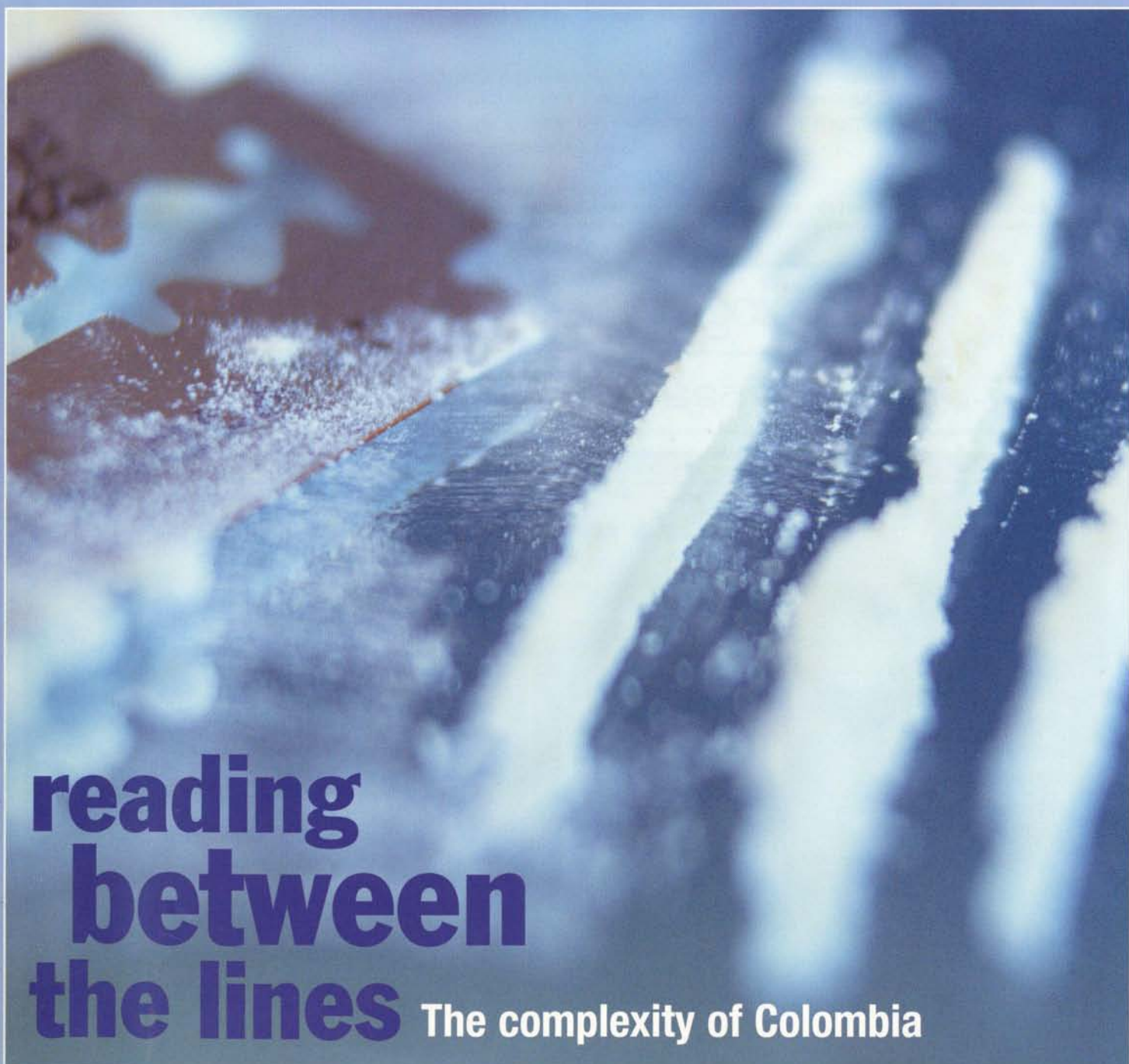


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Ecologist
RETHINKING BASIC ASSUMPTIONS JULY/AUGUST 2001



**reading
between
the lines** The complexity of Colombia

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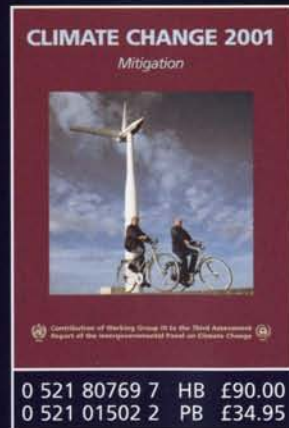
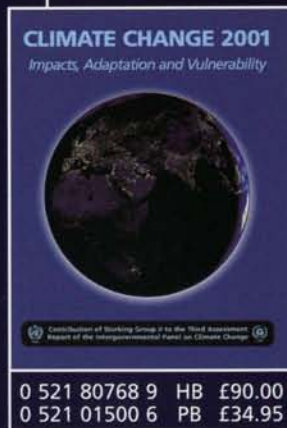
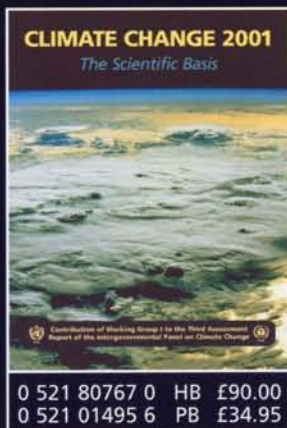
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THE ENEMY WITHIN

A reader wrote to *The Ecologist* recently of plans by the Environment Agency to allow a US corporation to dump vast quantities of radioactive material into a major West Country river. This was news to us, and at first we thought this couldn't be happening. But we investigated, and discovered that the letter's contents were not only true, but conservative.

The 4th of July marks the end of the 'consultation' process whereby the authorities will decide whether or not to allow Devonport Management Ltd (DML), a subsidiary of the vast, Texas-based, Halliburton Company, to increase emissions of radioactive tritium into the river Tamar, which runs through Plymouth, by a colossal 500 per cent.

DML have been commissioned to repair Britain's ageing nuclear submarines, all of whose coolant systems are beginning to crack. To avoid detection, the submarines no longer flush their cooling systems into the open sea, resulting in the accumulation of huge quantities of tritium, a radioactive isotope of hydrogen. It is this waste that the company wants to pour into the river Tamar.

The project has the full backing both of the Royal Navy and government, and because so little is known by the people of Plymouth, the verdict at the MoD has been that 'disapproval of the local population would be manageable.'

Independent nuclear experts now believe that if plans proceed, Plymouth is destined to become the South's answer to Sellafield, where the chances of contracting cancer are 10 times the national average.

Government experts counter that tritium is a form of low-level radiation that is barely detectable, and presents no risk. But findings in a report published by the Royal Society demonstrate conclusively that the risk model for low-level radiation is wildly inaccurate. Virtually all official assessments are based on the energy of external doses of radiation. In the case of tritium, however, it is its tendency to bind with organic material when ingested that poses the real threat. As Dr Chris Busby explains, 'in some ways, high energy radioactive decays are better because they kill the cell outright and you don't get cancer. Tritium has a tiny energy that can deform rather than kill a cell.'

No public enquiry has been offered. Instead, the authorities appear to have adopted the approach of the French nuclear official who, when asked why local communities were not

being informed of plans to site power plants in their region, replied, 'if you want to drain a marsh, would you consult with the frogs?'

The attitude is not so surprising. It is hard to justify risking the health of quarter of a million people on grounds that 200 jobs will result.

Realising the need to get involved, *The Ecologist* compiled a postcard appealing to the people of Plymouth to demand a public enquiry. We expected difficulties, not least because the Navy's relationship with the city is a long and glorious one. That explains why DML jobs are considered sacrosanct. But since 1985, when management was privatised and handed to DML, employment in the Naval dockyard has fallen from 13,500 to 4,000.

Hours before giving our printers a green light, however, a Plymouth newspaper that had agreed to distribute the card through every Plymouth letter box, informed us that they were unhappy with the claim that tritium is 'a dangerous and invisible substance believed by experts to cause cancer and birth defects.'

Unless we provided 'definitive evidence from clinical trials' that tritium caused cancer, the cards would be dropped, they said. We attempted to open other avenues, but each time were met with a similar response.

Finally, we sought approval from the Advertising Standards Agency. I explained the situation to them, pointing out that the kind of study they demanded was yet to exist, and that all we could rely on were reports such as that of the Royal Society, which raised very serious doubts about the safety of the proposals. I pointed out that the government claims were no more substantiated than our own, and were in many ways less so.

I suggested that it should be DML, not *The Ecologist*, on whose shoulders the burden of proof should fall. We, after all, are advocating caution. They advocate putting 250,000 lives to the test. Furthermore, we are not even making any definitive claims, except that the science is unclear and that an enquiry is needed. If the science was clear, I explained, there would be no need for the enquiry.

We failed to persuade them. In suggesting a cancer link and asking for an investigation, we threatened the profits of a multinational corporation. That, we should have realised, is a modern day heresy.

It is ironic that the army is behind these devastating plans. What good is an army if it fails to protect the nation? Could a foreign enemy to do more than poison our food and water, plunder our countryside, release untested genetic freaks into our ecology, and dose the population with cancer-causing radiation? The truth is, we are already under siege.

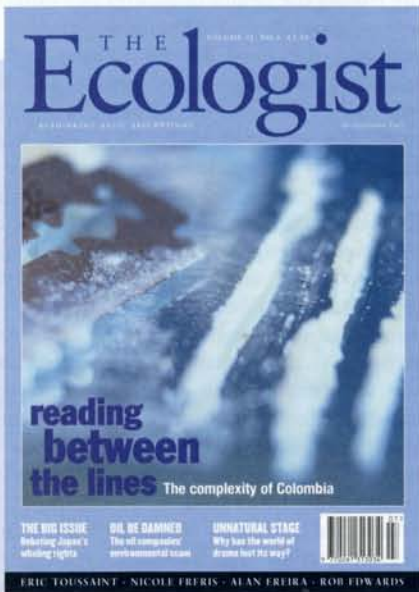
In the meantime, we have not yet resolved the issue. But we will. Turn to the Campaigns section (starting on page 14) to see how you can help.

ZAC GOLDSMITH



THE Ecologist *contents*

VOLUME 31 NO 6, JULY/AUGUST 2001



COVER FEATURE

Cocaine comes from Colombia, everyone knows that. What is not so well known are the internal exploitations and political chicanery that lie behind its production and supply.

And yet, Colombia is so much more than just a drug supplier. It is a deeply complex nation, home to dozens of indigenous peoples and an extraordinarily rich ecological biodiversity.

But it is rapidly becoming a pawn in the great US political chess game. As a result, Colombia is in danger of losing the human and natural values and heritage upon which it was built.

In this issue, we present an overview of the many strands that make up Colombia, from a visit to a mountain haven, to a warts-and-all examination of the country's main guerilla force, FARC.

Can sanity and stability be brought back to this remarkable country? Our writers investigate.

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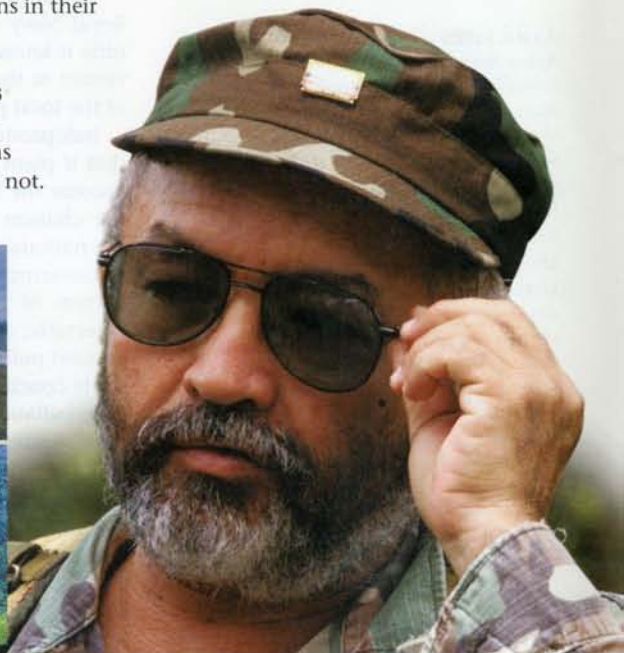
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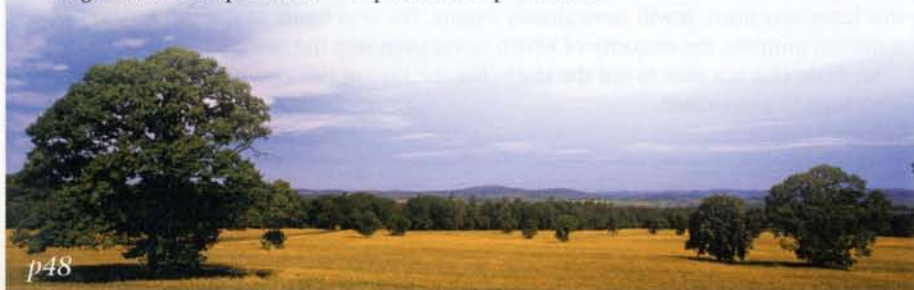


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SCRAPIE UP THE EVIDENCE

As a committed 'observation-based conspiracy theorist' I'm always intrigued by comments such as 'scrapie is harmless to humans, whilst BSE kills' (*News*, Vol 31, No 3). No! BSE doesn't kill humans. vCJD which arises from infection with the BSE agent kills humans; and it is likely that BSE arose by passage of the scrapie agent from sheep to cattle. It is also possible that the spongiform encephalopathies of zoo animals arose by cross contamination from both scrapie and BSE affected animals through feedstuffs.

So. A thought. There are four recognised forms of disabling and fatal prion diseases in humans – variously described between 1920 and 1981.

Excluding Kuru for now (a peculiarly New Guinea disease) are we to believe that these diseases have not arisen from infection by the scrapie agent?

In the event that such is the case, that the evidence is being withheld, and considering the likely effect on the world meat market – could I be on to something? And is this suggestion an act of terrorism?

DAVID SPRATT *Tavistock, UK*

WATER MISTAKE

In his *Crow* column (*Running on empty*, Vol 31, No 4) Gard Binney states that 'irrigation by diverting the Columbia River, which today makes California's Central Valley one of the world's most fertile food baskets, was but a glimmer in the eye of some eccentric hydrologist up in Sacramento, the state capital'.

This is incorrect. California's Central Valley does not divert water from the Columbia River, which serves as the north-south border between the states of Oregon and Washington. Instead, California's Central Valley diverts water from the Colorado River. Efforts have been made to

MR BLAIR, ARE YOU THERE?

This is an open letter to Tony Blair.

When I confronted you in Exeter on 11 April, asking for physical and financial help, you promised, on camera, to come back to me within 24 hours. Of course you did not. Apart from letting me down, which is of no particular importance, you have let the whole countryside down, which is so desperately trying to cope with a national disaster the likes of which has never been seen in the UK before.

Oh, if only the townspeople could begin to understand the absolute horror of what is going on. To witness the abject cruelty you have subjected our livestock to. To watch highly trained army personnel literally cry because they can't face killing another lamb or calf by beating it over the head with whatever heavy object they can find. To witness vets walking away from the whole disgusting affair because they cannot cope with the cruelty and gross incompetence of MAFF. To see farmers who witness death on a regular basis still dissolve in tears at seeing their life's work so needlessly end up rotting in their yards for three weeks.

Oh, if only such a disaster were to be inflicted on the townspeople where there were a few more votes this whole troubled affair would have been treated in a different manner. To add insult to injury, and using your words, you said that the crisis was in hand and proceeded to call the election. Let me tell you, it is not in hand now, and never has been. For all that is good in this world, for God's sake listen to us.

By the time this letter appears, the election will have come and gone, but I'm writing now at the end of May. We hear that over 300 lorries are being amassed around Devon. Vets have been forewarned to go on standby immediately after the election. Enormous burial and transitional sites have been constructed costing many millions of pounds. All animals will be tested for antibodies and if found positive will be culled. It will come as no surprise when we see a massive cull on Exmoor and Dartmoor. Perhaps by the time this letter sees print, it will have already begun. The true figure of the cull is near to 6 million animals, the majority of which never even had the disease.

Mr Blair, this is a plea to tell the truth. For the sake of this country and its people – it's time to come clean.

JUDY CARLESS *Exmoor, UK*

divert water from the Columbia to water-starved Central California, but these efforts have failed (largely because of the efforts of environmentalists in Oregon and Washington).

PAUL S KIBEL *Professor of Environmental Law, Golden Gate University, California, US*

MORE CRUELTY PLEAS

I had begun to fear that, like many other pro-environment bodies, you cared nothing for the stupendous holocaust of suffering we inflict on animals. Hardly any

of your pages mention it, even when there is direct relevance to other topics of concern, such as the WTO or media bias.

So I was relieved and glad to see your March issue (Vol 31, No 2) with its Scruton-Tyler debate, its article on Huntingdon Life Sciences with perceptive commentary by Stephanie Roth, and its report on the EU cosmetics directive.

For me, the plight of animals is the paramount subject of concern – it's so intense, the numbers of victims are astronomical, and it is so neglected.





I'd like to see this subject much more often in *The Ecologist*. Meanwhile, your readers may be interested to know that the current Animal Rights Calendar is available from Veggies, c/o Rainbow Centre, 180 Mansfield Road, Nottingham NG1 3HW, Tel: 0845 458 9595.

MICHAEL MAAS *Sheffield, UK*

CLONING AROUND

Your article on the recent proposal to clone endangered species (*Bessie and the Gaur*, Vol 30, No 9) raises some good points on why this idea is 'lazy science', and thus a misguided conservation effort.

Yet I do not think that this issue is as clear-cut as conservation funding that could be better spent protecting and restoring endangered species' habitat being squandered on cloning and bioengineering projects, as you suggest, nor do I think that the research in assisted reproduction in endangered species is a 'slippery slope'.

The scientists who are involved in these efforts acknowledge the limitations of new reproductive technologies, and in doing so, they articulate the broader unanswered questions in conservation. Terms such as 'salvage operation' and 'last resort' come up often in as the scientists attempt to put new reproductive technologies in perspective in the overall conservation effort.

Not all scientists involved in cloning and genetics are working 'in isolation' from the larger social concerns that their work affects, as you claim. This is especially the case with Dolly creator Ian Wilmut, who, rather than 'distancing himself from any responsibility' for his cloning work, as you allege, has repeatedly weighed in on its ethical implications, especially with regard to human reproductive cloning. In addition to his co-authored book, *The Second Creation*, that you cite in your article, Wilmut has commented on the ethical issues surrounding cloning in US Senate testimony, in anthologies, articles and countless media interviews.

In his editorial announcing the new journal *Cloning*, Wilmut, along with co-editor Tanja Dominko, stipulated that, in addition to publishing the latest scientific reports on cloning and related technologies, the journal wishes to 'promote public discussion on the uses of cloning and support democratic policy making'. By this point, Wilmut had already amply demonstrated his willingness to do just that.

At least some scientists take the risk – and it can be a big one, depending on who signs their pay cheque – of engaging in

public discussion about the possibly negative ramifications of their work.

Rather than vilifying scientists for being self-serving, it is in everyone's best interest to know which scientists are sincerely interested in advancing the discussion of how biotechnology is likely to affect humans and non-humans alike.

Only in this way can non-scientists establish the common ground needed for informed decision-making about these new technologies – before they are misapplied.

STEPHANIE S TURNER

Purdue University, Indiana, US

IT'S AN ILL WIND...

Regarding your reports on key climate issues in February's magazine (Vol 31, No 1) the Scottish Executive's survey saying that the great majority are 'generally positive about wind farms' is not consistent with significant opposition in Dumfries and Galloway to keep our hills turbine-free.

There is a campaigning group with widespread membership, many of whom live near existing or proposed wind farms. Caspar Henderson's article presented wind power as if the debate was over, failing to stress the centralised nature of wind farms and their undemocratic nature, lending themselves to corporate control and wasteful distribution infrastructures.

Is green energy to be a people's energy or an eco-version of the status quo? What are the alternatives?

Peter Bunyard's 'cleaner vehicles' (same issue, p54) also raises issues of universally applicable levels of technology. Fuel is not the only component of motorised transport. Is there ever likely to be a green car or bus or train? Surely eliminating the need for transport should be the goal.

JOHN ROGERSON *Lockerbie, UK*

BADGER CULLING – TO BE OR NOT TB?

Progress in politics and science often happens accidentally. And one unforeseen impact of the foot and mouth epidemic may fall into this category. Both MAFF and vets are over-stretched dealing with the crisis, and so badger culling which was to have resumed on the 1 May has been suspended for a year, and even routine TB testing of cattle is on hold.

It seems probable that the Krebs/Bourne badger culling trial will be abandoned altogether. Several hundred thousand cattle amongst the 3 million stock removed due to foot and mouth, have compromised the basic premise of 'cattle TB hotspots'.

And at least seven of the ten 'triple' badger cull areas are now disrupted, particularly in Devon-Cornwall, and Gloucestershire-Hereford. Some 600 of the 2,900 badgers culled so far are in these two areas, perhaps 120 with TB, but only some 25 infectious. And since these are from some 400 square kilometres, encompassing 450 farms, it is hard to see how the culls will have made the slightest impact on cattle TB.

In fact it is already apparent that each TB badger culled has cost some £35,000, which merely confirms the 1986 findings of the Dunnet Review, that badger culls are a waste of money as they don't work.

Professor McInerney, as part of the review, noted that ending badger culling was purely a political decision. If Labour had won the 1992 election, contingency plans were in place to end culls. Sadly, by 1997 New Labour decided it was politically safer to go ahead with the Krebs cull.

Enough data ought to be available from the trial to provide 'scientific' reasons to grasp the nettle, and take the inevitable and long overdue political decision to end this sorry farce, once and for all.

M HANCOX *Stroud, UK*

JUST A QUICK WORD...

PICTURE THIS

No mention is ever made of the pictures in *The Ecologist*. The photographs in this month's food hygiene supplement were outstanding – some, like the poor sheep or goats with their heads in clamps on your contents page, and the milking suction tubes behind them, really eye-opening. And what of the Coca-Cola-cow contraption? Is this where experiments in cybertechnology will lead us?

AGNES WHITTARD *Lincolnshire, UK*

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Fax: +44 (0)20 7351 3617. Email: letters@theecologist.org Please attach your name and postal address, even when sending by email. The editor reserves the right to shorten or edit correspondence where necessary.

RIP: THE MARSH ARABS

Satellite pictures confirm the destruction of 15,000 miles of ancient Mesopotamian wetlands, home for 5,000 years to the Marsh Arabs

'As I came out into the dawn, I saw, far away across a great sheet of water, the silhouette of a distant land, black against the sunrise. For a moment I had a vision of Hufaidh, the legendary island, which no man may look on and keep his senses; then I realised that I was looking at great reedbeds. A slim, black, high-prowed craft lay beached at my feet – the sheikh's war canoe... Before the first palaces were built at Ur, men had stepped out into the dawn from such a house, launched a canoe like this, and gone hunting here. Five thousand years of history were here and the pattern was still unchanged.'

Wilfred Thesiger foresaw the devastation of the Marshes decades ago, writing in the introduction to *Arabian Sands*, his book on the people he loved so much, that 'recent political upheavals in Iraq [this was in 1964] have closed this area to visitors. Soon the marshes will probably be drained; when this happens, a way of life that has lasted for thousands of years will disappear.'

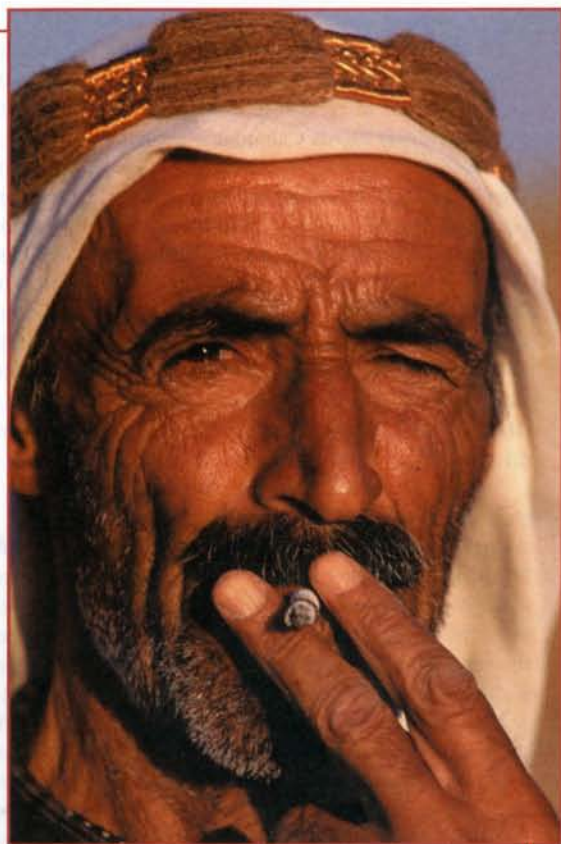
Saddam Hussein issued instructions to begin the draining of the ancient marshlands for 'security reasons' sometime in 1989, a year before his invasion of Kuwait. Massive drainage works followed in the early 1990s after the Gulf war, ostensibly to counter chronic salinisation in the region, but were soon expanded into a scheme to drain the marshlands completely. It was the success of the Iranian troops in the 1980-88 Gulf war in penetrating deep into the Iraqi marshlands which probably initially

drew Iraqi attention to the strategic vulnerability of the region. Iraq's military response during that war was to saturate the lagoons with mustard gas. 'In a garden, you use weed-killer to kill weeds,' one Iraqi officer is quoted as saying. He may have been referring to Iraq's own marsh people.

The Marsh Arabs added nothing to the national economy, were not standard, countable units, and were of uncertain, or actively hostile, political loyalty. The Kurdish uprising in the north, brutally put down using, again, gas, was accompanied in the south by a Shia revolt in which insurgents used the wetlands as hideouts and were impossible to trace.

After the second Gulf war, American journalists were shown the ramparts of vast concrete structures described as 'irrigation' projects, but forbidden access to the salt-encrusted wastelands of the 'agricultural' lands they were supposed to service.

For years, British and American pilots flying the southern 'no-fly' zone set up after the Kurdish massacres, supposedly to protect Iraq's minorities, have been able to observe the shrinking marshlands. According to Robert Fisk, writing in *The Independent*, Marsh Arabs have been arriving in Kuwait and Iran for years, telling of dried-up river beds, starvation and disease, and he adds that on his last visit to their territories he found the women of one Marsh Arab village prostituting themselves to passing lorry drivers to provide a livelihood for their families. And now, NASA/United



IMAGES: SANS FRONTIERS

Nations Environment Program satellite images give public confirmation to what has been known for years: the marshes are literally disappearing.

In ecological terms, the loss of about 14,000 of the 15,000 square miles of the largest wetland in the Middle East, home to more endemic species than any other place in Europe or Asia, will have, according to UNEP, 'significant implications for global biodiversity, including migratory birds, from Siberia to southern Africa,' and has placed an estimated 40 species of waterfowl at risk as well as driving various mammal species to extinction. All in addition to the fate of the ancient peoples themselves.



A monthly roundup of George W Bush's recent words of wisdom

'I say things because I believe them'

D'OHBYA!

'There's no question that the minute I got elected, the storm clouds on the horizon were getting nearly directly overhead.'
Washington, DC, 11 May

'But I also made it clear to [Vladimir Putin] that it's important to think beyond the old days of when we had the concept that if we blew each other up, the world would be safe.'
Washington, DC, 1 May

'Thirdly, the explorationists are willing to only move equipment during the winter, which means they'll be on ice roads, and remove the equipment as the ice begins to melt, so that the fragile tundra is protected.'
Conestoga, PA, 18 May



BANKING ON MEXICO

US corporations are already taking advantage of the Free Trade Area of the Americas

Following on from undertakings by the 34 governments involved in George Bush's Free Trade Area of the Americas (FTAA) project, that they would begin talks on removing trade barriers within the American continent in May next year, and finalise agreement by 2005, Citicorp's purchase in May of Mexico's largest bank, the Grupo Financiero Banamex-Accival, or Banacci, for \$12.5bn, is being seen in the financial press as the precursor to a flood

of US takeovers of Mexican companies, or what Grey Newman, chief Latin American economist at Morgan Stanley Dean Witter, called a 'wall of money'.

Damian Fraser, an analyst at UBS Warburg, is quoted in the *Financial Times* as rating Mexican companies as having a 40 per cent lower purchase price than equivalent companies of equal profitability in the US. Analysts, however, also warn that opposition to President Vicente Fox's government may be stronger than commonly perceived in the United States.

SYNGENTA GETS THE JITTERS

Another GM company that sees debate as a threat...

GM giant Syngenta has been playing unpleasant games with the people of Bracknell, in Berkshire. A meeting was held on 25 May to discuss Syngenta's planned open field trials in the area. There are 3 organic farms in the region of the trials and one garden centre – not to mention Bracknell town centre – and locals were concerned.

On Thursday 24 May, the day before the meeting, the organisers were contacted by the Special Branch of the police to say that

Syngenta had contacted them, saying that a 'demonstration' was being organised for the following evening (the organisers had it on the Friends of the Earth website as a public meeting) and that they 'feared for the safety' of their speakers. Needless to say, nothing happened – except public debate. Perhaps that's what Syngenta doesn't like.

