forest protection and replanting requirements, instituted under the Soviet regime.

J. P. Razon/Survival International

The livelihoods of the Khants, who depend on reindeer, have been severely affected by oil spillages, roads and logging; reindeer feed off lichen which takes many years to grow and is barely enough to feed them anyway.

US Ventures

US timber companies, such as Louisiana-Pacific, based in Oregon, would like to import unprocessed Siberian logs to offset declining log harvests at home and to deflect domestic opposition to logging of North American old-growth forests.

The viability of doing so depends on transport costs and the development of plants to receive and treat them, while the cost of timber inspection and fumigation may discourage imports; one test shipment of Siberian pine and larch contained pine nematodes not native to the US, a potential threat to domestic tree species. Louisana-Pacific has been setting up mills in Mexico, however, which may be a way round import restrictions.

Another US timber giant, Weyerhaeuser Corporation, has almost concluded two years' of negotiations with Russia for a logging venture which would give it access to one million hectares of forest, yielding 375,000 cubic metres of timber per year, mainly for export to Japan.

Weyerhaeuser has already built a large loading dock near Khabarovsk which has outraged Far Eastern environmentalists. The director of the Far Eastern Scientific Research Institute for Forest Management in Khabarovsk, Dmitry Efremov, declared, "Weyerhaeuser wanted to conduct its project near the coast facing Sakhalin Island by clearcutting and then replanting. You can't do that here, because selective cutting is necessary to protect the soil". The local environmental protection agency is opposed to Weyerhaeuser's proposed logging of the Botcha River basin, recommending that it be preserved as a nature reserve or national park.

Weyerhaeuser, however, has refused to consider any harvesting method other than clearcutting, followed by seedling replanting. It has undertaken intensive public relations campaigns to convince local residents, environmentalists, scientists and politicians that it is committed to environmentally responsible forest management, including inviting local officials to see the company's model tree farms in the US. It has now given funding to Dmitry Efremov's Institute, hoping to gain scientific support for its practices, but thereby compromising the objectivity of the Insititute.

Weary of adverse publicity, Weyerhaeuser has adopted an evasive and deliberately vague stance on the proposed logging. A company representative in Tacoma, Washington, stated that Weyerhaeuser would probably go into Siberia towards the end of the century, but as expensive infrastructure is already in place, it may be sooner.

Environmental Hazards

The logging practices of non-Russian companies in their own and other countries, often the target of popular protests, do not augur well for Siberia. Dr Vladimir Molozhnikov of the Baikal Ecology Museum in Irkutsk, the main town on Lake Baikal, who has 20 years experience in Siberian forest ecology, was shocked by US logging practices during a 1990 tour of Oregon forests, organized by US timber companies:

> "Your example was even used to cool the heads of our aggressive forest industrialists. But what I've seen in Oregon won't make it possible for me to use your forest techniques as an example: a multitude of bare, forestless cliffs, slopes ribboned with roads, intensive erosion of soils, silting of rivers and reservoirs, loss of animal habitat, the disappearance of recreation areas."

Joint ventures are unlikely to maintain environmental standards any higher than the existing lax norms in Siberia, while profit motives on all sides may perpetuate malpractices. The very weakness of the environmental protection agency may be an additional factor in attracting foreign industries, while Russia has an economic interest in easing regulatory standards and their enforcement.

Environmental Activism

Despite the wishes of the Russian Republic for foreign exchange and the eagerness of foreign companies for timber, there have been several hindrances to full-scale exploitation getting under way. Russia's moves towards a free-market economy have been accompanied by the disintegration of the centralized system and political instability, creating uncertainty about who owns and controls the forests — central, regional or local authorities. Most of the joint venture agreements have so far been signed with the Russian Ministry of Forestry, but in many cases, it is not clear whether it has the authority to make such agreements, nor what the relevant legislation is. Although some companies have been deterred by this instability, others, such as Hyundai, have taken advantage of it.

In between the Russian state and the foreign timber companies are the indigenous peoples. Over the past few years, there has been a resurgence of indigenous political activity at local, regional, national and international levels; independent political and social structures have begun to appear throughout the Russian North. In March 1990, the goal of the Association of Northern Minorities, formulated at the First Congress of Northern Minorities in Moscow, was stated bluntly: "To unite all our strengths in order to survive."

Some of the indigenous peoples, such as the Yakut, Khants, Mansis, Udege and Altai, are well aware of the threat to their way of life from further natural resource extraction by outsiders. In 1989, the Khants, Mansis and Nenets peoples, known collectively as the Yugra, formed the association *Spasenie Yugry* (Save the Yugra). At their First Congress in August 1989, they declared their forests off-limits to logging and mineral prospecting. There have been successful protests against the siting of factories and other industrial projects, using the media when administrative and judicial systems have failed local communities. Despite legislation banning any logging which does not have the permission of local inhabitants, local people have been arrested when they have tried to prevent trees being cut down on their lands.

Sustained pressure on the authorities has prevented some environmentally destructive projects from going ahead. In the late 1980s, the Nenets of the Yamal Peninsula in north-west Siberia campaigned to prevent implementation of a natural gas extraction project in their traditional lands. Some 50,000 square kilometres of grazing land had already been lost through gas and oil extraction, causing the numbers of wild reindeer to fall by at least half. A Russian ethnologist described the devastation caused to the area near Lake Pyaku-ot, ten years after oil and gas exploration started:

> "... black patches of burned forests, vast spaces of man-made deserts, the moss uprooted by Caterpillars, oil overflows surrounding oil rigs, gas torches burning day and night, the smoke of forest fires. One gets an impression that man declared war on nature here."[7]

Five thousand Nenets convinced local authorities to take their complaints to Moscow where Soviet environmentalists supported them. Scientists warned the gas extraction project might prove fatal to the fragile ecology of the Yamal Peninsula, even causing it to melt away as 60 per cent of the area is ice. The $1.5 billion project was halted, albeit temporarily.

The president of *Spasenie Yugry*, Tatiana Gogoleva, said at the association's 1992 conference:

> "Until recently, 'development' for us meant moving from our traditional ways to Communism, and the assimiliation of our people. Our ethnic identity was ignored. Now a special statute must be worked out to give us an economic base to develop our own ways of livelihood."[8]

URGENT ALERT

The Udege people have asked for immediate international support to prevent Hyundai logging their forests. Contact the following groups for details:

Siberian Forests Protection Project
Pacific Energy and Resources Center
Fort Cronkhite Building 1055
Sausalito, CA 94965, USA
Tel: +1 (415) 332 8200
Fax: +1 (415) 331 2722

Greenpeace International
Keizersgracht 176
1016 DW Amsterdam
THE NETHERLANDS
Tel: +31 (020) 523 6555
Fax: +31 (020) 523 6500

Survival International
310 Edgware Road
London W2 1DY, UK
Tel: +44 (071) 723 5535
Fax: +44 (071) 723 4059

A strategy of halting, shutting down or fining joint ventures which violate environmental regulations may prove difficult, especially if legislation is relaxed and if the agreements continue to be on a non-cash basis, such as the KS Sanyo project, or in Tynda with the North Koreans. Nonetheless, one of the main hopes for regulating these joint ventures may be local citizens' groups who are beginning to demand the right to determine how their local economies are diversified and how the Siberian forests are used.

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3. Vakhtin, N., op. cit. 1.
4. The Finnish forest company, Jaakko Pöyry, is preparing a master plan for the European forests of Russia. Jaakko Pöyry has been involved in drawing up Tropical Forest Action Plans for several countries.
5. Siberian Forests Protection Project, Pacific Energy and Resources Center, California, personal communication.
6. Many of Japan's leading companies do not operate as separate entities in free competition but form interconnected networks bound together by corporate interests. Each of these *keiretsu* (industrial groupings) has a bank and an insurance company at its core and includes companies manufacturing and trading in a range of products, including food stuffs, electrical equipment, machinery, tropical timber and chemicals.
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India Under IMF Rule

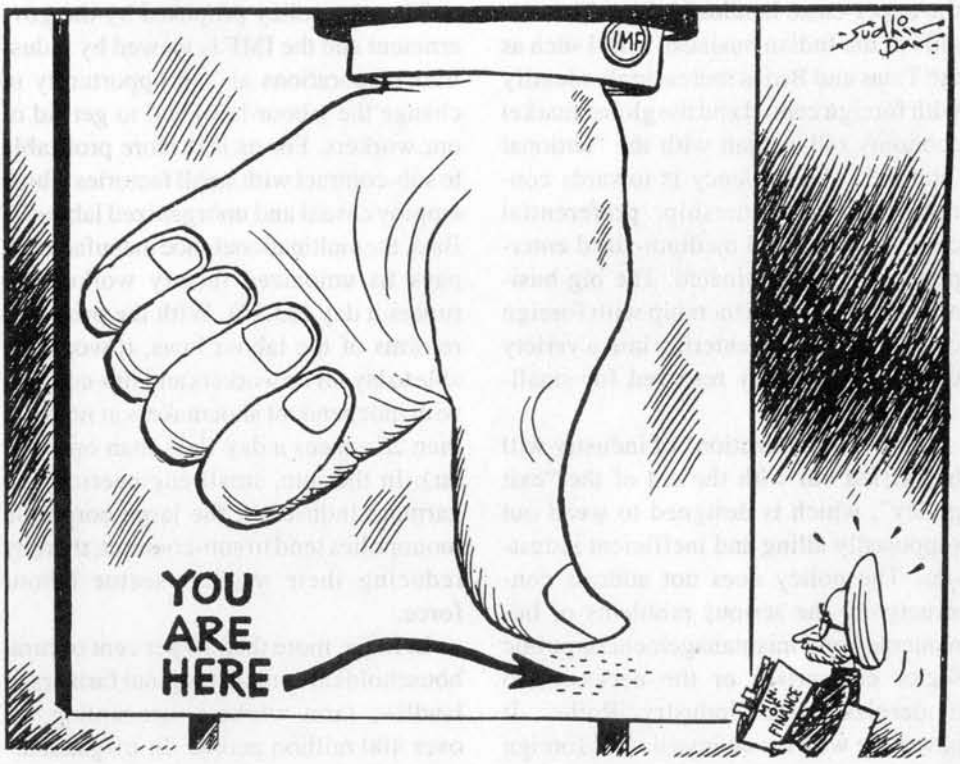
by
Michel Chossudovsky

Under a series of agreements with the IMF and the World Bank, India has been offered up to $3.5 billion to stabilize its wavering economy and reduce its fiscal deficit. However, the full amount is not to be handed over until the Indian government has complied with a detailed structural adjustment programme. These measures are already having a devastating impact upon many of the country's 870 million inhabitants. They have furthered the process of fiscal collapse and introduced a system where the government is no longer in control of its fiscal and monetary policy.

The IMF-World Bank programme was set in motion with the fall of the Janata Dal government of VP Singh in 1990, and the assassination of Rajiv Gandhi in Tamil Nadu during the election campaign of May 1991. Over the previous decade India had gradually accrued a foreign debt of $74 billion (partly through a previous round of IMF loans), and the economy was in difficulties. In July 1991, the government was obliged to airlift some 47 tons of gold to the vaults of the Bank of England for "safe custody" to satisfy the requirements of international creditors.[1] The IMF agreement, implemented shortly thereafter, provided at best a short breathing space: the IMF and World Bank loans, already earmarked to pay back international creditors, barely provide enough cash to fund six months of debt servicing.

The IMF's "economic surgery" is ostensibly designed to help India alleviat its balance of payments difficulties, reduce the fiscal deficit and relieve inflationary pressures in order to make its economy more attractive to outside investors. It requires the Indian government to adopt the following measures:

- cut spending in social programmes and infrastructure;
- eliminate state subsidies and price support programmes, including food and fertilizer subsidies;
- sell off the more profitable public enterprises at "a good price" to the large business houses and foreign investors;
- close down a large number of "sick public enterprises" through what is known in India as the "exit policy";



Finance Minster Manmohan Singh's bargaining position with the IMF, as seen by cartoonist Sudhir Dar of The Pioneer.

- devalue the currency to make exports cheaper and imports more expensive;
- liberalize trade to allow freer entry of foreign imports and capital;
- carry out major reforms of banks and financial institutions, in particular the reduction of subsidized loans in rural areas;
- alter the tax structure, including abolition of the wealth tax and reduction of the capital gains tax.

An Invasion of Foreign Capital

But although the IMF-World Bank package aims to lower the budget deficit and reduce inflation, it has so far accomplished exactly the opposite. The economy has entered into a condition of stagflation. The devaluation of the rupee to stimulate exports has meant that the price in rupees of internationally tradeable commodities has risen to meet the world market price. The price of rice in India has increased by more than 50 per cent in the last year. Meanwhile the balance of payments crisis has been aggravated by the increased cost of imported raw materials and by the influx of luxury imports for a wealthy minority who have benefited from tax cuts and other measures.

While this minority benefits from the new measures, the costs are borne by the rest of the population. Purchasing power

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has been squeezed by price rises, dampening demand for home produced goods. This, together with the free entry of foreign capital, is pushing domestic producers into bankruptcy. The cuts in social and infrastructural projects also undermine production of goods, including exports. Debt-servicing obligations are rising, so more loans from the international financial institutions are required to pay back the creditors. The IMF's proposed "solutions" are increasingly appearing to be the cause of economic collapse.

While the IMF programme denies India the possibility of an autonomous national capitalist development, the reforms have the firm backing of India's largest business houses, in a fragile alliance with the upper-caste landlord lobby. The moguls of the Indian business world such as the Tatas and Birlas increasingly identify with foreign capital and the global market economy rather than with the "national interest". The tendency is towards concentration of ownership: preferential credit to small and medium-sized enterprises will be eliminated. The big business families in partnership with foreign capital are rapidly entering into a variety of areas previously reserved for small-scale industry.

This "rationalization" of industry will be carried out with the aid of the "exit policy", which is designed to weed out supposedly ailing and inefficient industries. The policy does not address constructively the serious problems of bureaucracy and mismanagement of public sector enterprises or the necessity to modernize Indian industry. Rather, it paves the way for an invasion of foreign capital. A large share of the automobile and engineering industry is likely to be phased out with the entry of foreign capital and the establishment of joint ventures. In the textile industry, approximately one-third of workers could be laid off. In all, an estimated four to eight million public and private sector workers (out of a total organized labour force of 26 million) will be laid off over the next three years if the exit policy programme goes ahead.

Crushing the Rural and Urban Poor

In anticipation of social problems, the World Bank advisers took the precaution of devising a "safety net": the National Renewal Fund (NRF) was created in July 1991 to provide assistance to "vulnerable groups". But judging by the failure of similar schemes in countries such as Bolivia, it is extremely unlikely to provide adequate compensation to the several millions who will be made redundant. The NRF's main function will be to buy out trade union opposition. Instead of extending the labour laws to protect casual and seasonal workers, the IMF programme proposes "to help the poor" by scrapping the labour laws altogether, because "these laws favour the labour aristocracy" and "discriminate against" the non-unionized sectors of the labour force. Neither the government nor the IMF have addressed the broader social impact of this "new economic policy" on farm-workers, artisans and small enterprises.

The exit policy proposed by the government and the IMF is viewed by industrial corporations as "an opportunity to change the labour laws and to get rid of our workers. For us it is more profitable to sub-contract with small factories which employ casual and unorganized labour".[2] Bata, the multinational shoe manufacturer, pays its unionized factory workers 80 rupees a day ($3.20). With the proposed reforms of the labour laws, it would be able to lay off its workers and sub-contract with independent shoemakers at no more than 25 rupees a day (less than one dollar). In the jute, small engineering and garment industries, the large corporate monopolies tend to sub-contract, thereby reducing their modern sector labour force.

In India, more than 70 per cent of rural households are small marginal farmers or landless farm workers, accounting for over 400 million people. In irrigated areas, agricultural workers are employed for 200 days a year, and in rainfed farming areas for approximately 100 days. The phasing out of fertilizer subsidies (an explicit condition of the IMF agreement) and the increase in the prices of farm inputs and fuel is pushing a large number of small and medium-sized farmers into bankruptcy.