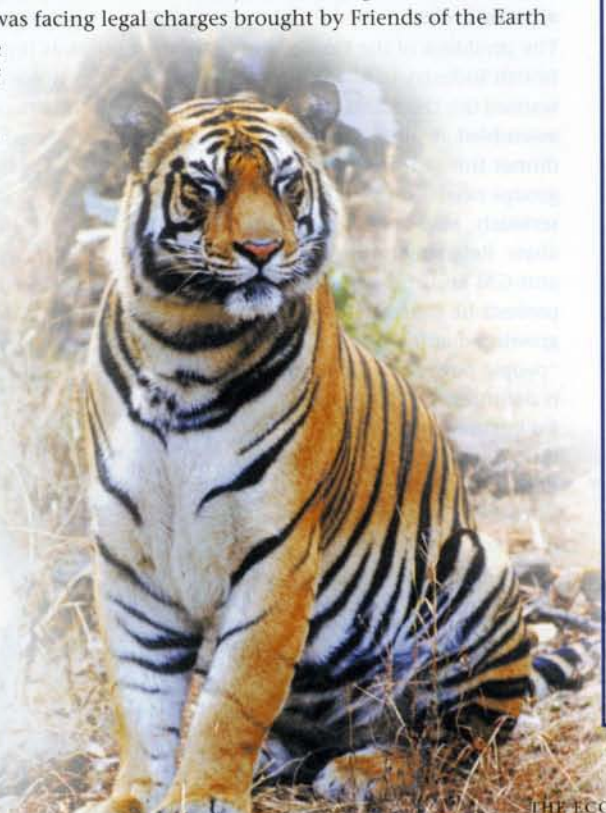
For more on the meeting or the Berkshire trials, contact Doreen Wyatt on 01344 452 893 or 07798 702 042 or Lesley Tooze on 01344 648 343.

SHELL PULLS OUT IN PAKISTAN

Some good news from the oil frontier

Plans to explore for gas in Pakistan's Kirthar National Park (see *The Ecologist* Vol 31, No3) are being dropped by Shell, which was facing legal charges brought by Friends of the Earth for contravening the Sindh Wildlife Protection Ordinance, section 15 of which states that the 'clearing or breaking up of any land for cultivation, mining or for any other purposes' is prohibited. Shell now plans to transfer its interest to another gas development project, still in the Kirthar concession but nowhere near the national park.

Campaigners applauded the decision which comes at a time when increasing pressure is being brought to bear on oil companies (for FoE, Greenpeace and People & Planet's joint UK campaign against ExxonMobil, for example, see www.stopesso.co.uk). Shell is still involved in other controversial projects in South Asia, including exploration for oil and gas in the Sunderbans region of Bangladesh, which is tiger territory.



NOTES & QUOTES

'HNWIs', otherwise known as High Net Worth Individuals – those with investable or liquid assets of more than \$1 million – account for one in 850 of the world's people and together have liquid assets (not property) of \$27 trillion, nearly four times as much as in 1986.

Numbers of HNWIs by region last year (millions):

North America	– 2.50
Europe	– 2.30
Asia	– 1.70
Middle East	– 0.22
Eastern bloc	– 0.20
Latin America	– 0.19
Africa	– 0.04

'Conservation, at least in today's politics, isn't so much about having enough to go around as it is about putting a freeze on any and all development for the sake of 'nature'. Although their arguments invariably lack merit – who can deny that seismic drilling makes oil extraction enviro-friendly, that clean coal has dramatically cut back on pollutants, and that there is no proof that fossil fuels contribute to 'global warming'? – the environmental lobby has a loud voice and a lot of money. It has proved itself the one group capable of cowing Mr Bush into concessions.'

Kimberley A Strassel, writing in *The Wall Street Journal*

'A society guided by survival of the fittest is torn apart internally unless there is something that keeps it together... As a capitalist myself, I'm definitely on the inside, but I would like to work on reforms from there, and I think those outside have some really valid points.'

George Soros, in an interview with *The Observer* after the launch of his book, *Open Society: Reforming global capitalism*

'I am a dissident by nature. I want a society in which dissidence can flourish.'
George Soros

'Open trade is not just an economic imperative, it is a moral imperative. Trade creates jobs for the unemployed. When we negotiate for open markets, we are providing new hope for the world's poor. And when we promote open trade, we are promoting political freedom.'

George Bush, putting the moral argument for free trade

continued on page 10

NOTES & QUOTES

REGULATING POISONS

Yet, as ever, there's a rider.

Aldrin, chlorane, DDT, dieldrin, endrin, heptachlor, mirex and toxaphene (all pesticides), industrial chemicals PCBs and hexachlorobenzene (which is also a pesticide), and dioxins and furans, both by-products of combustion and industrial processes, are now subject to new control measures under the new Stockholm Convention on persistent organic pollution which came into force in May of this year. The World Bank and United Nations Environment Programme have also signed an additional 'memorandum of understanding' which sets out their future role in advising and monitoring national governments' adherence to the convention.

Of the myriad pollutants created by human activity, the so-called 'persistent organic pollutants (POPs)' are distinguished firstly by their extreme toxicity, causing potentially fatal brain and nerve damage, birth defects, reproductive disorders, immune system disruption and cancers, and also by the fact that it can take decades or longer for the compounds to break down in the environment. They circulate around the world through a process of evaporation and deposit, resulting in their being transported through the atmosphere to regions

far away from the original source.

POPs are readily absorbed in fatty tissue and, through bioaccumulation, concentrate in living organisms at magnifications of up to 70,000 times the background level. Fish, predatory birds, mammals and humans, all high up the food chain, absorb the greatest concentrations and POPs are extremely mobile, with the result that POPs can be found in people and animals living in extremely remote regions, thousands of miles from any POPs source. And yet this knowledge is not, it seems, enough to result in an outright ban.

Many of these chemicals are central to key industrial processes, so the Stockholm Convention will aim to 'monitor production and use', while asking governments to 'promote the best available technologies and practices for replacing existing POPs while preventing the development of new POPs'. The worry is, of course, that encouraging the development of industrial economies in poorer countries will result in the proliferation of atmospheric pollutants, hence the involvement of the World Bank which, like the magician's apprentice, is trying now to control what it has helped to create.

BUSINESS LOOKS BAD

Corporations are waking up to the threat of global protest

The president of the Confederation of British Industry (CBI), Sir Iain Vallance, warned the thousand industry captains assembled at the Confederation's annual dinner this year that pressure from protest groups needed to be taken far more seriously, and would grow rather than abate. Referring to the fuel price, anti-GM and anti-capitalist protests he stated that, 'This growing manifestation of "people power" in the raw is definitely not good news for business, particularly if national politicians hesitate in the face of threats or, just as bad, overreact to them.'

He went on to say that business needed to be prepared for a 'people-powered digital networked world' that could

challenge the economic and political givens of the last half-century and that it was impossible to know what the effect. 'All we can really say is that we cannot take business's role in society for granted.'

Speaking of the effect of direct action on the public's perception of business, Vallance spoke of the 'need to promote the undoubted benefits we bring, if only because much of the outside world is highly sceptical that they exist. 'In the view of many, shareholder value accrues to the benefit of the few, at the expense of employee and consumer, just as they see world trade as something devised by the developed world to exploit the underdeveloped. 'In their view, business labours under a massive democratic deficit.'

Looks like we have a new spokesman.

'On the inside, you are not sure of the leverage you [have over] anything.'
US vice-president Dick Cheney, dismissing suggestions that he runs things in the White House

'The problem is, we've got this competition for purity. Too many in the party have an attitude that says "my R [for Republican] is bigger and better and brighter than your R".'

David Cox, Republican leader of the California Assembly

'The clock is standing at one minute to midnight for the Great Apes. Some experts estimate that in as little as five to 10 years they will be extinct across most of their range. Local extinctions are happening rapidly and each one is a loss to humanity, a loss to a local community, a hole torn in the ecology of our planet.'
Klaus Toepfer, director of the United Nations Environment Programme

'If you want to take a shot, you are going to get a shot back.'

US trade negotiator Robert Zoellick's less-than-diplomatic response to a Dutch member of the European Parliament pointing out that her country had more than a passing interest in the consequences of global warming

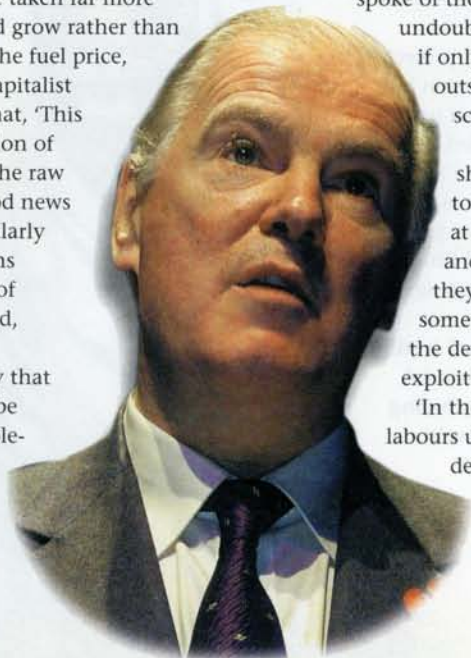
'Here we have a remarkable achievement, a world first, and there are people who seem to make a living out of spreading angst. We are not Frankenstein-type people. If we hadn't made the breakthrough somebody else would; the technology is out there.'
Ian Wilmut, embryologist at the Roslin Institute in Scotland

'Now that we have crossed into the third millennium, we have the technology to break the rules of nature.'

Panayiotis Zavos, US doctor on the baby cloning team, speaking at a conference on human cloning in Rome

You can spray up to six quarts of Roundup [herbicide] on biotech bean without damaging them... the beans even seem to like it.

Monsanto representative during a presentation to farmers, quoted by North Dakota farmer Rodney Nelson, one of hundreds of farmers contesting lawsuits from Monsanto for saving transgenic seeds for sowing the next year.



REUTERS

STAN AT EASE by Stan Eales

A LIFETIME IN SLOGAN T-SHIRTS

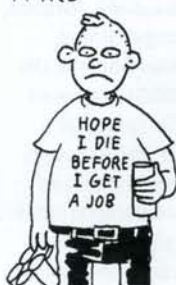
8 YRS



15 YRS



19 YRS



29 YRS



39 YRS



49 YRS



69 YRS



AMBER NECTAR?

Can local food defeat Australia's corporate staple?

Vegemite – the Australian's best-loved staple, aside from Fosters beer. Ozemite – a new treacle spread due to be launched onto the market soon. The difference? Vegemite is owned by Kraft, the Philip Morris subsidiary, and Ozemite is owned by Dick Smith, 57-year-old entrepreneur and multimillionaire, as part of a line which markets itself purely on the strength of being locally produced and owned.

Smith's venture stems from conviction rather than any desire to make money. His company is a licensing operation which takes 7.5 per cent of the wholesale price in return for marketing and the use of the Dick Smith name, and profits not reinvested in the business are given to charity.

The point of Smith's venture is to prove that nations can fight back against the dominance of global corporations. The message is unequivocal: 'Proudly Australian Made' reads the writing on the label. The business was launched in late 1999, with an advertisement saying 'Most Foods Make Me Sick' after Mr Smith learned that Vegemite and many other local food brands were foreign-owned.

Judging by the response so far to Dick Smith's 'Genuine Australian Foods', with 18 products now on the shelves and a sales figure, after only 15 months, of over \$42 million, his feelings are shared by many Australians, but despite the fact that the business has been the saving of several food-processing companies and created hundreds of jobs in hard-hit rural areas, he has faced charges of xenophobia, which he denies.

'I wanted to communicate to Australians that you can support the home team if you want to,' he says, whilst freely admitting that products that cannot be made in Australia should be imported, but says there is a 'groundswell of concern that Australia is in danger of becoming a branch-office economy, beholden to foreign multinationals'.

Wizard of Oz: Dick Smith and his all-Australian perishables

DWELLERS IN THE TREES

Treesitters in the US northwest have saved the forests – so far

A handful of protesters who, in the spring of 1998, built a treehouse high in the branches of a giant fir tree in the ancient forests of Oregon to defend the woods from loggers, unwittingly founded a community of treetop dwellers who have since become a symbol of resistance to the destruction of the forests of the pacific northwest.

Facing determined, often violent opposition from the National Forest Law Enforcement department, their prosecution ended in vindication in the courts, which not only ruled that timber sales had been illegal, but also that the forest police had routinely violated the 'Forest Defenders' civil rights. During the peaceful 18 months which followed, more than 1,000 people came from all over the world to see the treehouses, 200 feet high in the forest canopy, to show their solidarity and support for the continuing existence of the forest.

Under new federal policy, though, clearcutting can now begin again. At the time of going to press, a campaign call had been issued to support what have now become the longest lasting tree villages yet. By the time this issue comes out, the treehouses may have been smashed, and the trees pulped. Either way, ladies and gentlemen, raise your glasses to the Cascadia Forest Defenders and the trees they defend...



in brief

ILISU IN TROUBLE?

A dramatic AGM in May for Balfour Beatty, the UK-based construction giant which is bidding for a contract to build the Ilisu dam in Turkey, led to the company committing itself to taking the World Commission on Dams (WCD)



criteria 'into account' in determining whether and how it should be involved in any future hydro-electrical projects.

The distribution by Friends of the Earth (FoE) of the £30,000 of shares it had bought to campaigning groups and members of the press led to uncomfortable questioning of the board on its record, and to FoE proposing a motion that the company should adhere to the WCD guidelines. As the board had advised against voting in favour of the motion as it would effectively prevent the company from taking on the Ilisu dam project, the abstention of a large percentage of the shareholders was read as tacit support for the proposal.

GLOBAL SAFE FOOD ALLIANCE

Some dozen disparate groups in the US have come together to form a coalition with the mission to 'mobilise a large, broad-based grassroots movement to advocate a food supply that is safe, wholesome and humanely produced in a sustainable manner that benefits consumers, workers, farmers, animals and the environment.' This new Global Safe Food Alliance brings together Family Farm Defenders, the Cancer Prevention Coalition, the Government Accountability Project and the Institute for Agriculture and Trade Policy, as well as the National Catholic Rural Life Conference, which recently ran an 'eating is a moral act' campaign, and whose director, Brother David Andrews, said at the press launch: 'We are concerned that the food cartel culture and industrialisation of agriculture is diminishing the dignity of God's creation.'

INDIGENOUS RIGHTS UPHELD

200 representatives from indigenous groups from Australia, Bangladesh, Bolivia, Botswana, Bhutan, Canada, Colombia, Chile, Ecuador, El Salvador, Guatemala, India, Indonesia, Kenya, Mali, Morocco, Mexico, Nepal, Papua New Guinea, Rwanda, Russia and the Sudan amongst others, together with representatives from the UN and several NGOs, gathered in Panama this spring for a conference to discuss issues related to native rights and culture. The conference culminated in the signing of the 'Panama Declaration', which encapsulated the results of the discussions. Speaking about social programmes sponsored by the World Bank, the IMF and certain NGOs, Biadilla Lino, a Mayangna woman from Nicaragua, said, 'these organisations lack

methods that draw on the indigenous world view,' with its essential aspects of respect for nature and the ability to coexist, 'which turns them into agents that undermine our cultures.'

GREEN SCREEN

Air freshener comprising a cocktail of baking soda, white vinegar and water; and potted basil and mint window sill insect repellent are two of the tips given by the local council in Middlesbrough, in the northeast of England, in a 10-page booklet of home-cleaning hints. The leaflet is being

distributed as part of a two-year 'healthy homes' campaign, aiming to reduce lung cancer and respiratory disease levels.

Middlesbrough's shipbuilding and chemical industries have been associated with a high incidence of cancer, but local studies have shown that in some areas air pollution is greater indoors than out. Susan Lee, officer in charge of the campaign, lists fumes from aerosols, cleaning products, paints, varnishes and glues, smoking and toxic fumes from fitted carpets among the reasons for respiratory illnesses and the dramatic increase in asthma.

SHEEP DIP

The government has paid an estimated £4 million to a French company for a clay quarry in North Devon with the intention of burying 350,000 sheep carcasses there.

The plan is to liquefy the carcasses in 15 chambers, layering the bodies between a geotextile material normally used for keeping earthen materials (soil and gravel, for example) separate, and tapping off the gases and estimated 1,100 gallons of liquid produced daily by the decomposing bodies for removal and disposal by 'a qualified private sub-contractor'.

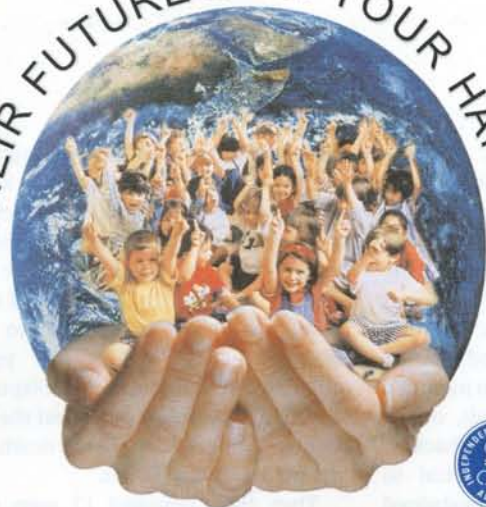
The government is claiming Crown Immunity from waste disposal directives, which would make the action illegal. Local concerns about release of *E. coli* and campylobacter as well as CO₂, methane, nitrogen and hydrogen sulphide, have gone unanswered. The site, close to two primary schools, was previously turned down as unfit for burying slaughtered cattle.

TURBO-CHANGE

Denmark has opened the world's biggest offshore windfarm on the Oresund, the stretch of water across which Copenhagen faces Sweden. The 20 turbines have a combined capacity of 40 megawatts, enough electricity to supply about 30,000 homes, and are funded through a combination of public and private ownership; 10 are public, and the other 10 owned by several thousand shareholders, who can view their turbines and monitor performance on the windfarm website, www.middelgrund.com. Greenpeace is a shareholder, having bought shares to equal the electricity consumption of their Copenhagen office.

The project capitalises on legislation passed by the Danish parliament last year to promote renewable energy, at the same time as liberalising the energy market, and paves the way for a batch of larger windfarms, planned to generate 150MW each (see www.middelgrunden.dk/MG_UK/index). This picture is from the book *Middelgrunden – the Beauty in the Wind* available in both Danish and English. ISBN87-988408-0-04. The book can be ordered at: www.spok.dk/fotobog.html

THEIR FUTURE'S IN YOUR HANDS



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Find out more about our work by requesting a trial copy of our free newspaper Environment Action. Recent contributors include writer and broadcaster Polly Toynbee, Friends of the Earth's Tony Juniper, Green Futures' Professor Chris Baines and New Economics Foundation's David Boyle.

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ENVIRONMENT
AGENCY

+++ ACTION ALERT +++ COME TO BONN +++

THE LIFEBOAT



JULY 21ST 2001, WORLD CLIMATE TALKS
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WHILE THE US PLAN TO WRECK THE TREATY
AND OTHERS AIM TO WATER IT DOWN
TO AVOID CO2-REDUCTIONS AT HOME

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A 30M LONG LIFEBOAT
WITH THEIR MESSAGE TO WORLD LEADERS:

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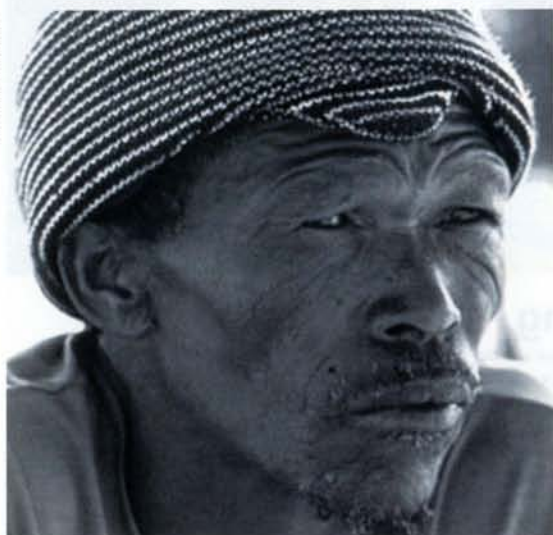
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SOUTHERN AFRICA LAST OF THE BUSHMEN?

STEVEN CORRY/SURVIVAL



The last of the nomadic bushmen, the 'aborigines' of southern Africa, continue to be forced out of the Central Kalahari Game Reserve in Botswana, which was created in the 1960s as a final safe haven for the beleaguered tribe and the animals they depend on for their survival. The bushmen, whose origins go back some 20,000 years, are of the Bantu tribes which arrived in the area around 1,500 years ago, and are seen as 'primitive' hunters by the majority in Botswana.

More recently, an official (and illegal, according to international law) relocation

policy was launched. Villages belonging to bushmen were destroyed by Government officials, and the inhabitants were trucked to 'resettlement camps' far from the reserve. A few hundred bushmen remained on their lands, and after forced resettlement ended in 1998 (after a vigorous campaign mounted by Survival International), others managed to find their way back.

Hunting, which is central to bushman culture and is enshrined in religion and ritual, has been made increasingly difficult by park officials, who require that the bushmen have licences to hunt that put limits on the amount they are allowed to hunt each year.

Indigenous rights and questions of ownership are clearly an issue here, as this is the traditional means of survival of the bushmen and none of the animals they hunt are in any

danger of extinction. And though it is the bushmen who have the greatest knowledge and respect for the animals the reserve ostensibly protects, it appears that the intention is to drive the bushmen from the Kalahari Reserve to make way for diamond mining.

In an incident reported to Survival International in August last year, park officials entered houses in Molapo, a Khwe bushman community, and beat the men and women inside, leading to the death of one of the men a few days later.

They then removed 12 men from the village, keeping them for several days of repeated interrogation, beating and torture. Apparently, the men were tied to trees, threatened with fire, had their feet tied to the fenders of trucks while they were prostrate, and were then beaten and kicked.

Botswana, unlike many other African countries, has a generally good human rights record – but it doesn't seem to extend to the 'primitive' bushmen.

MAKE A DIFFERENCE

Please send a letter or fax pointing out the importance of allowing the bushmen to continue their traditional way of life, and that the rights of the bushmen to their lands must be upheld. Address letters to His Excellency, The Hon F G Mogae, President of the Republic, Private Bag 001, Gaborone, Botswana, fax: + 267 356 086 and, if possible, copy to: Mr Matlhare, Director of Wildlife and National Parks, PO Box 131, Gaborone, Botswana, fax: + 267 312 354. Alternatively, add your name to Survival's sign-on letter at www.survival.org.uk/bushmanabo105.htm.

AFRICA NIGERIA CALLING

The following joint letter signed by several Nigerian environmental organisations has been posted on the internet by the Global Response Network, as an appeal for urgent action:

'By the time you read this, Mr Donald Duke, the Governor of Cross River State in Nigeria will have concluded plans to officially commission WEMPCO, a multi-million gigantic wood processing factory, situated at the bank of Cross River. He has already commissioned Calabar wood Ltd, Rite Edge wood company and other similar logging companies in the state.

WEMPCO has been in the forefront of destroying the last stretch of pristine rain forest in Nigeria found in Cross River state, through indiscriminate logging, and pollution of the only drinking source of water for hundred of communities through discharge of industrial effluents into the river.

It is our belief that the official commissioning of WEMPCO factory on the 17th

of May 2001 is the stamp required to annihilate the forest, turn it to savannah, turn community people to beggars and deprive many ordinary people of their livelihood and independence. WEMPCO has the capacity to clear cut Cross River rainforest, send toxic waste into our water and enslave our youth through provisions of 'work' as hewers of wood and fetchers of water.

Cross River environment requires your active support to stop Mr Donald Duke from his intentions. Please inform others, that the Cross River rainforest is about to be brought to its knees.'

MAKE A DIFFERENCE

Write to: Mr Donald Duke, The Executive Governor, Cross River State, Calabar, Nigeria. Telephone +234 87 235 050 or fax +234 87 +238 181 or +234 87 239 191. Ask him to protect the forest and to consult with local groups and people.

UK EATING INTO THE GREEN BELT

At the time of going to press, a public enquiry into the application by Wiggins Teape to build an all-weather racetrack with a 10,000-seater grandstand on 300 acres of Green Belt land in the outer-London borough of Redbridge is in session, and will give a final judgement in September.

The site, known as Fairlop Waters, was painstakingly recovered from landfilled gravel pits to create a sailing lake, wildlife sanctuary and golf course, but local campaigners claim that, following its purchase by Wiggins Teape in 1997, it has been allowed to fall into a state of dilapidation in order to make the case for planning easier to argue.

As well as destroying valuable green space, there are serious doubts as to the safety aspects, as evidence of the toxic nature of the landfill site appears to be being suppressed.

MAKE A DIFFERENCE

With any help you can give to the campaign, contact Ray Frensham on +44 (0)7779 192 773 or email rayfrensham@ukonline.co.uk.

five dot.campaigners

<p>www.amazonwatch.org Stop the construction of a destructive pipeline in Ecuador</p>	<p>www.actionaid.org/campaigns/coffee.html Join ActionAid's campaign against GM coffee</p>	<p>fpif.org/republicanrule/index.html An interesting site...</p>	<p>enough.enviroweb.org/enougho2.htm Learn what consumerism does to the world, and how you can change your lifestyle</p>	<p>http://www.catalyst-trust.co.uk WDM's new report on GATS and how to stop it</p>
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campaigns and events in July and August

1-3 July 2001

Salzburg, Austria

World Economic Forum Meeting

Visit www.antiwef.org

5 July 2001

Geneva, Switzerland

WTO Council for Trade in Goods Meeting

5-8 July 2001

Vancouver, British Columbia

Forum on Conservation and Human Rights

Organized by the Council of Canadians. International forum brings together activists, experts, and community leaders to address the water crisis caused by privatisation, deregulation, and the trade of fresh water. Contact Peter Coombes on +1 888 566 3888 or visit www.canadians.org/blueplanet/index2

8-13 July 2001

Brisbane, Australia

International Congress of Toxicology

Toxicology and sustainability issues such as endocrine disruptor research, forensic toxicology, ecological health, studies of naturally occurring toxicants such as algal toxins, and chemical sensitivity syndrome. Call +61 73858 5496 or visit www.uq.edu.au/ICT9/.

9-26 July 2001

The University for Peace (UPEACE), Ciudad Colon, Costa Rica

Collaborative Processes in Environmental Conflict

Management Course for students and groups active in natural resources management to manage conflicts, research case studies, train local players, create policy and build coalitions.

Call +506 205 9000 or visit www.upeace.org/academic/courses/collaborative01.htm

10 July 2001

Oxford, UK

Sustainable Building Competition

Brookes University students designs for retrofitting or building urban office space. Visit www.unifi.it/project/tia/competition

10-14 July 2001

Amsterdam, The Netherlands

Challenges of a Changing Earth

Open Science conference presents recent scientific understanding of natural and human-driven changes on the planet, and their effects on societies. Topics include sustainability of ecosystems and productivity, the planet's metabolic system, hot spots of land-use change, and technology issues. Call Susannah Elliott on +31 20 5040208 or visit www.sci.conf.igbp.kva.se/geninfo.html

12-13 July 2001

Geneva, Switzerland

WTO Council for Trade in Services Meeting

16-20 July 2001

London, UK

Detecting Environmental Change: Science and Society

Focusing on detection and understanding of long-term change in natural and disturbed environmental systems. Contact Catherine Stickley, Environmental Change Research Centre, University College London, fax +44 (0)20 7387 7565, email c.stickley@ucl.ac.uk or visit www.nmw.ac.uk/change2001

16-27 July 2001

Bonn, Germany

Climate Summit

20-22 July 2001

Genoa, Italy

G8 Summit Meeting

See peacelink.it/users/controg8

22-26 July 2001

Hilton Paris Orly, Paris, France

Business & Economics Society

International Conference Environmental business and economic, finance, game theory, government regulation, industrial organisation, international trade, business law and ethics, marketing. Contact Helen Kantarelis on +1 508 595 0089.

23-27 July 2001

Novotel, Hammersmith London, UK

International Whaling Commission annual meeting.

(Preliminary and sub-committee meetings from 3 July onwards) Call +44 (0)1223 233971 or visit www.iwcoffice.org

24-27 July 2001

Tarrytown, New York, US

Increasing Productivity Through Energy Efficiency

Subversive event sponsored by the American Council for an Energy Efficient Economy. Talks on industrial conservation measures in specific industries (iron and steel, aluminum, pulp and paper, glass, chemicals, foods, kilns, and cement), incentives that have worked to encourage adoption of industrial conservation and efforts to model current and future energy use patterns. Contact Rebecca Lunetta on +1 302 292 3966.

1 August 2001

Global

Go Wild!

Make a real difference for the holidays. Submissions deadline for Adbusters' place jamming contest. Roll back the asphalt; plant a field and make a short and artful film about it. See www.adbusters.org

five world-wide-watchdogs

<p>www.enn.com/news/wires/tories/2001/05/05132001/reu_whales_43522.asp Latest on the whaling issue in Japan and Norway</p>	<p>antiwto.jinbo.net/kopa/kopa_intro.html How anti-globalisation campaigns are kicking off in Korea</p>	<p>www.mediachannel.org/ As the media watches the world, the world watches the media</p>	<p>www.corpwatch.org/issue/s/dereg/featured/2001/so_lukoya.html Gas deregulation is destroying Nigeria</p>	<p>www.genoa-g8.it/ It looks like a holiday brochure, but if you speak Italian you can see what the G8 will be getting up to in Genoa in July</p>
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SOUTH AMERICA

SAVE THE FORESTS OF TIERRA DEL FUEGO



Reserve on its side of the border, and Chile has plans to establish a national park.

People from around the world are joining the campaign to save the Tierra del Fuego forest. The Chile-Argentina binational collaboration is seen as a first step toward creating a 'Gondwana Forest Sanctuary'.

Gondwana is the name of the ancient super-continent which split apart more than

100 million years ago, dividing the forest ecosystem among what are now southern Chile and Argentina, New Zealand, Australia, Tasmania and southern Africa. Even today the forests of these separate land masses are very similar.

Global Response are coordinating an international campaign to stop ongoing logging in the unique forests of Tierra del Fuego, on the southernmost tip of South America. Tierra del Fuego, an island shared by Chile and Argentina, is home to condors, guanacos, foxes, penguins, magellanes woodpeckers and over 200 species of bird. The forest of lenga trees is a global treasure whose future will be decided in the next few months.

If the US-based Trillium Corporation has its way, the lenga will be cut down and exported to the United States as a specialist wood to replace declining supplies of black cherry. Trillium, notorious for clear-cutting temperate rainforests in North America, bought 770,000 acres on the Chilean side of Tierra del Fuego and 220,000 acres on the island's Argentinian side in the early 1990s. In June of this year, the multinational logging company plans to start clear-cutting 11,000 acres of ancient lenga forest on the Argentinian side.