In turn, millions of landless farm workers belonging to the scheduled and backward castes — already well below the official poverty line — will be crushed by Finance Minister Manmohan Singh's new economic policy. These are "the untouchables of economic policy". For the upper-caste élites, they are people who really do not matter; the impact of the IMF's "economic medicine" in these sectors of the labour force has been ignored. For the IMF and the government, there is no need for exit policies for the unorganized sectors: in Manmohan Singh's words, "the cottage industries have no problems because the wages will go down".[3]

With the possible exception of the states of Kerala and West Bengal, minimum wage legislation has largely been ineffective in protecting the rights of farm workers. In the state of Tamil Nadu, for instance, the minimum wage for farm workers set by the state government is 15 rupees a day. Labour legislation, however, is not enforced and actual wages paid to farm workers are (with the exception of the harvest period), substantially lower than the minimum daily wage: for transplanting paddy, for instance, workers are paid between three and five rupees a day ($0.12 - 0.20); in heavy construction work, men receive 10 to 15 rupees a day ($0.30 - 0.40).[4]

On the Hyderabad-Bangalore national highway, child labourers of the Dhone limestone mines transport heavy loads in bamboo baskets up a flight of some 60 steps where the limestone is emptied into tall brick kilns. Both adult workers and children are paid 9.5 rupees a day ($0.40); there have been no wage increases since the July 1991 Union Budget. "We have to work here, regardless of poisonous fumes, heat and dust," explained one worker. "The wages are higher than on the farms "[5]

"Eliminating the Poor" through Starvation

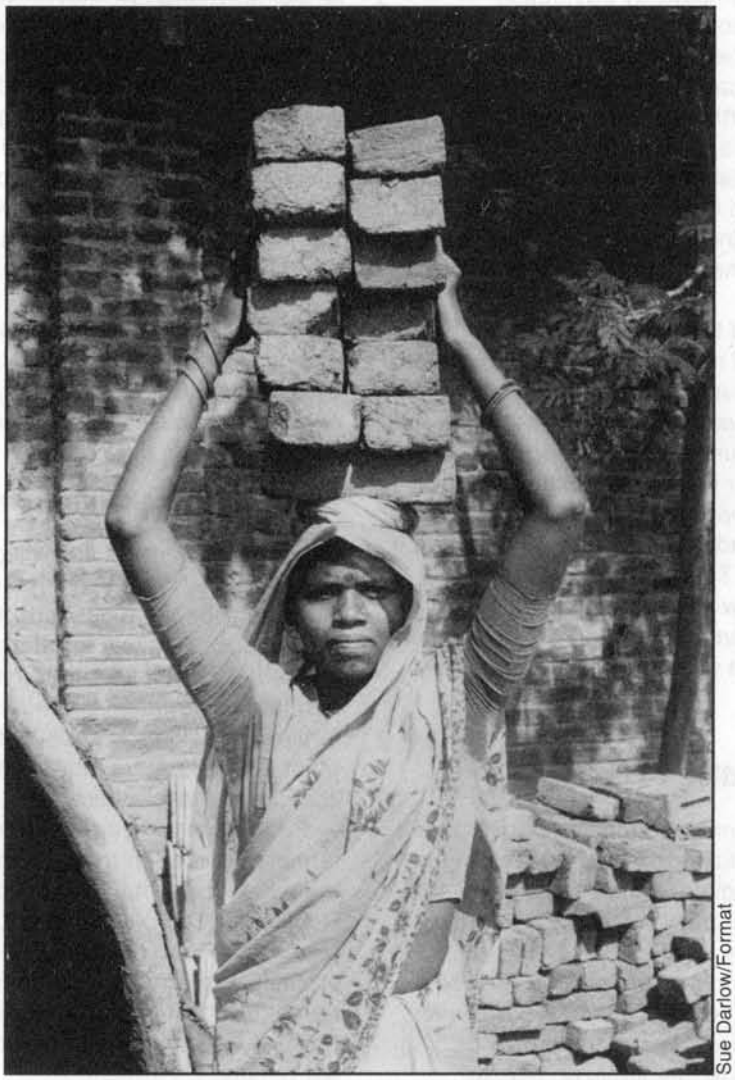
The IMF programme is becoming an instrument of what some have called "economic genocide". India is much poorer than most of the Latin American countries that have undergone similar structural adjustment programmes: several hundred million farm-workers, artisans, small traders and others are surviving on per capita incomes substantially lower than 50 cents a day, while domestic prices are moving up to world levels. Even a modest rise in prices can have a critical effect upon people's standard of living. The increase in the price of rice and wheat of more than 50 per cent since the July 1991 economic measures, combined with a decline in the average number of days worked in both rainfed and irrigated agriculture, is pushing large numbers of rural people into "chronic starvation". Nothing on this scale has been seen since the great famines in Bengal in the early 1940s.[6] In contrast, the drop in consumption of food

throughout the nation has been matched by an increase in rice exports. In the words of Tata Exports, "the devaluation was very good for us, together with the lifting of quantitative restrictions on rice exports. We expect to increase our sales of rice to the world market by 60 per cent."[7]

In the post-independence period, starvation deaths were largely limited to peripheral tribal areas such as Tripura or Nagaland. But a recent study on starvation among handloom weavers in a relatively prosperous rural community in Andhra Pradesh in the months following the implementation of the new economic policy indicates a new and disturbing trend. The report sheds light on the mechanisms underlying the IMF-sponsored programme: the jump in the domestic price of cotton yarn, due to devaluation and the relaxation of export controls, led to a collapse in the rate paid to the weaver by the middleman through the putting-out system. Radhakrishnamurthy of Gollapalli village in the Guntur district of Andra Pradesh and his wife "were able to weave between three and four pachams (72 to 96 metres) a month bringing home the meagre income of 300-400 rupees for a family of six ($12-16). Then came the Union Budget of 24 July, 1991, the price of cotton yarn jumped and the burden was passed on to the weaver. Radhakrishnamurthy's family income declined to 240-320 rupees a month ($9.60 - $13.00)".[8] Radhakrishnamurthy died of starvation on 4 September, 1991.

Between 30 August and 10 November, 1991, at least 73 cases of death by starvation were reported in just two districts of Andhra Pradesh. The IMF-World Bank programme rather than "eliminating poverty" as claimed by the World Bank president, Lewis Preston, is "eliminating the poor". Combined with a 50 per cent rise in the price of rice (which resulted from the devaluation and the removal of food and fertilizer subsidies), the real earnings of handloom workers declined by more than 60 per cent in the six months after the adoption of the IMF programme. There are some 3.5 million handlooms throughout India supporting about 17 million people.

A similar situation prevails in most small-scale rural and urban cottage industries which operate through the putting-out system. For instance, there are in India more than one million diamond cutters supporting nearly five million people: the large diamond export houses based in Bombay import rough diamonds from South Africa, and subcontract the cutting through middlemen to rural workshops in Maharashtra. Seven out of ten diamonds sold in Western Europe and the US are cut in India. Whereas in the rich countries diamonds signify wealth, in India poverty is the decisive input for this profitable export activity: in the words of a major diamond exporter: "Making jewellery is cheap labour . . . (food prices have gone up) but we have not increased the rupee payments to village workers. With the devaluation our dollar labour costs go down, we are more competitive, we pass on some of the benefits to our overseas customers."[9]


Sue Darlow/Format

An Indian labourer, one of the many millions who will be carrying the burden of the country's "new economic policy".

The IMF Supports Caste Exploitation

The repeal of minimum wage legislation and the de-linking of earnings from the level of inflation, both of which are required in the IMF-World Bank programme, tend to reinforce despotic social relations; it gives a greater legitimacy to caste exploitation, slavery and child labour. Under World Bank guidelines, the tendency is towards dispossession through the formal removal of land ceilings as well the expropriation of communal village lands by feudal landlords and wealthy farmers. The proposed liberalization of banking, involving the reduction of subsidized loans for rural areas and the abolition of rural credit cooperatives, will strengthen the position of the village moneylenders who demand crippling rates of interest.[10]

Inevitably these factors will exacerbate social tensions, and there are grave fears that they will provoke ethnic disputes. There are active secessionist movements in Kashmir, Punjab and Assam, bloody confrontations between Hindus and Moslems in various parts of the country, and an uncertain truce along the "Line of Control" with Pakistan. The IMF's economic medicine is likely to further polarize Indian society, and embitter religious and ethnic animosities.

Both Hindu and Islamic fundamentalism thrive on poverty. The major opposition party, the Hindu Bharatiya Janata Party (BJP) has rhetorically condemned the government's "open door" policy. Invoking Mahatma Gandhi's *swadeshi* ("self-reliance") the Rashtriya Swayam Sevak Sangh (the BJP's parent fundamentalist movement) has called for a massive boycott of foreign goods. The BJP has, nonetheless, helped keep Narasimha Rao's Congress government afloat, by supporting it in the controversial vote on the IMF-World Bank

Structural Adjustment and Indian Agriculture

World Bank Structural Adjustment Programmes (SAP) are called stabilization plans. But India's SAP has become a rural destabilization plan that threatens to destroy both farming and farmers.

The immediate cause of this destabilization is the removal of subsidies for food and fertilizer. These liberalizing measures are simply a pretext which the World Bank uses to introduce its destructive agenda. The subsidies were introduced by the World Bank in the first place, and every move towards subsidy removal has in fact resulted in an increase in subsidy payments.

In the 1960s, Indian government policy, inspired by international agencies like the World Bank, actively supported the use of chemical fertilizers through the Green Revolution. These fertilizers were subsidized or given away by international agencies. The World Bank and US AID pressurized India to encourage Western chemical companies to build fertilizer plants in India; but despite these investments, India imported up to 40 per cent of the fertilizer requirements created by the Green Revolution.

The World Bank provided the credit to introduce this capital-intensive agricultural model. The foreign exchange component of the Green Revolution over the five year plan period 1966-71 was over 10 billion rupees, more than six times the total amount allocated to agriculture during the previous five-year plan. Most of the foreign exchange was needed to import chemicals and seeds and to provide subsidies and credit. The result was debt and a balance of payments crisis. This crisis, entirely of the World Bank's making, is now used as justification for a structural adjustment programme, through which the Bank is forcing a withdrawal of the very subsidies it had earlier introduced.

Tampering with Subsidies

In line with the Bank's recommendations, the government of India agreed to raise fertilizer prices by 30 per cent in order to reduce state expenditure on subsidies. However, after large-scale protests across the country, the price was increased by only 10 per cent in 1991. In August 1992 another attempt was made; the prices of fertilizers were decontrolled and they doubled overnight. However, political resistance forced the government to provide subsidies to enable farmers to buy fertilizer. Due to increased prices, the subsidy burden actually increased to 60 billion rupees ($2.3 billion) in 1992-93, against the budgeted 50 billion rupees ($1.9 billion).

A similar mess has been created around the subsidizing and pricing of food imports. The structural adjustment programme prescribes a removal of the food subsidies which provided cheap food for public distribution; but simultaneously, the Bank recommends liberalization of farm imports. The net result has not been the removal of food subsidies, but their redirection; the beneficiaries are no longer the poor in India but powerful transnational corporations in the US.

In 1991, India exported 672,000 tonnes of wheat at the cost of over 1.7 billion rupees ($60 million). However, under the pressure of import liberalization and structural adjustment, India has imported 2.5 million tonnes of wheat this year. Of this, one million tonnes has been sold by the US which gives a $30 per tonne subsidy to its exporters. Despite the US subsidy, the cost of imported wheat after adding transportation and handling charges, will be higher than the support prices paid by the government to Indian farmers. Farmers are paid 260 rupees per quintal of wheat, but the imports from North America have cost 560 rupees per quintal. Indian farmers movements are therefore demanding that, rather than import wheat and subsidize multinational corporations (thereby draining foreign exchange and increasing debt), the government should raise the domestic support prices.

Neither fertilizer decontrol nor import liberalization have reduced the burden on the Indian exchequer. Public spending and foreign exchange expenditure has actually increased under the structural adjustment programme which is supposed to reduce both. The aim does not seem to be stabilization but destabilization of the economy so that India is left with no option but further dependence on the World Bank and transnational companies. A US ex-Agricultural Secretary stated "the idea that developing countries should feed themselves is an anachronism from a bygone era. They could better ensure their food security by relying on US agricultural products, which are available, in most cases, at a lower cost".

Beyond Chemical Dependency

Farmers are sensing their dispensability under the new policies. They want to move away from the chemicals on which they became hooked when they followed World Bank policy. But they insist that the transition has to be phased; it cannot be sudden and it is a transition that requires government back-up. The abrupt removal of fertilizer subsidies is seen by farmers as an attempt to get rid of Indian farmers, not to get rid of subsidies for chemicals in agriculture.

Protests in rural areas are mounting. Thousands of farmers have been arrested in Uttar Pradesh. Four farmers were shot by the police during a protest at Ramkola in Deoria district in UP on 9 September, this year. Since then, Ramkola has been a site of continued protests and arrests. The demonstrators persistently repeat the chorus "*Lathi, goli ki sarkaar, nahi chalegi, nahi chalegi*" ("A government that rules with bullets and batons will not last").

On 2 October, 1992, the anniversary of Gandhi's birth, about 500,000 farmers gathered in Hospet in Karnataka to protest against the government's new economic policies and the structural adjustment programme. They pledged to fight for Gandhi's concept of *swaraj* (self rule) and to resist policies aimed at handing over food and seed production to multinational corporations. The "green revolution" as introduced by the World Bank in the 1960s was an environmentally destructive, debt creating, farmer displacing policy. It made a mockery of two fine words, "green" and "revolution". Today, as farmers throughout the country organize to fight the World Bank's structural adjustment policies, an authentic green revolution could be beginning in rural India. That is the only hopeful sign coming out of the Bank's policy for the destabilization of Indian agriculture.

Vandana Shiva

programme, on 9 March 1992 in the Lok Sabha, the Indian parliament.

However, the Congress Party is itself deeply divided on economic policy with several Cabinet ministers speaking out openly against the IMF package. The rise in food prices weakens Congress' grassroot support, while its rapprochement with Israel since the Gulf War, partly as a result of US pressure, tarnishes its image as a secular party and helps strengthen the Muslim league. The National Front and the Leftist Front (led by the Communist Party of India (Marxist) fear that if the minority Congress government falls, the BJP will take over, led by Hindu fundamentalist leader Murli Manohar Joshi. In such an event, India could well be heading for political, as well as economic, collapse.

The IMF's Indirect Rule

It is these same social, religious and ethnic divisions, and the weakness of the Indian government, that have allowed the Washington-based international bureaucracy to "divide and rule" — to install what amounts to a parallel government. Since Indira Gandhi's return to power in 1980, former IMF and World Bank employees have moved into key advisory positions in the central government ministries. These mandarins are kept better informed than the Prime Minister. The bulk of the economic reforms being carried out by the government are based on a World Bank report titled *India: Strategy for Trade Reforms*, published in 1990. This report was held back from the then Prime Minister and the Cabinet Secretary by a group of eight officials who had been associated with the World Bank or the IMF.[11] Not surprisingly, the IMF feels that "it has on the whole been easy to negotiate with Indian officials . . . Compared to other Third World countries where you see a lot of grim faces at the bargaining table, economic thinking has largely been in the same direction, their attitude has been most conciliatory".[12]

A quarterly monitoring agency has been set up under the close guard of the IMF. Under this computerized system located in the Ministry of Finance, IMF and World Bank officials have access to key macro-economic data no later than six weeks after the end of the quarter. In the words of the IMF liaison officer in Delhi: "We take the monitoring very seriously, we scrutinize all the information we get, we are very careful that they (the government) do not cheat". Some 40 key economic variables are subject to quarterly verification by the IMF. "We have also included in the agreement ten 'structural benchmarks', these are not explicit conditions of the loan agreement, they pertain to broad areas of structural reform which we would like the government to address" in future loan negotiations. [13]

The scrupulous monitoring, the behind-the-scenes manipulation, and the various levels of secrecy make a nonsense of the democratic process in a country that proudly claims to be the world's largest democracy. The text of India's February 1992 Union budget, formally drawn up by bureaucrats in Delhi, is a repetitious and redundant document, whose main clauses were already established in the agreement with the World Bank three months earlier.