More than 200 environmental organisations in Argentina and Chile have been fighting for eight years to thwart Trillium's plans and to save the forests of Tierra del Fuego. 'The Trillium project will affect a unique ecosystem, our ancestral woods; it will harm air, land, plants and animals, and undermine the livelihoods of local residents dependent on eco-tourism,' warns the Argentinian NGO FinisTerra. In both countries, they say, community-based eco-tourism could offer a sustainable economic alternative to destructive logging by a multinational corporation.

Regional activists are asking Trillium to sell its forest holdings back to the governments of Chile and Argentina, and return to Chile 156,000 acres that Trillium still hasn't paid for. The countries are already planning how they will protect the Tierra del Fuego forests if Trillium leaves.

Argentina plans to create a Biosphere

MAKE A DIFFERENCE

Please send a polite letter/fax/email to the CEO of Trillium Corporation, supporting the local groups calling for the ending of logging in Tierra del Fuego, and the creation of a sanctuary. Ask Trillium to work with the government of Chile and Argentina to end logging and set up the sanctuary. Copy your letter, if possible, to the two governments.

Mr David Syre, Trillium Corporation, 4350 Cordata Parkway, Bellingham WA 98226, fax: +360 676 7736, email: info@trilliumcorp.com

Sr Ricardo Lagos, Presidente de la Republica, Palacio de la Moneda, Santiago, Chile, fax +56 2 694 5080, email crubio@presidencia.cl

Dr Fernando De La Rúa, Presidente de Argentina, Casa de Gobierno, Balcarce 24 CP 1064, Ciudad Autonoma de Buenos Aires, Argentina, fax +54 11 4344 3700, email engaforest@ecosrioplatenses.org

UK METRIC MADNESS

By now, many people, certainly in Britain, will be aware of the Metric Martyrs, two Sunderland tradesmen who are being taken to task – and court – by EU-obsessed local councillors for the heinous offence of selling their bananas and haddock by the pound, rather than by metric measures. It seems that since the EU passed their all-compassing regulation insisting that all loose goods must be measured by the gram, the right of British shop-keepers to trade in a manner that most suits the British has legally fizzled away.

Does this matter? The results of a new poll

Do you believe goods should be by law:

Only be sold in imperial measures?	13%
Only be sold in metric measures?	10%
The choice should be left to shopkeepers and customers	70%
Don't know	6%

Does this case (the Metric Martyrs) and other similar cases make you:

More in favour of the EU?	4%
Less in favour of the EU?	56%
Make no difference?	36%
Don't know	3%

would suggest that it matters very much indeed, and that the Metric Martyrs – and indeed the 40,000 traders up and down the country who are still selling by the imperial system – are enjoying a remarkable degree of support from the British public.

The poll, commissioned by *The Ecologist*, was conducted by ICM, who interviewed a random selection of 1000 adults aged 18+ by telephone between 25-26 May 2001. Interviews were conducted across the country and the results have been weighted to the profile of all adults.

Would you support shopkeepers who continue to sell goods in pounds and ounces in defiance of the law or not?

Yes	75%
No	19%
Don't know	6%

Do you tend to think in kilos and grams or in pounds and ounces

Kilos and grams	18%
Pounds and ounces	74%
Don't know	8%

MAKE A DIFFERENCE

There are still 40,000 traders in Britain selling loose goods by the pound and the ounce. You can give them your full support quite simply – by buying their wares. For further information on the Metric Martyrs see www.metricmartyrs.sageweb.co.uk

Whaling: should Japan

JOJI MORISHITA AND FRED O'REGAN



JOJI MORISHITA

Joji Morishita has been deputy director in the Far Seas Fisheries Division of Japan's Fisheries Agency since 1996. He is one of the agency's key negotiators on international fishery issues.

Dear Fred

I appreciate the opportunity provided by *The Ecologist* to present our position on whaling. I hope readers will look objectively at our case and respect our views.

From a Japanese perspective, whales are a valued marine resource that should continue to be used as a source of food, providing that stocks are robust enough to support sustainable whaling. Japan, with limited grazing land and adherence to Buddhist teachings that prohibited eating of land mammals, has long resorted to the oceans to supply its animal protein. This is why we consider our food culture a 'seafood culture' in contrast to the European and US 'cattle culture'.

Japan's degree of food self-sufficiency ranks as the lowest among the major developed nations. In terms of calories, food self-sufficiency in Japan is only 41 per cent, compared with 152 per cent in Canada, 139 per cent in France, 132 per cent in the US, 97 per cent in Germany, and 77 per cent in the UK and Italy. Japan made a remarkable economic recovery after its defeat in World War II, at the price of minimising its own food production. With regard to animal protein supplies, Japan currently imports almost 75 per cent of its daily requirements. Our government seeks to address this unsatisfactory situation in the 21st century, by increasing food self-sufficiency in environmentally-friendly ways. Destroying our terrestrial biodiversity as so many nations have had to do to raise cattle, is not an option we wish to pursue.

This is the background for our principle that food resources from the oceans must be managed properly to ensure long-term food security. Certain whale stocks, which credible scientific authorities have determined are abundant enough to meet our needs, should be utilised as an important part of our food-security strategy. With such a heavy dependence on marine living resources, we are very aware of the need to follow a precautionary and an ecosystem approach in fisheries management. We cannot adopt a *laissez-faire* attitude toward management of whale stocks; our fisheries are being seriously damaged as increasing whale populations feed on many economically-important fish species.

We fully recognise that some whale stocks must continue to be protected. Indeed, blue, fin, right, sei, and humpback whales were protected long before the adoption of current moratorium by the IWC. What we are speaking about is the new sustainable whaling regime, in which only those stocks that can sustain a regulated fishery would be fished

under a conservative catch quota system that has been unanimously approved by the IWC Scientific Committee.

Modern sustainable whaling is a far cry from the ruthless over-harvesting of the past, during the so-called 'whaling olympics' era. In those days there was intense international competition to supply the global demand for whale oil. With only rudimentary scientific knowledge about whale populations, the international whaling regime was incapable of regulating the various nations' whaling fleets racing to hunt the large whales in a competitive international market. All this has now changed. Today there is no international market for whale oil, the science is rigorous, and thanks to the advanced use of computers utilising data obtained through non-lethal methods, the IWC Scientific Committee can determine appropriate catch quotas on a stock by stock basis, so that catches will not harm the health of the whale populations.

The whale is a renewable resource, and many populations are increasing. The Eastern Pacific Grey whale is a well-known example; after several decades of regulated hunting, this population has recovered from a very low level to a population now considered to be larger than its pre-exploitation size. This population recovery has occurred despite Russian whalers taking around 180 whales annually. This as an exemplary demonstration of sustainable whaling.

Some claim that for moral reasons, whales, even if very abundant, should not be killed. We recognise that there are diverse food cultures in the world, and that some people only accept the eating of pigs, cattle, or poultry as appropriate, while others regard eating wild animals as normal. Whales have been on our diet for thousands of years, and we do not subscribe to the recent paradigm created by the anti-whaling lobby that enshrines the whale as a sacrosanct creature that should not be taken as food.

We are committed to work within the framework of the International Convention for the Regulation of Whaling (ICRW), the objectives of which are clearly stated: 'Recognising that the whale stocks are susceptible of natural increase if whaling is properly regulated, and that increase in the size of whale stocks will permit increases in the number of whales which may be captured without endangering these natural resources.' It concludes that the signatories to this treaty (which governs IWC activities) have acceded to the treaty 'to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry.'

The ICRW allows the regulated taking of non-endangered whales. Japan is committed to upholding the rule of law with regard to this rational and environmentally-friendly food-producing activity.

Joji Morishita

YES



be allowed to continue?

CLASH ON CULTURE, CONVENTIONS AND CULLING

Dear Joji

We thank you for allowing us the opportunity to respond to the views of the Japanese government on whaling. The International Fund for Animal Welfare (IFAW) welcomes this open exchange of opinion and information.

We certainly appreciate the cultural differences that make our shared world such an interesting place, and recognise that many Japanese people view Japan's food culture as a 'seafood culture,' as you stated in your letter. At the same time, we believe that the debate over whaling cannot be generalised as a simple difference between European and US versus Japanese culture, which is the view his letter seems to promote. As you know, many of the nations opposing Japanese and Norwegian whaling are neither American nor European and include Brazil, Mexico, and India, to name but a few.

Japanese public opinion seems to reinforce our view. In 1999, the first comprehensive non-governmental poll on Japanese public attitudes toward whaling was conducted by the well-known MORI polling firm. Contrary to the Japanese government claims of overwhelming public support for whaling and for eating whale meat, the poll revealed that 61 per cent of those questioned had not eaten whale meat since childhood. Only one per cent said they ate whale meat once a month, and none questioned claimed they ate whale meat more often than this. When asked their views on whaling, only two per cent strongly supported the industry, with eight per cent tending to support Japanese whaling.

Under these circumstances, we find your charge that there is a 'recent paradigm created by the anti-whaling lobby that enshrines the whale as a sacrosanct creature' to be completely false. We believe we have far more in common with the Japanese people than Japanese government claims would indicate, and this debate should focus on its scientific and animal welfare merits – not on generalised claims of vast cultural differences.

We totally agree with the concerns stated in your letter about credible science, the rule of law, and conserving biodiversity. However, Japan's argument that fishing stocks are being 'seriously damaged' by increasing whale populations is simplistic and dangerous, and lacks credible scientific information. Most scientists today recognise that human over-fishing is responsible for the sad state of many of our commercial fisheries; in fact, the UN Food and Agriculture Organisation (UNFAO) states that 80 per cent of the world's fish stocks are depleted due to commercial fishing activities. To propose culling whales instead of engaging in serious global efforts to curtail over-fishing is simply irresponsible. How many whales would Japan propose we cull in order to resolve our fishing problems? Thousands? Tens of

thousands? More than two million, as were killed in the southern hemisphere during the 20th Century? The government of Japan knows, as all objective scientists know, that culling marine mammals has never been the answer to failed fisheries management. It may provide a conveniently simplistic justification for whaling, but it has no basis in either science or sensible resource management.

We also agree with you that Japan and all nations should be 'committed to upholding the rule of law' with regard to whaling. But we would point out that the Japanese government currently has little credibility on this issue. Japan began its scientific whaling programme immediately after the establishment of a global moratorium on commercial whaling proposed in response to overwhelming international concerns about the precipitous decline in global whale populations. The majority of the whales killed by Japan are taken in an internationally designated sanctuary which Japan has chosen to ignore. Furthermore, last year the Japan whaling industry deliberately extended its efforts to two new species at the same time they were negotiating on how best to ensure compliance in future whaling efforts. Lawyers may argue whether the Japan is technically violating international law, but few will deny that Japan's efforts have seriously undermined the intent of the ICRW and the wishes of most of its members.

Before Japan can claim to be committed to the rule of law, the government must stop trying to block all attempts to build an objective monitoring and compliance regime into the IWC. Between 1995 and 1997, IFAW-funded scientists purchased whale products in Japanese retail markets; the DNA was then analysed by scientists at the University of Auckland. The results, published in the most prestigious peer-reviewed scientific journals, show that whale products in Japanese markets contain meat from protected humpback, blue and fin whales. They also indicate an alarmingly high level of direct or incidental catch of other species in Japanese and adjacent waters, catches which are subject to neither regulation nor monitoring. Despite evidence that it lacks controls over its domestic whale meat market, Japan has since rejected all proposals to include a DNA monitoring scheme as part of an international regulatory system. The history of commercial whaling is one of non-compliance and lack of control, and we cannot support efforts to continue that sad tradition.

Fred O'Regan ✦



FRED O'REGAN

Fred O'Regan is the president of the International Fund for Animal Welfare and has published numerous articles and papers on international development.

NO

'Whales have been part of our diet for thousands of years, and we do not subscribe to the paradigm created by the anti-whaling lobby that enshrines the whale as a sacrosanct creature that should not be taken as food.'
Joji Morishita

Dear Fred

Although I appreciate your agreement with so many of my points, particularly those concerning the need to respect cultural differences and the rule of law, I don't claim this dispute is simply rooted in cultural differences. The critical question is whether an abundant marine species may be sustainably used for food, or should become an 'untouchable icon'.

Most of your assertions are contradictory to the intent of the ICRW, while the rest misleadingly misrepresent the facts.

The MORI poll you quoted was commissioned by Greenpeace and the IFAW, and failed to meet minimum survey standards or any other test of credibility. Also, you incorrectly interpreted the 55 per cent of respondents who held no opinion or were neutral as a negative result. A more credible survey by the Japanese Prime Minister's Office found 77 per cent of Japanese support regulated whaling.

Japan's whale research programs are perfectly legal and have a sound scientific basis. The ICRW provides for the issuing of permits for the killing of whales for research purposes and the IWC Scientific Committee has commended Japan's research, noting that it is providing valuable scientific information that will contribute to the management of whale stocks. Further, the ICRW requires that regulations be based on scientific findings. These facts render absurd your statement that Japan's whale research undermines the intent of the ICRW. It is the anti-whaling members of the IWC that undermine the purpose of the ICRW. There is no 'good faith' interpretation of the convention that provides for the prohibition of whaling when science supports the sustainable use of abundant whale resources.

Contrary to your assertion that Japan is ignoring efforts to curtail over-fishing, Japan is leading the world in response to the UNFAO's call for a reduction of fishing capacity having scrapped 20 per cent of its tuna long-line fleet. The point you miss is that cetaceans are consuming three to five times the amount of marine resources harvested for human consumption, and failure to include this in ecosystem models for managing our ocean resources may diminish the effects of controlling fishing capacity.

With regard to DNA testing in the market place, the work of IFAW-funded scientists lacks credibility. Their pronouncements that blue whale meat was found on the market in Japan were proven false by Japanese scientists and later corrected by the authors themselves. Further, contrary to standard scientific procedures, they have consistently refused to provide samples for independent verification.

Japan is opposed to the inclusion of DNA market testing in the IWC's Revised Management Scheme simply because, from a legal point of view, the IWC's mandate is to regulate whaling, not markets. Insistence that DNA market testing be included is just one example of stalling by anti-whaling members to prevent the IWC from functioning. Even so, Japan has voluntarily instituted a DNA register and market

sampling programme. Results of market sampling and testing by The World Conservation Union (IUCN-Traffic) indicate that the small amount of meat whose origin is questioned could have come from frozen storage, stranded animals or whales accidentally caught in fishing nets.

Joji Morishita

Dear Joji

I must disagree with your assertion that Japan's whale research programs have a sound scientific basis. The international scientific community seems to view research whaling as anything but scientifically sound. Why else would the IWC ask you to cease every year?

Since Japanese research whaling was introduced, your government has repeatedly changed the aims of the program. The original stated objectives, which arose following the implementation of the IWC's moratorium on commercial whaling, concerned the estimation of biological parameters for stock management of minke whales and their role in the marine ecosystem. Then, in 1995, a new objective was introduced, to investigate the effects of environmental change on cetaceans. Research was then expanded into adjacent areas and additional animals were killed. Although Japan told the IWC that this expansion was for one year only, the extra catches have continued ever since.

As you know, the IWC Scientific Committee has already devised a management procedure for whales based on data collected exclusively from observation, and not requiring any data collected by killing whales. The committee undertook a comprehensive review of the Japanese 'scientific whaling' program in 1997, which concluded that the data collected are not required for management. In 1998, the IWC noted the grave concerns expressed in a letter from eminent members of the international scientific community, stating that 'moral and ethical issues are raised when a single research program results in more than 2,500 cetaceans being killed over eight years, with whale meat and other whale products resulting from such research being sold in commercial markets, while a moratorium on commercial whaling remains in force.'

Your government now appears to be calling for the culling of whales on the grounds that they are competing with humans for fisheries resources. These claims are unsubstantiated by any peer-reviewed research or objective scientific body. To make such claims prior to conducting and reviewing research involving ecosystem models shows a total disregard for science-based management. Sadly, this is what we have come to expect from Japan's research whaling program. In none of the cases investigated so far has it been found that culling marine mammals would benefit fisheries, although nations with failed fisheries policies are often eager to use marine mammals as the scapegoat for those failures, or to raise the issue in an attempt to garner support for

whaling. How can Japan's 'scientific whaling' be seen as credible, objective science when the government of Japan has clearly already concluded that whales compete with fisheries before the necessary research has been conducted?

Your simple comparison between the estimated consumption of marine resources by whales and fisheries is meaningless given the complex interactions in the marine ecosystem. The major predators of commercially important fish are not whales, but other fish, while whales often prey on fish that are of no value to humans. To confuse the overwhelming scientific evidence regarding needed reductions in fishing effort with the poorly understood role of whales in the ecosystem is ludicrous.

You claim that Japan is opposed to the inclusion of DNA market testing in the IWC management scheme because the IWC's mandate is to regulate whaling, not markets, and state that the anti-whalers are stalling progress in the IWC. Once again you have distorted the scientific objective. As you know, the proposals to include DNA testing are not for the purpose of regulating markets but for the purpose of checking whether catches are within the limits set by the IWC. It is not the proposed DNA registration scheme that is stalling progress in the IWC, but the refusal by Japan (and Norway) to accept any objective monitoring of commercial whaling.

Fred O'Regan

Dear Fred

As the IFAW's position has never been based on science, your criticism of Japan's research is misinformed. Changes to the objectives of the programme, which you criticise, were additions to reflect IWC resolutions regarding the environment and pollution and questions from the IWC Scientific Committee concerning whale stock structure. Both the quantity and quality of the scientific work has been commended by the Scientific Committee.

Your reference to the quote of 'eminent members of the scientific community' merely confirms that their concerns are ethical and moral and not scientific. Article VIII of ICRW requires utilisation of the research by-product (whalemeat) to avoid wastage. Our culture views wastage as unethical and immoral. Your reference to the IWC's resolutions against Japan's whale research is misleading. These non-binding resolutions were adopted by the anti-whaling arm contrary to the convention and the views of the Scientific Committee which recommended the continuation of the programme.

Regarding RMS, it is the anti-whaling members of the IWC who seek a permanent moratorium who have delayed its completion. Their actions undermine a decade of work by the IWC and its Scientific Committee to bring the IWC back to its mandated task of managing whaling on a sustainable basis. Also contrary to your statement, the scientific literature does contain studies documenting the impact of marine mammals on fisheries. Again, since

science is not the basis for IFAW's position, it is easy to dismiss these. The fundamental difference between our positions is: We believe that the management of marine resources, including whales, should be based on scientific advice. The IFAW's position is that no whales should be killed period – irrespective of their abundance and importance to other cultures. In your attempt to impose your views you have misused science, misinformed the public and rejected the need to respect cultural differences. To the IFAW, whales must remain an untouchable icon but to the Japanese, they are a valuable source of food.

Joji Morishita

Dear Joji

I suspect that all the scientists who have been involved in the peer-review process of IFAW's many publications on the whaling issue would find your statement that 'IFAW's position has never been based on science' quite offensive. The resolutions calling on Japan to stop its lethal research whaling were not passed by an 'anti-whaling faction' but by a large majority of the Commission, following conclusions by the IWC Scientific Committee that the data were not required for management of whales.

Rather than cast aspersions on IFAW's science, perhaps the Japanese government should listen to its people, more than one third of whom believe that whaling should stop if it harms Japan's international reputation. There can be little doubt about the harm done to Japan's reputation by your Fisheries Ministry's insistence on conducting whaling in an international sanctuary, or by expanding whaling operations while supposedly negotiating in good faith on a new management scheme.

You finish by accusing the IFAW of viewing whales as an untouchable icon. During the 1970s whales became the living symbol of a global environment movement so powerful that it brought us strong national laws and international agreements to protect the oceans, rain forests, and wildlife. Whales became that symbol because industrial whaling by countries like Japan, Norway, the Soviet Union and the US had so obliterated whale populations that we wondered if they would ever recover. And now you would cull them because they are an easy scapegoat for failed fisheries policies.

Is this a symbolic battle? Perhaps. Millions of people view whales as symbolic of the need for the continued protection of many species. Your government sees this as a battle to weaken the conservation movement by refusing to comply in international environmental agreements or to accept any science but your own. We believe the choice is clear.

Fred O'Regan

Japanese whaling rights is one of the major issues on the table at the 53rd annual meeting of the International Whaling Commission from 23-27 July at the Novotel London West, Hammersmith, London, UK. For more information contact Kara Brydson at IFAW on KBrydson@ifaw.org or 020 7587 6700.

'Japan's argument that fishing stocks are being 'seriously damaged' by increasing whale populations is simplistic, dangerous and lacks credible scientific information. Most scientists today recognise that human over-fishing is responsible.'
Fred O'Regan

THE GOOD

It's like letting the cat guard the cream', said Vera Mischenko with her typically succinct and incisive way of coming straight to the point. It was a good analogy. The cat in question was Russia's Ministry of Natural Resources, and the cream in its custody, the oh-so-tasty bowlful of the country's oil, logging and nuclear waste-dumping rights, which the Ministry's corporate alleycat chums, including Exxon, had been sniffing around for years.

When, in May last year, Russia's president, Vladimir Putin, abolished the independent Russian State Committee on Environmental Protection and the Russian Forest Service, transferring their functions to the Ministry of Natural Resources, which is responsible for handing out corporate environmental exploitation licences for cash, it was Mischenko who led the outcry.

'The Natural Resources Ministry disregards environmental laws all the time,' she stated, 'and has consistently refused to conduct environmental impact assessments as is legally required when issuing mining and other resource extraction licences.'

But Mischenko is not a woman just to use strong words – she

backs them up with firm action too.

Mischenko is president of the Ecojuris Institute, Russia's increasingly powerful environmental law group, and in August, she and her team launched a suit against the President to declare his actions unconstitutional and invalid.

The particular cat they're taking on is a monstrous one. Previously, environmental

VERA MISCHENKO

impact assessments – or Expertizas – were carried out independently by the Committee on Environmental Protection, and further citizens' groups were able to conduct their own environmental reviews in addition to those of the Committee.

When, for example, the Committee refused approval of Exxon's drilling plans in the country, because they included levels of waste-dumping that violated Russian law, Exxon was furious. Yet under Putin's new decree, the Ministry is able to conduct its own expertizas, with no public scrutiny. They also have to find funding for these investigations. It's not hard to imagine where the roubles will come from.

Yet this is only one of many cases of environmental rape and pillage that Mischenko has taken on over the years.

Ten years ago, she founded the Ecojuris Institute, as the country emerged from communist rule, and hasn't looked back since. She has chiefly focused over the years on the enforcement of environmental legislation, and the insistence that development projects are in part reviewed by citizens' groups.

Her first victory came as early as 1992, when she halted the construction of a huge thermoelectric power station – the success was short-lived, as the plant was eventually built, though at least with modifications. In 1998, she won a famous victory, marking the first time that a defence of public ecological interests was won in Russia. The case covered a number of governmental decrees, not the least allowing the logging of 20,000 hectares of previously protected forest, in violation of existing laws. Mischenko, instead, cut down the loggers in the Russian Supreme Court.

The work hasn't stopped there. She has stopped the laying of railtrack through national parkland, and saved further forests. She has helped strengthen national environmental law, and enforced public health rights. She has been involved in extensive analysis of the health defects of Russian children in urban areas, highlighting disturbing levels of bronchial asthma relating to nitrogen oxide from vehicle exhausts, and birth defects due to PCBs in maternal milk. And she is currently

researching, designing and promoting a comprehensive legal advocacy and reform strategy for the protection of Russian seas. During this period, Mischenko has even found time to create the Russian Network of Environmental Lawyers, a group of attorneys from across the country who do pro bono environmental work, and has helped draft environmental legislation for the State Duma.

In 2000, she won the Goldman environmental prize, the world's largest prize to honour grassroots environmentalists.

'This award is a great recognition of the work of the lawyers and researchers of Ecojuris Institute, the Russian Public Interest Environmental Law network, and NGOs from different Russian regions,' she said upon its receipt.

Which brings us back to the case being presented against Putin. You may recall from the beginning of this article that Exxon was denied the right to operate in Russia's eastern seas by the Committee on Environmental Protection. Well, it wasn't quite as simple as that. The Committee certainly did reject Exxon's proposal, but Putin overturned that rejection.

The Exxon proposal to drill for oil, and dump toxic waste from the oil extraction in the Sea of Okhotsk, seemed to have been given the green light. Yet there was one unexpected hurdle lying ahead of Exxon. A lawsuit was filed in Russia's Supreme Court to challenge the decision – and was won. This was the first environmental victory in Russia against the interests of a multinational corporation.

Behind the lawsuit, once again, was none other than Russia's staunch environmental defender and promoter of citizens' rights, Vera Mischenko.



THE BAD



Changing the World's climate, bringing storms, floods and drought, is a role normally reserved for James Bond villains. Lee F Raymond, the 62-year-old Chairman and Chief Executive Officer (CEO) of ExxonMobil doesn't seem like the Stavro Blofeld type. This Doctor of Chemical Engineering from South Dakota has a low profile. *Businessweek* described him as 'the anti-celebrity CEO'.

However, if one man is behind President Bush's abandonment of the Kyoto treaty, it is Raymond. This year, he declared: 'Exxon is a machine that grinds its own way.' Exxon has ground away at targets as diverse as trade unions, the rights of indigenous people, and even the regulation of chemicals in European toys. Now, with the abandonment of Kyoto, Raymond's firm wants to grind away at the biggest target of them all, the global climate.

Raymond gave Bush the justification for tearing up the Kyoto treaty. There were two main prongs to the attack. Firstly, Exxon tried to spread confusion about global warming. Raymond told his shareholders that when it came to CO₂ emissions that 'what is clear is that nothing is clear.' If global warming seemed uncertain, then increased use of fossil fuels could remain a certainty. Secondly, he portrayed the Kyoto principals as a fetter on economic freedom. In China, he declared that, 'to achieve the kind of reduction in carbon dioxide emissions most advocates are talking about, governments would have to resort to energy rationing administered by a vast international bureaucracy responsible to no one'.

It's a curious point – Kyoto was debated democratically, whereas Raymond himself, as CEO of Exxon, heads a vast international bureaucracy accountable to no one.

Raymond's Texas based firm has made its mark in other ways. Exxon is a chemical manufacturer. They make phthalates, chemicals used to soften the PVC in toys, which are suspected of disrupting chil-

dren's growth. Exxon didn't want the European Union (EU) banning phthalates in all toys. After intense lobbying from the US government, the EU dropped the ban.

Exxon mines coal. The El Cerrejon mine in Colombia, which is over 20 miles long, despoiled the land of the local Wayuu people, draining rivers and spreading waste. Some Wayuu had jobs in the mine, but they were soon replaced by Colombian workers, who have in turn had to strike repeatedly for better pay. The Colombian government backed Exxon by surrounding the mine with tanks.

When Raymond's firm drills for oil, the results can be ugly. Last year Exxon persuaded the World Bank to lend the government of Chad money, so Chad could pay Exxon to build an oil pipeline.

The World Bank demanded that none of the cash be spent on internal repression. Exxon agreed, but it was soon revealed that \$4.4 million dollars, a quarter of the first payment to Chad, was secretly spent on weapons.

ExxonMobil drilling in the Indonesian province of Aceh is associated with the devastation of local communities and civil strife. Challenged about the relation between Exxon and oppressive regimes,

LEE F RAYMOND

Raymond told *Business Week* that 'the biggest thing this company can bring to some of these countries is the opportunity to see capitalism and the free market work.'

In 1999, Raymond managed the merger of Exxon and Mobil, and reunited the two halves of Standard Oil. However, size isn't everything. Raymond has also made a mark because his firm is very political. Raymond is a member of some of the key global business groups. He sits on two of the US's most powerful business lobby groups, the Trilateral Commission and the Council of Foreign Relations, which between them

have dominated American foreign policy. He is a member of the American Business Roundtable, which led the opposition to Kyoto. His firm backs the Global Climate Coalition and American Petroleum Institute, which also joined the charge against Kyoto.

Raymond may have learnt to lobby hard when he lost out to political pressure. Most significantly, he spent two years in Alaska negotiating smaller fines for his firm after the Exxon Valdez disaster. His firm paid \$3.3 billion in fines and clean-up costs after the firm's tanker spilled 11 million gallons of oil into Alaskan waters, but resisted a further \$5 billion in punitive damages.

Exxon are fighters – they fought over Valdez and they fought over Kyoto. But Raymond believes he is fighting a just cause. For him, US energy policy 'starts with a recognition that the country needs and wants to have economic growth. I'm not sure whether we can handle all the social and economic demands of this country, but without economic growth, I'm very confident that we can't.' To meet these demands, Exxon must 'find more oil' because energy conservation and efficiency is 'no panacea'.

One economic demand to be met is Raymond's own salary. His last reported annual earnings were \$58,409,575, plus \$121,788,923 in unexercised stock options.

...AND THE UGLY

'In addition to making spending reductions, we will attempt to eliminate regulatory and bureaucratic barriers to economic development. We will promote value added resource development and work to remove barriers to getting state land into private hands.' *Brian Porter, Republican representative for Alaska, re-affirms the party commitment to destroying Alaska's environment.*



eye spy

Flying mini-surveillance computers the size of a grain of sand: Science fiction? No – the US military's latest project. **Rob Edwards** opens the doors on the era of 'total surveillance'.

To see a world in a grain of sand', was how William Blake expressed his wonder at nature 200 years ago. Now, thanks to some American hi-tech military research, the poet's image may be turned into something infinitely more sinister.

Funded by the Pentagon, scientists of the University of California at Berkeley are developing an intelligent surveillance sensor no larger than a grain of sand. Designed to spy on enemies of the US, it is called 'smart dust', and could be with us in less than a few months.

The idea is that small, remote-controlled planes will sprinkle clouds of smart dust behind enemy lines. The dust, each particle packed with state-of-the-art miniaturised electronics, will then use laser technology to relay vital information about troop and tank movements back to commanders in the field.

The worry is that smart dust could also be used for more nefarious activities. It could be used to spy on citizens, to pry into people's personal lives and to control 'troublesome' protesters. It could make the state and large corporations, who already monitor most of our movements on CCTV, a much more powerful Big Brother.

Kris Pister, the ebullient head of the development team at Berkeley, acknowledges that his technology has its 'dark side'. Nevertheless, he is confident that it will bring more rewards than harm, and so is enthusiastically forging ahead. 'I believe that the benefits will far, far outweigh the drawbacks,' he argues, 'but I'm hardly unbiased.'

Smart dust is the logical product of the ever-decreasing size of electronic equipment. It is now quite possible to harness the processing power of an IBM desktop computer of 15 years ago in a matchbox-sized machine.

The Berkeley researchers have already built a prototype micro-sensor the size of a pea. Two etched silicon chips less than five millimetres across incorporate an optical receiver and transmitter, as

well as a simple digital controller. They have shown that the signals it sends can be detected 21km away across San Francisco Bay.

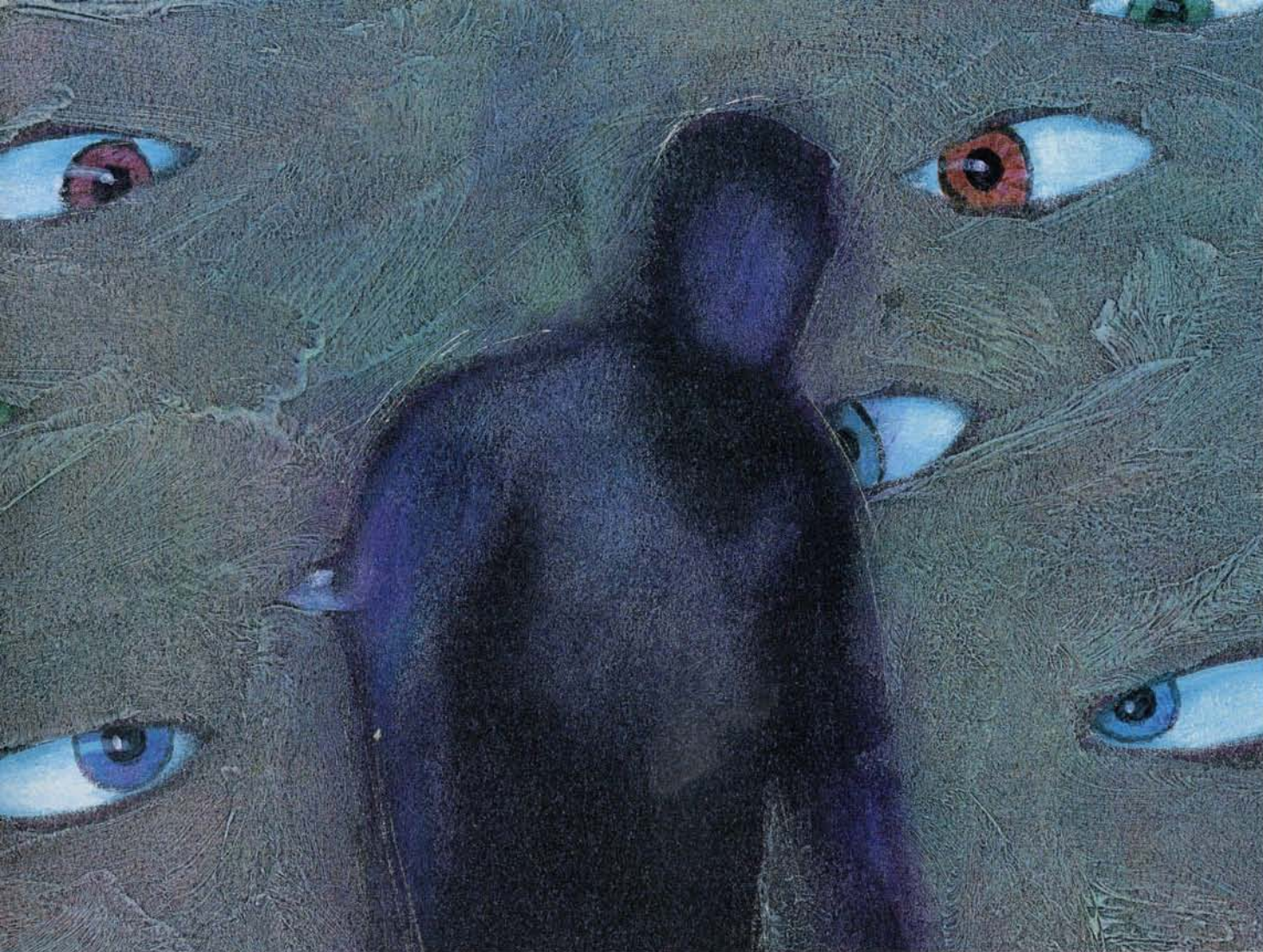
By July 2001, they say they will have a functional sensor with two-way communication within a cubic millimetre – the size of a sand grain. Such a 'mote' of silicon, including a low-power receiver, converter, controller and transmitter, will be driven by a tiny array of solar cells.

Pister, an associate professor of electrical engineering and computer science at Berkeley, insists that all the individual parts work and it's just a question of putting them together correctly. If all goes well, he hopes soon to be able to move to the next stage: making the dust even smarter by attaching tiny wings and enabling it to 'swarm' in pursuit of a common goal, much like a swarm of bees.

The work is being funded for three years by a grant of \$1.2 million from the Defense Advanced Research Projects Agency, an arm of the US Department of Defense. As well as spying on battlefield movements, the hope is that smart dust could also track transport links, help verify arms treaties and trace chemical, biological and nuclear weapons.

These are some of the beneficial uses, Pister contends, which could be accompanied by a host of other helpful civil applications. By 2010, he predicts that micro-electro-mechanical systems, or MEMS, will make possible ten-cent radios, one-dollar three-colour laser projectors and sensors that will scream when anyone tries to remove valuables from your house.

Sand-sized devices will tell you if your baby stops breathing, fine-tune your central heating and guide you through busy traffic to a parking space. In 2020 tiny sensors implanted around your body will warn you when you are about to come down with a heart attack, cancer, or the flu. 'MEMS sensors will be everywhere, and sensing virtually everything. Scavenging power from sunlight, vibration,



thermal gradients and background radio frequencies, sensor motes will be immortal, self-contained, single-chip computers with sensing, communications, and power supply built in,' Pister forecasts.

'Entirely solid state, and with no natural decay processes, they may well survive the human race. Descendants of dolphins may mine them from the arctic ice and marvel at this technology from our extinct civilisation.'

He dismisses fears that such long-lived items could cause an environmental hazard, either by contaminating air and water or poisoning people. 'Even in my wildest imagination I don't think that we'll produce enough smart dust to bother anyone,' he claims.

Environmental scientists would disagree – but even they would probably worry more about the implications for civil liberties.

'This is a technology of total surveillance,' comments Richard Sclove from the Loka Institute, in Amherst, Massachusetts, which investigates the social impact of new technology.

'I have no doubt that there will be plenty of benign and wonderful applications of this technology, but it's easier to imagine the lousy ones. The CIA and the National Security Administration would love to get their hands on this, and there's no way to control what they do with it.'

Control is the key issue for the British civil liberties expert, Clive Norris, a senior lecturer in criminology at the University of Hull.

'It's not that the technology itself is bad, but the way it is used,' he observes. 'That depends on to what extent it will be applied in civil

situations, and how this will be controlled.'

But Pister is not much concerned about state surveillance. 'I'm much more worried about how societies will adapt to the idea that anyone can put a sensor on anyone else, and with some level of effort track their every move, record their every conversation, possibly even record video of their interactions with others. Will we get to the point where people are bored by videos on the internet of public figures having sex?'

The coverage that smart dust has received in the US has made him cynical about newspapers and television, too. 'You can have a lot of fun with smart dust in the media,' he says. 'I've been vilified as the bringer of Huxley's *1984* and worse, and the subject of unjustified praise. Hoo baby, I love the media.'

Whatever Pister's technological skills might be, nightmarish prophecies of the future are clearly not his forte. Aldous Huxley, of course, wrote *Brave New World*, while George Orwell was the author of *1984*. When his mistake was pointed out, Pister bared his soul. 'How incredibly embarrassing. I am hardly worth trusting at

this point, am I? If only you could have witnessed my self-flagellation when I saw my blunder. Orwell's *1984* is the vision that most people are afraid of.'

Rob Edwards is a consultant for New Scientist and environment editor of the Sunday Herald.

For more information visit: www-bsac.eecs.berkeley.edu/~pister/SmartDust/

'Berkeley researchers have already built a prototype micro-sensor the size of a pea. By July 2001 they say they will have a functional sensor with two-way communication within a cubic millimetre – the size of a sand grain.'

Colombia revisited

To much of the world, Colombia is seen in terms of black and white – oil and cocaine being the two best-known exports to emerge from the country. Yet Colombia is a deeply complex nation that has been built upon – and often against – the wishes and ways of life of many peoples.

Here we examine the multi-faceted Colombia: first Peter Bunyard provides an overview of the country's social, economic and environmental status; from page 40 we present a twofold view of the revolutionary guerilla movement, the FARC; and finally, film-maker Alan Ereira returns to the homelands of the Kogi to discover how these remarkable people have fared since they invited him to film them for the first time 10 years ago.



Flying over the Colombian Amazonas, it's hard to imagine there's much wrong with the world. There below, like a giant anaconda, is the Caquetá river, making its journey over the equator, first into the Amazon, far beyond the borders of Colombia, and then, thousands of kilometres later, with all the other accumulated rivers, pouring into the Atlantic Ocean. Everywhere, as far as the eye can see, nothing but forest, rivers and creeks, until our arrival at Leticia, a city built after the 100-day-war with Peru in the 1930s.

Leticia is the capital of Colombia's Amazonas. Within the region are vast areas of indigenous lands – the *resguardos* – national parks such as the Cahuinari, forest reserves and various colonist settlements, particularly in the piedmont regions of the upper Putumayo and Caquetá. Colombia's Amazonas encompasses 42 million hectares, not far off double the size of Great Britain. Even so, it occupies just 5.5 per cent of the 7.8 million square kilometres of the entire basin.

The ecological biodiversity in the area is legion, unparalleled in terms of quantity, with more than 6,600 species of flowering plants from 277 families, 868 species of birds, 147 species of reptile, 95 species of amphibian, 210 species of mammal and 343 distinct species of bees and wasps, quite apart from all the other insects, numbered in their thousands.

Cargo planes make daily flights to Leticia, providing virtually all the consumer goods you find in the shops, from fresh vegetables that don't grow too well in the humid tropics to the latest scooters. The planes then load up with fish for the return journey. Amazon fish, such as *pirarucú*, the largest-scaled freshwater fish in the world – which lives off fruit falling from the trees into the many lakes that branch off from the Amazon – is highly prized for its flavour and texture. But overfishing has taken its toll, and *pirarucú* taken now tend to be well under half normal weight, such as one I saw being expertly filleted by a Tikuna Indian across the waters in Peru. He told me he no longer came across the bigger specimens.

Leticia, with its 24,000 inhabitants, lies on the border between Colombia, Peru and Brazil. Its population is made up in part of indigenous peoples, mainly Tikuna, and the rest of Colombians, who for one reason or another, are seeking a life away from conflict, away from paramilitaries and guerrillas, away from the violence, from the drug-traffickers and sometimes, where threats have been made, from death itself. But life in Leticia is not easy. It's hard trying to scrape a living in a place where unemployment is rife and where, in some instances, those employed by the regional government have not been paid for more than a year.

Coming back for more

Ten years ago, in the company of Juan Manuel Renjifo, a renowned herpetologist from Bogota, I tried to meet with Tom Defler, who had established the Caparú biological station in an isolated island of forest fed by the Apaporis River. Tom had a reputation for trying to protect monkeys from being hunted and of caring for orphans, young monkeys whose mothers had been slaughtered for bush meat.

Juan Manuel and myself had spent the previous two months making our way first to La Chorrera on the Igaraparana and then from Araracuara on the Caquetá to La Pedrera close to the border with Brazil. Our mission was to review the impact of the new 1991 Constitution of Colombia on the indigenous communities of the Amazon and the conservation of the forest and natural resources.

The hope of sociologists, anthropologists and biologists was that the granting to the indigenous communities of title to large sectors of land in Colombia's Amazonia, would serve two purposes: the recognition of a

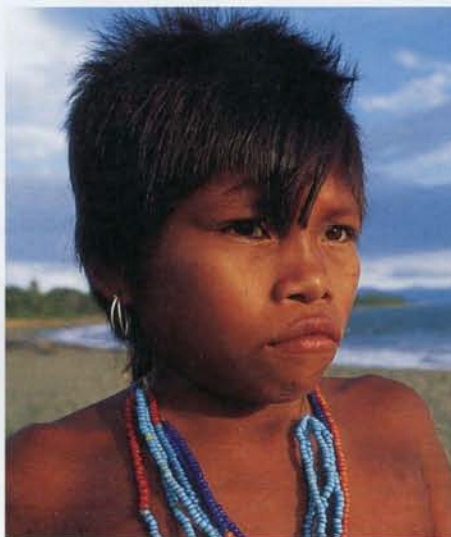
priori indigenous rights and therefore protection from colonisation; and the regeneration of traditions that would serve the aim of conservation. But floods prevented us getting to our destination, and we returned empty-handed.

Now, in 2001, in Leticia, I finally meet Tom. More than 20 years before, armed with his PhD from the University of Colorado, he had arrived in Colombia with the Peace Corps. His aim was to get as far away as he could from human impact on the forest and study the life and behaviour of primates. Meanwhile, he and his then-wife Sara fought to get Caparú accepted as a biological station in the hope of protecting it from hunting. Gradually they built up a remarkable system of more than 120 km of trails, to make forays easier into the forest and to save would-be researchers from vanishing forever.

Colombia, as Defler points out, is mega-rich in primates compared to most of the rest of the world. The same applies to its flowering plants, its birds, its reptiles, its butterflies. In Colombia's Amazon alone, there are 19 distinct known species of primates and new species are still being found across the border in Brazil. There may well be more to be discovered in Colombia. According to the distinguished ethnobotanist, Richard Schultes, even though Colombia's Amazonia is one-fifteenth the size of the legal Amazon of Brazil, it has close to equal biodiversity.

Over the years, Tom has accumulated a wealth of information on the foraging habits of the different species in the forest around the station, including howlers, woolly monkeys, capuchins, spider

'Even though Colombia's Amazonia is one-fifteenth the size of the legal Amazon of Brazil, it has close to equal biodiversity.'



monkeys, the black-headed uakari and marmosets, such as the diminutive red-haired pygmy. In addition he has studied their behaviour with regard to territory and whether the presence of one species or subspecies has an impact on the presence of others, whether for instance woolly monkeys keep spider monkeys away or whether, based on their locomotory abilities and consequently different feeding strategies, they avoid competition and tolerate each other. In fact, spider monkeys are far more agile and can therefore get to fruits at the ends of branches that the woolly monkeys leave alone. Not much friendliness between the species, but they do seem to tolerate each other.

Destruction

But as so often in today's world, the real enemy of wildlife is man. 'Time and time again, whether indigenous communities or colonists, all have had a devastating impact on wildlife, not least on primates', Tom told me, 'leaving little but "empty" hunted-out sections of forest. In the past, after some 30 years of settlement, an entire indigenous community would up sticks and move. That gave forests time to recover. In those traditional times the shamans imposed hunting restrictions; now communities tend to stay put, hunting without restraint, or concern that today's feast will be tomorrow's famine.'

The primates are affected by the loss of habitat and the larger ones, such as woollies and howlers; by hunting. One of the richest areas in terms of biodiversity, is the piedmont of the Andes, especially that in the upper Putumayo and Caquetá. That entire region has been savagely degraded, particularly in recent years, through the invasion of coca and poppy growers who moved in in their droves when the US succeeded in rooting out coca production in Bolivia and Peru during the 1990s. Meanwhile, hunting is putting a lot of pressure on primate populations throughout Colombia's Amazon.

As much as 12 per cent of Colombia's Amazon has now been degraded, with some important regions such as La Macarena, legally a national park, having lost one-fifth of its forests. Some 5.5 million hectares of the Colombian Amazon, or 13 per cent of the whole, are supposedly protected in the form of national parks, but very often these parks, such as the Cahuinari, overlies indigenous areas and are considered 'fair game' for hunting.

According to Tom's observations, the spider monkey population is plummeting throughout the Amazon. 'As a species', Tom told me, 'our own survival is at stake, and we'll only survive if we come to respect life other than our own. In the Amazon, we couldn't do better than look to our primates as a marker of what we are doing.'

Monkeys and guerillas

Tom DeFler knows what it is to be hunted. Not all that far from the station, in the Guainía, on the border with Brazil, is a gold mine, which, more than 15 years ago, came under the control of FARC guerrillas. Tom paid his dues and was on reasonable terms, but then, three years ago, a small group of

guerrillas, quite likely acting independently, entered his house. They were not friendly; they gave him two hours to get out, forcing him to leave without any of his possessions, not even his notebooks, nor his boat with its outboard motor. 'If we see you again you're dead,' they told him.

Tom didn't argue; he took a small dugout and paddled down the Apaporis to the Brazilian border. At the border post, he decided to call his colleague by radio in La Pedrera. At that moment, the guerrillas arrived, in his launch, laden with his possessions – computer, solar panels, laboratory equipment. They took him captive and walked him towards the forest. But not being one to die without a struggle, he tore himself free and ran for his life into the jungle, diving over spines, splashing and swimming through the flooded forest until he felt safe.

'They came after me,' he said, 'but I suddenly realised they were afraid of the forest and I could shake them off.' For three days, Tom swam through the forest, until he made it to an outpost. He has not returned to Caparú. But neither has he given up. He has located a tract of forest in the Trapecio which, if not as isolated as Caparú, is currently free of the FARC, the paramilitaries and any others with nefarious

backgrounds. 'The sad part of it all is that, even if I didn't actually support them, in the past I sympathised with a good part of the ideology and aims of FARC.'

The FARC now has control

over much of the Caquetá and Putumayo, a significant swathe of land. When I was there 10 years ago the guerrillas kept themselves hidden for the most part, but they now move around openly and control small towns. In particular, they now have under their jurisdiction many of the colonists in the piedmont region of the Caquetá and Putumayo, as well as to the north in Guaviare. In the past, colonisation led inexorably to clearing of the forest for cattle, but more recently the new waves of colonists are those seeking to make a living out of coca plantations.

In the Putumayo, between 1985 and 1997, the area cleared for cattle ranching, but mainly for coca production, grew by 130,000 hectares, and that in the Caquetá, just to the north by a similar amount. The quality of the soils is simply not good enough to sustain constant ranching or monocultures of coca, and every year some 16,000 hectares are abandoned. That means that wherever forest is cleared, within a matter of years the land will have to be abandoned. That sort of development is therefore a cancer, eating its way through

the forest. Violence is endemic in the region. If you are a male, aged anywhere between 15 and 44 years old, your chances of dying a natural death are pretty minimal: 65 per cent of all deaths in that age group are through homicide, and the paramilitaries play their part, with mass slaughter of peasants whom they believe to be FARC sympathisers – or simply as an excuse to grab their land.

A particular problem is that for each hectare of coca planted, four hectares of forest are destroyed, mostly by fire. Currently some 120,000 hectares are exploited for coca; hence

'Socially and environmentally, the coca eradication campaign is having disastrous consequences.'



Powder plants: a Colombian peasant sorts through thousands of seedlings of coca bushes, the raw material for cocaine, on a small holding in the hamlet of Chufiya in southern Putumayo province on Colombia's southern border with Ecuador. The entire area is the target of Plan Colombia.

480,000 associated hectares of forest have been lost, mostly during the past five years. Add to that illegal timber extraction to the tune of 328,000 cubic metres of wood each year, and one is seeing a swathe of destruction that is for ever eating its way further into the Amazon.

In addition, coca production requires the use of toxic chemicals, which seep into the rivers. Every hectare of coca needs some 1.3 tonnes of precursor chemicals, all of which are imported from the US and Europe. Some 150,000 tonnes of toxic chemicals now flow into the Caquetá, Putumayo and Guaviare Rivers each year, resulting in significant soil deterioration.

With multi-million dollar aid from the US, Colombia has embarked on a 'fumigation' campaign, using glyphosate, to wipe out the illicit crops. Monsanto must be over the moon, since glyphosate is none other than its notorious 'Roundup', of which it has exclusive production. The intention is to eliminate the drug crops, leaving chemically scorched earth behind, as was achieved in Bolivia and Peru. But the Colombian situation is far more complicated. Much of the coca production is now in areas that are overrun by FARC guerrillas. They have a double interest in protecting the crops, first because it provides a substantial source of income for the acquisition of arms and other 'necessities', and second because they are winning the battle for political support from those colonists whom they are now protecting. Over the past couple of years they have managed to shoot down several of the planes used for spraying.

Moreover, the FARC provides a system of justice and administration in the areas over which it has control, with the result that crime and violence have been substantially reduced. Indeed, in some areas, the FARC has taken over the functions of the mayor's office, including pocketing money allocated for the region's administration. But at least the FARC is building some reasonably decent roads.

Coca eradication has been going on in Colombia for several years, but has been accelerated over the past few months, with some 30,000 hectares having been destroyed so far. Socially and environmentally, the eradication campaign is having disastrous consequences. The campesinos are left with next to nothing and become little better than refugees, or, in desperation, they unleash a new wave of forest destruction. Eye-witnesses told me of the savage effect on people who had been sprayed. They go temporarily blind and their eyes became inflamed. Their skin becomes ulcerated, their lungs are affected. Many of the victims are young children who are caught out in the open when the spraying begins.

Talking to the top brass

Juan Mayr Maldonado is Colombia's environment minister. I have known him for more than 12 years, having hiked with him on several occasions up the arduous trails into the land of the Kogi and the Sierra Nevada de Santa Marta in northern Colombia.

To be environment minister in a country five times the size of the UK, with more biodiversity for its size than anywhere else in the world, and with a rich cultural heritage, including 80 distinct ethnic groups, is no mean responsibility. But when I spoke to Mayr in Bogotá on my recent trip to Colombia, I had the distinct impression that his current role is to give credibility to the Colombian government in its



Killing fields: an aircraft fumigates a poppy plantation with liquid glyphosate during a fumigation in the Rio Negro area.

promotion of US interests in the region.

Mayr's ministry has given Occidental, the Los Angeles-based oil company, permits to explore for and extract oil in the region that straddles U'wa indian territory. His ministry has also agreed to the US-sponsored eradication of coca plantations in the Upper Putumayo and Caquetá, areas where the FARC now reigns supreme. Of course, if Mayr had opposed the government his days as minister would have been numbered.

Yet instead of voicing concerns about the environmental and social impact of the fumigation programme, Mayr rather insisted that the consequences would be short-lived. He had just returned from a visit to the region and he denied that he had seen anything which particularly worried him. 'Only ten per cent of complaints concern health,' he said, and when I asked him what was to happen to those peasants who were left with nothing after the eradication, he said, 'they have the right to seek compensation.' It turned out that the peasants had to call the police to validate the destruction of their crops and then take their claim to a tribunal. Somehow, it's hard to imagine a peasant who has just seen his crops destroyed by government sources taking his case for compensation to an official tribunal.

The spiral goes on

To make matters worse for the coca growers, few grow vegetables for local consumption. The net result is the importation of food from Ecuador, which is then sold at elevated prices, forcing the peasants to increase their coca harvests to afford it. Altogether, some 347,000 people are involved in the coca business in Colombia's western Amazonia, and 450,000 in Colombia as a whole.

Meanwhile, the disparity in prices for cocaine, depending on where it's finally sold, is astronomical. If a peasant barely gets his subsistence from coca, the trafficker who lays his hands on a kilo of cocaine in Colombia will pay US\$2,000; in Frankfurt or the US, that same kilo will go for \$50,000. No question that the eradication programme is making cocaine a high value commodity, and the stakes for processing a successful crop increase proportionately. That does not bode well for total eradication nor for the western Amazon of Colombia.

So what is the solution?

Many Colombians I spoke to said that effective action to limit coca production while protecting both peasants and the environment will happen only if drugs such as cocaine are made legitimate. That is not to say they would be freely available, but that their production and distribution would be state-controlled. Meanwhile, a programme of crop substitution could be elaborated in which the peasants would want to cooperate fully, even to the extent of pulling up coca plants by hand.

Most biologists, quite apart from the public in general, see the fumigation programme as an abomination which serves US interests above all. It is seen as wholly counter-productive in terms of causing untold human misery while not solving the fundamental problem of drug abuse. Tackling that is the first step in bringing sanity and stability back to this remarkable country. ♦

Peter Bunyard is science editor of *The Ecologist*.

Guns, drugs and the new world order

Mónica del Pilar Uribe Marín is granted an exclusive interview with the Colombian guerrillas, the FARC

On 27 May 1964, 16,000 Colombian soldiers, assisted by the US, entered the lush lands of Marquetalia, Colombia. Their mission was simple: to put down an uprising of angry peasants. The 'operation' took just three weeks, during which the military used all means at their disposal, including bombing, bacteriological warfare, torture, execution and, for the luckier ones, imprisonment.

Badly armed and with negligible backing, 48 of those beleaguered farmers nevertheless survived the onslaught, and their resistance gave birth to the FARC – the Armed Revolutionary Forces of Colombia. Today, 37 years on, the FARC has 20,000 members, 70 fronts throughout the different regions of the country and permanent representatives in more than 15 countries worldwide.

Ever since its inception, the revolutionary peasants of the FARC have been the bane of the authorities – and a worry to US ambitions to assert both economic and political control throughout Latin America. Throughout the years, the Colombian government and military have carried out a succession of military operations, with names like Operation Exterminate, Operation Destroyer and Operation Claw, to rid the country of the guerrillas. They all failed. An attempt at a peace deal with the government in 1984 was scuppered by opposition from within the military.

Having created its own new political party, the 'Bolivarian Movement for the New Colombia', the FARC is once again engaged on a peace initiative, this time with Andrés Pastrana's government.

From the beginning, the armed forces, right wing paramilitaries, certain businesses and some sectors of the population bitterly opposed the peace process, seeing it as a dangerous concession to the guerrillas. Some members of the Colombian government disagreed with certain of the FARC proposals, in particular its insistence that the US-supported 'anti-drugs' scheme 'Plan Colombia' be abolished. The peace process looked to be on the verge of collapse.

But on 8 February, the Colombian president met with Manuel Marulanda, the leader of the FARC. The two set out to inject life back into the negotiations, and a series of frank discussions followed.

After many months of trying, I was able to speak to Raúl Reyes, right-hand man to Marulanda. Reyes carries responsibility for the peace process and for maintaining FARC's relationship with the international community. He has been working with the

organisation for 20 years.

Monica del Pilar: Do you think your peace talks with the government have achieved anything so far?

Raúl Reyes: Well, we have a demilitarised zone for the talks. Also, we now have in place a 'Common Agenda for the New Colombia' which takes account of 12 themes we have agreed on.

MdP: And the 12 themes are?

RR: They concern the social aspects of life – employment, health, education and well-being; political aspects – the right to express yourself without repression, to elect and be elected; and economic – how to reorganise the country such that its natural wealth does not remain in the pockets of the few, but benefits the population as a whole. We need to develop the agricultural sector so that the peasant economy recovers.

MdP: Despite the peace talks, two groups, left-wing guerrillas and right-wing paramilitaries, are implacably opposed to each other. Is the FARC open to talks with the paramilitaries?

RR: Never! Not under any circumstances. We are talking with the representatives of the government and the state, as named by the President of the Republic. We do not hold talks with any others.

MdP: The paramilitaries claim the population is on their side in the fight.

RR: It certainly is a grave problem. All the time the country is becoming ever more polarised and undoubtedly one sector on the right is in favour of paramilitary action. Such people have abundant resources, good media connections and run businesses.

MdP: And what about drugs? Isn't a major source of the FARC's finance from coca and poppy production?

RR: In Colombia, production undeniably exists, but actual local drug consumption is relatively small. Nor does Colombia produce the chemicals required for extraction and purification of the drugs. What Colombia does, because of the collapse of the rural economy, is to grow poppies and coca. The FARC is in all Colombia, from the Amazon to the borders with Venezuela and the Orinoco River, and to the borders of Ecuador and the Putumayo. Our being in a particular area does not mean we are engaged in growing the crops.

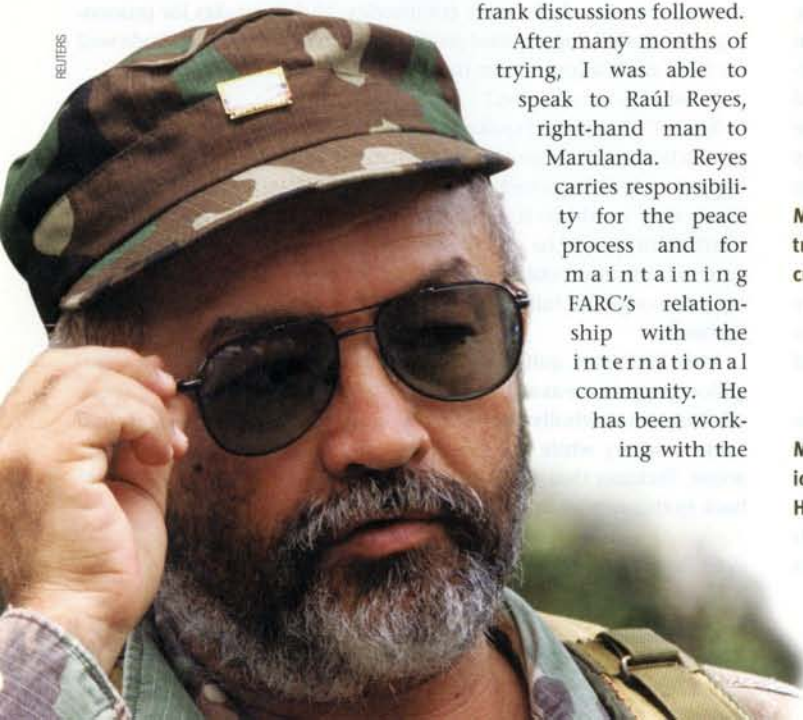
On the other hand, the FARC represents a people in arms and has to survive from whatever produce that goes into the overall economy of the country. The FARC is a revolutionary organisation that is not in the business of tackling the cultivation of drugs or of fighting the traffickers. That is the responsibility of the state, though we have made proposals for dealing with the problems.