Indirect rule in India has a long history. Nevertheless, the Rajputs and princely states had a fair degree of autonomy in relation to the British colonial government. In contrast under the IMF-World Bank tutelage, the Union Minister of Finance bypasses Parliament and the democratic process and reports directly to 1818 H Street NW, Washington, DC.

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Long Distance, Short Life

Why Big Business Favours Recycling

by

Simon Fairlie

The recycling of items beyond repair is sensible practice. But in the past few years, manufacturers and retailers in Britain have promoted recycling as the "green" remedy to the problem of domestic waste. Recycling is a solution they can live with, since it favours centralized production and long distance distribution; reuse, on the other hand, gives an advantage to independent, locally-based producers — an advantage that corporate business stigmatizes as a "trade barrier". Large companies also prefer recycling because it allows a continuing expansion of industrial throughput and provides a convenient environmental excuse for planned obsolescence. Environmental groups who emphasize recycling over durability are playing into the hands of big business.

Recycling gets a spectacularly good press in developed countries. Thousands of advertisements, press releases and scientific papers extolling its virtues are posted each week by environmental groups, local councils and, above all, businesses. Large companies vie with each other to flaunt their green credentials: Alcan Aluminium announces that it is recycling 56,000 cans brought back to Britain from the Antarctic;[1] British Nuclear Fuels sponsors "treecyclers" — cardboard depositories for office waste paper, which are sent out free.[2] Others promote schemes to recycle polythene film into rubbish bags,[3] plastic cups into coathangers[4] or paper into cow litter.[5] Much of the advertising is directed at children. Television's cartoon eco-hero, Captain Planet, exhorts: "The best way to deal with waste is to recycle it! Don't forget, Planeteers, the power is yours." [6]

This barrage of propaganda has touched a chord in the public conscience. "Apparently, people experience guilt knowing that wasteful packaging will end up in a landfill," says packaging consultant Inge Brissou. "They seem to question whether all packaging is strictly necessary, and the act of recycling seems to exonerate that guilt in some way".[7] Many consumers now believe that the complex problems of overconsumption in the North can be solved simply by saving newspapers and smashing bottles in a bottle bank.

The public, however, are being deliberately misled. A cursory examination of some of the more serious studies on waste is sufficient to refute Captain Planet's claim that recycling is the best way to deal with it. The US Environmental Protection Agency, for example, has defined a hierarchy of waste management systems which places source-reduction, including reuse of packaging, above recycling, incineration and landfill, in that order.[8] A report commissioned by Tetrapak, the drinks carton manufacturers, concluded that, in the UK, both reusable bottles and non-recyclable paper cartons were less environmentally-damaging than recycled containers.[9] McDonald's hamburgers and the Environmental Defense Fund, working together, agreed that throwaway paper and plastic fast food wrappers are less harmful than recyclable polystyrene containers.[10] And Friends of the Earth UK have published a document entitled "Bring Back the Bring Back", arguing strongly for reusable packaging.[11]

If recycling is recognized as a less than ideal solution in many situations, why has it received such widespread backing? Why are there not massive advertising campaigns to promote reuse or to reduce the consumption of unnecessary packaging? Undoubtedly, environmental campaigners have found that advocating recycling is an easy way to enlist support; and local councils have found that the establishment of bottle and can banks is a painless way to demonstrate concern for the environment. But the fanatical enthusiasm of business for recycling demands a more searching explanation.

Recycling Versus Reuse

The British Government Management Paper No. 28 defines recycling as "the collection and separation of materials from waste and subsequent processing to produce marketable goods".[12] This definition rightly excludes any form of reuse. Reuse means continuing to use an item rather than destroying or reprocessing it. Refilling bottles, washing plates or passing on unwanted clothes are all forms of reuse. When a car is scrapped, the chassis and bodywork are *recycled*, that is to say melted down into raw steel; the engine or carburettor, however, may be salvaged or *reused* by being placed in another car.

The distinction between reuse and various forms of recycling could hardly be more basic, yet it is frequently undermined. In a detailed study comparing the environmental benefits of various packaging systems, researchers David Pearce and Kerry Turner choose to group recycling and reuse under the same heading, by means of a mathematical equation which allows no distinction between the performance of refillable bottles and that of recyclable bottles.[13]

Consumers may become confused as well. They are, of course, aware that recycled toilet paper is not the same as reused toilet paper. But when they are asked to "recycle" old clothes in a "textile bank", from which a proportion are sent to the needy

Ann Leonard/Greenpeace

Indonesian workers sorting US rubbish. The international trade in recycled materials is little more than the export of undesirable waste under another name. In 1991, 200 million pounds of plastic waste, collected by dedicated recyclers in the US, was exported to a score of Third World countries. The workers have to remove newspapers, clothing, metal and other trash as well as plastics that are either too contaminated or of such poor quality that recycling is not feasible. The owner of one Indonesian plastics recycling company estimates that up to 40 per cent of the imported waste is directly landfilled at local dumps.[14] These imports are lowering the price paid for local materials and threatening the livelihoods of over 30,000 scavengers and junk dealers.[15]

of the Third World, while the rest are reprocessed, the word becomes more imprecise. Local councils regularly refer to the "recycling" of durables such as office furniture, meaning their resale, while those who practise the business of what used to be called "salvage" now find it more advantageous to describe themselves as "recyclers". The confusion is arising because industry is keen to suppress the idea of reuse, whilst the environmental movement has failed to promote it.

Muck But No Brass

Recycling has been most successfully promoted in the so-called "packaging industry". Countless studies and reports compare the environmental effects of different recycling and waste management strategies for packaging. But the wildly differing criteria used to assess environmental performance — energy expenditure, volume, weight, and convenience — mean that almost any conclusion can be reached.

One salient fact does emerge, however: with the single exception of aluminium cans, recycling packaging waste above a token level can be expensive. Time and again we hear the same story: "There are more good economic and technical reasons against recycling plastics than there are for it"; "The lesson . . . is that recycling facilities can be very expensive"; There is a "£160 million a year gap between the price the reclamation industry is prepared to pay for reusable household rubbish and the extra costs to councils involved in collecting it".[16] The reasons are straightforward; the money spent collecting, transporting and reprocessing frequently make the recycled material more expensive than the original material.

Recycling is also economically precarious because as soon as the volume of collected material increases, the price it commands goes down. The situation is particularly acute in the US, where in 1991 most dealers stopped paying for green-tinted glass.[17] The US exports a surplus of over 6,500,000 tons of waste paper per year, much of it to Britain, thus lowering the price abroad.[18] Britain meanwhile, as long as it continues to import about 60 per cent of its paper products, will continue to have more waste paper than it can reprocess, which it will be obliged to dump or ship abroad at considerable expense.[19] An international trade in commodities implies the international transport of recyclable wastes.

That recycling is expensive does not mean that it is necessarily environmentally more damaging than other options. There may well be subsidies supporting the price of original materials, and there will be innumerable other uncosted externalities, too complex to assess. The financial cost of recycling generally comprises three factors: the energy, the plant and the labour involved in collecting, sorting and processing the material. Of these, energy and plant exact an environmental toll, while labour on the whole does not. Labour, however, is expensive; in their attempts to cut costs, recyclers will invest in specialized high-tech machinery.[20] Whether such mechanized systems are less environmentally-damaging than any other is anybody's guess. Not only is there an overabundance of information — the cloud of conflicting statistics that analysts call "a gross deficiency of data" — but there is also no agreement upon the criteria for environmental soundness.

Life Cycles

Let us, then, adopt a different perspective. What happens, in Britain, when a consumer in Plymouth, say, lobs an empty beer or soft drink bottle — with a resounding crash — into the bottle bank? The broken glass, now known as cullet, may be taken to one of four recycling depots at Harlow in Essex, Wakefield or Barnsley in Yorkshire, or Alloa in Scotland, a journey of at least 200 miles. At the depot the cullet will be melted down and mixed with raw materials to make new glass bottles and jars.

The use of a percentage of cullet in the manufacturing process allows considerable savings to be made in raw materials, energy and water. However, glass is heavy and the raw materials are cheap. "The somewhat modest energy benefit of using cullet is more than offset by its higher cost . . . This higher price tag for cullet stems from the transportation and separation costs associated with glass recycling."[21]

Molecules of our consumer's bottle have now been fused into a new "recycled" bottle. This bottle might then be transported 70

miles from the glass depot to Sussex to be filled with beer. From there it might be trucked another 200 miles to Shropshire, where it would be sold to another consumer, who would take it home in the car, drink it, and finally, after another car journey, toss it in the recycling bin, and the process would start over again. This is a "one-way" system, where the product manufacturer takes no responsibility for the future destination of the packaging.

Compare this odyssey with the typical life-cycle of the most popular form of reusable container in Britain, the delivered milk bottle. This bottle belongs to a dairy that in most areas collects milk from the local neighbourhood. The bottle of milk is delivered to the consumer's door at a distance of perhaps five miles from the dairy. When empty, it is rinsed and left outside the door to be collected by the milkman, and returned five miles to the dairy; here it is washed, using about five per cent of the energy needed to make a new bottle,[22] refilled with milk and the cycle restarts. This is a "two-way" system where the producer has an interest in prolonging the life of the bottle. On a national average, a milk bottle makes about seventeen journeys in its lifetime, though in rural districts it may be as high as seventy. Some small farm dairies are still using old style milk bottles, last made in the mid-1970s.[23]

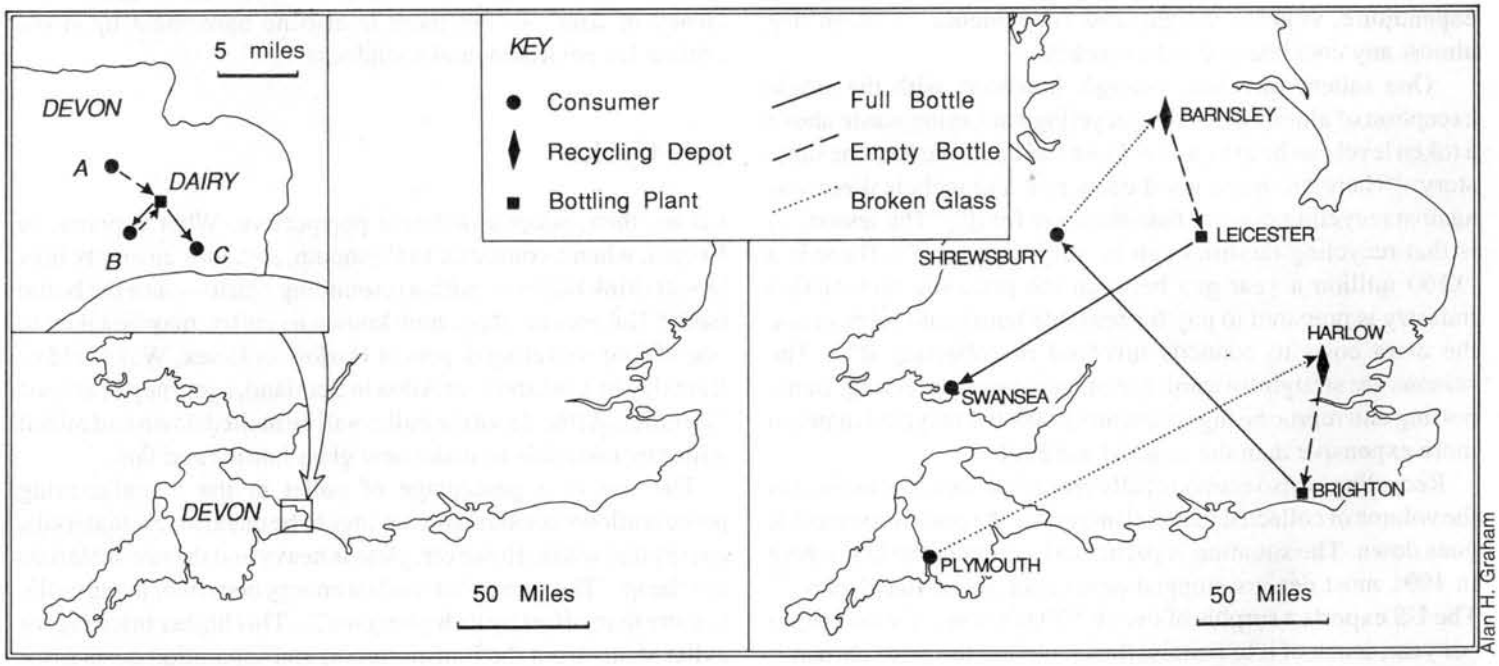
The significant comparison here is not between milk and other beverages. Before the large centralized breweries took over in Britain and introduced cans and disposable bottles, most off-premises beer was sold in returnable bottles. Nor are we simply comparing refilling with recycling. What we are looking at is two different distribution systems. The first, a long distance, centralized, "one-way" system, has the volume to warrant reprocessing (with the aid of recycling subsidies), but could not support the transport charges involved in carting whole bottles over large distances. The second "two-way" system, local and decentralized, can afford to carry bulky bottles over short distances (without subsidies), but does not have the volume to warrant an entire recycling operation. Which of these two systems is less taxing on the environment may be surmised by comparing the maps below.

Herein lies the crux of the dispute between reusable and recyclable packaging. Reusable containers, heavier because they are built to last, are best suited for a local distribution system, recyclable containers for a wider-based system. And yet the vast majority of the studies which compare different packaging systems take little or no account of the distances involved, and hence of the energy and resources used in transport. They may entertain as a variable the number of trips made by a container, or the degree of compaction that can be achieved for landfill purposes,[24] but one of the most critical variables — how far the material has to travel — is regularly ignored.[25]

Barriers to Trade

The reason for this omission is not hard to fathom. Any attempt to define or regulate the distance that a commodity or its packaging travelled would be an interference with free trade, and could not, in the modern scheme of things, be countenanced. Forcing (or subsidizing) every business to recycle creates a "level playing field" for any company large enough to compete on the long distance market; small "uncompetitive" businesses, unable to benefit from economies of scale, are likely to be squeezed out. Forcing every business to adopt weighty reusables, on the other hand, would give a distinct advantage to small, local and supposedly more inefficient businesses, and would be considered a form of "protectionism".

This can readily be appreciated by the ferocity with which industry has contested attempts to protect locally-based returnable bottle systems. In the mid-1980s, for example, the Republic of Ireland put forward a national ban on cans and PET (polyethylene terephthalate) containers for alcoholic drinks, but this proposal was quickly vetoed by the EC commission and forgotten.[26] In 1988, however, another small country, Denmark, was hauled up before the European Court of Justice. The international beverage industry complained that Denmark's 1981 law, which required all beers and soft drinks to be sold in



LEFT: The typical movement of a reusable milk bottle, through two consumer-to-consumer cycles. RIGHT: The typical movement through two consumer-to-consumer cycles of a hypothetical recyclable bottle in Britain. As the European free market expands the movement of recyclable materials will become increasingly transcontinental.

refillable bottles, was a trade barrier. "The court supported this view, but also found that the Danish law could be justified on environmental grounds '*as long as no alternative EC legislation exists which offers the same or a higher degree of environmental protection*'".[27]

This proviso reveals the unwillingness of legislators to recognize that the relative environmental merits of reusable and recyclable systems are dependent upon the distances involved. It is not impossible that some other country, backed up by an EC ruling, could present evidence purporting to show that over the whole of the EC a can-recycling scheme or a lightweight plastic bottle system would be environmentally more sound than a system which trundled returnable bottles back and forth over hundreds of kilometres. The Danes might retort that, whatever might be the case throughout Europe, within Denmark the returnable bottle was the most ecological. In this case, the European Court of Justice would be making a decision that had nothing whatsoever to do with the relative environmental benefits of reusable and recyclable systems — which are conditional upon distance — but was simply a blunt question of whether an international economy should have the right to enclose a local one.