MdP: You mean to tell me that the relationship between FARC and drug trafficking is limited to occupying territory which happens to have illicit crops?

RR: Exactly. The FARC is present throughout the country and it needs resources to strengthen its political hold. Therefore it imposes taxes on whatever is grown, whether coca or cattle, soya or sorghum. If, tomorrow, coca was no longer grown, then the FARC would seek taxes on whatever was substituted.

MdP: You talk a lot about 'Bolivarism' – a kind of pan-Latin American political ideal which would mean some form of integration with other countries. How are the FARC relations with other South American countries?

RR: Often good, and we also have good relations with the European Union, particularly through France. However, apart from





Venezuela, no other Latin American country is pursuing Bolivarian ideals. One of the essential needs for the development of our countries is unity.

MdP: How can you get these 'Bolivarian' ideals off the ground in Latin America, when many countries, as a result of economic crises, are becoming 'dollarised' and sucked into the economic orbit of the US?

RR: Dollarisation has to do with pressures from World Bank, IMF and US policies. It is worrying what has happened to Ecuador, where the official money is no longer the 'sucres' but the dollar. When Ecuador lost the sucre, it not only lost its currency, but its symbol of liberty. Just imagine what it would be for Venezuela were it to lose the Bolivar. We must analyse carefully the changes that result from the global economy. Our governments are not particularly concerned about holding on to their country's symbols. We must surely defend our symbols, our dignity, our independence.

MdP: How does the FARC view the current model of economic development?

RR: The model is exclusive, and does not take account of people's needs. It is for the benefit of the richer sectors of society. Colombia has immense agricultural resources and any model of development must consider both the need for the country to be self-sufficient in food and to be able to export competitively. It seems a big step back that in the 21st century we cannot feed our 40 million people, but have to import.

MdP: How do you view the influence of the 'free trade' on Colombia?

RR: It's been damaging, in particular for those at subsistence level, because it has undermined local production. We now get products from all over, without any tariffs being paid: we get coffee from Vietnam, rice from Asia, meat from Ecuador, cereals from the US and Canada. Colombia has the capacity to produce all these products for itself and for export, but it doesn't happen because the high costs of production are not compensated by the returns from overseas markets.

This neo-liberalism has pushed peasants away from food production and they have had little alternative but to go into the jungle to cultivate coca and opium poppies. It has also had an impact on the commercial sector, which has seen itself obliged, for its own survival, to traffic coca and heroin. Meanwhile, those people in



'Neo-liberalism has pushed peasants away from food production and they have had little alternative but to go into the jungle to cultivate coca and opium poppies.'

commerce who have remained outside trafficking find themselves unable to compete. The phenomenon of drug trafficking is above all economic in nature. In that regard it has grown significantly in every aspect in recent years: coca and poppy production, a surge in the cocaine cartels, armies of criminals created as a result, the buying of consciences, and increase in corruption.

MdP: But it's also a political problem.

RR: Not just national but international. For that reason, FARC has proposed the legalisation of drugs on a worldwide basis, combined with a reduction in the consumption and the need to control and restrain the production of the precursor chemicals, which are manufactured in Europe and the US. We need to make the main consumer countries, which also happen to be the manufacturers of the precursors, aware of their responsibilities

with regard to encouraging demand and enabling drug traffickers to launder their money overseas. The lack of import tariffs because of the open global market means that they can bring in the chemicals they need without any additional cost.

MdP: How does the FARC propose to tackle globalisation?

RR: The globalised world has some advantages, such as the benefits from telecommunication and the means to transmit information. The model breaks down when governments of 'dependent' countries like ours allow the big bosses of capital to dictate policies. The interests of the Colombian population must come first and we should not assume a feeble position in the face of international economic policies.

MdP: And the FARC position on transnational corporations?

RR: At the moment, the great majority of transnationals in Colombia are fuelling the internal conflict in the sense that they pay special taxes to maintain the army and the security forces. Equally grave is their impact on employment, with many workers losing their jobs. That doesn't mean we are absolutely against transnationals in Colombia, just that we must have contracts with them in which they guarantee social and labour security and that the taxes that they pay will be used to combat political corruption.

MdP: How has the environment fared in the peace process?

RR: The FARC leaders have established an ecological decree, which is rigorously upheld. The decree prohibits the cutting down of

Plan Colombia

On 22 June 2000, the US Senate agreed overwhelmingly to support President Andrés Pastrana's 'Plan Colombia'. This flagship project was ostensibly intended to strengthen the military forces in combating drug trafficking and subversion. The amount approved was some \$1.3 billion to be spent over the following two years.

Most of the 'resources' for the Plan are to come from the US. They include an 'anti-narcotics' military battalion with helicopters (\$600 million); equipment for maritime and aerial interception (\$340 million); the strengthening of the national police in their anti-narcotic role (\$96 million); alternative development with regard to crop substitution (\$145 million); and strengthening of justice and democracy (\$93 million). The European Union offered US\$300 million for the social component of the Plan.

Critics of the Plan envisage big problems, including: displacement of the rural population because of the destruction of 'illicit' crops and the activities of paramilitaries; escalation in military activities with serious consequences for human rights and the environment; failure to distinguish

between drug trafficking and the cultivation of 'illicit' – often traditional – crops. They also note that similar anti-drugs plans have so far failed. And many share the FARC view that the plan is a thinly-veiled attempt by the US to gain further control over the country.

The consequences of the plan could be far from what supporters intend. Indiscriminate use of herbicides (fumigation) may, for example, generate a new dynamic in the production of narcotics, that will lead to more natural forest destruction and to widespread contamination, with environmental consequences for watersheds.

Instead of large areas of illicit cultivation, the likelihood is that growers will move deeper into the forest and generate small, less conspicuous clearings, thus extending the problem. People will be displaced from the land, adding to the numbers of unemployed; schools, households, water sources have already been contaminated by aerial fumigation, and the country could become even more polarised as people increasingly support the guerrillas who oppose the Plan.

forests, and calls for the protection of water, fauna, flora and the national parks. In addition, we have established a system of fines. For example, for killing a jaguar the fine is US\$250, money that we then use for the benefit of the community, including school maintenance, community health, the construction of bridges and works that benefit the community. We have imposed laws to prevent the contamination of rivers. In that respect, we also oppose the use of herbicides, because they damage the environment and are a health risk. We have therefore proposed to the government that they abandon the use of herbicides and substitute other methods such as returning to hand cultivation techniques that do not involve the use of chemicals.

MdP: How do you view the Colombian U'wa Indians' fight against Occidental petroleum (Oxy) to defend their territory?

RR: The U'wa, are seeking to reclaim what they believe is justly theirs. Terrible lies have been said about the FARC; it has been claimed that we have been receiving money from Oxy to expel the U'wa. At no time would FARC ally itself with the multinationals against indigenous communities, colonists, nor any Colombian. What we do know for sure is that some of the revenue from Oxy's operations are being used to strengthen the army and paramilitary groups, which are now pitched against the U'wa, all Colombians and the country's sovereignty.

MdP: How far do you support the U'wa in their refusal to negotiate with Oxy or with the government?

RR: If they succeed in holding out until such time as a new government comes into being which takes as a basic principle that the dispossessed must benefit from the use of natural resources, then we'll support that. At the rate we're going, we are going to be left with little more than the memory of all the riches that were taken away, while the population remains as impoverished as ever.

For that reason, in oil-bearing regions other than those of the U'wa, we are putting pressure on the oil companies. What we see is that Ecopetrol – the Colombian state oil enterprise – is investing its resources in more repression, in financing paramilitary groups, in supporting the army and police, with absolutely no benefits going into health, education or welfare.

MdP: What do you think of Plan Colombia? [see box]

RR: It's a strategy of the US government. It's not, as sold to the public, to combat drug trafficking. The peasant people who plant coca or opium poppies, or indeed those gather the crop, are not drug

traffickers. The big-time mafiosi in Colombia do not plant coca; they are the ex-presidents of the republic, generals in service or in retirement, ministers, ex-ministers and congressmen. Or they are high in the Bank of the Republic, or they are in Washington, Miami and Europe. The plan is fundamentally a plan for war, and above all it is a strategy to allow the United States to expand its interests in the region, and in South America in general.

MdP: One of the aims of the Plan is to wipe out guerrilla operations.

RR: The real reason for Plan Colombia is to launch war against revolutionary processes. The drug war is a pretext. The US wants to strike at the FARC, and the ELN. Colombia is undoubtedly suffering from an internal war. As soon as the US intervenes in the fight against guerrillas, the confrontation takes on a different and dangerous character. Once the plan is put into action, that will signal that the war is no longer an internal matter, but will take on the character of a true civil war, and many Colombians will find themselves embroiled in defending what they perceive as the sovereignty of their country.

MdP: Do you think that Plan

Colombia will have a strong ecological impact on Amazonia, by destroying coca plantations with herbicides, for instance?

RR: Undoubtedly. However, one element is in our favour, in that we can count on many allies in the defence of the Amazon. When you consider the Green Party, ecologists, and environmentalists, then you can see we have some serious allies determined to protect our Amazonia. They will not go down without a fight.

Mónica del Pilar Uribe Mañín is a freelance journalist.

Translated from Spanish by Peter Bunyard.



Colombia's tragedy

Moises Villafaña provides a more damning overview of FARC's activities.

This is a riven nation. In Colombia, armed groups, revolutionaries, militants, soldiers and drugs barons regularly drag ordinary folk into their wars; with horrific results. What is happening to the people of the Sierra Nevada de Santa Marta, in the north of the country, gives a good idea of what happens everywhere to traditional people caught up in the bloodbath.

In the remote past, this area had a highly developed civilisation which exercised a major cultural influence on the surrounding region. These were very peaceful cultures with a profound respect for nature, whose social, political and religious institutions were based on a philosophy of natural harmony. They also had a highly developed economy, cultivating maize, fruit, beans, and root crops. They were excellent architects and engineers, building roads, staircases, walls, canals, terraces and towns. The peoples of the lowlands traded with those in the mountains, exchanging fish, salt and conches for maize and beans.

Colonisation, of course, has uprooted many of these people. But

many, too, still live in peace, in their traditional way. Or did, before the gunmen arrived.

The conflict zone

Colombia as a whole is the victim of armed conflict between anti-government guerrillas, the Unión Camilista, the Ejército de Liberación Nacional (ELN, National Liberation Army) and the Ejército Popular de Liberación (People's Liberation Army). There are also paramilitary counter-insurgency groups known as autodefensas (self-defence), most of whom refer to themselves collectively as Autodefensa Unida de Colombia (AUC).

All of these armed groups have forcibly displaced the indigenous peoples. Their lands have become a battleground, and they have lost large numbers of people in what is essentially a form of permanent discrimination and ethnocide; although the indigenous peoples are not involved in the conflict, they are the worst affected because of constant forced displacement from their homes.



The indigenous peoples of the Sierra Nevada de Santa Marta are highly traditional, with a deep respect for nature, their lifestyles little changed for thousands of years. But it is precisely because of this that they easily fall victim to the violence which has wracked the country for so many years. The FARC, ELN and EPL have had a presence in the region, but until recently it was relatively limited. FARC's 'front 19' was located in the farming belt of the lower and middle Sierra Nevada towards the Arhuaco indigenous reserve in the valleys of the rivers Ariguani and Fundación. Their 'front 59' was situated in the Guatapurí and Atánquez and extended as far as Patillal and Río Seco in the Kankuamo region and the Marokaso sector of the Wiwa region. The ELN's '6 December front' covered Bunsichama, La Señora, Kuanimu, Birwa in the Ahuaca region, and Río Seco, Murillo and the Kankuama. The EPL was located in Marokaso, Mingeo and Hulago.

As if this wasn't enough, the autodefensa groups are operating throughout the Plan del Cesar region. They are not based in the Sierra itself, but they have camps on the plateau from where they operate patrols and incursions into the foothills of the Sierra, entering and leaving at Pueblo Bello, La Mina de Iracal and La Señora in the Arhuaca region, and in other parts of the region.

The Colombian army, meanwhile, has a presence in the form of operational command number 7, whose headquarters is at Valledupar in the Batallón La Popa, and which has a base on the Inarwa hill (El Alguacil) behind the Arhuaco reserve and in the municipalities of Pueblo Bello and Atánquez. It also operates mobile campaigns in the rest of the Sierra Nevada and the Serranía del Perijá.

Might is blight

The effects of this invasion of military might on the autonomy and identity of the indigenous peoples can be devastating. People constantly fear armed invasion, the indigenous authorities' autonomy and decision-making powers are being eroded, their cultural values are being destroyed, and their territories invaded. They are afraid, very simply, because the situation is beyond their control and understanding.

But the real, material problem, is the forced displacement which the conflict causes. The displacement caused by armed conflict in the region is difficult to quantify because only on a few occasions has it happened on a very large scale. However, families are constantly having to relocate through fear of becoming military targets.

Seventy families living in the municipality of Pueblo Bello – Las Minas de Iracal – were, for example, forced to leave after two incursions by the autodefensas in May and June 2000. And the table below shows that they were far from alone.

On 10 May, 1,500 Kankuamu villagers were forced to move towards Valledupar after a threatened incursion by the autodefensas into the village of Atánquez. They returned following agreement with the municipal authorities and the army that they would be protected. Four hundred Yukpa people were forced to move to the village of Casacará after their food supplies came under threat. One hundred of these are now living in Codazzi, and the others have returned home. Two adults and four children died as a result of this displacement. The depressing list goes on and on.

The regional Red de Solidaridad Social [Social Welfare Network]

PLACE	DISPLACED FAMILIES	PLACE	DISPLACED FAMILIES
Guatapurí	30	Rancho de la Goya	10
Las Flores	10	Ramalito	10
Chemesquemeyna	25	La Mina	30
Atánquez	60	Patillal	45
En Pontón	15	Murillo	15
El Mojao	10	Río Seco	35
Los Háticos	20	Villa Rueda	40

states that it is receiving an average of 40 families a day as a result of the displacement of people from the south of Bolívar and other regions.

Killings

Then there are the killings. For this conflict does not just uproot and disrupt lives; it ends them too. The table below lays out the cold statistics; in every one of them is a tragedy.

These murders are being carried out both by the autodefensas and the insurgent groups – including the FARC. The mayor of the Copey

KILLINGS IN THE SOUTH EASTERN REGION

PLACE	NO. OF KILLINGS	PLACE	NO. OF KILLINGS
Guatapurí	10	Patillal	38
Chemesquemeyna	15	Río Seco	29
Atánquez	41	Murillo	9
Haticos	76	Villa Rueda	17
La Mina	27		

municipality was murdered on 29 May this year, and the mayor of Becerril on 6 June, apparently by members of the autodefensas. The killings in the table above were 'selective' – individuals murdered for, apparently, specific reasons. But there are random massacres too.

And if not death, then at least the threat of it, is a regular part of life here. Death threats have been made by the autodefensas against paramedics, indigenous leaders, and indigenous councillors, while FARC

has made threats against indigenous leaders and councillors. The shortage of cultivable land has also resulted in many death threats being exchanged between indigenous Yukpa people and settlers in the indigenous reserves.

Meanwhile, in the last month alone, there have been confrontations in the Marokaso and Serranía del Perijá regions between the FARC and the ELN, resulting in territorial gains for FARC and an unknown number of civilian deaths – which can be added to the grim lists above, as the death tally spirals and spirals.

The indigenous people of the Sierra and the Mama have strongly condemned these acts of violence, because they not only cause death but also disturb the natural balance. They have also called urgently for peace in the Sierra Nevada and the country as a whole. Their latest plea to the gunmen, issued by the indigenous people in 1999, reads as follows:

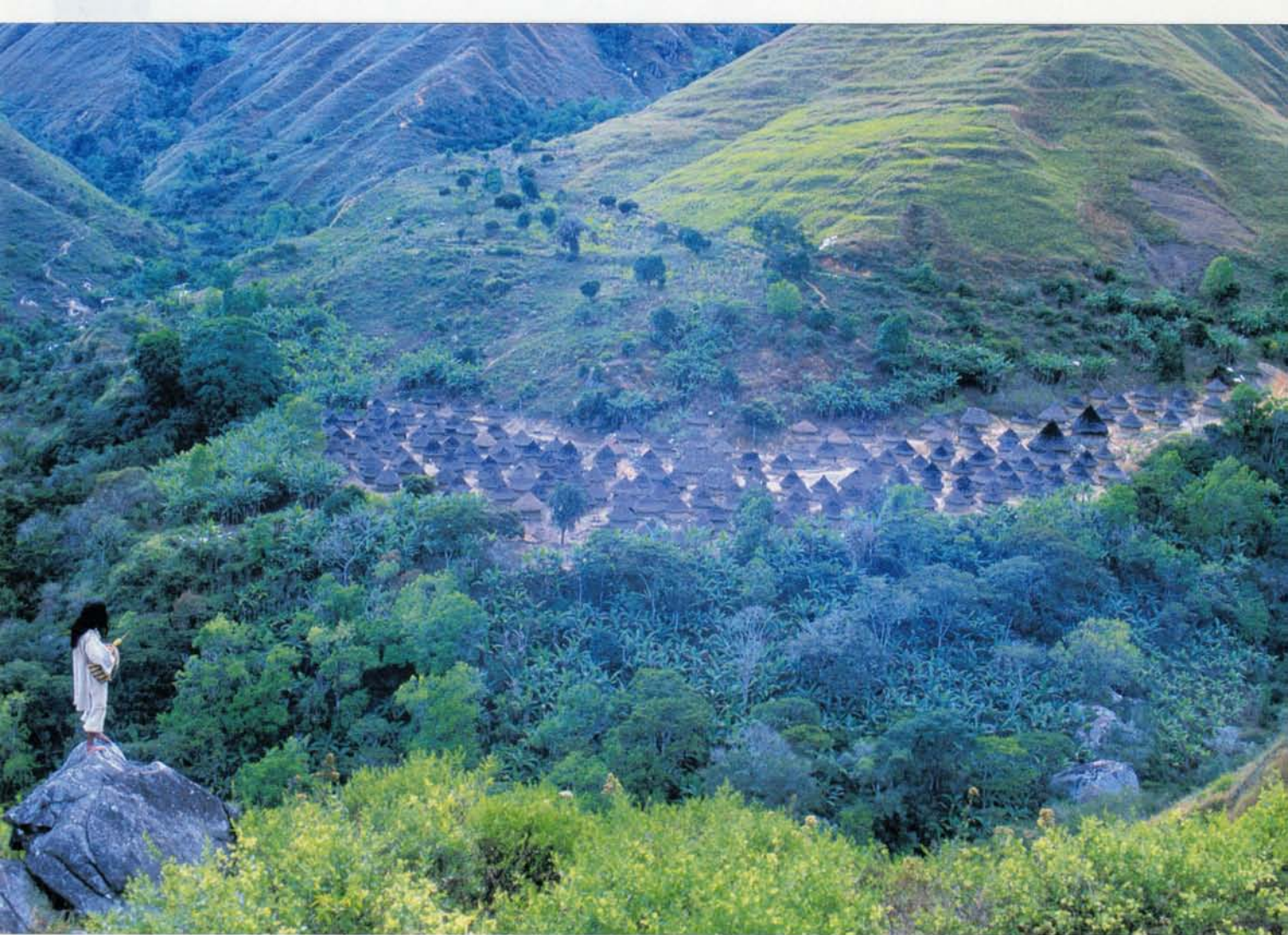
'We, the indigenous peoples of the world, prefer the life we have lived for thousands of years to the war of intolerance. Peace cannot exist without the rule of law and peaceful, sustainable coexistence between the different sectors of Colombian society. Human rights, sustainable development and peace are interdependent and indivisible. Peace is not simply the absence of war; peace is a way of acting, creating, listening, talking, thinking and living in harmony with nature and its laws.

'Peace comes from within us, and we can only experience things and express ourselves through our spiritual ability to be peaceful and free of all evil.

'We, the indigenous peoples meeting in Umunukunu, in the Sierra Nevada de Santa Marta in Colombia, the heart of the world, declare ourselves to be guardians of peace. Honesty and respect are the first chapter in the Sacred Book of Wisdom.'

But will anyone listen? ♦

Moises Villafañá is an Arhuaco studying at Bogota University: his uncle Adalberto was a major figure in Arhuaco politics who died in mysterious circumstances four years ago.



Back to the heart of lightness

Alan Ereira revisits the Kogi indians of Colombia, and finds them ready to adopt desperate measures to prevent the annihilation of 'The Heart of the World'.

'When I took part in the film I was a young man, and I thought it was a good idea. Now I am not so sure.' The speaker was Arregocés, a Kogi Indian from the Sierra de Santa Marta in northern Colombia. We were sitting in the Casa Indígena, the Indian House in Santa Marta, the city at the foot of the mountains.

The film in question was *From the Heart of the World: the Elder Brother's Warning*, a feature-length documentary that I had made for the BBC in 1990. At that time, Arregocés was indeed quite young, and distinctly dashing. Something of a rebel, he was impressed by some features of white culture and very critical of what he saw as the ignorance of his parents' generation. 'My father is an ignorant man, he had told me in 1989, 'he doesn't even know how to speak Spanish.'

Most Kogi did not know how to speak Spanish – and still don't. The Kogi are the most isolated of the tribes of the Sierra, remaining

deliberately withdrawn from what they still see as an invading, colonising culture. Favoured by the intimidating terrain, protected to a considerable degree by a wall of dense jungle and steep mountain river-valleys, some 12,000 Kogi still live in traditional communities, wear traditional costume, speak their own language and live under the rule of their own priests, the 'Mamas' or 'enlightened ones'. They have tried to preserve the life that they were leading when they established this safe haven in the early seventeenth century, and today reject the 'benefits' of roads, electricity and, of course, Christianity. They call us the 'Younger Brother' from across the sea – a dangerous intruder who does not understand nature, who came to rob and continues with mindless destruction.

'The Heart of the World' is their description of the Sierra itself, the world's highest coastal mountain, which rises from the tropical Caribbean to snowfields and glaciers in just 25 miles. The Sierra is a



triangular pyramid; one side faces the sea, another desert, and the third jungle, so that its thirty-five river valleys provide an infinite variety of habitats, with every possible variety of temperature and rainfall. This richness, and the variety of interactions between ecosystems, means that the indigenous people have attained a very complex understanding of nature and its processes.

The Mamas believe that they have been charged with the sacred obligation of taking care of nature and managing the interaction between human beings and the natural world. They do this by devoting the bulk of their lives to an arduous regime of offerings, 'payments' which re-balance the world, compensating for the damage caused by human activity in both material and transcendent reality. They understand material reality to be simply an instant of time, the present moment, embedded in a continuum which is itself a living intelligence, called Aluna. They speak of Aluna as 'the Mother', but say she is not a person, rather, 'she is memory and possibility.' Human beings (or at any rate the 'Elder Brothers') are able to cross the frontier between the material and non-material worlds and it is their duty to act as servants of the Mother, taking care of the material world as instructed.

The obligation of their work, which they believe is necessary to prevent the material world from collapsing into chaos, means that they have a duty to survive. This is the imperative that has prevented the indigenous societies of the Sierra from losing their identity. The function of their society is to sustain the Mamas; the function of the Mamas is to sustain the world.

To do that, the Indians need to maintain as much distance as possible between themselves and our culture. When Arregocés was young, and thought that it was a good idea to make a film, most Kogi thought it was a very frightening idea indeed.

Film rites

The decision to make the film came from the Mamas. They had concluded that their work was failing. Nature was suffering, the Mother was grievously sick. The depredations of the Younger Brother had become overwhelming. Sacred sites had been destroyed and had become inaccessible, ancestral gold had been looted. The steady advance of colonisation, which had begun with Columbus, was on its way to a final conclusion. This last stronghold, The Heart of the World, was on the point of falling. At the same time, the earth was being tortured: forests were being torn down, minerals being grubbed up, oil being drained from the ground. The Mother was in physical torment.

The consequences were clear to see. Rivers were drying up, wild animals were vanishing, and jaguars were beginning to hunt humans, as their prey had disappeared. The ice cap of the Sierra was rapidly melting, and the high tundra, which provides the fresh water that sustains all life below, was becoming desiccated.

The Mamas decided to make the film in order to give us a final warning. It was a rebuke and an offer of help, from an older, wiser and now very frightened civilisation. 'We are the Elder Brothers, with knowledge of all things, material and spiritual. We know what you have done. You have sold the clouds. Open your eyes.'

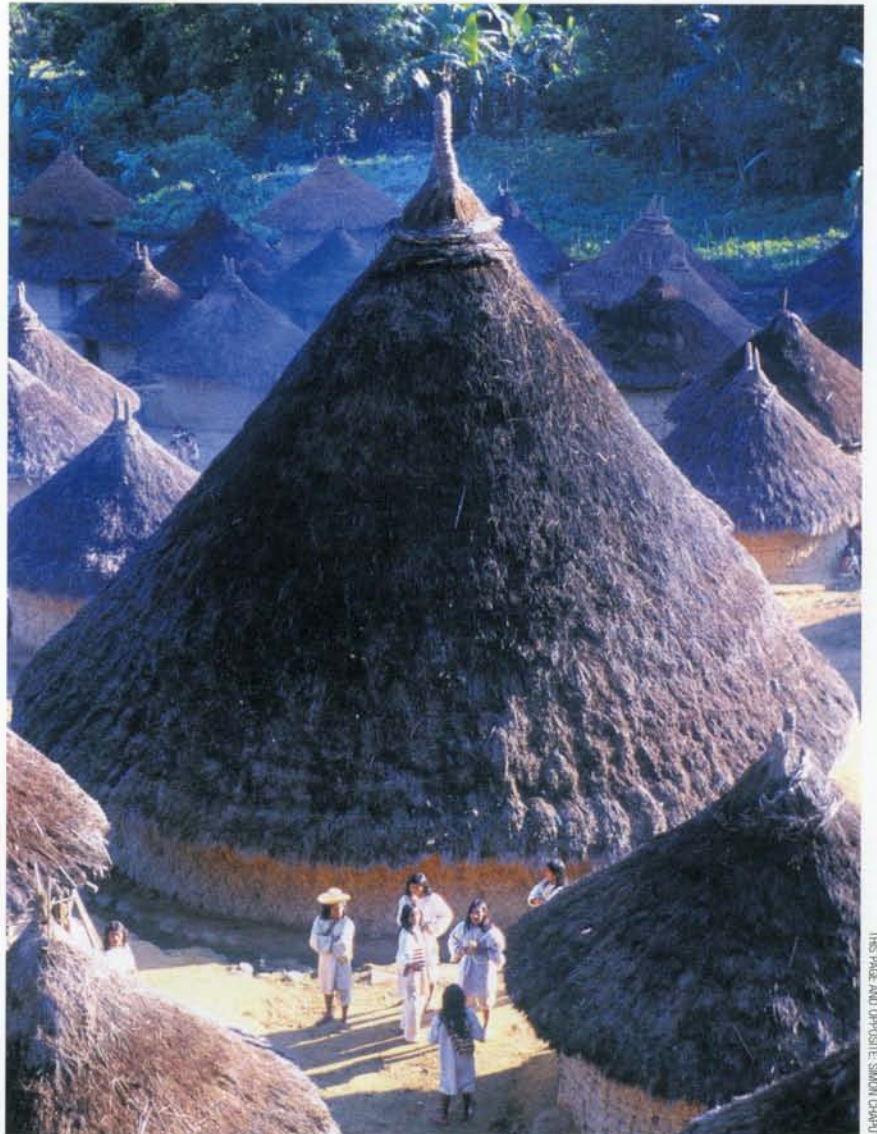
Filming was a disturbing exercise, involving a complete reversal of centuries of non-co-operation. Some took part only because they were directly instructed to by Mamas, who supervised their

participation. Arregocés, who had had some contact with Younger Brother (he had been trained as a health assistant and wore a watch as a badge), was given the job of helping me survive in this unfamiliar environment. He was teased about his liking for Younger Brother and his ways.

Arregocés has come a long way since then. Today he is the General Director of Gonawindua Tayrona, the political organisation that exercises authority in Colombia on behalf of the Mamas. Far from being a rebel, he is a rock of tradition. And he is no longer seen as any kind of enthusiast for Younger Brother.

The question that concerned him – was it a good idea to have made that film and opened a window on the Sierra? – is one that of course concerned everyone involved with the project from the beginning. It is a question that should be addressed by seeing what has happened there since 1990, and how much of that change, for better or worse, has resulted from the film itself. But it is difficult to establish cause and effect.

The greatest change is the transformation of the political status of the indigenous people. In 1990, they had no distinct legal identity beyond living in designated reserves under the paternal care of the Department of Indian Affairs. That Department no longer exists. Colombia has a new constitution, which recognises the political autonomy of indigenous 'territorial entities'. This has paved the way for the indigenous reserve of the Sierra to become a self-governing region in which the laws, languages and educational system of



THIS PAGE AND OPPOSITE: SIMON CHARLTON

indigenous people have legal authority, and where the budget is handled directly by local indigenous organisations. The film certainly did not make this happen, but it did contribute in some small way, as one of the factors that helped to raise awareness of the dignity of indigenous Colombians.

The new Constitution has encouraged the appearance of some indigenous communities that were virtually invisible in 1990. When we made the film there were three groups of indigenous people in the Sierra: the Kogi, the Arhuaco and the Arsario. They share a common culture, and all recognise the authority of the Mamas to some extent, though the Arhuaco and Arsario were considerably more acculturated than the Kogi, and the Mamas exercised less complete authority in many of their communities. They were more likely to speak Spanish and to be familiar with the language of business and government, and more likely to have received a formal education. I was told there was once a fourth group, the Kangwama, but that they had been completely acculturated.

The new constitution has encouraged a retreat from acculturation among the Arhuaco and Arsario. This had already begun in the 1980s, when the Arhuaco confronted the Capucin missionaries who had been largely controlling their lives. 'We have been listening to you for four hundred years,' they told the Capucins. 'We have considered your words, and analysed them. You are wrong. Now you must go.' They followed this coup by walking around the Sierra delimiting what they called 'The Black Line', the boundary of the

traditional lands of the four tribes, and demanding that they should re-assume control of the land enclosed. This line, formally mapped in 1994, has now been recognised by the government as delimiting the territory within which the indigenous people of the Sierra exercise moral authority, if nothing more.