A similar debate is unfolding in Germany, where the 1991 Packaging Ordinance has elaborated a system that "seems totally focused on recycling as the solution to the landfill crisis". "Packaging must be refillable *as far as is technically and economically feasible,*" whereas the Ordinance "does not extend the requirement of economic feasibility to the collection and materials reprocessing of packaging".[28] The ruling makes it compulsory for manufacturers, distributors and retailers to take back all consumer packaging and pay for its recycling or disposal — a two-way system. However, there is a let-out clause in the Ordinance which allows industry to organize an alternative system — the Deutches Duales System, or DDS — to which companies can delegate, for a fee, the responsibility for their waste. Industrial corporations have taken up this option with gusto, since it absolves them from the obligation to collect, transport, sort and reprocess their own waste, an obligation which would seriously undermine the competitiveness of long distance importers. Leading figures in the German packaging industry have accused the DDS scheme of devouring more energy in transport and collection than it saves through recycling but their comments have not diminished industry's enthusiasm for the scheme.[29]

However, at the last minute an amendment was pushed through by Bavarian members of parliament, placing a minimum 72 per cent quota for refillable bottles. "It is thought", writes The Alliance for Beverage Cartons and the Environment, (alias Tetra Pak), "that the quota was introduced as a result of pressure on politicians from small brewers in Bavaria. France, in particular, and the UK, believe that the measure discriminates against imported water and beer, and want the . . . law notified to the EC as a result."[30]

Once again, it is clear that the conflict between refillable and recyclable containers is, in essence, a conflict between local distribution systems and centralized international ones.

Subsidizing Supermarkets

The driving force behind the centralization of distribution in the last 30 years has been the supermarket system, and the phenomenal rise in packaging is linked to the rise of this system.

Hervé Prat/Silence

Conveyor-belt conditions in a plastics recycling factory in Dunkirk, France. The sorters are on a special work scheme for the unemployed.

"Supermarkets could not exist without packaging," says the Industrial Council for Packaging and the Environment (INCPEN). "The benefits and efficiencies of supermarket food retailing depend, at present, on a smooth and uninterrupted flow of produce from supplier to consumer, and with very few exceptions this is a one-way flow . . . Savings in the labour overhead are achieved by prepackaging at the factory instead of delivering in bulk." [31]

The packaging industry presents this radical change as the "housewife's" choice: "The British housewife is not compelled to shop at a self-service store . . . she can forswear the 32,000 self service food shops for the 75,000 counter service competitors."[32] Apart from the fact that these are 1971 figures (in a 1990s publication), and that there are now few high-street counter-service shops and almost none offering a delivery service, INCPEN ignores another crucial factor. When consumers drifted over to the "convenience" of supermarkets in the 1960s and 1970s, they were not asked to pay directly for disposal of the inconvenient packaging waste, since it was conveniently taken away by the municipal refuse services. Had these consumers been obliged to dispose of the packaging themselves, "in their own backyard", there is a high chance that they would have opted for a minimal packaging system with a considerable amount of returnable containers.

In effect, a long distance distribution system, based on economies of scale and minimal labour costs, took over from a more local system based on economies of energy and greater use of labour. It could do so, not because it was necessarily more efficient — the home delivery service operated by small shops was extremely efficient — but partly because a principal externality involved, the disposal of packaging waste, was paid for by taxes.

The supermarkets are fully aware that a return to refillable or returnable packaging will erode their competitive advantage: that when it comes to transporting bulky containers back and forth, the small local independent manufacturer has a distinct

advantage over the centralized national producer. And they are determined to preserve their position. When Friends of the Earth asked independent drinks suppliers about reusable bottles it received replies such as the following:

> "None of our take-home sales are made in refillable bottles. This is not a situation of our choice, it simply reflects the demand from buyers in the supermarket industry."
>
> "We have always found returnable bottles to be by far the most convenient and economic. Unfortunately our policy has meant that we have never been able to sell our products through supermarkets."
>
> "Until supermarkets do not constitute the majority of sales, there will be no change."[33]

Subsidizing Recycling

Although they fear a return to reuse, supermarkets are by no means averse to recycling, provided they themselves do not have to cope with the returned packaging — in other words, provided that it is a one-way flow.

However, because recycling is uneconomic and recycled materials must be sold at a loss to manufacturers, landfilled or dumped in the Third World, the recycling procedure must be subsidized — and nearly always is, either by industry itself or by government. The British Plastics Federation, for example, ploughed £200,000 into a project in Sheffield which spends an average of £150 to collect a tonne of plastic bottles which it sells for £50 to £100.[34] A survey of 17 towns and districts in the US which operated "successful" recycling schemes showed that none of them came anywhere near to covering their costs through the sale of recuperated material, and several of them failed to sell anything at all. All of them were subsidized by local or State taxes and grants, except for one town which exacted a mandatory removal charge. No indication is given in the report as to how much of the recyclable material finally found its way into a new product, and how much was eventually incinerated, landfilled or sold abroad.[35]

In the UK, the government offers subsidies, called Recycling Credits, to those who collect recyclable materials. Recycling Credits are an intriguing form of market distortion since they are presented as being precisely the opposite. They are paid to recyclers on the assumption that recycling relieves the municipality of the burden of disposing of the material as refuse, and are supposed to reflect the value of this relief (although the current rate of about £14 per tonne is clearly inadequate). However, municipal waste collection is itself a market distortion, since it relieves manufacturers of the external costs of disposal. Recycling Credits simply confer upon recyclable materials the subsidy that is already allocated to throw-away goods — at the expense of refillable bottles, reusable bags and baskets, washable plates and anything else that is not "disposable".

As fiscal mechanisms, Recycling Credits and similar subsidies are fundamentally flawed. Any attempt to apply them consistently to commodities or activities that reduced waste would end in absurdity. It might, it is true, be possible to subsidize refillable milk bottles. But then why not, by the same token, subsidize reusable shopping bags or china cups? And what about solid dustbins, non-disposable razors, fountain pens, metal paraffin cans, tobacco pouches and washable nappies, in fact anything that provides a durable alternative to a disposable and lightens the burden of waste upon the community? And, for that matter, what about those who choose to do without a certain commodity altogether — are they not also entitled to a subsidy?

A Pariah Commodity

The contradictions inherent in recycling subsidies bring to the surface the fundamental question that is rarely, if ever, confronted in the mountains of learned papers devoted to the subject: What, exactly, is packaging? Why is a plastic shopping bag regarded as "packaging", while a handmade shopping basket is not? Why is a plastic cup "packaging", but not a Wedgewood?

The present use of the word "packaging" dates from the 1930s, though it does not seem to have acquired its full meaning until the 1950s.[36] Before this century, the concept did not exist at all. Baskets, bags, sacks, pouches, tins, boxes, pots, barrels, gourds, pitchers, preserving jars, bottles and vaporizers were not forms of packaging, but tools — useful devices made with pride, bought with circumspection and guarded with care. Before the arrival of metal cans, the only throwaway products were those made of cheap readily-available biomass, which melted back into the environment when discarded.

The only definition of packaging that bears any scrutiny is that it is something disposable but persistent— a manufactured product so cheap and unloved that it is not worth the inconvenience of keeping it; but that when jettisoned, obstinately refuses to disappear. If discarded packaging — litter — blended discreetly back into the environment like beanpoles, banana-leaf plates or the falling leaves of autumn, we would not have to bury it and it would not pose such a problem. If, on the other hand, packaging were costly and crafted, we would not be at such pains to eject it from our homes. In neither case would there be a need for a special word.

Packaging is a pariah commodity no one wants to keep. It is the brainchild of an economic system that has to keep producing more and more to maintain equilibrium. Obsolescence is crucial to the survival of capitalism and packaging is the most refined form of planned obsolescence yet devised.

A Licence to Consume

It is to perpetuate the ethos of disposability that large corporations have embraced the recycling scenario with such enthusiasm. It does not matter to industry whether its raw materials are mined from the earth, stripped from forests or regurgitated at considerable expense from the waste stream. As long as there is a continual and ever-expanding throughput, the consumer is consuming and business is healthy. Recycling offers business an environmental excuse for instant obsolescence and consumers an environmental excuse for increasing their consumption of it. Listen to British Petroleum (BP) describing their can-recycling fruit machine, Crusher the Can-Eater: this "strapping six-footer with shoulders to match, combines the fun of a one-armed bandit with the serious business of recycling aluminium. Every used can he swallows sets his tumblers turning with the chance of a free drink on winning lines . . . His massive appetite will be satisfied only by a regular supply of used drinks cans". Crusher, of course will not only stimulate the drinks and aluminium industries — he will bring dedicated motorized recyclers to BP petrol pumps.[37]

But the danger of singling out recycling as a sustainable strategy goes beyond providing an environmental licence for planned obsolescence. Since recycling is advocated both for recognized disposables and for items that are still regarded as durables, it threatens to blur the distinction in the public mind between the two.

The rationale behind this confusion is laid bare in an advertisement headed *The Astonishing Apple Macintosh Summer Recycling Offer*. "Tired of staring at the same old screen every morning . . . Now the message is: don't bin your old technology . . . You can easily trade up to Apple and save money on the way . . . To complete the package, companies like Lotus, Word Perfect and Insignia are joining us with their special offers".[38] What was known until recently as "hardware" is taking on the role of recyclable packaging for a kaleidoscope of consumable software. Computers, redundant after four or five years because their parts are withdrawn from sale, are joining the ranks of items such as disposable razors and throwaway cameras. The distinction between durable and disposable, itself a relatively young concept, is being rapidly eroded. In the future, everything will be "recyclable".

The Wheels of Industry

The most determined attempt to promote the durable as recyclable is in the beleaguered motor-car industry. Sales have been hit by the recession, the Northern market is "mature" and a new strategy is required to boost turnover. The industry has followed the lead of BMW, which recently started advertising "the 80 per cent recyclable car". This claim is sheer puffery; cars are, or were, 80 per cent metal and scrap-dealers have been recycling them for years.

In October 1992, BMW opened "the UK's first car recycling plant", and plans three in the US.[39] Germany's environment minister, Klaus Töpfer, has announced draft plans to force manufacturers to take back cars at the end of their lifespan. "In future, anyone who produces and markets vehicles should also be made responsible for their disposal."[40] The implications of Töpfer's proposals are disturbing. The automobile manufacturing industry, already controlled by a handful of firms, could increase its vertical control over the secondhand parts market. Some vehicle dismantlers fear that they may be put out of business. "If the motor industry got a closed shop," says a representative of the UK Vehicle Dismantlers Association, "they could do anything. They could hold back secondhand parts, so that they sell more new parts."[41]

Manufacturers could also dominate the secondhand car market, by encouraging "recycling" trade-ins of the kind pioneered by Apple. It is not difficult to imagine cars being deliberately designed, in the name of environmental efficiency, to dysfunction after ten, eight or even six years, so that they can be traded in at the proprietary recycling centres, melted down and reforged into new models. Thus, in a saturated market, may the wheels of industry be kept turning.

Bricks and Mortar

This contrived "demolish and recycle" mentality is likely to spread through the entire industrial fabric. The building industry, less centralized than the motor industry, has been slower to respond to the call to recycle, but it will not be for long. Recently I asked a press officer from Shell Petroleum why two smart and apparently sound petrol stations in my home town were being demolished and then rebuilt. He replied that there were structural weaknesses in the buildings. One of them was 20 years old, whereas the average life of a Shell petrol station was nearer 15. Besides, he added, a proportion of the building materials were being "recycled".

The salvage of building materials is nothing new. Upon demolition, recuperable items such as iron girders, timber, bricks and stones have traditionally been cleaned and reused. Many of the other materials, however — such as glass, plastic, mortar, concrete, cable and felt — are unusable and fit only for hardcore or recycling.

From an environmental point of view, it is not so much the level of recycling that is critical, as the projected lifetime of the building. Shell's unsightly high-tech edifices, costing hundreds of thousands of pounds, have a life expectancy rather less than

A 25-year-old Morris Minor, repaired by the Morris Minor Centre of Bath.[42]

Durable Cars

A majority of cars on British roads are bought secondhand by private users. Yet it is companies and a rich minority preoccupied with prestige and performance who dictate the market. Secondhand buyers, more interested in reliability, have no choice other than to buy what the wealthy bought five or ten years previously, and have to battle with an increasing array of electronic gadgets and disposable "sealed unit" car parts.

Nevertheless, there has been some successful popular resistance to this trend. The Morris Minor, designed for economy and ease of repair, and discontinued over 20 years ago, is still common on the roads of Britain. Its fuel consumption of over 40 miles per gallon is above the present day average and could doubtless have been improved if the original manufacturers had continued production. Parts for Morris Minors are now available from The Durable Car Company of Sri Lanka, where they are handmade by a local workforce. The company plans to produce a new durable car and van, based on the old Morris Minor design.

Such "reusable" cars, whose repair and refurbishment over 30 years or more is labour-intensive rather than energy-intensive, are in the long run cheaper and more environmentally-friendly than their slick "recyclable" replacements. Designing cars for short life-cycles and recyclability will make consumers dependent on expensive, over-capitalized production lines.

Jimmy Holmes/Environmental Picture Library

A dealer of reusable containers in India. In some countries the deposit on a bottle of cottage industry soda can be five or ten times the value of the beverage inside.

that of many Third World buildings built out of biomass, and a fraction of that of a Victorian stone warehouse. The latest generation of multi-million pound office blocks are little better. Rob Harris of Stanhope property developers says that his company is constructing buildings in London with a lifespan of 25 years.[43] In Florida hotels are scrapped after as little as seven years. When the developers are finally challenged on the environmental effects of this short-term planning, we will doubtless start hearing about the recycling of building materials.

The Future Looms

We may also be hearing more about the recycling of clothes. Since the early days of the industrial revolution, the textile industry has been subject to gluts, and it has traditionally relied on fashion to stimulate demand. As production increases with the development of eight-metre-wide superlooms and the proliferation of factories throughout the Third World, the industry will become more reliant upon the promotion of ever shorter life-cycles for its products.

In the long run, the body-packaging industry is likely to mimic the food-packaging industry. If throwaway and recyclable tableware can be marketed as more environmentally friendly than the washable alternative[44], why not recyclable bodywear? So far, the industry's attempts to market unwashable textiles such as paper dresses and underwear have not met with great public acceptance (the exceptions being disposable nappies and paper handkerchiefs). But if, in the future, the cost of a mass-produced jacket drops to little more than the cost of getting one dry-cleaned, consumer attitudes may well change. It may not be difficult, given the public appetite for recycling, for industry to convince consumers to forget laundry altogether and simply drop their dirty clothes into the textile bank, to be respun, rewoven, retailored and retailed as an impeccably hygienic and up-to-date garment.

A Culture of Durability

Such a system might sound like idle science fiction, were it not for the fact that it already exists for tableware; and that it is a challenge to conceive of a free-market strategy that would allow industry to go on indefinitely pumping out new goods with a semblance of sustainability. It is easy to see why corporate planners would be keen to move down the road of recyclability. It is harder to understand why so many greens should elevate recycling to a position where it is used to promote environmentally exhausting activity and justify the production of shoddy goods.

This is not to argue against recycling in any form. When a product comes to the end of its useful life, obviously it makes sense to reuse the materials. But this does not mean that industry should be allowed to use it as a justification for shorter and shorter life cycles. Overconsumption cannot be remedied by recycling waste.

There is, after all, the option of a culture of durability rather than of throughput. Though reusable packaging is being forced out of the market in Europe and the US, it is still the dominant system in many parts of the world. Even middle-class people "cannot afford the luxury of waste . . . They reuse whatever they can and are loath to discard bags, jars, tins or boxes."[45] In India, "fast food" is sold in an ingenious system of portable stacking metal bowls. Throughout the South, secondhand cars and buses abandoned by wealthy countries are given a new lease of life, and clothes do not become rags until they are past repair. Through practices such as these, Third World and Eastern European countries produce a fraction of the waste that Northern countries do.

With the "liberation" of Eastern Europe and the spread of the "free market" under the wing of GATT, these sound systems are under threat. Some newly-industrialized countries, such as South Korea, have a waste problem that rivals the North's. Supermarkets are proliferating in Bangkok and Bombay; throwaway plastic cups are beginning to litter Indian railway stations; and in Hungary Tetra-Pak, partly financed by the World Bank, recently opened a disposable carton factory that caused the country's deposit bottle system to collapse in a matter of weeks.[46]

Is the rest of the world destined to go through the same cycle as the North: amassing insupportable surpluses of trash for which it has to devise ludicrous, uneconomic and environmentally dubious methods of recycling, so that transnational manufacturers and supermarkets can reinforce their enclosure of markets? It is time that the environmental movement in the North, instead of concentrating on the suspect, third-best solution of recycling, took as its model the reusable systems that are still working in other parts of the world.

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Local Initiatives in Southern Mexico

by

Jutta Blauert and Marta Guidi

Threats to natural resources and local livelihoods, either from environmental deterioration or outside intervention, can trigger concerted community action — illustrated by several local initiatives from Indian communities in southern Mexico. For such communities, ecological deterioration is only a symptom of a much wider crisis and has to be tackled as such.

The municipality of San Juan Mixtepec lies where the highland and lowland regions of Mixteca in north-west Oaxaca meet, some of the most eroded areas in Mexico. It encompasses 35 villages and has long been the home of a Mixtepec Indian community, today comprising 14,000 inhabitants, linked by kinship and linguistic, religious, political and economic bonds.

Since the colonial period, the relationship between local peasants and their environment has changed radically, the traditional subsistence and exchange economy having been transformed into an extractive one for the benefit of Mexico City and Spain. Since the middle of this century, the relationship has deteriorated still further because of the community's increasing dependence on industrial products. To produce a marketable surplus of maize and beans, the San Juan Mixtepec peasants abandoned plot rotation, cut down forest to expand their farming area, and started in the late 1960s to use chemical fertilizers and pesticides. To widen their sources of income, they also started to raise more sheep and goats which graze freely on communal land.

The consequences of such changes in land use are now clear: the soil on the hillsides has been washed away, the volume of water in the rivers has decreased and forest cover is depleted. Today Mixtepec, which was a relatively fertile area 40 years ago, is poor and dry with only 3.6 per cent of its land suitable for agriculture. The community still depends primarily on farming, but almost all the cropped area lies on steep eroded slopes, thinly covered with exhausted soils which are now saturated with nitrate; the land is barely productive, even with applications of fertilizers and pesticides, still regarded by many as "magic chemicals". Each year, more forest is burnt to turn the land into new fields.[1]

The most common Mixtepec response to the resulting poverty is illegal migration to the US — the area has one of the highest migration rates in the country. Migration, however, increases the community's consumption of imported goods, especially status symbols such as cars, electrical goods and North American clothes. Moreover, because it is mainly women who remain in the villages, migration increases their already heavy workload.[2]

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Building Their Own Solution

A long history of unsuccessful public sector "development" projects in the region has made the Mixtepecos sceptical of any new proposals intended to integrate them into the mainstream.[3] For them, "modernization" is linked to increased structural inequalities between Indian peoples and the centres of decision-making.[4] Indeed their "participation" in past projects has been nominal; they have been more or less forced to accept the technical "solutions" to environmental degradation and poverty imposed by city-based outsiders — solutions which took no account of Mixtepecos' perception of farming or conflicts within the community.

In September 1986, however, a group of concerned teachers and returned migrants were elected to the municipal authority. In association with with the Comité de Maestros (an organization of Mitxtepecos teachers) and the Comité Voluntario (an organization of returned migrants from California, particularly conscious of the importance of restrengthening communal self-identity and maintaining group cohesion) and with the collaboration of "outside" researchers, they put together a proposal in early 1987 to address San Juan Mixtepec's socio-economic problems. The project had a twofold purpose: to address environmental and production problems and to recover those cultural aspects most directly linked to communal identity.

The focus was to be on combining traditional agricultural knowledge with alternative technologies that were simple, low-cost and adapted to the local context. Farmers themselves would choose, apply and evaluate technical alternatives which they considered suitable to their situation. Above all, the project would respect the Mixtepecos' own social organization, their concept of time and their capacity to make their own decisions. From the outset, it was a central objective to demonstrate the feasibility of developing a small project which avoids as much as possible the "invasion" of outside specialists (whether from non-governmental organizations or state agencies) in the communities.

Small Beginnings

It took over a year for the project to get underway, owing in large part to negative experiences with previous development projects and conflicts between the upland communities and the central village.[5] At first, activities focused primarily on testing and applying simple techniques of soil conservation and reforestation. So as to gain a better grounding in these techniques, those

involved decided to start work in early 1988 with only a few peasants in a few communities.[6] Word of mouth, however, ensured that the first small successes became rapidly known throughout the municipality. By 1990, numerous activities were being implemented in 20 localities. In most cases, it was the communities themselves which approached the project to arrange joint activities.

Today, the project is working in three main areas: conserving the environment and improving agricultural production; training "health promoters"; and setting up a producers' cooperative.[7]

The International Atlas (1991) Chicago: Rand McNally & Company/Routledge

Environment and Production

Mainly native tree species have been planted to reforest communal land, but in some cases, the peasants decided to combine these with fruit trees; more than 500 fruit trees have been planted by families from eight villages. The work is done through *tequio*, the traditional form of collective work.

To support reforestation, tree and horticultural nurseries have been established in four communities. Besides their educational function, these nurseries help reduce dependence on government institutions. Many families have begun small nurseries on their own plots as well. The nurseries also serve to encourage the use of organic fertilizers and biological pest control.

With vegetables and fruit trees from the nurseries, both communal and family gardens have been established. Each community decides independently how labour and produce from the forests and gardens are distributed. Mostly tended by women, the gardens have not only stimulated confidence in local agricultural knowledge, but have also increased women's participation in discussions and meetings. Since late 1989, beekeeping has been started up in two communities, primarily on the initiative of women.[8]

Building contour terraces with ditches and protective or reinforcing fences has had less impact than reforestation. It requires three to four adults to work eight days to build terraces on a quarter hectare plot, but, during the dry season, labour is short because 90 per cent of the men, and many women, go to work in the US. However, the increased yields from the first terraced plots have inspired other farmers to build them on their land.

Local Health Promoters

As a first step in an overall integrated health programme, the project has trained interested villagers as "health promoters" through courses and workshops, focusing on the recovery of communal knowledge about medicinal plants and traditional healing practices.[9] The promoters are trained to diagnose and provide basic treatment for the most common illnesses in the area. They can now prepare tinctures and syrups and have started gardens for medicinal plants. By taking part periodically in regional meetings of traditional doctors, they not only enrich their knowledge, but also have a chance to exchange experiences and strengthen their self-confidence.

Creating a Cooperative

Setting up the cooperative was a slow process. Previous attempts to set up an agricultural cooperative had failed because of in-fighting and poor organization; many villagers were unenthusiastic, if not hostile, to the idea of communal enterprises because previous joint enterprises, such as raising fish, goats and vegetables, had ended up as individual responsibilities. The project therefore decided to run intermittent training workshops and courses, combined with informal discussions, at the same time as giving encouragment and assistance to those local people who were interested in forming a cooperative.[10] In June 1989, the first formal meeting was held of the Yosonovico Cooperative of food producers, made up of 11 local farmers, eight men and three women. Agricultural products and honey are now produced on a small scale, both for consumption and sale at regional markets. Cooperative members contribute minimal fees, a plot and their work. Two cooperative members take part in regional meetings of peasants' cooperatives in south-eastern Mexico, an exchange which increases the self-confidence of the cooperative members.

A Small-Scale Project

The project has had its ups and downs. It has often been necessary to readjust activities as circumstances change, for example, due to conflicts among the communities or increasing migration. It has required much effort for the project to maintain itself as an independent entity with contacts and links with different non-governmental organizations and governmental agencies without being subordinate to any of them; and it has been difficult at times to gain external financial support. In spite of these problems, more people have gradually become involved with the project and farmers are slowly taking over more organizational responsiblites. From the beginning, the project was to be evaluated not according to predetermined time limits or conventional cost/benefit terms, but according to its "appropriateness" for the Mixtepecos.

However, it would be unrealistic to expect to obtain spectacular results in such a short time; the problems are too complex and deep-rooted to be resolved overnight. Nonetheless the San Juan Mixtepec project shows that small initiatives can be effective, not only in solving practical problems but also in increasing opportunities for people to take their lives into their own hands.

"If they oppress us with the word 'Indian', with the word 'Indian' we shall free ourselves!"

The communal land of Santa Fé, not far from the Pacific coast of Central Mexico, amounts to some 5,550 hectares, to the extreme west of Purépecha territory, which makes it vulnerable to incursions from outsiders. In November 1979, we decided to take action against the cattle breeders from nearby Quiroga, who had been driving their cattle to graze over 700 hectares of our land for several years. As is our custom when it is a question of safeguarding common property, the committees responsible for the different sections of our community organized the rounding up of the offending cattle. More than 2,000 communal farmers took part in herding the animals, which were not to be given back to the owners until they had paid rent for pasturage.

The reaction of the cattle breeders was swift and bloody. The farmers were ambushed by *guardias blancas* (armed guards) and by the gunmen of local chiefs in Quiroga who murdered two of our farmers, while nine more were injured in the shooting. Not only did the wounded not receive medical treatment, but they were put in prison, together with others from Santa Fé.

This outrage stirred the consciousness of our community and helped reactivate our communal organization. Here the role of women was decisive. It was they who braved the bullets to go and pick up the bodies of the dead men and, when the other menfolk were persecuted and had to go into hiding, it was the women, together with the children, who took over the organization of the committees and assemblies.

fenix no. 00 1990/Friend of Ideas and Action Foundation

Because the local authorities were clearly on the side of the aggressors, we felt we had to mobilize ourselves to obtain justice. Our assembly decided to organize a series of marches and meetings, during which we received a lot of support from other peasant and worker organizations in the region and beyond. We also staged a sit-in for 32 days in front of the government building in the State capital, Morelia. This was finally broken up by firemen and their hoses, but not before we had obtained at least some of the demands outlined in our petition: freedom for the prisoners, compensation for the relatives of the murdered men and recovery of the property that had been encroached upon.

However, the rest of our claims were ignored. We decided to change our tactics and convene a national meeting, to be held in Santa Fé, of rural organizations. It was attended by no fewer than 30 rural organizations, from various states in the country, and it ended with a march-cum-meeting. Again, women played a key role in the community organization and they now constitute the right arm of the peasant movement.

We in Michoacán have now formed our own group, the Unión de Comuneros Emiliano Zapata (UCEZ) so that we can defend our communal land better. UECZ now represents 60 communities in our state.

During the eleven years of our struggle, we have learnt a lot from all these experiences and we realize the importance of reinforcing our culture. Now the Purépecha communities use their own language to communicate with each other when appropriate. We use our music when we are marching, to give us courage in difficult moments and we sing our *pirecuas* (ballads) in which we recount our struggles. Our artisans print news-sheets to circulate information about what is happening.

We also use drama, with our farmers themselves as actors, to spread the word to other communities, while a film showing our struggles has been shown all over the place. So that we can commit these events to our collective memory, we make mural paintings of these events on the walls of our hospice.

Of course it is not easy; there have been many problems. Along the way, a number of people have abandoned the struggle and others have fallen victim to corruption and manipulation from outside. But our original aim, to be in control of our own destiny, remains the same.

We see now that one of our challenges is to come up with an alternative, integrated programme which enables us to bring about a change that is based on practical reality but in accordance with our culture. This can only be done by the communities themselves. At the moment, everything is planned from the viewpoint of those in power, who use methods of control that do not take true development into account.

But we cannot act in isolation. 1992 is the celebration of the so-called "discovery" of the Americas by the Spanish *conquistadores*. This event provides an opportunity for ethnic groups throughout the continent, who have suffered so much during these last 500 years, to start formulating alternative plans for their own survival, contributing another vision of the world to make it more just and human.

Crescencio Méndez is a member of the Purépecha community of Santa Fé. (Extracted from *fenix* no.00 1990)

Activism in the Chimalapas and Mixe

To the east of Mixtepec, the Union of Indigenous Communities of the Northern Isthmus (UCIZONI) is addressing similar issues to the San Juan Mixtepec Project, but on a broader front. Acting as a support group to several Indian communities in the lowland Mixe and Chimalapas regions in the south-east of Oaxaca, the Union has gained a reputation for defending communities affected by logging and human rights violations. By the mid-1980s, it was in contact with some 30 communities over four municipalities in the Tehuantepec Isthmus between the Gulf of Mexico and the Pacific, its activities ranging from holding meetings with government agencies to direct action.

Drawn together to oppose the invasion of their lands by loggers, settlers and cattle ranchers over many decades, the different Indian communities of the lowland Mixe and the largely Zoque and Zapotec villages of the Chimalapas region have a long tradition of resistance.[11] Direct action by Chimalapas communities against illegal loggers and ranchers in the region, which accounts for one-fifth of the two million hectares of tropical forests remaining in Mexico, became commonplace in the 1970s as local people blockaded roads and destroyed machinery.

In 1986 the logging in the Chimalapas came to national attention: in July of that year, representatives of the Chimalapas communities met with the governor of Oaxaca to protest against the logging by, among others, the brother of the governor of the neigbouring state of Chiapas, but no action was taken. In December 1986, local activists ("Chimas") detained ten men, whom they accused of being illegal loggers, land invaders, drug traffickers and cattle thieves, among whom were the Chiapas governor's brother, his nephew and four gunmen. The Chimas burned the men's centre of operations in the forest, confiscated or destroyed machinery and took the men to the municipal offices in Santa María Chimalapas where they held them as security against their demands. These included compensation for illegal logging of over 80,000 hectares of forests, the end to further land invasions from Chiapas and elsewhere, and the termination of logging licenses. Government representatives, police, helicopters and army units from Chiapas descended on the village, quickly agreeing to implement a 1967 presidential decree recognizing Indian land rights to over 460,000 hectares of communal lands on the state boundary between Oaxaca and Chiapas. Four days later, after a promise was given by the new governor of Oaxaca to meet his Chiapaneco counterpart, the Chimas released their hostages.

Following the December 1986 "kidnappings", the communities of the Chimalapas continued to negotiate with various authorities, publicize their situation and campaign, in alliance with organizations such as UCIZONI and the national federation of environmental organizations, the Pacto de Grupos Ecologistas (PGE).

UCIZONI has also coordinated activities to pressure agencies such as the Ministry of Agriculture — in one instance, by occupying the Ministry's offices in May 1988 — and to denounce cattle ranchers, *caciques* (local political strongmen) and state forces who burn forests and crops, and detain, beat and torture villagers. Connected with this, the Union provides legal aid and runs various projects concerning women's rights. It is also involved in agricultural production by arranging workshops on traditional and non-traditional low external input agriculture and conducts economic studies in support of other activities.

Cooperation for Development

In 1987 representatives from the Chimalapas, environmentalist groups, advisers and government representatives met in Oaxaca City to discuss the long-term future of the region. Together with the Chimas, UCIZONI presented detailed studies of current problems in the area — ranging from agrarian conflicts to cattle ranching, marijuana cultivation and drug trafficking to road and dam construction — and recommended a new regional development strategy.[12]

In February 1989, several groups built on this to propose a programme for communities, academics, state agencies and environmental groups to work together on ecological restoration and agro-forestry initiatives which would be controlled by the communities.

Yet these initiatives will not bear fruit until land disputes are finally resolved. In September 1991, eight communities from the border area between the states of Oaxaca and Chiapas formed a Negotiating Commission on Agrarian Issues (CAN) to resolve their 25 year history of violent conflicts over mutual land invasions and access to resources. They proposed that outstanding land titling be finally settled by the state agrarian agency, but that no new settlement be permitted, nor land titles granted for which a presidential degree has not been given. Referring to the uncertain boundary between the two states, a PGE spokesperson said of the proposal: "Each case of land titling conflicts needs to be resolved, but villagers don't care whether their land is in Chiapas or Oaxaca. What matters is that the agrarian and social problems get solved."[13]

Following on from this, CAN proposed establishing a locally-defined and locally-controlled biosphere reserve, bringing together some 30 *ejidos*[14] and 50 villages in the 250,000 hectare area. This initiative has been supported by environmentalists and scientists based in Mexico City and adds a new political dimension to the alliances between Indian communities, grassroots support organizations, environmentalists and academics. Central to such a "protected productive area" is control over local resources in a way that ensures not only environmental sustainability but also political control and economic development according to locally defined criteria.[15]

In supporting initiatives such as these, UCIZONI, like other activist groups, believes that self-determination by the communities has to be fought for as much as the land has to be defended. This implies recuperation of and control over lands and natural resources, over local and regional decision-making processes and over freely-elected local authorities. It includes education in native languages, revaluation of local culture, and choice over which technologies are adopted by communities.[16]

The contacts that the UCIZONI has with NGOs working in the agricultural and forestry sectors, and with grassroots support organizations, and its informal social networks with members of the present regional government have made most of its activities and publicity possible. With the government now committed to increasing "participation", a new space for activism has opened up which UCIZONI is exploring openly but with care to avoid cooption.[17]

The UCIZONI is an example of how the interrelated problems of race, class and environment can be — and are being addressed — by local people.[18] So far the UCIZONI has not relied on explicit alliances with political parties but instead has tried to negotiate the maximum possible allocation of resources and concessions from regional and national governments, while

insisting on maintaining its independence. Whether the organization can grow further and maintain a democratic structure remains to be seen: there is always the risk that it may coopted by new manipulative indigenous élites or the government.