Even the Kangwama have re-appeared. They have salvaged their language from an obscure German anthropological text and re-discovered their culture. Gonawindua Tayrona is the largest of four indigenous organisations that now represent the tribal people of the Sierra, and the Mamas have stepped in to put an end to squabbles between tribes, by insisting that they operate in concert, under an umbrella 'Territorial Council'.

1994 was also the year in which the Colombian president first took notice of the Sierra and its indigenous people, flying in by helicopter to announce that by decree, he was designating a corridor of land down to the sea which was to be restored to them. Here too the film can claim some credit. Although it was never shown in Colombia, the President's wife had been sent a copy by a friend in London. The enthusiasm of these two ladies did play some part in bringing about the presidential visit.

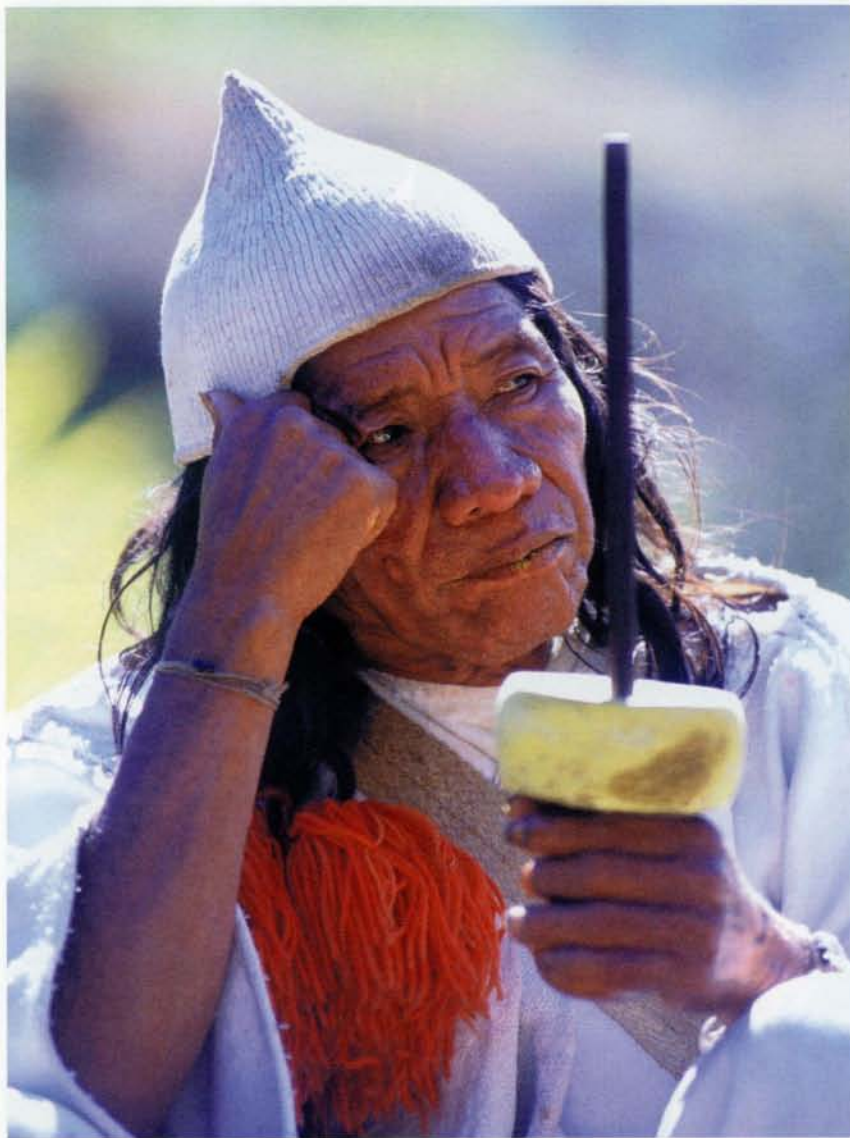
Out of trust

The return of their land is the most fundamental of the Mamas' concrete ambitions. It is only when their ancestral lands are fully accessible, and their direct access to the sea is restored, that they can hope to carry out the offerings and rituals which they believe can sustain life and the health of the Mother. The most immediate consequence of the film was the creation of the Tairona Heritage Trust to receive donations from viewers, and the Trust provided Gonawindua Tayrona with the finance to purchase 13 small farms from settlers. The Trust also provided finance for legal help, medical assistance, and made a contribution to the re-building of the Indian House in which Arregocés was voicing his doubts.

All this activity acted as a springboard for a much larger scale of assistance. The University of Rome and the EC offered help with restoring sustainable agriculture in the damaged lands that were being bought, and since the end of 1999, a US foundation, Nature Conservancy, has spent some \$500,000 on land purchases for the indigenous people, with considerably more to come. In addition, the World Bank has offered loans totalling some \$20 million for 'sustainable development' projects in the region.

The heartlands remain intact: there are no new roads, power stations or missionaries – though the efforts of evangelical Christians to undermine respect for indigenous spiritual authority does cause constant anxiety, as do appearances of back-packers and New Age tourists inspired by the film and its message. For some reason the part of the message that says: 'Stay away – we do not want you here' seems to be beyond the comprehension of many Europeans and Americans.

If you have read this far, and have perhaps noticed the appearance of 'Kogi organic coffee' on your supermarket shelves, you will have probably formed the impression that it is all going rather well for the indigenous people of the Sierra. But this is Colombia, and Colombia is engaged in an apparently endless civil war. Power here lies not with the government but with warring gangs. These gangs are principally: guerrillas (notionally left wing, their trade is kidnap, ransom and taxing the drug trade); paramilitaries



SIMON CHARPIT



(notionally right wing, their trade is anti-guerrilla murders and taxing the drug trade); and 'narcos' (the cartels whose trade is drugs, enforcement and financing guerrillas and paramilitaries). The nearest thing to stability comes when there is equilibrium between these forces. In the last two years that stability has been dramatically upset by the government's attempt to create a new 'peace process', which has weakened the guerrillas, and by an apparently more effective Colombia-US assault on the local narcos.

The result has been a dramatic escalation in the power of the paramilitaries, and in particular of one charismatic paramilitary leader, Carlos Castaño. He appears to be engaged in a war of conquest of northern Colombia, which has now moved into the Sierra. He is effectively in control of Santa Marta and of much of the lower region of the Sierra. The guerrillas of the region, who are mostly members of the FARC (the Armed Revolutionary Forces of Colombia), have been driven into the higher parts of the mountain, although they still control an area of the lower Sierra on the eastern side. Castaño's 'self-defence forces', now a uniformed army of some 8,000 men, have conducted numerous massacres; the fact that they effectively pacify the regions they control does not make them less frightening.

The crucial area of conflict and danger is on the guerrilla-paramilitary frontier, which now runs right through the indigenous communities of the Sierra. The FARC have moved into Arhuaco and Arsario villages, taking effective control of them, and forcibly recruiting young Indians. They are demanding that each family provide a 'volunteer'. Some Kogi villages are also affected. There is now terror of paramilitary reprisals. Such reprisals have already been suffered by the Kangwamas, dozens of whom have been slaughtered and many more 'relocated'.

I visit the Sierra most years, on behalf of the Tairona Heritage Trust. This year, for the first time, I was told that I should not go up into the Sierra at all. The Mamas and officials of Gonawindua Tayrona would come to the Indian House in Santa Marta. Anything else would be too dangerous.

The main issue that they wanted to discuss was the ever-present question of reclaiming land. The Nature Conservancy and World Bank projects are controlled by a local NGO, the Fundación Pro-Sierra Nevada de Santa Marta. The Nature Conservancy money is being used to purchase land in accord with a priority list drawn up in consultation with Gonawindua Tayrona. But what is given with one hand, Younger Brother takes away with another. New settlers are moving into the Sierra, and virgin land is being seized for farming. This is not exactly a case of land-hungry individuals accessing a new frontier: the region is far too dangerous for any optimistic peasant to attempt to carve out a farm on his own. Castaño appears to be rewarding his followers by setting them up with land that is being seized for the purpose.

He claims in his public statements to be concerned about environmental issues, and to be anti-drugs. The indigenous leaders, recognising that they cannot stop land being taken in this way, have decided that they can at least stop it from being deforested and destroyed. They do have one card to play: they are now a recognised part of the government, and under the 'Plan Colombia' the government is spraying defoliant on cocaine plantations in other parts of the country. So the deal is that if the new settlers cut down even a single tree, or put in a single coca plant, Gonawindua Tayrona will call in the defoliant aircraft and destroy the farm.

The destruction would not, of course, be of just one farm. A whole region would be blasted. The indigenous people themselves would be victims. Calling in the defoliants would be a Doomsday scenario – the guardians of the earth threatening to destroy it themselves. It is their equivalent of the nuclear deterrent – mutually assured destruction. So far, they say, it has worked.



SHAWN CHAPMAN

A matter of land

And they are still determined to continue with their own programme of acquiring land. The last President's promise to purchase a swathe of land down to the sea was, of course, never fulfilled, but gradually a connected line of farms has been assembled between two river valleys. The next target is a narrow strip, two and a half miles long, between the road and the sea that includes the beach. Nominally prime agricultural land (though the plan is not to put it into production), it is the most expensive purchase in their minds, too expensive for the Nature Conservancy project. But in terms of restoring the overall spiritual landscape of the Sierra, and allowing the Mamas to conduct their work, it is seen as fundamental. The lands that are bought are owned communally, but the Mamas decide who will live and work on the new farms. In some cases, where the farms were producing commercial coffee, the new farmers have continued production, though using only organic methods, and have sold their crops. This has created a new situation: a society that was relatively egalitarian in material terms has begun to develop a class structure. There is considerable unease at this development, and the Mamas are now considering what can be done to control the growth of private wealth and prevent the existing social structure from being wrecked. It does look as though the days of the private ownership of crops may be coming to an end.

Encouraged by government education programmes and a buoyant market, other farmers have also turned to organic coffee production. Shrewd dealers are buying up this production, from settlers, Arhuacos, Arsarios and Kogis, and marketing it as 'Kogi organic coffee'. This too is one of the consequences of the film, and it annoys the Kogi. Their identity, they feel, has become a commercial commodity in other peoples' hands. Besides, they think people must assume that they are producing all this coffee themselves and



becoming very rich. It annoys the Arsario and Arhuaco too. The film made the Kogi famous, and has given the world the impression that Arhuaco and Arsario do not exist. This makes for some uneasiness. It helps to account for Arregocés' feeling that the film might not have been a very clever idea after all.

The money from the World Bank, millions of dollars, is a loan to the Colombian Government, and is managed by the Fundación Pro-Sierra Nevada, an organisation created by Juan Mayr, who is now Minister for the Environment. None

of this money may be used for land purchase, a situation that baffles and angers Gonawindua Tayrona. They are also extremely uncomfortable with the notion of financing 'sustainable development', and challenge the concept of 'development' on which it is based. The Arhuaco leaders, who are fully familiar with the issues of globalisation and corporate capitalism that lie behind 'development', are taking the lead in this political discussion. But they clearly speak for all the indigenous leaders whom I met, who share the view that the plan in question was drawn up without reference to them. 'You are stitching a bag, and say that we are being consulted on what it will be like. But you only consult us when the bag is complete and it is time to fit the handle. We should be consulted from the very first stitch.'

There is a strong feeling that the indigenous people have to take conceptual control. They have to define 'development' in a way that is compatible with their own beliefs. They also believe that establishing a proper frontier between their world and ours means that they must become gatekeepers of information as well as territory. The major current undertaking of Gonawindua Tayrona is to create a Documentation Centre that will enable them to do this.

In 1988, when I first visited the Sierra, the Kogi had only the most minimal knowledge of the outside world. They do not have a written language. And though they insisted on a written contract as the basis for the film, and dictated its contents, which were shrewd and sophisticated, it had to be written down by a Colombian government official, and 'signed' with fingerprints.

Now things are a little different. Most of the Kogi still have no office skills – though some do. And an increasing number of Arhuacos and Arsarios have had decent educations, a few to degree level. Two years ago, I was asked if the Tairona Heritage Trust could supply Gonawindua with a high-powered computer, a sophisticated mapping programme and training courses. We obtained a grant from a charity called Avina, but were reluctant to actually spend the money until Gonawindua was able to establish regular e-mail contact with us. Now that has happened, and the project has been set in motion. An indigenous map of the Sierra will be created which will order information in a different way from that which is being imposed by the Younger Brother. What that will mean, and how a traditional culture can shape and use 21st century technology, will be fascinating to see. Assuming, of course, that it can be done.

There was one other purpose to my visit. Part of the University of Rome project had been to develop printed material in Spanish using stories told by the Mamas. A small number of pamphlets were pro-



All this could be theirs?: Arhuacos at the land they need.

duced under the title *Words of the Mamas*, which were used to provide Kogi children with reading material in Spanish from their own culture. These stories are, in their raw form, very obscure and hard to make sense of, but the Mamas relate them as a way of helping children learn about their own society, and how to think.

We agreed some years ago that I should attempt to translate and elucidate these stories in English, to make them accessible to a wider audience. Younger Brother would be given some idea of the mode of thought that the Mamas want to encourage, and which they believe must be encouraged if the

world is to survive. I was returning with my text, to read it back to them in Spanish.

This is where Arregocés' doubts really came to the fore. We had begun by discussing my explanations of the tales, their metaphorical interpretation and moral significance. I had also described the relationship between some of the Words of the Mamas and material from Greek and Biblical sources. And then the deeper issues began to emerge. Do we really want to be known, opened up, exposed? We are an oral culture; we speak to each other face to face. What happens when our words are detached from that encounter? Who reads a book, and what happens when they read it? Are people going to be given new ways to damage us and profit from us?

For sale

That has been one consequence of the film. The Kogi have become a marketable commodity. They are aware of a character based in Arizona who travels the world giving workshops on 'Kogi telepathy', teaching that the Mamas speak only a telepathic language and communicate through him. Whether what is being sold is Kogi telepathy, Kogi coffee, or 'Kogi Experience' trips into the jungle, they feel it all amounts to a theft of their public identity for profit, and one which could not have happened if the film had not been made.

Compared with the catastrophes that afflict most other indigenous people, the Kogi seem to have done pretty well. Four hundred years of experience in surviving Younger Brother have taught them to think very carefully about what they are doing, to be pro-active where possible, to be discreet and show united respect for their leaders. These are probably the fundamentals of survival, and even in these terrible times, when the paramilitaries and guerrillas are intruding on a wholly new and frightening scale, one should not be pessimistic.

Until you look at the larger picture.

The disintegration of civil society, like the appearance of new diseases among humans and animals, is understood by the Mamas to be a natural consequence of the sickness of nature itself. The change in the climate, the drying up of rivers, the melting of the snowfields, all these things are symptoms of the deep malaise caused by Younger Brother's rape and mutilation of the world. 'You are cutting out her eyes and ears, you are tearing out her veins; the Mother is weak and in pain. You are bringing the world to an end.'

I do not think that the film changed that. Nor do they. ♦

Alan Ereira is a director of Sunstone Films (SunstoneFilms@aol.com).

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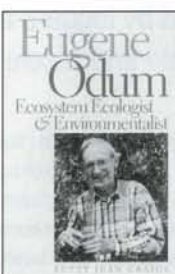
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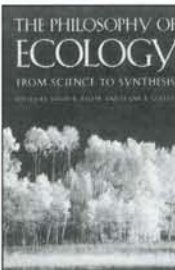
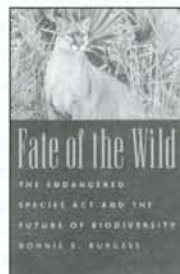
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Saving the wood...

Certified tropical timber has been hailed by loggers and environmentalists alike as the best way to protect the rainforests. But is it? **Klemens Laschefski** and **Nicole Freris** have problems with it. Here, they explain why.

If it's good enough for James Bond, it's good enough for you. It's also good enough for the world's fast disappearing rainforests.' This, it seems, is the message behind a glossy advert on behalf of the Forest Stewardship Council (FSC) which recently appeared in magazines and newspapers across the land. 'You don't have to be a movie star to be an action hero', it reads, beneath a picture of a smouldering Pierce Brosnan. 'Help conserve the world's forests. Look for and purchase [wood] products carrying the FSC logo.' It's reassuring stuff, with some heavyweight backing: 'WWF, Friends of the Earth, Greenpeace and the Woodland Trust are all proud and active supporters of the FSC.'

Some readers might do a double take. Haven't environmental organisations been running campaigns for decades against a tropical timber industry which is devastating the world's shrinking forests? Weren't tropical timber products deemed unnecessary luxuries for uninformed consumers? Wasn't a complete boycott of tropical timber encouraged by the same groups who now support the FSC? And didn't those boycotts cause significant sales slumps for targeted timber importers?

Yes, is the answer to all those questions. Yet now, suddenly the consumer is redeemed, empowered to save the rainforests by shopping. We are encouraged not to boycott but to buy tropical timber – with the important proviso that it carries an FSC stamp.

What is the FSC?

The FSC was founded in 1993, with the WWF as its main champion, in a bid to resolve the impasse between the timber industry and environmentalists. It brought together environmental, social and economic interest groups, and has been responsible for defining a set

of global criteria for 'well managed' forests, including 'ecological' management, involvement of local people and good employment practice. Based on these guidelines, privately run certifying bodies carry out FSC-certification of logging operations. The 'responsibly' harvested wood is then sold with an FSC logo.

It sounds like a good idea, and a lot of heavyweight greens are certainly convinced. But is it?

The change in emphasis of the tropical timber campaigns of many environmental groups is symptomatic of a shift in the method – and arguably the ideology – of the environmental movement, from 'radicalism' to 'pragmatism'. Campaign successes have brought environmentalists to the negotiating table. Gradually, a critique of the ideological foundations of the present environmental and social crisis has been replaced by a search for technical solutions in collaboration with government and industry.¹

The rise of the FSC is a symptom of this shift. 'Buyers' Groups' for FSC certified timber include some of the largest tropical timber retailers, most of which are former targets of boycott campaigns. Their demand is an important factor in the recent expansion of FSC certified forests. Having surpassed their ambitious target of 25 million hectares of certified forests world-wide, the WWF in alliance with the World Bank, is now aiming for 200 million hectares of certified forests by 2005.

Precious Woods

Because of this apparent success story, certification of primary forests is now enthusiastically promoted by environmental heavyweights. Certification occupies, for example, the heart of the Greenpeace Amazon campaign. While denouncing illegal logging in the region,

Greenpeace has sought alternatives for the logging industry. They found what they thought was needed in the company 'Precious Woods Amazon', which received FSC certification in 1997.

This Swiss-owned company was founded in 1994, with the intention of proving that sustainable logging in tropical regions is economically viable. In mainstream forestry circles, the project is recognised as one of the best examples of planned logging in primary forests. Their example has now been followed by Gethal, the largest foreign logging company in Brazil's Amazon state, which was certified last year. Certification of Gethal has been claimed as a landmark victory, proving how predatory loggers can be persuaded into good behaviour. Greenpeace is now negotiating the certification of WTK², a Malaysian company with an appalling history of environmental and social abuses.

This 'conversion' of predatory logging companies is being celebrated with evangelical fervour by supporters of the FSC. But if certified logging of the disappearing rainforests is the answer, perhaps we have forgotten what the question was. For the story of the FSC's success raises many questions which, until now, environmentalists have avoided asking, let alone trying to answer. What sort of development for the region is certification really promoting? Who benefits from this development model? What impact does certified timber extraction have on native forests? Does buying certified timber products really contribute to saving the rainforests?

These are not easy questions to answer, but answer them we must. In this article, using the example of Precious Woods Amazon and the Brazilian rainforest to illustrate wider points, we aim to determine the truth behind some of the myths of tropical timber certification.

Myth 1: Certified logging of primary tropical forests has minimal impact on forest ecosystems.

The logging system employed by Precious Woods Amazon involves a 100 per cent tree inventory and carefully planned infrastructure based on satellite images. Five per cent of the 'management area' is clear-cut for roads, skid trails and stocking areas. After felling, this results in around 20 per cent of the forest canopy being opened.³

The result of this is that the 'managed' forest ends up criss-crossed with 400km of permanent and 5,000km of secondary access roads,⁴ maintained in better conditions than most public roads. These allow the invasion of wildlife poachers, who prove difficult for the company to control. If Precious Woods Amazon moves on from this area, the road access will remain, inviting farmers, settlers and other logging companies to wreak a second wave of damage.

Silviculture techniques are adopted to encourage the growth of commercially lucrative species. First, large diameter, mature, target

species are felled and removed. Then, a ring of bark is cut from around the trunk of nearby trees with no market value, which are left to die standing. This causes drying of the forest floor, increasing the danger of forest fires. Silviculture techniques profoundly alter the species composition and the age of the forest. With time, an ancient ecosystem is transformed into an artificial land use system.

The environmental sector of the FSC uses its influence to progressively tighten the criteria for certification, reducing the volume of wood extracted per hectare. But for certified companies to be economically viable, production quotas need to be maintained. This necessitates opening up new areas of undisturbed primary rainforest. In other words, certified logging is creating a new forest frontier; the infrastructure required for certified management is opening up ever remoter regions of forest.

Myth 2: By increasing the market value of tropical timber, FSC certification puts economic value on forests. This creates a disincentive for more damaging land use, such as clearcutting for agriculture.

Recent figures seem to support this myth, showing that planned timber extraction yields a 33 per cent interest return on investment per unit area, whereas cattle ranching, for example, yields only 8-14 per cent.⁵ But in reality, areas suitable for forest clearance for agriculture and selective timber extraction rarely compete as economic alternatives.

Brazilian farmers and landowners simply do not feel the need to include 'percentage interest return' or 'land productivity' in their calculations. The expansion of the agricultural frontier is promoted through access to land made cheap through subsidies and special tax regulations.⁶ This encourages short-term profits from transforming forest into pasture rather than investing in new methods of forest use. The political clout of the farming industry ensures that the incentives that consider natural forest as 'non-productive' remain in place. This predisposition is further exaggerated by the extreme wealth concentration in Brazil. For the few who have capital, land scarcity is not an issue. Under these circumstances, the FSC provides no meaningful incentive to turn cattle ranchers and soya farmers into foresters.

However, certification certainly is providing a survival option for a growing number of the large logging companies. Many were facing bankruptcy due to pressure from state environmental agency and international boycotts. The new 'green' markets overseas are perceived as a lifeline,⁷ as are the institutional support and international funds available after taking the FSC vows.

Certification does provide an incentive for better planned

...from the trees



logging, but is merely a voluntary marketing tool and not a long term obligation. As such, it will only work as long as it guarantees maximum profit for the logging company. If certified timber loses its commercial advantage, companies will drop certified management and revert to more predatory practices.⁸ There is nothing whatever to stop them doing so.

Myth 3: With so many trees, and a growing global demand for wood, logging is inevitable in the Amazon.

Logging in the Amazon has been defined as 'unavoidable' by the political, economic and academic beneficiaries of the timber industry. Forestry is even considered to be a 'science' that justifies our interference with forest ecosystems. Increasingly, foresters are employed by research institutes, environmental NGOs and international funding agencies, and their expertise is sought on all issues related to forests. Yet foresters are trained almost exclusively in how to cut down trees. Faced with a forest, they are conditioned see wood not trees – marketable cubic metres of timber, not ecosystems.

One example of the monopoly of the foresters' perspective is 'Promanejo', a joint project between international development agencies and the Brazilian government. Promanejo is part of the Pilot Project for the Preservation of Tropical Rainforests of the G7 countries, established to develop sustainable use of tropical forest resources. Promanejo interprets 'forest resources' exclusively as 'timber'. Both Gethal and Precious Woods have benefited from these funds; Gethal recently receiving \$382,000 for personnel training and Precious Woods Amazon \$238,000 for an education centre designed to promote their forest management system.

In contrast, land use systems of indigenous peoples and riverside dwellers continue to be marginalised. The range of non-timber economic alternatives includes brazil nuts, tree oils and essences, guarana, medicinal plants, babassu, honey, art work and an endless list of exotic fruits, all with well established markets. These local economies are collectively of a scale easily competing with the logging industry in terms of economic returns. But they are left unexplored as the trees come down.

Myth 4: Planned logging by FSC-certified companies stimulates the local economy, offers job opportunities for local people and provides an alternative to the traditional land use systems which intensify deforestation.

The logging industry is unstable in the extreme, and exacerbates a boom-bust economy. Periods of expansion intensify migration, as local people are drawn to cities by the prospect of a job in the sawmills. Crises in the industry are common, caused by fluctuating demand from unstable markets, control by environmental agencies, international timber boycotts and supply problems due to species scarcity and transport difficulties. Having stimulated expansion of the urban population, such downturns in the logging economy then intensify unemployment.

Precious Woods Amazon is based in Itacoatiara, the principal logging centre of the Amazon state, 200 km from Manaus. Arriving in the 1990s at a time when the timber industry was in an economic trough, it was easy to find unemployed workers already living in the town. The creation of 300 jobs at Precious Woods Amazon was welcome, but has hardly dented the local employment crisis. Instead,

its presence has helped maintain local economic dependence on foreign capital and external markets. This precarious economy is reflected in the unstable internal situation of the company, whose management area in Itacoatiara is proving unable to guarantee the profit required to demonstrate economic viability.

Seeking a larger area of undisturbed forest with a higher concentration of valuable tree species, Precious Woods recently acquired an area of 179,000 hectares of rainforest in the neighbouring state of Pará. If its operations transfer to Pará, the company will leave the economy of Itacoatiara as precarious as they found it.

On the positive side, Precious Woods Amazon has a fairly good record with wages, working conditions, job security and union rights, and is creating pressure on other companies to follow suit.⁹ However, a worker's monthly salary at Precious Woods Amazon is only 20 Real higher than the minimum wage of 151 Real (US\$79) – inadequate to support the average Amazonian family.

The environmental consequences of Precious Woods Amazon's operations might be evaluated by comparing its impact as a local employee with the subsistence land use of local peoples. Rural families use an average of five hectares to plant basic food crops in rotation.¹⁰ Precious Woods Amazon transforms 2,700 hectares inside the managed areas into transport infrastructure. This is equivalent to an area required for the subsistence of 540 traditional families. In addition, every day, 300 workers eat food from the company canteen provided by farms and cattle ranches along the road between Itacoatiara and Manaus. The ecological impact of these urban consumption patterns can be seen in the widening



'Ultimately, certified tropical timber sold to an ecologically conscious elite in the rich world has little influence on the global dynamics of the logging industry.'

strip of deforestation clearly demonstrated on the satellite image.

The recently certified logging operations of Gethal provide another clear example of how certified companies compete with lower impact and more socially just local land use systems. Within their 40,000 hectare management area live 1,200 local people in seven riverside communities. They have no land rights, but depend on the land. With approval of the certified management plan, these communities are legally prohibited from practising their subsistence activities, such as collecting brazil nuts, without Gethal's permission.¹¹

The communities, with the support of the local church, have denounced this injustice.¹² They also complain that the road building for the logging is making access to the brazil nut trees difficult, and hunting scarce. In sum, as a direct result of the certified management plan, the subsistence of 1,200 local people is threatened.

Myth 5: Certified logging companies are committed to transparency. Their activities are monitored by certifying bodies, whose role is to ensure that high standards are maintained.

Given the chaos and illegality of the Brazilian logging industry, certification seems, at first sight, to offer the incentives and penalties required to lever companies into better behaviour. Certainly, companies will be less willing to lose their ecological niche markets by engaging in illegal activities. But when it is a question of profit, such constraints have not stopped 'model' companies engaging in dubious practices.

The case of acuariquara shipments from Precious Woods Amazon is one example. Acuariquara is a durable species of tropical timber with insignificant local markets. International demand for the species

was created when the German municipality of Rostock decided to use certified acariquara for coastline construction work. The contract was celebrated as a new transatlantic partnership to preserve the rainforest. But Precious Woods Amazon had insufficient acariquara to respond to the demand. To complete the shipments, wood was bought through an Austrian company, MW Florestal, from local loggers, in unmanaged areas.¹²

At the same time, a series of illegal logging incidents involving acariquara took place in the neighbourhood of Precious Woods Amazon. In one case, authorisation to clear-cut a small plot for agriculture was used to rip out hundreds of acariquara trees using the company's tractors and personnel.¹³ In another incident, at an FSC meeting, a local mayor denounced the company for illegally removing acariquara within his municipality.¹⁴ Beyond the possible explicit involvement in illegal logging, opening the market for acariquara helped stimulate a local boom in illegal logging of acariquara.¹⁵ Clearly, it is difficult to neatly contain the economic incentive for logging to a management plan area.

Following these incidents, ranks were quickly closed around Precious Woods Amazon, and it was left to small, under-funded environmental groups and concerned individuals to investigate and lobby. This reflects a murky constellation of interests within the FSC, where those responsible for monitoring operations are also those with vested interests in the FSC's success. The certifier, simply put, is on the logging company's payroll.

For the dominant environmental groups, such as Greenpeace, WWF and Friends of the Earth, FSC certification is their negotiating card with industry and is at the heart of the forest campaigns. With the growing alliance between the industry and environmental groups, and their mutual investment in the success of this model, voices of dissent are not welcome, and are thus rarely heard.

Myth 6: Many consumers are willing to pay more for products with 'green' labels. The economic reality is that certification is an essential tool for environmental preservation.

Traders in the FSC buyers' groups have created the impression of huge, ecologically-sensitive markets. This mirage is convenient for governments and industries keen to find ecological solutions which leave unquestioned the economic foundations of the present environmental crisis. The cause of our social and ecological malaise has become the cure – the world can be saved by 'ethical' shopping.