Framing the Future

Neither the UCIZONI nor the Mixtepec project are as far-reaching as their participants would wish. Yet they differ from previous committed but "top-down" projects in that they are responsive not only to the variety of local conditions, but also to the different communities' perception of their immeditate problems and how they may be solved.

These projects, whether cultural, agricultural or in the defence of human rights, make clear that local people in Mexico do not perceive their crisis to be only "environmental" in the Western sense. Whereas ecological factors such as soil erosion and deforestation are clearly important, it is falling production, lack of credit, a disadvantageous marketing system, repression, insecurity of land tenure and threatened cultural environments which are their main concerns. For these local movements, the isolation of problems and concentration on single solutions is simply not a viable approach. To them, ecological deterioration and falling living standards are only symptoms of a wider crisis. UCIZONI and the San Juan Mixtepec project are helping them to challenge a system that has worked to their disadvantage and to frame their own future.

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5. The support given by the new local authorities was decisive in getting the project started. The collaboration of the Comité Voluntario was extremely important in letting the upland communities know about the proposal.
6. In early 1988, some peasants and the new authorities decided to form the Comité pro-Projecto Mixtepec to support the work of a small team (an anthropologist, an agricultural technician and an extension worker) who coordinated the implementation of the project.
7. Some assistance is also given on land tenure issues.
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9. The health programme was coordinated with Mexican non-governmental organizations with experience in rural health work.
10. Courses were given by "Apoyo y Asesoría AC", a Mexican NGO specializing in this kind of work.
11. González Martínez, A., *Relación de Santa Maria Chimalapas*, Casa de la Cultura, Oaxaca, 1986.
12. *Ecologia, Politica y Cultura* 3: 1987; UCIZONI "Contra los enemigos del bosque", *El Gallo Ilustrado*, 20 March, 1988, pp.2-4.
13. *La Jornada*, 1 September, 1991.
14. *Ejidos* is an officially recognized agrarian community, holding usufruct rights to the land (secured by agrarian law after the 1910-1917 revolution but, since 1992, disenfranchised under the reform of Article 27 of the Constitution). Until 1992, neither *ejidos* or Indian lands could officially be sold, although this happened frequently. Now, however, such sales are allowed and even encouraged.
15. Because the region encompasses highlands and lowlands, Chimalapas has varied ecological systems and a wide diversity of species, and is thus considered by conservationists to be one of the most significant tropical areas in North America. So far, Mexico has paid scant attention to the local communities which live in protected areas, conservation strategies focusing only on botanical criteria.
16. Díaz Gómez, F., "Principios communitarios y derechos indios", paper presented to the 46th International Congress of Americanists, Amsterdam, July 1988; Martínez Luna, J., "Penetración de captial y reproducción comunitaria", MA in Anthropology, University of Veracruz, 1984.
17. When the government handed over the parastatal Coffee Institute to coffee-producer organizations, UCIZONI obtained government funding for the construction of a coffee processing and packaging plant, to be administered by the organization. UCIZONI considers this acceptance of government funds as necessary in securing income and infrastructure for community coffee and timber production urgently needed in the region. It refutes the criticism that it is cooperating with the new federal government in a policy of *concertación*, a cooption measure which the UCIZONI secretary general believes they can avoid. *La otra cara de Mexico* 10: 1989.
18. The advice of outside specialists (in legal, agro-forestry and communication spheres, for instance) has been of practical use and has helped establish contacts with national and international organizations and the media.

Banana Bonanza

Multinational Fruit Companies in Costa Rica

by Scott Alan Lewis

John Vandermeer

One of many new banana plantations in the Sarapiqui Valley , on Costa Rica's Atlantic coast. Sarapiqui is already girdled by a large Standard Fruit Company plantation which has attracted migrant labour into the area. The only union for banana workers in the area, Solidarista, is funded by the CIA-inspired Association for Free Labour Development and abjures strikes and collective bargaining, preferring to pacify workers with clubhouses and soccer fields. When, in periods of slump, workers have been laid off, they have moved into the surrounding forest — the level of forest cover in the valley has declined from 90 per cent to 25 per cent since 1950. Some 850 US Army Corps Engineers have been enlisted to build roads and bridges in the area through a programme called "Bridges for Peace", known locally as "bridges for bananas". Information from John Vandermeer et al.[15]

Bananas are booming again in the Central American nations of Panama, Costa Rica, Honduras, and Guatemala — once known as "banana republics". The US fruit companies Dole, Chiquita (formerly United Fruit) and Del Monte that gave these countries their sobriquet still own many thousands of hectares and in the last few years they have started to expand. The commercialization of Eastern Europe and the projected removal of trade barriers in the EC (see Box p.289) have improved prospects and increased market prices.

Costa Rica is the leading banana exporter in the region and second in the world, after Ecuador, producing 76 million 40 pound boxes of bananas in 1990.[1] To cash in on the boom, the Costa Rican government offered tax breaks and other incentives for plantation expansion worth over $3 million in 1989 alone.[2] The area under plantation has risen from 20,535 hectares in 1985, to 32,000 and is expected to reach 45,000 hectares by 1995.[3] Banana exports from Costa Rica were valued at over $278 million dollars in 1989.[4] But like the bananas, the profits are exported overseas: a study of the industry in Honduras concluded that only 16 per cent of banana profits stay in the producer country.[5] As profits vanish abroad, the economic dream of easy money from bananas is turning into an ecological nightmare.

Over the last 40 years, Costa Rica's lush forests, home to more than 2,000 tree species and 12,000 plant species, have been ravaged by cattle ranches. But as Costa Rica's beef industry entered a slow decline in the mid-1980s, the expanding banana industry has taken over as the main agent of deforestation. In some cases the forest is felled and burned to clear land for plantations; in others, *campesinos* — rural subsistence farmers — are persuaded with bribes, threats or violence to leave their already cleared land in order to make way for expanding plantations. These displaced campesinos either go to work on the plantations or move into the rainforest to clear more land to farm. Displaced workers who choose to work on the plantations, rather than move to the cities or the rainforest, often find their communities disrupted, their families separated for months at a time and their traditional ways of life lost forever.

"The banana industry is one of the principal environmental problems in Costa Rica," according to Chris Van Arsdale, former Director of the Costa Rican Audubon Society. "It's not just an environmental problem, it's a human rights problem and a sociological problem as well."

A Plague of Pesticides

In one respect the banana plantations are more ecologically harmful than the cattle ranches — as intensive agricultural operations they are highly dependent on the intensive use of pesticides. Costa Rican levels of pesticide contamination are among the highest in the world, and the banana industry imports 25 to 30 per cent of all pesticides used in the country.[6] Costa Rica's pesticide use is equivalent to seven times the world's per capita average,[7] and there are 250-300 cases of pesticide poisoning involving agricultural workers reported in Costa Rica each year.[8]

Seventy-five per cent of imported pesticides arrive from the US without any notification of their regulatory status.[9] The majority of the imported materials are reformulated in Costa Rica, resulting in applications twice as strong as in intensive agriculture in industrialized countries. The number of pesticide producing facilities in Costa Rica has grown from nine in 1984 to fifteen in 1988. These facilities produce eight pesticides that are banned in the US.[10] Documents provided by Costa Rica's National University claim that US-based Velsicol Chemical Corporation sells heptachlor and chlordane in Costa Rica, even though those chemicals are banned in the US. France's

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Rhone-Poulenc produces lindane and sells it in Costa Rica, while Germany's Bayer produces ethyl parathion and methyl parathion. Eighty per cent of poisonings in Central America may be attributed to ethyl parathion, according to San Francisco's Pesticide Action Network.

Ironically, many of these pesticides are not only US-made; they are applied to land owned by North American corporations and find their way back to the USA on produce destined for the US market, in what is known as the "circle of poison". In June 1991, the discovery of aldicarb residues in Latin American bananas imported to the US led to a $100 million recall of tainted fruit already in the distribution system.[11]

Those pesticides which do not find their way back to the United States are likely to be dispersed into the local environment. The cultivation of bananas requires a system of irrigation trenches which flushes millions of tons of soil into the waterways annually. Reports circulate in Costa Rica documenting acute poisonings among cattle, bees and other domestic animals, as well as massive mortality cases in wildlife: up to half a million fish were found dead in the canal areas of the banana producing region of Costa Rica in July 1990.[12]

Tortuguero National Park in Costa Rica which lies adjacent to one of the regions of recent plantation expansion, has reported problems of pesticide runoff and siltation in its waterways. To add insult to injury, the streams get clogged up with "blue bag" — pesticide-lined plastic sacks, used to protect bananas from insects, which can choke animals that try to eat them. The pesticide contamination eventually reaches the oceans. The coral reef off Costa Rica's Caribbean shore is now nearly 90 per cent dead as a result of pesticide run-off and sedimentation, mainly from banana plantations.[13] Coral is the base of a complex food chain, and local fishing communities report that fishing has become increasingly difficult. In 1985, the death of thousands of fish in the Pacific Coast Gulf of Nicoya, which provides 50 per cent of Costa Rica's fish, was attributed to pesticide contamination.[14]

After the Boom

The final victim of the intensive use of agrochemicals in the banana industry is the soil itself. In 1985, United Fruit stopped production in the Pacific region, leaving behind more than 6,500 hectares of previously high-quality soil, poisoned with copper and unusable for almost any kind of agricultural production. Intensive use of chemicals ultimately leaves banana monocultures open to diseases such as Panama disease (*Sigatoka*) and general debilitation. Over 80,000 hectares of banana plantations have been abandoned along the Carribean coast since 1979.[15]

While banana exports from Costa Rica and other Central American countries continue to rise, and with them the profits of Dole, Chiquita and Del Monte, local production of basic food staples continues to decline. Every country in Central America now imports their basic grains — beans, rice and corn — making themselves all the more vulnerable to the whims of the international market and the vicissitudes of global politics. When the current boom in bananas peaks, tails off and slumps — as it surely will — the new plantations will be neglected and eventually abandoned, leaving the workforce landless, rootless and redundant and the rural environment stripped of its traditons and its fertility. The current banana boom is a model of modern unsustainable agriculture.

GATT and the EC Banana

The bulk of bananas eaten in the EC are imported from the "dollar banana" countries — Central America, Colombia and Ecuador — but about 20 per cent come from islands in the Caribbean, such as Jamaica, St Kitts, St Lucia and the Windward Islands, which are allowed a protected quota under the terms of the Lomé Convention. These countries cannot compete on the open market with the vast plantations in Latin America: their bananas, mostly grown by small farmers on difficult and ecologically fragile hillsides, cost about 30 per cent more to produce. The islands are dependent upon bananas for up to 50 per cent of their export earnings.

However, the creation of a single market in 1993 and the looming GATT Uruguay Round proposals threaten to disrupt this arrangement. A group of eight Latin American countries have protested against the protective measures and are taking the issue to GATT, charging that the Caribbean countries should not be exempted from GATT rules on free trade. They are supported by US trading interests, which have a large stake in the dollar banana. According to Dame Eugenia Charles, prime ministerof Dominica, "Mr. James Baker, the [US] secretary of state, is adamant that there should be no exemptions. The argument is that if there is an exception for bananas, then there will have to be for rice, for dairy products and all other farm products. The United States is dead against us on this."

If the banana trade is liberalized, it will have serious consequences in both production areas. In Central America it will mean yet more deforestation for intensive plantations, while for the Caribbean it will spell economic ruin.

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Books

Making Lenders Accountable

ODIOUS DEBTS, by Patricia Adams. Earthscan, 1991, £8.95, 224pp. ISBN 1-85383-122-0.

Big loans mean big projects. During the 1970s alone, 1,614 mega-projects with an average value of $620 million went ahead in the Third World, many of them funded by the World Bank or other Multinational Development Banks (MDBs). "Virtually all these projects required foreign financing to proceed, and virtually none was economic without subsidies. Virtually all these projects have damaged the environment." What money was not used on these schemes was spirited out of the country by dictators such as Marcos and Mobutu, or well-placed members of the middle-classes. Citizens of the 15 largest Third World countries own roughly $300 billion abroad, roughly half their countries' combined debts.

But the heady days of the 1970s are over. The big projects have left debts of over a trillion dollars in their wake, resulting in an intense exploitation of the debtors' remaining assets — minerals, timber, cash crops — to pay the debt. So much attention has been focused upon this debt by organizations, such as Friends of the Earth and the World Development Movement, that it has come to be seen in some quarters as the root cause of the asset sale, implying that if the debt were to be relieved, the asset sale would grind to a halt.

Adams is at pains to dispel this illusion. The sale has been going on for hundreds of years, and the debt crisis may even have slowed it down. In many cases, the debt crisis has dried up the funds that might have financed further destruction. Cameroon's plan to liquidate its southern forests have come temporarily unstuck for lack of funds to build the roads. Brazil's plans for further nuclear and hydroelectric development have foundered without finance, as have Peru's plans for oil exploration and Surinam's plans for bauxite mines.

With the debt relieved, plans like these could swiftly be revived, no matter how financially absurd. The prospect of economic failure is not enough to put off potential lenders because the debts have traditionally been guaranteed by the governments concerned. One of the objects of *Odious Debts* is to examine ways of ensuring, in the event of a resolution of the debt crisis, that the cycle of lending, project investment and debt does not start all over again.

Physician, Heal Thyself

The leading role in the lending madness must go to the MDBs, of which the World Bank is by far the biggest, accounting for some $180 billion of the $250 billion in MDB debts, and lending an average of $400 million a week. The World Bank was created in 1944 as a deliberately unaccountable institution, not subject to the "transient will and uncertain judgement" of the people. It was also made immune to police investigation and legal process, while its proceedings take place in total secrecy.

It soon began to train élites in the countries in which it operated as "apostles of a new life" to "usher in a new age of enlightenment", while taking over or creating the institutions it was to work through. In this way it developed an immense but hidden power, often exceeding or subverting that of national governments. One measure of its power is that every dollar it lends is matched by dollars from other sources.

But in spite of its political success, its loans have been abject failures. Quite apart from their wider consequences, almost half of them have failed even to pay for themselves. This matters little to the World Bank, which remains a blue chip institution despite an apparently worthless portfolio. Its secret is to be guaranteed by its shareholders, national governments, and ultimately by taxpayers.

The Bank is a zealous proponent of privatization, forcing governments across the world to sell off their assets. Yet it remains a peculiar paranational government-owned entity, bolstered by subsidies such as the $200-million-a-year operating subsidy contributed by its shareholding governments. These countries also subsidize the Bank by guaranteeing its borrowings, giving it an undeserved credit on the world market. One intriguing suggestion of Adams is to privatize the World Bank. If the subsidies and guarantees were abolished, it would have to compete on money markets purely on the strength of its own performance. Of course it would not fetch a great deal, as without the guarantees it would be backed only by "junk bonds worth pennies on the dollar". But at least taxpayers would be relieved of the "financial albatrosses" now around their necks.

Repudiating the Odious

This is not to argue that private banks have played an insignificant role in the escalation of debt. Far from it: over the 1970s their lending steadily grew, to reach two-thirds of foreign Third World financing by 1980, much of it being used to pay off old debts. When the bubble burst in 1982, they found it necessary to throw good money after bad, providing a further $5 billion, while national governments provided $2 billion and the IMF $1.3 billion. In the private sector as well, the cycle of debt and corrupt investment must be broken by making lenders and borrowing governments more accountable.

To achieve this, Adams proposes reviving the concept of "odious debts". In 1898, the US, following its take-over of Cuba, repudiated the debt of the former Spanish rulers, which was "imposed upon the people of Cuba without their consent and by force of arms", in order to maintain unpopular Spanish rule. The debt was deemed "odious", that is to say, contracted for illegitimate purposes by illegitimate parties. As for the lenders, they were held to have "taken the chances of the investment", and lost. The principle was later upheld by a US Supreme Court judge in 1923, in a dispute over Costa Rican debts to the Royal Bank of Canada.

In 1990, Japan's Bishimetal Corporation offered to take on Brazil's entire national debt in return for gold mining rights across the Amazon. Brazil refused because, says Adams, the public refused to accept the legitimacy of the debt. Given the corrupt way in which these debts were acquired and the uses to which they were

put, this point of view is entirely understandable. More than that, it may carry weight in international law.

Debtor countries can and should apply such criteria to their own debts, argues Adams, and repudiate the debts wherever they are found to be odious. Thereafter governments should refrain from long-term borrowing as a soft electoral option to raising taxes. Development all too easily becomes "a conspiracy between the donor or lender and government against the people". Democracy should be organized at a local level in which people "control their own resources, have access to relevant information, and have the means to hold the officials of government accountable". The willingness of taxpayers to support a government's expenditures Adams describes as its "ultimate test of legitimacy".

"The Third World", concludes Adams, "should repudiate its debts, not through appeals to charity, but by recourse to due process of law. Declaring debts odious will compel the lenders — in order to recover some of the billions they have lost — to seek redress by suing, pursuing and, where possible, seizing the booty of the unrepresentative Third World élites who borrowed so recklessly in the name of their people. In doing so the lenders will be discouraging future élites from similar behaviour. More importantly, declaring debts odious will force lax lenders to be accountable for their mistakes, and ensure they are never again repeated".

Oliver Tickell

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Water Rights and Wrongs

THE DAMMED: Rivers, Dams and the Coming World Water Crisis, by Fred Pearce, The Bodley Head, London, 1992, £17.00, 376pp. ISBN 0-370-31609-6.

Fred Pearce has written for a wide audience a lively study of dams and water engineering, which is rich in detail and wide in scope. *The Dammed* covers the history of water engineering from the irrigation canals of ancient Mesopotamia, through the imperial works on the Nile and the Ganges, the draining of England's marshlands, and the industrial exploitation of the Rhine and the Danube, to the "superdams" of the present which have plugged major rivers on every continent. He takes the reader through dozens of river valleys to meet the people who either love or hate the big dams and irrigation schemes that have re-routed rivers, greened deserts, drained inland lakes, drowned forests and fertile river valleys, and flooded tens of millions of people out of their homes.

Pearce's central theme is that attempts to harness rivers by constructing giant water works have always provoked conflict — and that these can only grow in the future. It is striking how little has changed over the years. The arrogance displayed by the imperial engineers of British India, who dismissed the native traditions of irrigation and cultivation, is not dissimilar to that of French and Dutch advisers today who want to turn Bangladesh's delta region into a tropical Holland. The world's major rivers are now drying up, but dam builders are peddling their megaprojects to governments and financiers as the panacea to global warming, chronic drought and skyrocketing water demands in towns and cities. Pearce analyses why, despite ardent protests and hunger strikes from opponents, dams in Himalayan earthquake zones and other high-risk and high-cost experiments, still make it beyond the drawing board.

As nations grow thirstier, Pearce predicts that governments will use military might or money to secure water supplies beyond their borders. Iraq, Iran and Turkey are quarrelling about the water of the Euphrates, and Syria and Israel about the Jordan. Vietnam is concerned that its rice production may be jeopardized by Thailand's plans to divert water from the Mekong river. South Africa is muscling in on the water in the mountainous enclave of Lesotho.

The root of these conflicts lies in an unwillingness to temper consumption. "There is a growing consensus that the fundamental problem is not a water shortage so much as a failure of politicians to accept a world of finite water resources and the need to live within their hydrological means." The south-western United States are a prime example. Suburban residents of Phoenix, Arizona use an average 4,000 litres of water a day, while California is looking at Canadian rivers for more.

Pearce contrasts the voracious irrigation schemes demanded by modern agriculture with half-forgotten agricultural traditions such as rainwater harvesting by nomadic people in Africa or the floating gardens and terraced hillsides cultivated by native Americans. He argues that these systems which worked for thousands of years may eventually come to replace the iron and concrete structures of today that are expected to last only a few decades.

However, Pearce's vision becomes blurred by the end of *The Dammed*. His plea that we all learn the "language of conservation and restraint" if we are to stop the destruction and squandering of our water resources is a banal Earth Summit platitude — a far cry from what people fighting dams all over the world are saying. The future of rivers depends upon the communities who rely on and respect them. It is imperative that these communities secure their rights to defend and manage what is central to their means of subsistence and well-being. For them the water crisis is not coming: it is already a fact of life.

Graínne Ryder

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The Global Beefpack

BEYOND BEEF, by Jeremy Rifkin, Dutton, New York, 1992. $21 (hb), 353pp. ISBN 0-525-93420-0.

According to Jeremy Rifkin, the beef industry is a landgrabber's stampede which has now covered 24 per cent of the landmass with herds of cattle whose combined weight exceeds that of every human on Earth. Beef-eating has become a geopolitical status symbol, a "club" to which all ambitious nations now aspire. The excessive consumption of modernized cowmeat has brought with it a licence to exploit further the hungry parts of the world. This fact-packed, though apparently hastily-written, book provides a useful outline of a web of multinational intrigue which has entangled the heedless Western eater as accomplice in a system that Rifkin describes as "a new kind of malevolent force in the world".

The book starts with a few chapters of prehistoric cattle theology, to explain our psychic obsession with the beast, and then contrasts the benevolent mother-cow worship of India with the bull-virility cults of imperialist peoples — notably the Spanish, whose deliberate "seeding" of their new World conquests with cattle symbolized their domination of "virgin" territory; and the English, whose legendary appetite for roast beef carries more than a hint of male dominance, class division and colonial superiority. This macho impulse has developed relentlessly (despite obstacles such as buffaloes, Indians, and forests) into the present nightmare, where transnational corporations, in their drive to create "the bovine analogue of the World Car", have gained vertical control of all the assembly-line from the "inputs" — grain, grasslands, fertilizers, pharmaceuticals, embryos, automated feedlots, slaughterhouses and workers — to the outlets — supermarkets, McDonalds and the mass human appetite. Beef is as much a political tool as a commodity.

The cattle themselves are no longer amiable converters of rough pasture to honest food, valued as much for their by-products in life as for their eventual carcasses. Milk in its multifarious forms, manure for fuel and fertilizer, and tractive power freed the peasant from having to kill to eat: a surplus calf was for purely festive consumption. This versatile arrangement has been sabotaged by the mass invasion of the "world steer", which eats not grass, but grain: enough to provide "a cupful for every person on Earth every day of the year." Thanks to the bovine stomach's inefficient conversion of this rich diet, only a fraction of the potential nourishment survives to fatten the wealthy few who perch atop this artificially-contrived protein ladder. While the more obese of these drop prematurely dead from diseases of affluence, the fertile regions of starving countries are growing export grains for foreign cattle, which are themselves drugged, damaged or diseased.

How can typical North American children, scoffing, on average, 6.2 hamburgers a week, realize that they are participating in "a new dimension of evil . . . whose consequences are so far removed in time or place from the perpetrators or victims that no causal relationship is suspected or experienced?" How can a glimmer of responsibility be awakened in such cogs as this US rancher in Amazonia?

> "You can buy the land . . . for the price of a couple of bottles of beer per acre. When you've got half a million acres and 20,000 head of cattle, you can leave the lousy place and go live in Paris, Hawaii, Switzerland, any place you choose."

Rifkin's answer to this scary situation is to dangle before us a millenarian vision: "The elimination of beef will be accompanied by an ecological renaissance, a grand restoration of Nature on every continent. Ancient rivers will flow, their waters bathing and healing thousands of damaged riparian zones. Native wildflowers and perennial bunchgrasses will sprout and bloom, spreading a verdant carpet across the western landscape . . . " and so on. One can only pray that the Beyond Beef campaign that has emerged from this book will devise a more rigorous strategy powerful enough to convince the massive vested interests and their political back-up boys that they really must stop. Until then, read *Beyond Beef*, and think on.

Gill Barron

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Pinstripe Lumberjacks

WHOSE HAND ON THE CHAINSAW? UK Government Policy and the Tropical Rainforests, by Tony Juniper, Simon Counsell and Melissa La Marchant, Friends of the Earth, London, 1992, £7.95, 85pp. ISBN 1-85750-170-5.

"The [UK] Government is profoundly concerned both about the debt crisis and about the destruction of the tropical rainforest", says Norman Lamont in a quote in *Whose Hand on the Chainsaw?* The evidence, presented in this report from Friends of the Earth (FOE), suggests that this concern owes more to worries over loss of revenue, than to any interest in conservation or justice.

The report examines the links between UK government policies and the loss of tropical rainforests. It casts doubt on the motives of some aid programmes and links the UK's role in the debt crisis to the escalating environmental degradation in the debtor countries. In many cases, it is in the interests of the Northern nations to maintain the forced trading inequalities which are the result of the debt burden and this leads to a desperate short-term use of tropical forests as a source of revenue. The report aims to show direct links between government actions and the reduction of tropical forest cover, and it makes a very convincing case.

In particular, the report illuminates some of the realities concealed behind the statistics for government aid schemes. The UK government's £28 million for forestry aid in 1992/3 is only one-fifth what it will earn from the VAT on im-

BOOKS DIGEST

- CONSERVATION OF BIODIVERSITY FOR SUSTAINABLE DEVELOPMENT, by O. T. Sandlund, K. Hindar and A. H. D. Brown, Scandinavian University Press, Oslo, 1992, £35 (hb), 324pp. Distributed by Oxford University Press.

This collection of essays from some leading conservation biologists draws together challenges to biodiversity and the role of conserving genetic resources within ecosystems and *ex situ*. Ethical, economic, political and social issues are brought to the fore as intrinsic parts of a science attempting to foment sustainable development.

- BIODIVERSITY: *Culture, Conservation and Ecodevelopment*, edited by Margery L. Oldfield & Janis B. Alcorn, Westview Press, Boulder, CO/ Oxford, UK, 1991, $45.00/£30.50 (sc), 349pp. ISBN 0-81337-680-7.

Another perspective indicates that some of those "who plan the future of biodiversity from afar" are aware of the culturally diverse people who live with, use and conserve it. However, the strategies the editors recommend — empowering the traditional conservation ethic and constructing a new one for the global capitalist economy — still rely on the planners.

- GROWING DIVERSITY: *Genetic resources and local food security*, edited by David Cooper, Renée Vellvé and Henk Hobbelink, Intermediate Technology Publications, London, 1992, £9.95 (pb), 166pp. ISBN 1-85339-119-0

Farmers have maintained and developed their plant genetic resources for as long as they have cultivated crops. Farmers' groups, NGOs and scientists report on wide-ranging experiences of continuing to do so, against the tide of the Green Revolution which has displaced established varieties.

- REFASHIONING NATURE: *Food, Ecology & Culture*, by David Goodman and Michael Redclift, Routledge, 1991, £14.99 (pb), 279pp. ISBN 0-4506-703-0.

In charting the manifold interconnections in today's food system, the authors refreshingly draw attention to the social processes in the North which have accompanied food commodization over the last 50 years, in particular, changing work patterns based on gender and the "naturalization" of women's domestic role, the family farm and food itself.

- PLANTS, POWER AND PROFIT: *Social, Economic, and Ethical Consequences of the New Biotechnologies*, Lawrence Busch, William B. Lacey, Jeffrey Burkhardt, and Laura R. Lacy, Blackwell, Cambridge, MA and Oxford, UK,1992, £14.95(pb), 275pp. ISBN 1-55786-379-2.

The vertical integration of the wheat industry and the globalization of tomato production are two case studies used by the authors to illustrate how market supply and demand drives biotechnological advance. They anticipate that farming will be gradually replaced by "in vitro" industrial production of plant tissue.

- HOW MUCH IS ENOUGH? *The Consumer Society and the Future of the Earth*, by Alan Durning, Earthscan, London, 1992, £8.95 (pb), 200pp. ISBN 1-85383-134-4/ WW Norton & Company, New York, 1992,$8.95 (pb), ISBN 0-393-30891-X.

In a lively book full of fascinating detail, Durning compares the lifestyles and consumption patterns of three broad ecological classes: the wealthy consumers of the North, the poor and dispossessed of the South, and the middle-income bracket of North and South. He finds the wealthy to be as spiritually deprived as the poorest are materially.

- STRUCTURAL ADJUSTMENT AND THE ENVIRONMENT, edited by David Reed, Earthscan, London,1992, £15.00 (pb), 209pp. ISBN 1-85383-153-0/ Westview Press, Boulder, CO/Oxford, UK, 1992, $34.95 (sc), ISBN 0-81338-702-7.

During the 1980s, over 60 developing countries instigated "structural adjustment programmes". Following detailed case studies and analyses, Reed concludes that SAPs perpetuate the social and economic trends which cause environmental problems. An important book.

ported tropical timber. Yet although shifting cultivation is the largest single cause of loss of tropical rainforests, this aid does little to help the landless people who practise it. Only five per cent of Britain's forestry aid is spent on small-scale projects helping the rural poor. FOE believe that "there is no escaping the conclusion that the sparse allocation of funds stems from the limited direct benefit such projects offer to British companies, research institutions and ultimately the Exchequer".

In some cases, UK aid projects have directly caused rainforest destruction. The UK were involved with the World Bank in a scheme in Gabon involving a US$22.5 million loan to increase timber exports to pay off a US$3.6 billion debt; and in an abortive £7.8 million road-building project in Congo which would have destroyed huge areas of rainforests. Similarly, the Commonwealth Development Corporation (CDC), the overseas private sector investment wing of the UK government, loaned £11 million to Ivory Coast for a hardwood plantation project that destroyed 40,000 hectares of natural forest. The CDC's involvement in monocultural crop schemes has resulted in clearance of tropical forests from West Africa to New Guinea.

The cavalier attitude in the disbursement of aid has led to many abuses. In one case, recipients of CDC funding hired mercenaries to intimidate local farmers in an area scheduled for a new oil palm plantation. In Ghana around £30 million is said to have been stolen from a package funded by the UK Overseas Development Administration and the World Bank, which singled out the country's forests for special treatment as part of a debt-driven export drive. Even when graft and violence are not involved, and even where schemes do not involve deforestation on a grand scale, the benefits of logging to the producer country are slim. The report provides a breakdown of who receives what from sawn timber exports. On average the consumer country nets 89.5 per cent of the revenue.

This report will serve to engage and enrage the converted, and it will bring new people into the fold. However, it is difficult to see it hitting home where it most needs to — in the corridors of Whitehall and in the minds of the Ministers whose policies this report implicates in rainforest destruction. The hand on the chainsaw descends from an elegant pin-stripe cuff; regrettably this report will have little more effect than a hard slap on the wrist.

Adrian Barnett

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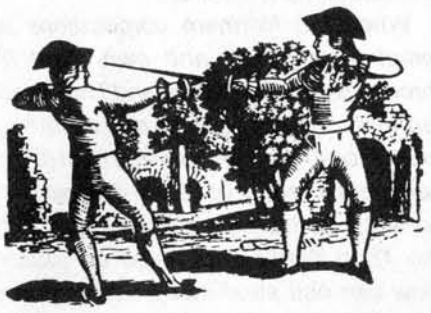

Letters

Whose Common Future?

'Whose Common Future?' (*The Ecologist* July/August 1992) is certainly one of the most important and profound documents of our time. You have generalized in clear terms what we knew, felt, assumed to be the problems of the people and their environment.

We should not allow this document to be killed by silence. I have learnt so much from this issue, that is, from you (the collective of *The Ecologist*).

Thank you very much.