The issue of certification was discussed at an expert working group for the UN Commission on Sustainable Development in 1996.¹⁶ As bans and boycotts are considered incompatible with the rules of the World Trade Organisation, certification was accepted under three conditions: first, there should be an open market for all certification schemes, the market defining the best initiative; second, there should be no political action to diminish the trade in uncertified products; third, the origin of the timber should not be included on the product label, to avoid 'discriminatory' actions against specific regions.¹⁷

At one fell swoop, these conditions ensure that markets remain open for products from predatory and illegal sources. Responsibility for combating environmental and social crime is transferred from governments into the hands of consumers faced with hundreds of eco-labels, the vast majority of which are a result of opportunistic marketing. Environmental organisations are now engaged in campaigns to defend the FSC as the only 'trustworthy' ecolabel. This has been at the cost of political action directed at the underlying causes of forest destruction.

Research indicates that markets for 'green products' are actually very limited. Half of German consumers, for example, pay attention to eco-labelled products, but only a third would pay even five per cent more for them. This is inadequate to effect the big changes required for sustainable forest use.¹⁸ Consumer behaviour is notori-

ously fickle and these statistics do not reflect real life situations where even ecologically aware consumers with limited finances may opt for a cheaper uncertified product.

And ultimately, certified tropical timber sold to an ecologically conscious elite in the rich world has little influence on the global dynamics of the logging industry. Within Brazil, 85 per cent of timber from the Amazon is consumed in internal markets.¹⁹ It is these markets that help sustain illegal logging in the region, currently estimated at 80 per cent. Low-income Brazilian consumers do not have the luxury of 'consumer choice' offered by certification.

What can be done?

Many people have supported the FSC in the hope that through valuing tropical timber, the forests would be preserved. Many thought the FSC would empower local people in small, community based initiatives, offering an alternative to more destructive land use. In reality, though, the FSC is supporting industrial-scale logging of the world's remaining primary forests. Presently, 96 per cent of certified forests are accounted for by industrial or government forest owners, with 85 per cent being in holdings of more than 100,000 hectares. Only 34 per cent of the total number of certificates, covering a paltry three per cent of the certified land area, are accounted for by communal groups and non-industrial users.²⁰

It is probable that certification has insignificant impact in halting predatory logging practices in tropical forests. Meanwhile, the FSC is leveraging open tropical timber markets in Europe and the US which were closed by the boycott campaigns of the 1990s. It is offering a survival option for logging companies and attracting new international investment for logging of primary forests.

The investment, support and marketing of certification is helping to create an economic, academic and environmental culture supporting the logging industry. Massive financial and human resources are being invested in certified logging; resources which should be spent on more meaningful forms of forest preservation. In the final analysis, by buying FSC timber, consumers are supporting the exploitation of a rare raw material from a developing country by multinational companies.

Rather than buying into the myths, individuals and organisations wanting to contribute to the preservation of the world's remaining tropical forests could adopt seven very simple principles, which may better serve to protect the world's primary forests from the rapacious appetite of the Western consumer:

1. End certification schemes for tropical timber from primary forests.
2. Boycott all tropical timber in Europe and North America.
3. Support fair trade initiatives of non-timber forest products with direct links to local communities.
4. When absolutely necessary, buy timber produced locally from secondary forests
5. Invest in improving governmental control of illegal logging and tightening of regulations for legal logging.
6. Invest in community-based, non-timber forest products as economic alternatives.
7. Invest in reforestation schemes in degraded areas. ♦

Klemens Laschefski, as the forest spokesperson for Friends of the Earth Germany, was responsible for a tropical timber boycott campaign. Presently living in Brazil, he is concluding his thesis on Certification and Sustainable Development. Nicole Freris is engaged in developing alternative economies with the indigenous peoples of the Brazilian Amazon.

References on page 66.

The FSC has been invited to reply to the claims made in this article. *The Ecologist* looks forward to publishing its response in the near future.

POVERTY – THE CHILD OF PROGRESS

THE DREAM THAT ECONOMIC DEVELOPMENT CAN BRING PROSPERITY TO THE POOR IS OVER, ARGUES TEDDY GOLDSMITH.

ECONOMIC DEVELOPMENT, in spite of its devastating effects on societies and the environment, remains the overriding goal of international agencies, national governments, and the transnational corporations that are of course its main promoters and beneficiaries.

This is justified on the grounds that only development, and of course the global free trade that fuels it today, can eradicate poverty. Hardly anyone in a position of authority today seems willing to question this thesis, even though it is backed by neither any empirical nor any serious theoretical evidence.

Consider for a start that since shortly after World War II when world trade and economic development really got under way, the former has increased by nineteen times and the latter by no less than six times – an unprecedented performance. If these processes really provide the answer to world poverty, then it should by now have been reduced to little more than a faint memory of our barbaric and underdeveloped past.

However, the opposite is true. In Indonesia poverty has increased by 50 per cent since 1997, in South Korea it has doubled during the same period, in Russia, it rose from 2.9 per cent to 32.7 per cent between 1966 and 1998 alone.¹

Much the same thing has happened throughout South America, as well as the Caribbean. It has also increased in the rich industrial world, where 37 million people are now unemployed, and 100 million are homeless. In the UK, the number of adults in households with less than half the average income has increased by a million above the level of the early 1990s and is now more than double that of the early 1980s.² To reasonable people, these facts should be enough to discredit the dogma that development eradicates poverty. But for the promoters of development it merely indicates that it has not proceeded fast enough.

Significantly poverty is not seen as an isolated problem, but is the cause of all our other problems. Thus the Food and Agricultural Organisation of the United Nations (FAO) insists that if people are hungry it is because they are poor and cannot afford to buy the food they need, while the World Health Organisation (WHO) also assures us that if people are disease-ridden and die young it is because they are poor and cannot afford the medicines that would make them healthy. The answer to both hunger and disease is thus the eradication of poverty, which means more development.

By defining poverty in purely monetary terms, it is assumed that money has always been, and always must be a prerequisite – as indeed it partly clearly today – for satisfying real needs. This is simply not true.



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BUT THIS IS NOT TRUE

Development creates poverty

What we tend to forget is that in the traditional families and communities in which we lived during perhaps 95 per cent of our tenancy of this planet, settlements were designed, houses built, food produced, prepared and distributed, children were treated and educated, the old and the sick cared for, religious ceremonies organised and performed, government functions fulfilled – all entirely for free. This was possible, as Karl Polanyi, the great economic historian, pointed out, because in such societies the economy was embedded in social relations where: 'All the functions that we would regard today as economic were fulfilled for social rather than economic reasons, mainly to satisfy kinship obligations and to achieve social prestige.'³

Development changes all this. It is above all the gradual disembedding from their social context of these functions and their monetisation, and takeover by corporations. As a result, a large section of society no longer has access to the money needed to pay for food, health care, and other such – now – monetised benefits.

We have been trained to believe that all pre-industrial people who lived in non-money economies were poor – but this is not true. Early travellers always noted how healthy and well fed were the traditional people whom they visited.

Thus Mungo Park, in his *Travels in Africa*, tells us that the Gambia River abounds with fish and that nature 'with a liberal hand' has bestowed on the inhabitants of the area 'the blessings of fertility and abundance.'⁴ Poncet and Brevdent, two eighteenth-century French travellers, noted that the Gezira area of the Sudan now occupied by eroded cotton fields, was once covered in forests and 'fruitful and well-cultivated plains', and that it was called God's Country (Belad-Allah) 'by reason of its great plenty'.⁵

Sir George Grey, Governor General of New Zealand in the early part of the 19th century, spent time among them and insisted that he always found the greatest abundance in their huts. Many modern anthropologists have noted how healthy and well-fed tribal peoples, with whom they lived were, and how their diet and state of health deteriorated as soon as they adopted the life-style of their colonisers.

RR Thaman of the University of the South Pacific, for instance, points out that prior to European contact, the islanders of Melanesia, Polynesia, and Micronesia, generally had abundant food resources, and were almost universally reported to be a sturdy, healthy people of superior physical type. Even those atolls and raised coral limestone islands where food was relatively scarce 'had abundant bread-fruit, coconuts, pandanus, often taro, a vari-

STEVE COBBETT



ety of edible wild plants and rich marine resources.' Recent years, however, have seen a dramatic deterioration in the health of Pacific islanders. The growing trend towards eating a western-style diet has brought in its wake a rise in the incidence of the so-called 'Diseases of Civilisation', notably heart disease, dental caries and diabetes – diseases that were almost unknown a few decades ago. In Micronesia the number of people who were treated for heart disease at local hospitals tripled between 1958 and 1972 – a rise which is best explained by changes in diet and by the stress of modern living.⁶ Countless other studies in the Pacific islands and other parts of the world paint the same picture.

In other words, tribal and other traditional people did not require economic development and the money that it provides in order to be healthy and well-fed. Significantly, the World Bank's 2001 edition of World Development Indicators (WDI) shows Cuba – the only developing country with the exception of North Korea, which since 1960 has received no World Bank loans, and has had but 'anaemic' economic growth – as topping all other poor countries in health and education statistics. Even Joe Ritzen, the Bank's Vice President for development policy, cannot help being impressed. He notes that the Cuban system is extremely productive in social areas, but he cannot help commenting critically that it does not give people opportunities for prosperity. But what, one might ask, is the use of prosperity if it has 'a negative effect in social areas?'

What is particularly significant is that these pre-industrial people did not feel poor, a point that is made very clearly by Marshall Sahlins:

'The world's most primitive people have few possessions, but they are not poor. Poverty is not a certain small amount of goods, nor is it just a relation between means and ends; above all it is a relation between people. Poverty is a social status. As such it is the invention of civilisation.'⁷

No word for poverty

Serge Latouche, who has worked for decades in West Africa, tells us that 'there is not even a word for poverty in the principal African languages, at least in the economic sense of the term, which he sees as a Western invention.⁸ The closest are the words that denote an 'orphan.'

In this way, poverty is not associated with a lack of money, but rather with the absence of social support. For Latouche the very idea of poverty is only conceivable in an individualistic society, such as that which development necessarily gives rise to. It refers above all to the powerlessness of the social isolate. 'In a non-individualistic society,' Latouche tells us, 'the group as a whole is neither rich or poor.'⁹

Julius Nyerere said much the same thing. For him 'in an African society... Nobody starved, either of food or human dignity, because he lacked personal wealth; he could depend on the wealth possessed by the community of which he was a member.'¹⁰

Many of those who are economically poor in the modern world of today are also those with minimal family support. These include the increasing number of old people who have been largely abandoned by their families and have become dependent on a miserable state pension that is hardly sufficient to keep body and soul together. They also include many single parents and their children.

As early as 1974, Bronfenbrenner, the well-known child psychologist, pointed out that 'of the number of children in the USA living in poverty under the age of six, 45 per cent of them were members of single parent households.'¹¹ Since then the situation has become very much worse. The number of children living in poverty in England in the year 2000 has just about trebled since 1968 from 1.4 to 4.4 million, as, not surprisingly, has the number of lone parents during the same period.

It is in the slums of the modern industrial cities that social

disintegration and the deprivation it gives rise to is most advanced, and this gives rise to a form of poverty which is largely absent in traditional societies, and which in some ways is even less tolerable than that which exists in the slums of Third World cities such as Calcutta.

The main reason why development must create this social deprivation is that, as more and more of the key functions that have always been fulfilled by families and communities are assumed by corporations, these key social units will simply atrophy, like muscles that are no longer in use. People will thereby be deprived of the most caring and most dependable sources of security. The bulk of people in the industrial world do not realise this. They depend on personal investments, on their jobs, and on the welfare state to provide them with security.

However, within the context of the highly unstable global economy we have created, investments are pretty precarious, as we saw with the massive slump in technology shares. Jobs are also increasingly precarious, while at the same time the welfare state, in order to reduce costs to industry, is being systematically dismantled. As this process occurs, so vast numbers of people, increasingly deprived of family and community support, will find themselves deprived of virtually any form of security and will thereby join the proliferating throngs of the poor and destitute.

However, today's poverty is as nothing compared to what it will be as development enters its final stage in a global economy controlled by uncompromising trans-national corporations.

Consider, for instance, that, in accordance with WTO regulations, markets throughout the world are being systematically opened up to highly subsidised US food products. It has already begun in India with devastating results. There are somewhere between two and three billion small farmers in India, China, Indonesia, Thailand, and other parts of South and Southeast Asia, where the average farm size is only a few acres.

Few are likely to survive the opening up of their markets – few too of the artisans, small shopkeepers and street vendors who depend entirely on the farming community. Most will be forced to seek refuge in the slums of the nearest conurbations and, without land on which to grow their food, without jobs – as the level of unemployment in these slums is already horrific – and without any unemployment benefits, they will be reduced to a state of total destitution.

Plus, of course, in accordance with the WTO's General Agreement on Trade in Services (GATS) just about all government services would be included. This means that the services that the state originally took over from local communities, and which were largely subsidised by the public so that they could be provided for free for those in need, would now all be taken over by unaccountable corporations who would charge the maximum price that they could get away with – creating an unprecedented number of poor people who would thus be deprived access to the basic requirements of life.

But the overriding contribution of economic development to the growth of world poverty must be the generation of ever greater amounts of the greenhouse gases that cause global warming, which is by far and away the greatest problem humanity has ever faced. Indeed, if we do not rapidly put this process into reverse, much of our planet will soon be largely uninhabitable with ever worsening heat waves, floods, droughts, storms, and sea-level rises, giving rise to vast migrations of impoverished and half-starved refugees across the surface of our planet. To combat global warming means putting many developmental processes into reverse, and this is irreconcilable with everything we have been taught to believe in.

So far, nothing has been done.

Teddy Goldsmith is founder of The Ecologist. References on page 66.

THE PLANE TRUTH

THE BUILDING OF HEATHROW'S TERMINAL 5, SAYS JENNY CRAVEN, IS YET ANOTHER HUMAN SACRIFICE AT THE ALTAR OF AIR TRAVEL.

AMONGST FORMS OF transport, aviation is by far the most polluting. Jet engines are responsible not only for carbon dioxide emissions, but for spewing out nitrous oxides at high altitudes. Yet to date no conclusive research has been done into the latter.

No surprise here, of course. The only people in a position to properly map and record the problem are the perpetrators – the aviation industry. Understandably, they have been less than keen to volunteer. Concerned scientists have had to rely on computer models, which have a 15 per cent margin of error. Even so, their findings are frightening. Our high level activities, are, quite literally, burning up the planet.

Dangerous emissions closer to earth are easier to establish, but not that easy. Both airlines and airport owners have fed us the myth that polluting levels at airports are largely the result of ground traffic and diesel fumes. The collective wisdom has sworn that any resulting pollution from airports stops at the perimeter fence. Recently, the lie has been wearing thin. A study of Chicago's O'Hare airport has found increased carcinogens in a 40-mile radius from the epicentre. Finally the more responsible members of the industry are recognising 'there may be a problem'.

Residents close to airports have long complained of the bad air quality in their neighbourhoods. For even longer the aviation industry has denied any contribution to this. Last year, however, every borough in the UK was forced by the government to carry out its own air monitoring. Those found wanting would be given until 2003 to clean up their act, unless the cause of the problem was found to be beyond their control. The five boroughs surrounding Heathrow, the world's second busiest international airport, reported bad air quality way above the government's safety guidelines. With Heathrow in their midst, they have no hope of any improvement by 2003. The statistics say it all. Jet engines pollute at the rate of 1,000 cars, and on a daily average there are 1,250 flights into and out of Heathrow.

Heathrow was built on a lie and developed by sleight of hand. Behind the cloak of wartime necessity and the dagger of the Air Ministry, commercial aviation interests seized on this flat plot of land conveniently close to London as their future base. In 1944 the unfortunate residents received a notice to quit within two weeks. They were led to believe they could return after the war. They couldn't – and it took years for many of them to receive compensation, at best inadequate, at worst negligible. They lost their homes, their way of life and their livelihoods.

Wherever airports go, ugliness and destruction follow. Heathrow is a concrete desert, ugly in body and ugly in soul. Its activities are rapidly rendering south-west London untenable – and now they are building Terminal 5! This is not, as their propagand-



LIKE ICARUS, WE ARE
IGNORING THE ADVICE OF
THOSE WHO KNOW BETTER

da would have you believe, 'just moving the old slurry works'. This is the largest greenfield site 'development' in the history of our country.

Wherever aircraft go, noise follows. In London more than a million people are disturbed by Heathrow. But Heathrow is just one of 10 airports directly serving our capital city. London, in fact, has more planes flying over it, at lower levels than any other city in the world. Paris bans aircraft below 6,500 feet: London allows them below 3,000.

This is just the beginning, the thin end of the wedge. The skies of our island are already filled to capacity. There is no haven. If it's not commercial jets, it's private jets, helicopters, military aircraft, leisure aircraft. Nowhere is quiet.

For months the DETR has been preparing an aviation consultation paper to be followed by an Aviation White Paper determining the future of aviation for the next 30 years. They predict a massive increase. If not, the industry argues, Britain will lose its position in this highly productive sector. Fine! What, exactly, is this 'industry' producing, aside from the ill effects already mentioned?

A tourism deficit of 10 billion pounds a year. And that was last year's figure, way before foot and mouth. A horrendous deficit to our farmers and vegetable growers from cheap, tasteless imports including foot & mouth contaminated meat. An explosion of TB – a disease eradicated in this country half a century ago. An unusual strain of meningitis, brought back from the Haj to Mecca. An ever mounting bill to the NHS treating all of the above, as well as DVT and the ill effects of radiation on cabin crews and frequent flyers. A severe effect on education for kids living under flight-paths, unable to hear their teachers, or play outside.

A couple of months ago, Tony Blair gave a 'major' speech about the environment, yet aviation and its effects did not get a mention. Nor did the facts that there is zero tax on aviation fuel, no VAT on airline tickets. In April, the Royal Commission on Environment Pollution, composed largely of scientists and meteorologists, lambasted successive governments for their failure to address climate change. In particular they are 'profoundly disappointed' with their failure to do anything about the aviation industry and its increasing contribution to global warming.

If we should be taxed off our roads, we should be taxed out of our skies.

Like Icarus, we are ignoring the advice and the warnings of those who know better, but our activities are more deadly. Young Icarus killed only himself when he fell to earth: our high-flying, low-cost trips to the sun are destroying the world.

Jenny Craven is the co-founder of Save Our Skies (SOS). Contact her on (020) 8876 8332. Further reading on page 66.

ALL THE WORLD'S A STAGE?

ROBERT BUTLER WONDERS WHY MODERN DRAMA LEAVES THE NATURAL WORLD WAITING IN THE WINGS.

BETWEEN 1995 AND 2000, as a theatre reviewer for *The Independent*, I went to the theatre several times a week for 46 weeks a year. The shows ranged from fringe productions in rooms above pubs to lavish West End musicals with household names. During that period of theatre-going one fact came to surprise me above all the others. After five years, and nearly a thousand plays, I couldn't recall seeing a single one that might reasonably be described as 'green'.

With the exception of Shakespeare (and occasionally Chekhov) I rarely saw plays that even presented characters who lived on intimate terms with nature. The most basic subject of all, a human being's relationship with the natural world, had a hard time making it past the stage door.

I remember going to the Greenwich Theatre to see a stage adaptation of *Huckleberry Finn*. It was an intriguing prospect. The director had set himself the task of conjuring up a river that is a mile and a half wide and a thousand miles long. Mark Twain's Mississippi stands for everything that has not been crushed by the 'civilising' world of nineteenth century manners and materialism.

In a typical moment, Huck is floating down the Mississippi when he observes that 'it was kind of solemn, drifting down the big still river, laying on our backs looking up at the stars'. For the production to work, we had to be there with Huck, lying on our backs, and getting kind of solemn.

In the Greenwich production, the Mississippi was largely cut. The adaptation concentrated on the scenes that took place on dry land. The river was represented by the sound of lapping water. In its own way this was entirely typical. Theatre has been marginalising the natural world for 400 years. On stage the majesty of the Mississippi had dwindled to a tape-recording on a loudspeaker.

I came to think of this phenomenon as 'The World The Stage Forgot'. There are many reasons why this has happened. Let me suggest a couple. It could be traced back to the beginning of the seventeenth century when plays went indoors. Cromwell closed the theatres 'to appease and avert the wrath of God'. Charles II re-opened them and introduced a foreign courtly sensibility. That vital link with the countryside and its worldview – so evident in Shakespeare – had been broken.

Prose took over from poetry, and prose itself then shrank in its descriptive ambitions until the subtext became more important than the text. In the most acclaimed play of the last century, *Waiting For Godot*, the stage is dominated by a tree. In the first act the tree is bare. In the second act the tree has four or five leaves. We had come a long way from Blake's 'things of Vegetative and Generative nature.'

Today, theatres are stubbornly urban. The two major subsidised theatres in London – the National and the Barbican – are built above



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car parks. Theatre is also overwhelming metropolitan. In the actors directory, *Spotlight*, about 70 per cent of actors give London as their 'location'; only 0.1 per cent give Belfast.

When David Nicholson-Lord reviewed Clive Ponting's *Green History of the World* he said that: 'environmentalism is the most significant innovation in political thought in the 20th century...' Yet look at the index at the back of *Changing Stages*, a history of twentieth century theatre by Richard Eyre and Nicholas Wright, and you will find that there is not a single reference to 'environmentalism'. This is remarkable when you consider the areas that theatre has addressed. Anti-semitism, feminism, homophobia, socialism and racism: each of these subjects has inspired major plays.

So what have playwrights been up to? A new book about British drama, *In-Yer-Face Theatre*, by Aleks Sierz, details what has been happening. A group of writers has created a new aesthetic through the use of violent, confrontational material. It is worth considering the subjects these playwrights have addressed. In Sarah Kane's *Blasted* a soldier rapes a reporter, sucks out his eyes, eats them and shoots himself. The blind reporter then masturbates, defecates and eats a baby. In Anthony Neilson's *The Censor* a woman defecates onstage. In Mark Ravenhill's *Shopping and Fucking* a 14-year-old rent boy asks to be anally stabbed with a knife. Sierz says these plays have made theatre 'relevant'.

There is no doubt that violent sexual relations between individuals are strong material for a play. But you wouldn't have to travel very far from the favoured locations of bedsits, nightclubs, police stations, park benches and pubs to discover that it is only one particular area. An audience might discover another kind of shock if it had to engage with some of the issues raised, say, in *The Ecologist*. When we consider the magnitude of these other problems, the ability to test the boundaries of contemporary taste looks a mere sideshow.

As a theatre critic I saw dozens of shows that were about the theatre itself. I even saw shows about theatre critics. But I never once saw a piece that touched on the issue of deforestation, climate change or genetic modification.

How could it be done? I don't know. But playwrights, directors and actors need to find ways of involving the audience as emotionally and imaginatively in the subject of people's relationship to nature as they have traditionally done in involving the audience in people's relationship to each other. It is essential for environmentalism and for theatre. For, as Ted Hughes wrote, 'what alters the imagination, alters everything.'

Robert Butler is a theatre critic.

STEVE CARROLL

THE COOKING OIL CONSPIRACY

GUDRUN GREUNKE UNCOVERS THE TRUTH BEHIND A SPANISH 'MYSTERY ILLNESS' WHICH HAS BEEN DENIED FOR TWENTY YEARS.

TWO DECADES AGO, more than 1,000 people in Spain were killed by poisoned rapeseed oil. Or were they? The facts suggest a different story – and a corporate culprit.

Almost exactly twenty years ago, on 1 May 1981, an eight-year-old boy died on his way to hospital in Spain's capital, Madrid. But this was no isolated tragedy; it was the beginning of a 'mystery' disease that went on to kill more than a thousand people and affected up to 30,000; and whose causes are still being sought over two decades later.

The illness started with a slight fever, coughing and breathing difficulties, and progressed quickly to pulmonary oedema. Doctors and health officials were baffled. It was forty days after the beginning of the epidemic that the Spanish authorities announced the cause. Adulterated rapeseed oil, the authorities claimed, mixed with an aniline dye for industrial use, and fraudulently sold for human consumption, was responsible for the outbreak. The new disease, with a 'unique clinical appearance which separated it from any other known disease',¹ was quickly dubbed 'Toxic Oil Syndrome', and has been known by that name in Spain ever since.

Toxic oil?

But things were not as simple or clear cut as they appeared in the summer of 1981. Keen to 'solve' the problem quickly as the epidemic progressed, politicians announced that 'toxic' oil was responsible before any clinical, toxicological or

epidemiological studies had been

done. Ever since that fateful summer, with the World Health Organisation (WHO) and the US Centers for Disease Control (CDC) leading the investigation, hundreds of scientists worldwide have been trying to find the scientific evidence to prove the initial diagnosis. And they have had a hard time.

Oil samples taken from patients' homes have been analysed in the most prestigious laboratories in the US and Europe. The results have been disappointing. To this day, no toxic substance has been found that could account for the symptoms suffered by the victims. And about 75 per cent of all oil samples analysed did not contain any trace of aniline at all.²

In other studies, scientists fed the suspect oil to a wide range of animals, from mice to monkeys. Their results were equally negative. As one investigator said: 'All the animals thrived on the stuff, their coats became shinier and they put on weight, suffering no ill effects whatsoever.'³

Unperturbed by this disappointing outcome, the experts declared that, 'there does not yet exist a suitable animal model'. So it was left to epidemiologists to come up with the crucial evidence. Initially, they did not fare any better than their colleagues in the laboratories; results showed no difference for people who had ingested the incriminated oil with those who had not.

The CDC then 'loaned' medical epidemiologist Edwin Kilbourne to the Spanish government to take charge of the investigations, with the task of finding the link between the adulterated rapeseed oil and the illness. Together with fellow American and Spanish doctors he wrote more than a dozen reports, which also failed to isolate the cause of the 'medical mystery in Spain' – the title of a

Kilbourne paper from 1986.⁴ One year later, a widely hailed report in which he and his co-authors tried to establish a link between aniline contamination in the oil and the illness was published.

'Even given our findings,' they wrote, 'we do not believe that current data are sufficient to conclude that any of the compounds we measured actually caused the toxic oil syndrome epidemic'.⁵ And yet, later in the same paper, they go on to say, 'this relation further confirms the widely held belief that a food oil caused toxic oil syndrome'.⁶

Flying in the face of the facts

So what was going on? Why had the government announced a 'cause' of the epidemic without evidence? Why is that evidence, even now, impossible to find? And why, perhaps most importantly, were senior scientists backing up the government's case with statements of 'belief' based on no real evidence?

For Kilbourne was not the only scientist to do so. Sir Richard Doll, the British epidemiologist internationally acclaimed for his work on smoking and lung cancer, gave his support.

Previously, in October 1985, Doll had been asked by the WHO to review the epidemiological studies of the Spanish outbreak. In that report, he wrote, 'there are, however, too many gaps in the evidence to allow the conclusion that oil was definitely the cause'.⁷

Only two years later, in June 1987, Doll changed his mind suddenly and totally. A few days before he was to give evidence as an expert witness in the trial of 38 oil merchants accused of causing the epidemic, he handed the court an addendum citing 'new evidence', and stating that: 'With the addition of this



new evidence, I conclude that adulterated oil was the cause of the toxic syndrome'.⁸

With this single sentence, Doll saved the unproven oil hypothesis. To this day, he remains the only scientist in the world to have stated categorically that adulterated oil caused the Spanish mystery disease. But as shown in his references, all his new evidence is based on papers produced by Kilbourne and his team. What Doll failed to disclose was the visit paid to him in Oxford in May 1987 by Kilbourne and the British toxicologist and pesticide expert Roy Goulding, who was at that time the WHO representative responsible for Toxic Oil Syndrome. A few days after this meeting, Doll wrote his addendum.

The judges were delighted. This was the statement they badly needed. The oil merchants were duly condemned, albeit with incomprehensible legal reasoning: 'In rapeseed oil to which aniline had been added, fatty acid anilides formed spontaneously either during storage or transport, or during the manipulation and treatment undergone by the oils, as markers of the agent that caused toxic syndrome; so much so, that the *still unknown* [authors italics] toxic agent that caused the illness would not have appeared without adding aniline to the rapeseed oil...'⁹

The oil merchants were sentenced to long prison terms for killing and maiming thousands of their fellow Spaniards with a toxic agent that nobody in the world can find. Yet astonishingly, Doll and Kilbourne, as well as a host of their fellow scientists working on the rapeseed oil hypothesis, had overlooked one crucial fact that emerged during the many months of the trial: many of the victims had never ingested any incriminated oil. These, and other declarations contradicting the official oil hypothesis, can be found in the more than 30,000 pages containing every word pronounced during the 14-month trial. Clearly the epidemiologists had not done their homework.

Pesticides – the real culprit?

So what is the truth behind this saga? This is where the story gets very murky indeed, for what seems like a very complicated medical and scientific problem might have a much simpler explanation. Right from the beginning, there were opponents of the oil hypothesis. Doctors, scientists, lawyers and journalists pointed out another fact that those working with the incriminated oil had overlooked: the symptoms of the victims in no way resembled those typical of aniline-anilide intoxication, the main characteristic of which is the change of

colour of the blood to a chocolate brown. That was one symptom that none of the unfortunate victims had.

Detailed examination of the long list of afflictions published by the Spanish Ministry of Health,¹⁰ clearly shows that many of the symptoms coincide, and many are identical to, those described in the scientific literature for intoxication due to chemicals of the organophosphate family. But this fact was never officially investigated, even though pesticide expert Roy Goulding suggested precisely this possibility in August 1981.¹¹

By that time, Antonio Muro, who had first sounded the alarm about the 'new illness', had already reached the conclusion that organophosphate pesticides had to be the cause of the epidemic. After examining all the data for the thousands of products that were approved for use in agriculture in Spain, he concluded that a wrong application of a mixture of several products from this family, manufactured by the German chemicals giant Bayer, was to blame.¹²

Luis Frontela, one of Spain's most respected forensic scientists, agreed with Muro, stating, 'the intoxication was not caused by adulterated rapeseed oil but by some organo-phosphorous compound'.

Politics at play

Over the years, this problem has evolved into a political issue. Those who disagreed with the toxic oil theory were at best ridiculed and at worst sacked. Others were intimidated. The offices of lawyers, doctors and journalists suffered unusual break-ins. No valuables were stolen, but many papers concerning the illness went missing. Journalists who repeated the pesticide theory received letters from Bayer's legal department threatening all sorts of claims against them – though to date no court case has followed these threats. But worst of all, newspapers and magazines, which at the beginning of the outbreak had published the most outrageous theories about the new disease, suddenly refused to print anything that did not agree with the official line.