Dr Mohamed Suliman
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Protecting my Commons

Thank you very much for sending me *The Ecologist* 'Whose Common Future?' This issue is a penetrating and illuminating exposure of reality. I feel my understanding is amplified by this polemic, and it will help me find the words and explanations I need in my fight to protect my "commons" — Twyford Down, from the Department of Transport's road scheme and Southampton Water, from assorted chemical monoliths and Rechem, importer of toxic waste.

I am inspired by the clarity of this work — the rational thinking and powerful use of language.

Thank you.

Yvonne Fulton
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Technology Transfer

Congratulations on 'Whose Common Future?' — a true tour de force! However, there is one underlying tendency in your argument which I feel weakens your case unnecessarily. You appear to believe that the traditional methods are **always** the best. Thus, in your critique of wood stoves, you imply that the harmful effects of indoor smoke have been freely chosen by those exposed to them and that they could easily solve the problem if they wanted. Do you have any evidence that this is so? And would you then also reject Helena Norberg-Hodge's introduction of solar heating trombe walls in Ladakh which also helped to reduce indoor smoke? In my experience, far from feeling in control of their lives, many villagers in the South go through life, like our ancestors, weakened or threatened by many afflictions which modern knowledge has (sometimes) found simple answers to.

A good shaman knows when to send a patient to a surgeon. In some African hospitals you will be treated by a team which includes both. The architect Hassan Fathy — the first Right Livelihood Award recipient — always stressed that the problem with modernity was its arrogant assumption that it should replace instead of build on ancient knowledge. But he added that, although it was crazy to reject mudbrick buildings — which have been adapted and lived in for thousands of years — these could certainly be improved with the help of modern scientific insights into soil chemistry, ventilation etc. You seem to suggest that, as North and South obviously are **not** going to develop "alongside each other on an even footing", all transfer of knowledge is harmful to the South. You are right, of course, that Alternative Technology is unlikely to survive long in a growth-oriented market society. But this would apply also to the "alternative science and technology reflecting the traditions" of the South which is still being "sought"! The interesting question is, of course, for how much longer growth-oriented market societies will survive?

It is important to understand that, while the traditional commons concept involved real obligations and rights, a modern concept like the "global commons" is simply a slogan and **not the reason** for transnational corporations exploitation of global resources. These activities would continue even if the global commons concept was discredited and repudiated, simply because the TNCs have the power. How to restrict this power remains the crucial question — if we are to outlive the growth-oriented market society! This demands new broadbased alliances. Telling Third World communities that there is no middle way, that everything from the North, including Alternative Technology, is part of the same evil can, I feel, only weaken their resistance and breed hopelessness.

Jakob von Uexkull
The Right Livelihood Award
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Green socialism?

I notice that two of the inserts in your excellent, if somewhat gloomy, magazine are from political organisations — Green Pacifism and the Fabian Society. I have no objection to these organisations trawling for membership amongst the readers of *The Ecologist,* but I wonder if it is appropriate for people who are trying to bring about the "Post Industrial Age" to become Socialists.

Socialist and Communist thinking is derived from the understandable reactions of the intellectual classes to the gross inequalities in living conditions and wealth between the capitalists and the labouring classes. The early Socialists felt that it was brutally unfair that the workers should get so little of what they earned from their labours. Laudable though these sentiments were and still are today, they are merely a reaction to the way the cake is sliced and not an objection to the system itself. In other words, Socialism is merely the other side of the Capitalist coin. The Socialists are telling us just as loudly as their opponents that production must increase and we must all have the means to consume more. Both Socialism and Capitalism are concerned with exploiting the resources of this planet and thus cannot be supported by anyone who wishes to preserve the various ecosystems that make up our home.

If we are truly looking for a "Green Party", then "Socialism is not enough". An elector of a Socialist Government expects to receive more; it is the task of a Green Party to make everyone satisfied with less.

T.L. Davidson
The Forge, Church Road
Woodbridge, Suffolk IP12 2DH

Connection is not Ownership

I was astonished to find a statement by Vandana Shiva, in her article 'The Seed and The Earth' (*The Ecologist*, Jan/Feb 1992), that the idea of "foetal rights" splits "the organic bond between a woman and what grows inside her." I object to this statement on several counts. In the first place, the life that is developing in the womb is a human being, not a foetus, which is a medical term used by doctors (mostly male) to describe a condition rather than a developing human life. You will never hear a mother refer to "my foetus" or "my embryo" when she is talking about her unborn child. She always refers to him/her as "my baby." Even that is wrong. It's "our baby", not "her baby". Vandana Shiva describes this life as a woman's possession ("what grows inside her") that is being taken away from her by giving it rights, which is absurd.

No one would say that a newly born child hadn't the right to be treated with love and respect. You would not wean a child on alcohol or give it an injection of heroin, but this, in effect, is just what some women do to their unborn children.

A proposed Bill of Rights for the Unborn Child was compiled by the American obstetrician and gynaecologist Dr Van de Carr to include:

1. The right as a sentient being to have an unobstructed prenatal development.
2. The right to have adequate nutritional support to develop a healthy mind and body.
3. The right to be protected from exposure to poisons and toxins that retard neural and physical development.

These are fundamental rights which must be respected. The father also has rights. The bonding process is a combination of many factors — physical, psychological and cultural — which must include the father. Studies have shown that a child who is cared for with the same love and respect by both parents is more emotionally stable than a child who is mainly treated as the mother's "possession". The bonding process starts with attitudes before birth — even before conception.

I suggest that the idea that anyone can own another life or the means of creating another life, whether we are talking of the seed and the soil or of a fertilized ovum (the unborn child) and the womb in which it is implanted, is to ignore life's regenerative power of "longing for itself" (to use Khalil Gibran's words) and the ability to meet its own essential needs without human interference or control. To produce is to draw forth, not to own and control; and the creation of human life is not an act of human will, but the expression of human life. No one owns anyone.

Roy Ridgway
Co-Chair
The Renaissance Group
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Hants SO23 8BX

Vandana Shiva replies . . .

My paper on 'The Seed and the Earth' was an analysis of the patriarchal drive to fragment and colonize, own and possess everything in nature and society. It is interesting that Roy Ridgway should read my arguments **against** *"owning" and "possessing" life as an argument* **for** *ownership and possession. Roy Ridgway's response is not unusual. It is the response of every dominant group that fragments and controls when it is threatened by any resistance by the dominated against the fragmentation, colonization and control.*

When the Northern corporations attempt to fragment and own plant life through patents on seeds, and Third World farmers or ecology groups resist that fragmentation and ownership and fight to preserve the integrity of native diversity and protect it from claims of private property, the Third World is accused of "piracy". How can one steal that which is part of oneself? Third World biodiversity has evolved in Third World ecosystems and societies. Resisting its theft cannot be treated as theft in reverse. Similarly resisting ownership cannot automatically be interpreted as an attempt to own. Such interpretations occur only when the possessive mind reads the possessive mentality into those who refuse to be treated as possessions and property.

I have at no point in my article referred to a woman's baby as a woman's possession. That Mr Ridgway should read into the article the opposite of what I am saying is a puzzle to me. English is a foreign language for me, but not for Mr Ridgway. I hope he will reread 'The Seed and the Earth' and convince himself that I do not see the child either as a woman's or a man's possession. It "belongs" in the sense of being connected, not in the sense of being owned. Mr Ridgway will then realize that his attack comes from his own biases, such as his female stereotyping of alcohol and heroin addicts.

Either Mr Ridgway is not aware of recent research which has shown that male addicts also bring risks to babies they might father or he is in the habit of only blaming women.

The right to nutrition and the right to protection from poisons and toxins of babies in mothers' wombs that Mr Ridgway talks about is of course an inalienable right, but it cannot be guaranteed through foetal rights. It can only be guaranteed by first admitting those same rights for mothers. You cannot protect the baby from hazards by giving it "foetal rights" and continuing to expose the mother to hazards. Such a separation is unjust to both the baby and the mother and allows the continuation of hazardous production by getting rid of women workers.

I agree with Mr Ridgway that the language of "foetal rights" is not the language of women. It is the language of medical technocrats, who derive power through fragmenting knowledge. It is the politics and power inherent to reductionist and fragmenting knowledge which I have tried to address in 'The Seed and the Earth'.

Classified

DIARY DATES

MICROBIOLOGY WORKSHOP: Problems of Microbial Soilage of Bulk Distillate Fuels. Date: 3rd December 1992. Place: The Institute of Petroleum, London, UK. For programme and registration details please contact Miss Caroline Little, The Institute of Petroleum, 61 New Cavendish Street, London W1M 8AR, UK. Tel: 071 636 1004, Fax: 071 255 1472.

METALLURGY FOR NON-METALLURGISTS. A 5-day practical course with workshops from 14-18 December 1992 in Amsterdam. For details contact The Center for Professional Advancement, Oudezijds Voorburgwal 316A 1012 GM Amsterdam, The Netherlands. Tel: 31 20 638 2806, Fax: 31 20 620 2136.

SHORT COURSE/WORKSHOPS: Statistics for Field Ecology 20-22 January 1993, Studies of Resource Selection 26-28 January 1993, PC Software 18 January 1993, Biostatistics Overview 19 January 1993, Mathematics for Resource Selection 25 January 1993, Denver, CO. For further information contact: Lyman L. McDonald, West Inc. 1402 S Greeley Hwy, Cheyenne, WY 82007 U.S.A. Tel: (307) 634-1756, Fax: (307) 637 6981.

MISCELLANEOUS

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THE IWA (Inland Waterways Association) needs used postage stamps of all denominations. Please send to: WRG/IWA Stamp Bank, 114 Regent's Park Road, London NW1 8UQ.

MISCELLANEOUS

ENERGY ACTIVISTS seek similar (view long-term commitment). If you are interested in lobbying for conservation and renewable energy measures (London area), ring London Energy Activists Network: 071 281 4830.

TRAVELLERS EARTH REPAIR NETWORK (TERN) has recently established a new European link in its global network. The TERN database has thousands of contacts from all over the world but is particularly under-resourced in Europe. We are looking for organisations, groups and individuals who are interested in becoming hosts or being added to the TERN database as contacts. To find out more about TERN please send a stamped addressed envelope to: TERN Europe, Shrubb Farm Cottages, Larling, Norfolk, NR16 2QT.

GREEN BOOKS' CONSERVATION PROGRAMME. Leading and influential authors of environmental publications in 1992 will be discussing the changes they hope their books will bring about in the Green Books' Conservation Programme 1992/3. Please write to Vicky Matthews, The Green College, 154 Buckingham Palace Road, London, SW1W 9TR, 071 730 8868 for further information and full programme.

PUBLICATIONS

DISCUSSION PAPERS ON THE ENVIRONMENT FROM UNITED NATIONS RESEARCH INSTITUTE FOR SOCIAL DEVELOPMENT Greening at the Grassroots – People's Participation in Sustainable Development; Ruining the Commons and Responses of the Commoners – Coastal Overfishing and Fishermen's Actions in Kerala State, India; The Social Origins and Impact of Deforestation in Central America; Parks and People – Livelihood Issues in National Parks Management in Thailand and Madagascar; Fisheries Management in the Pacific – Tradition and the Challenges of Development in Marovo, Solomon Islands; Conservation, Livelihood and Democracy – Social Dynamics of Environmental Changes in Africa; Land Tenure and Deforestation – Interactions and Environmental Implications; Sustaining the Forests – The Community-Based Approach in South and South-East Asia; and The Social Dynamics of Deforestation in the Brazillian Amazon – An Overview. Write to: United Nations Research Institute for Social Development (UNRISD), Reference Centre Room E, Palais des Nations, 1211 Geneva 10, Switzerland.

IT'S OUR WORLD TOO – a local-global approach to environmental education at key stages 2 and 3. This handbook has resulted from teacher's groups who over two years have developed approaches for the National Curriculum cross curricular theme of environemental education (CG7) drawing on a global perspective. Price £7.95 plus £1.60 p & p from Development Education Centre (Birmingham), Gillett Centre, 998 Bristol Road, Selly Oak, Birmingham B29 6LE.

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Geeti Sen (Ed), Indigenous Vision. Peoples of India – Attitudes to the Environment. This monograph of 22 papers includes contributions by eminent ecologists, as well as a 27 page interview with the social activist Medha Patkar on her ongoing crusade for the people affected by the Narmada Dam. 310 pp incl. 37 illustrations, paperback £7.50.

Walden Bello, Brave New Third World. Strategies of Survival in the Global Economy. 97 pp paperback £5.95.

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Cheryl Payer, Lent and Lost. Foreign Credit and Third World Development. 154 pp, 1991, paperback £8.95.

Henk Hobbelink, Biotechnology and the Future of World Agriculture. 159 pp, 1991, paperback £9.95.

Susan George, The Debt Boomerang. How Third World Debt harms us all. 202 pp, 1992, paperback £7.95.

The Group of Green Economists, Ecological Economics. A practical Programme for global reform. 161 pp, 1992, paperback £10.95.

Wolfgang Sachs, The Development Dictionary. A Giude to Knowledge and Power. 306 pp, 1992, paperback £14.95.

Bharat Dogra, India, Despair and Hope. This book contains essays which stress the need for revising development concepts in India and outlines the steps to be taken. 1991, 366 pp, hardback £9.00.

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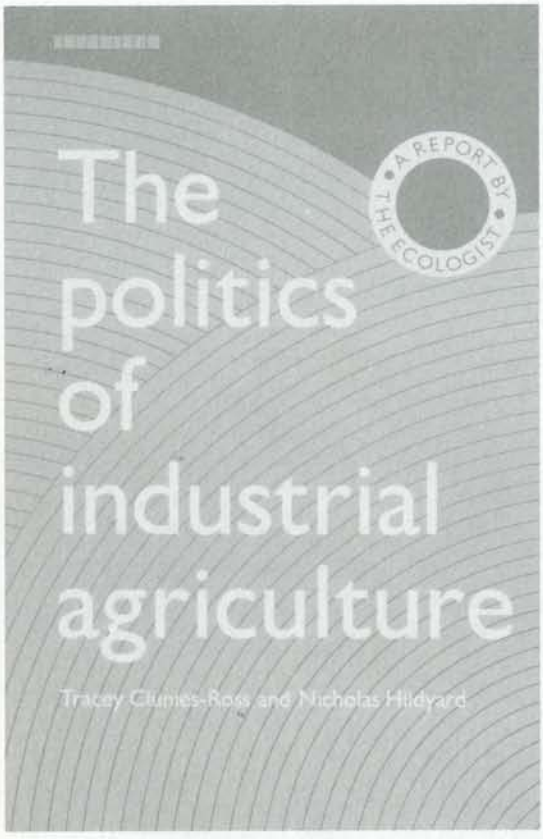

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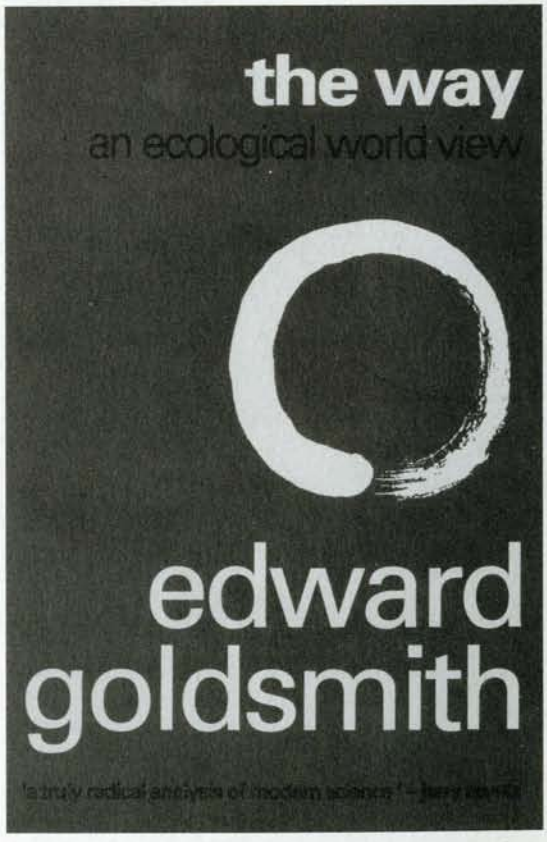

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