At the same time, cash became available for anything written or pronounced in favour of the toxic oil theory. In 1990, the Spanish Ministry of Health published a thick catalogue, 'Toxic Oil Syndrome's references'.¹³ The names of over 1,200 authors appear in alphabetical order, and 680 documents are listed with descriptions of varying length. No doctor, epidemiologist or scientist who questions the oil theory is even mentioned.

The authorities continued to make every effort to find proof for the hypothesis. Since

1981, successive Spanish governments have refused to investigate any other possible cause. They have also rejected an independent review of the existing data on which the flawed epidemiological studies are based. Contrary to established scientific practice – where no result is accepted if it cannot be reproduced – these data are safely out of reach, stored at the CDC. An agreement from 1984, signed by a Spanish representative and the then director of the CDC, James O Mason, states: 'All of the records... belong to the government of Spain and are confidential... These records cannot be used for scientific or other purposes... without prior authorisation.'¹⁴ These documents are so aggressively protected that they were not even available to the court that was supposed to find the true cause of the illness.

The political and scientific spin doctors from the Spanish government, the US CDC, the WHO and Bayer have been so successful in dealing with the Spanish illness that, for the vast majority of people, adulterated cooking oil remains the one and only cause. All parties have been guilty of repeatedly misleading the public.

The result is that, twenty years later, not only the unfortunate victims, but the general public and the world at large have been denied the truth about the biggest mass food poisoning in Europe since the second world war. Knowing the cause of the illness will most certainly not cure the maimed and crippled victims at this late stage, but it will give them something they have not had so far: the benefit of the truth. And it may help prevent the outbreak of similar disasters and show politicians and scientists – and even journalists and judges – how not to deal with this kind of catastrophe.

It is reasonable to say that the refusal to look at any other possible cause of the Spanish outbreak, and to ridicule or ignore the wealth of data that clearly points to intoxication by organophosphate compounds, amounts to criminal negligence. An objective investigation of these products and the illness could have saved hundreds of lives and prevented the physical decline and suffering of thousands more. Bayer's chemists, who invented the first organophosphate compound in the nineteen thirties, also produced the antidote for a possible intoxication. It is still widely available. But for the people of Spain, it is of no use now.

Gudrun Greunke is an investigative writer.

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CYNICS OR SAVIOURS?

SOME OIL COMPANIES CLAIM THEY ARE INVESTING IN RENEWABLES TO TACKLE CLIMATE CHANGE. BUT THIS DISGUISES A LESS PALATABLE TRUTH. GREG MUTTITT AND JAMES MARRIOTT LOOK AT THE FACTS BEHIND THE SPIN.

REINVENTING THE WAY we use energy will be one of the biggest challenges of the 21st century. But with governments squabbling and the Kyoto Protocol in shreds, who will save us from climate change catastrophe? Step forward the world's biggest oil companies...

Solutions old

Initially, oil companies reacted to the threat of climate change by denying its existence. Exxon, notoriously, still does. But some have seen the writing on the wall; they know things cannot carry on as before. And so they have changed their tune. They now want to be seen not as the villains of the piece, but as the heroes.

BP and Shell, most publicly, want to be seen as 'progressive' oil companies. They acknowledge the threat of climate change, and the fact that oil burning is partly responsible. Both companies have committed themselves to cutting their own emissions of greenhouse gases by ten per cent from 1990 levels – Shell by 2002 and BP by 2010. As a key part of its strategy for achieving this, on 1 January last year, BP became the first company in the world, way ahead of any nation state, to introduce a company-wide emissions trading system, whereby one part of the company can 'sell' part of its quota for emitting greenhouse gases to another part of the company which is struggling to meet its target. Shell followed soon after.

Both companies have also invested in renewable energies. BP is now the largest manufacturer of solar photovoltaic panels in the world. It has also invested in a major rebranding campaign, with which it hopes to convince us that it is now an 'energy' company, not just an oil giant.

Too good to be true?

Well, the bottom line is that these are still oil companies, and BP and Shell are among the most ambitious companies in the world in their targets for increasing their rate of extraction of oil and gas, Shell by 5 per cent a year, and BP by between 5.5 and 7 per cent. The cuts BP and Shell have promised are in greenhouse gas emissions from their own business operations – from

gas flaring, from pipeline leakages, from energy usage (such as in powering refineries) – not in those from their core products.

There is a fundamental contradiction in the companies' position. The amount of fossil fuels consumed in the world is necessarily equal to the amount produced. So what will happen to BP and Shell's increased production of oil and gas, if everyone follows their good example and cuts their consumption in line with the Kyoto Protocol? Do they hope that other oil producers such as Saudi Aramco, with no stated environmental commitment, will cut their production? Of course not. In reality, it seems that a cut in oil consumption is not the intention at all.

Solutions new

Recently, the production-consumption contradiction has begun to register. And in the evolving responses, what we see from these so-called 'progressive' companies are three key elements actually intended to allow increased consumption of fossil fuels.

Firstly, BP and Shell are actively participating in the 'Clean Development Mechanism' (CDM). This is one of the 'flexible mechanisms' within the Kyoto Protocol, whereby industrialised countries can avoid cuts in greenhouse gas emissions by investing in emissions-reduction projects in 'developing' countries, and claiming 'carbon credits'. Shell, for instance, has identified eight projects for potential inclusion within the CDM, and aims to pilot three of these. BP is exploring four projects, from rural electrification using solar power, to building gas power stations. Both companies are strong public proponents of the CDM.

Secondly, the companies are investing in forests, to be used as 'carbon sinks', which it is hoped will take carbon dioxide back out of the atmosphere. Shell has had a plantation forestry division for 20 years, mainly for pulp and paper manufacture, but with an increasing interest in building materials, furniture, and use of wood for energy (biomass burning). This business has now been consolidated with Shell Renewables. Shell is incorporating forestry into its strategy on climate change: one of

its action points is to 'directly contribute to a reduction in atmospheric CO₂ by expanding our forestry business and planting more trees.'

Shell estimates that its 135,000 hectares of plantations sequester 1.2 million tonnes of carbon a year (carbon emissions from Shell's hydrocarbon products can be estimated at about 180 million tonnes per year). BP sold off its forestry businesses during the 1980s and 1990s, but is now exploring options for gaining carbon credits from forestry, and is running a pilot project in southwest Australia, planting 500,000 trees a year.

Finally, these companies are exploring new technological fixes, in particular 'end-of-pipe' mechanisms, designed to capture carbon dioxide at the point of emission. Shell, for example, is developing a carbon-neutral gas-fired power station in Norway, which catches carbon dioxide emitted from its chimneys, and pipes it back to the gasfield in the North Sea, where it will be pumped back underground. BP has sponsored Princeton University to study options for carbon capture.

The approach now is at least becoming logically consistent. Nevertheless, this strategy gives the oil companies a set of policy options which allows them to expand their core business – oil – whilst still appearing to be green.

Lobbying by stealth

While BP and Shell engage in public debate, they participate in the Kyoto process through the two lobby groups, the International Chamber of Commerce (ICC) and the World Business Council for Sustainable Development (WBCSD).

The WBCSD and ICC play a 'good cop/bad cop' routine. The WBCSD is more solutions-focused, albeit from a business perspective. For example, regarding the CDM, they state that 'trying to allocate projects on an equitable basis among host countries would severely restrict the supply of CDM projects. The emphasis must be on the efforts of host countries to provide the right conditions to attract investors'. The ICC deals with the bigger picture, lobbying hard that 'the use of Kyoto mechanisms

(CDM, emissions trading and joint implementation) should be permitted in government of the Kyoto Protocol, without limits or ceilings'.

BP and Shell, by working through ICC and WBCSD, have not needed to publish lobbying positions, so their individual roles in the process have not been public. They would probably like to keep it that way, as the policy options they practice, and for which the ICC and WBCSD lobby, are exactly those which stalled the COP-6 negotiations in the Hague last November.

The talks fell apart because the USA-Umbrella Group's position was unacceptable to other governments, being too flexible in allowing countries to meet their targets through flexible mechanisms, and relying too heavily on carbon sinks to offset emissions.

REUTERS



Funny business: Jeroen Van der Veer, group managing director of Royal Dutch-Shell (left) and Sir John Browne, chief executive of BP-Amoco, find something amusing during a news conference in Calgary 13 June 2000.

Who's exploiting who?

But what of BP and Shell's investments in renewable energy – aren't they genuine? Yes, insofar as the businesses are real. However, using renewable energy will not prevent climate change in itself – it will only do so in so far as it allows a decrease in the use of fossil fuels. A Shell scenario for future energy supply estimates that renewable energy will provide around 15 per cent of world energy by 2030, but this is in the context of expanding total energy consumption. Fossil fuel production will almost double over the same period.

Perhaps it is now time to consider whether it makes sense for the organisations providing the solution to have an interest in perpetuating the problem.

Could a progressive oil company make the transition and become a renewable energy company? Greenpeace has said, 'if today's companies want to remain going concerns they will have to transform into sustainable energy companies... Renewable energy will be the growth market of the 21st century and that's where the smarter investors will be putting their money.'

In theory, this may be possible. But, in practice, the shift from oil and gas to solar or wind power (markets with very different financial structures, not to mention different physical technologies) would mean writing off a vast amount of capital. Not just physical capital (oilrigs, pipelines), but also 'relationship capital' (company relationships with people, organisations, companies and governments), 'intellectual capital' (knowledge of geology, markets, how to extract and skills, training and strategy); and even 'emotional capital' (the belief in the value of what they are currently

doing). Finally, even if there were long-term advantages to shifting the energy base, even if to be a renewable energy company were an attractive proposition, investors still might not allow an oil company to absorb the costs of becoming one.

The more things change...

So what is to be gained by these companies' position on climate change? Perhaps the greatest clue to understanding the answer comes from the *Shell Report* series. Published annually (the latest, *People, Planet, Profits*, came out this April), these reports provide the framework for Shell's discussion of environmental and social issues (including climate change), and for reporting on its own progress.

Six months after the publication of the first Shell Report, *Profits and Principles – does there have to be a choice?*, Shell was named winner of the W Howard Chase Award, by the Issue Management Council. Chase, a pioneering PR guru, commented in presenting the award: 'The demonstrable excellence and broad impact of the Shell Program represents the epitome of issue management, producing not only benefits for Shell in its worldwide business operations, but setting an example for other organisations to follow.'

...the more they stay the same

If we look at the reality behind the rhetoric from these companies, we can identify their three core strategic aims in relation to climate change:

1) To be seen as progressive on the issue, especially for the benefit of staff morale

and recruitment. Shell, for example, does not want another reputation crisis like Brent Spar or the Ogoni issue.

2) To discourage government regulation of their business by focusing attention on energy users rather than producers, and emphasising voluntary action. For example, the UK's climate change levy is targeted at (industrial) consumption of energy, and has a strong voluntary element for major energy users. What's more, by moving early, the companies will play a key role in influencing the terms of the Kyoto mechanisms.

3) To ensure that markets for oil and gas do not decline, and in particular to discourage societal pressure for radical change. Through clever positioning on the issue, the aim is that positive action on climate change will generally be seen as compatible with the use of fossil fuels – in other words, you can save the planet and still fill up your car at BP.

In these terms, BP and Shell are enjoying fantastic success. While behind the scenes companies have helped to stall government action on climate change, this stalling has contributed to the general public opinion that the companies are moving forward more effectively than governments, and it is to them that people are beginning to look for a solution. There is little call for mandatory regulation on climate change. The plaudits of some environmental groups have helped these companies in their brand-building, and as a result their recruitment and morale.

Meanwhile, the oil companies remain in control of the pace of change. Look, for example, at the development of renewable energy. BP plans to grow its renewables business at a rate of 20–30 per cent a year. At this rate, if it could sustain its current rate of growth of oil and gas extraction, renewable energy production would match oil and gas in 1,250 years' time!

However virtuous BP and Shell may be relative to their competitors, they have other agendas. Ultimately, there are natural conflicts between being an oil company and providing the solution to climate change. What is desperately needed is for civil society to reclaim management of the climate problem, and to wrest control of the issue from the corporations.

Greg Muttitt and James Marriott work at PLATFORM, carrying out research into the social and ecological impacts of the oil industry.

THE GREAT DEBT SWINDLE

ERIC TOUSSAINT EXPLAINS WHY THE 'DEBT CANCELLATIONS' ANNOUNCED BY RICH COUNTRIES IN 1999 HAVE TURNED OUT TO BE A LIE.

IF YOU THOUGHT Third World debts were cancelled two years ago, think again. The reality is the further entrenchment of the power of the IMF and the World Bank – and more pain for poor countries.

Towards the end of July this year, the G8 nations – the world's richest – will hold their annual summit in Genoa, Italy. There will be protests, as there always are today when world leaders meet, and some of those protesters will be concerned about Third World debt. The campaign to abolish debt has been highly publicised in recent years – so much so that many of the G8 governments have taken the protesters' demands on board and moved to cancel the debt which many poor countries owe to the rich. Or have they? Take a good look at the detail behind the hype, and you might begin to wonder.

In 1996, the World Bank, the IMF, the G7 (as it then was) and the 'Club de Paris' launched an initiative to improve the capacity of what they call 'Highly Indebted Poor Countries' (HIPCs) to effectively repay an unbearable debt. Why? The debt burden had to be reduced, they said, to avoid persistent accumulation of debt arrears. Debt reduction was not a moral decision – it was calculated as the only way to maintain the flow of repayments from poor countries into the coffers of the rich.

Thus it was that, at the G7 summit in Lyon in 1996, the IMF and the World Bank promised to cancel 80 per cent of the HIPCs' debt. Three years later, at another G7 summit in Cologne, they announced an even greater debt reduction, amounting to 90 per cent of the total debt of the HIPCs. This figure was agreed to under pressure from Jubilee 2000, the highly effective global campaign demanding debt cancellation for the poorest countries.

It sounded like a success. Yet the 1999 'debt cancellation' promise extended only to 41 of the 187 countries defined as 'developing' by the OECD. To date, only a few countries have obtained an effective reduction of the sums to be repaid. And of the 41 HIPCs, only 22 are actually being considered as possible future beneficiaries of a reduction in their debt payments.

The fact is that the concrete results are so meagre that the governments

of the leading industrial countries are finding it increasingly difficult to conceal the enormity of the swindle.

Between 1996 and 1999, according to the World Bank itself, the overall amount of debt payments from the HIPCs actually increased by 25 per cent. And in 1999, the HIPCs repaid \$1,680 million more back to the World Bank and the IMF than they were receiving in new loans.

The World Bank and the IMF trumpet that the cancellations already announced for 22 countries represent a reduction of \$34 billion spread over several years. In reality, though, the World Bank and the IMF will not genuinely cancel debts from poor countries. What they have done instead, having gauged public opposition to Third World debt, is agreed to some reductions or cancellations – but only if the countries agree to the imposition of new, neo-liberal economic conditions.

The total amount lent by the IMF between the beginning of the HIPC initiative in 1996 and 2000 was around \$400 million – less than the annual cost of paying about 2,300 IMF employees. As for the sum lent by the World Bank, it was less than its annual profit of \$1,500 million. And all this comes right back to them in the form of debt repayments. Debt levels have been slightly reduced in order to ensure that the debt system itself lives on. This enables the lenders to keep on doing what they have always done – imposing policies on the HIPCs which suit the interests of the leading industrial countries and their multinational corporations.

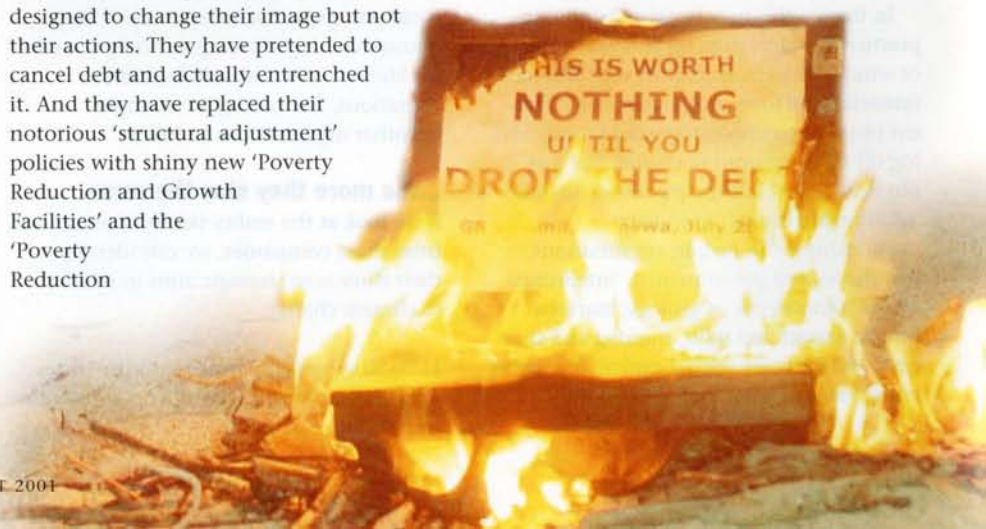
The World Bank and the IMF have embarked on a big rebranding exercise, designed to change their image but not their actions. They have pretended to cancel debt and actually entrenched it. And they have replaced their notorious 'structural adjustment' policies with shiny new 'Poverty Reduction and Growth Facilities' and the 'Poverty Reduction

Strategy Papers' – the same product with a new logo.

HIPCs must submit to these policies in order to receive debt 'cancellation', and to qualify for future loans. The policies comprise the usual neo-liberal kitbag: acceleration of the privatisation of services (water, electricity, telecommunications, public transport); privatisation or closing of public industrial firms where they exist; cancellation of subsidies for basic products (bread or other food staples); increased taxation of the poor through generalisation of VAT; abandoning customs protection (exposing local producers to competition with multinationals); liberalisation of capital inflow and outflow (usually resulting in massive capital outflow); privatisation of land; and recovery of health and education costs.

The conditions are so draconian that last year, two countries selected by the World Bank and the IMF to be included in the 'debt cancellation' project – Laos and Ghana – decided to decline the offer, choosing to maintain their crippling debt rather than face the imposed destruction of their public infrastructure. If this is the reality of 'debt cancellation', campaigners should not give up yet. In fact, they should renew their struggle.

*Eric Toussaint is president of the Brussels-based Committee for Cancellation of the Third World Debt, and the author of **Your Money or Your Life: The Tyranny of Global Finance** (Pluto Press). This article was translated from the French by Vicki Briault.*



TROUBLE BREWING

HUGH WARWICK EXPLAINS THE TRUE PRICE OF A CUP OF COFFEE.



THERE IS A CRISIS brewing in the world of coffee. But it is not the men in suits who paid £1,000 each to attend the World Coffee Conference at London's Hilton hotel in May who are suffering as a result. It is the livelihoods of 20 million smallholder farmers. Already battered by over-production and industrialisation, they now face a new threat: genetic engineering.

Seventy per cent of the coffee consumed worldwide is grown in small plots, along with food plants. This traditional method not only allows smallholder farmers greater food security, but helps maintain the diversity of local flora and fauna.

There has, however, been a steady move towards production of coffee on an industrial scale. Large, chemical-intensive plantations have sprung up across the world, and the resulting overproduction has caused prices world prices to plummet.

Not that we would notice when we go shopping or stop at a coffee bar, for it is not our end of the market that has been affected. Quite the opposite. The coffee price has tumbled to less than 50 cents a pound (down 50 per cent on just two years ago), so the profits of the coffee corporations have rocketed. Starbucks have seen a 40 per cent increase in profits for the first quarter of 2001, and Nestle had profits in excess of \$1 billion last year from coffee.

The impact on smallholder farmers is enormous, they are simply no longer able to make enough money to cover their costs. And while the World Coffee Conference delegates are offered, 'your choice of coffee - £3.75', Tatu Museyni, who farms a small plot of land in northern Tanzania, has seen her entire year's profits from coffee fall from £13 to £6.21, forcing her to remove her children from school. In Mexico, farmers have simply decided not to harvest their coffee, the price is so low. Plantation workers are leaving the region at a rate of 500 families per week from Chiapas state alone.

How has this situation been allowed to develop? International debt has forced countries to generate hard currency through export. And the World Bank has been instrumental in providing loans to

industrialise production. Ten years ago, for example, Vietnam was an insignificant player on the coffee market. Today it is second only to Brazil - and it is big plantations that have done it.

There have been attempts to control the world price of coffee. But since the International Coffee Agreement, which attempted to regulate the market, was shut down to further the cause of free trade there has been a 'race to the bottom' with individual countries competing to increase earnings by increasing output. In the resulting price collapse, total coffee export revenues are at their lowest for 20 years.

Could the situation get any worse? In 1999 the University of Hawaii was granted a US patent on genetically-modified coffee. The patent, being developed by a private company, Integrated Coffee Technologies (ICTI), describes a process that could further industrialise coffee production.

Coffee harvesting is labour-intensive. The 'cherries' that contain the coffee bean do not all ripen at the same time on each plant, but the best quality coffee comes from cherries that are ripe. Attempts to industrialise production have so far focused on harvesting all the cherries at the same time, but this produces a poorer quality result.

The solution from ICTI is to genetically engineer the coffee so that the cherries fail to reach ripeness until a chemical is applied. If the experiments, still in the laboratory, ever make it into the field, the consequences for the smallholder and labourer will be catastrophic. As John Stiles, the former University of Hawaii researcher who set up ICTI, is keen to point out, plantation owners 'are going to be

able to increase their yields and decrease their labour... by perhaps 50 per cent.' Good news for big coffee corporations. Bad news for small growers and the environments they sustain.

The programme to develop GM coffee has recently encountered some technical setbacks, and is now not expected to be in the business of selling plants for seven years. But it continues, and acts as a vital indicator as to where the industry is heading. As Dr Tewolde Egziabier from Ethiopia explains, 'Small farmers will be squeezed out of the market. It's a shift from a labour-intensive to a capital-intensive system, from small farmers to larger farmers.'

Neither of these two crises were high on the agenda at the World Coffee Conference. There were no representatives from the small farmers who provide the delegates with their wealth.

Development agencies are increasingly calling for action, however. A programme is being proposed that could see a shift of power back to the producers. There are calls for the immediate destruction of 15 million bags of low-grade coffee to stabilise prices. Oxfam estimates that this would cost around \$250 million, including equitable compensation for farmers. Oxfam have also called for a windfall tax on the largest coffee roasters, such as Nestle, Kraft and Sara Lee, who have all benefited from the hardships experienced by smallholder farmers around the world.

And for the consumer? The obvious solution is to seek out fair-trade schemes. Oxfam says that if producers were to get even an extra halfpenny for each cup of coffee sold, the situation would change for the better. And if you're already paying £3.75 a cup, that's not a lot to ask.

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*Action Aid's report, **Robbing Coffee's Cradle: GM coffee and its threat to poor farmers** is available through their website: www.actionaid.org/campaigns/coffee.html. Oxfam's report, **Bitter Coffee: How the Poor are Paying for the Slump in Coffee Prices** is available at: www.oxfam.org.uk*

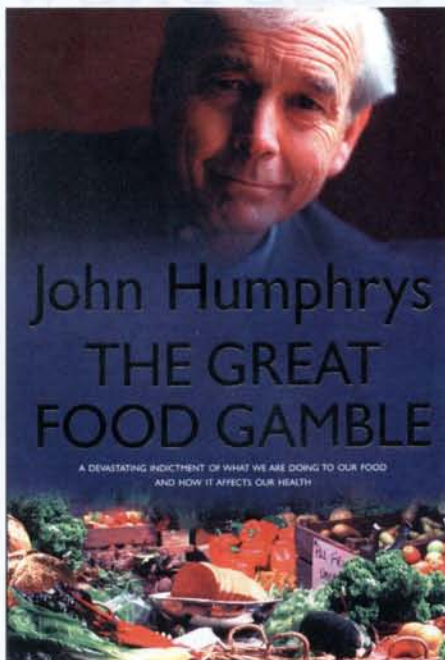
Those sceptical of the media's coverage of foot and mouth, BSE and the rest can now afford to take a welcome break. For John Humphrys' new book, *The Great Food Gamble*, is a thoroughly green manifesto for the sort of change we have been advocating in *The Ecologist* for decades. Written for a popular readership, with digestible anecdotes, stories and examples, the book is of great value to anyone working to understand or counter the madness of the modern food economy.

Humphrys is one of the country's best known and most respected journalists. He has presented Radio 4's *Today Programme* for 14 years and during that time has earned himself a reputation as an uncompromising and tough interviewer. He was once accused of 'poisoning the well of democratic debate' by none other than Jonathan Aitken, and has been officially defended and vilified by New Labour in the same 4-month period. One government memo went so far as to ask 'what are we to do about the Humphrys problem?' In February last year, he was voted Journalist of the Year. And now Humphrys – who personifies the media establishment – has, with this book, undeniably joined the green team.

Stripped to its core, it is a mighty call for the adoption of the precautionary principal, where each new technology, practice or chemical is assumed to be guilty until proven innocent. Would we, he wonders, have reacted so quickly to thalidomide for instance, had its effects been less extraordinary than they were? How long would the industry have been able to deny its dangers, had the effects involved simply cleft-palates or hair-lips? How many more thalidomides are we willing to risk?

The precautionary principal, of course, is the opposite of the method used by today's regulators, who sometimes seem determined to unleash the unknown into our lives on a daily basis. Instead, while small businesses and farmers drown in unnecessary red tape (see last month's *Ecologist* special report, *Condemned?*), those same regulatory bodies have allowed into the environment more than 100,000 man-made chemicals with 1,000 added each year, not to mention the biotechnology debacle of GMOs.

Humphrys tears apart the legacy of modern industrial agriculture, citing endless depressing examples of its effects on our health, the environment and on our lifestyles. He laments the breakdown of contact between producers and consumers, where the latter have no understanding or knowledge of the former, and notes the effects of that divide on our climate, among other things. He describes the emergence of chemicals designed for use in human war that have been deployed in a fruitless battle against insects. He describes the shady process by which they have been passed by safety



THE GREAT FOOD GAMBLE

By John Humphrys
HODDER AND STOUGHTON 2001
£12.99

regulators on the basis (at best) of tests on identical rodents in artificially sterile and controlled conditions. He furnishes his indictment of the regulatory system with examples too numerous to cite, but too powerful to ignore, making a strong case for a finite divorce between the interests of the lobby groups and public bodies charged with protecting our health and environment.

Such arguments certainly make it easier to understand how the medical establishment is still able to deny the obvious when it comes to industrial pollutants. It is obvious that our children, from conception, face something of an industrial obstacle course. Yet the Imperial Cancer Research Fund, for example, recently reported that:

'One of the biggest myths in recent years is that there is a cancer epidemic caused by exposure to radiation, pollution, pesticides and food additives. The truth is that these factors have very little to do with the majority of cancers in this country. In fact, food additives may have a protective effect – particularly against stomach cancer.'

The book could not be more timely, hitting the shops as it did in the midst of the foot and mouth crisis, and following a trail of food scares.

And if the rumours are accurate, Mr Blair will shortly announce his vision of a rural Britain that involves more than a quarter of our farmers leaving the land, their farms absorbed into ever larger units of intensive, modern production. His vision will not be presented with regret, but rather as a valiant goal to be pursued with policy and massive subsidies.

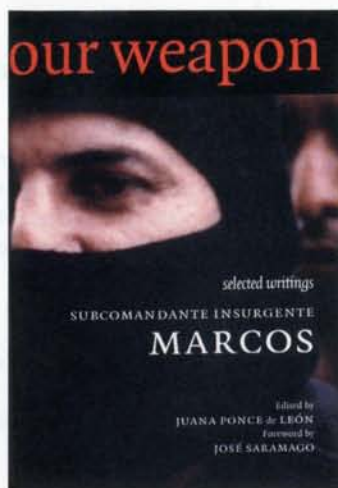
Whether or not the next few decades represent the twilight or the triumph of the megastore culture, with Tesco's billion pound profits reaching new highs and Walmart's open requests that 'if you really want to make it more competitive, the thing to do is to loosen planning', will depend greatly on whether or not our policymakers choose to take heed of this book's message.

If not, then the £5,000 earned in a good year by this country's average farmer will be remembered as a golden age, and a country famed for its green and pleasant land will have become history.

Zac Goldsmith

Reader Offer

The Great Food Gamble, by John Humphrys, is published by Hodder and Stoughton, priced £12.99. *Ecologist* readers can purchase a copy at the special price of £10.99 (including post and packing) by calling The Bookshop on 0870 162 0870 and quoting this offer.



OUR WORD IS OUR WEAPON

SELECTED WRITINGS

by Subcomandante Insurgente Marcos
SEVEN STORIES PRESS/
SERPENT'S TAIL 2001/£20.00

What does it take to be a revolutionary in a postmodern age? Marx failed, Castro is on his way out and Che Guevara's guerilla chic is being used to sell soft drinks. Students care more about their mobile phone bills than changing the world, and soaring political rhetoric has given way to Demos pamphlets. Peace, bread and land will be delivered through public-private partnerships and stable interest rates. History has ended and ideology, so they tell us, is dead.

So what do you do if you still want to change the world? What does it take to be a revolutionary when no-one believes in anything anymore?

It takes the ability to make them believe again. It takes the ability to lift people up, to open their eyes, to put fire back in their bellies. It takes words, finely crafted and precisely aimed. For words, well used, can change the world. All the best revolutionaries know that.

Subcomandante Marcos certainly does, for he uses words with a clarity, wit and passion that most 'professional' writers would pay back a substantial book advance for. Marcos first slipped into the world's viewfinders on 1 January 1994, when he led a band of indigenous rebels – the Zapatista National Liberation Army (EZLN) – out of the jungles and mountains of Chiapas State in southeastern Mexico and onto the international stage. On the day that NAFTA came into operation, the Zapatistas declared war on the government in the name of the indians of Mexico who had been failed for five centuries, and for whom NAFTA could still be the death blow.

It is seven years on. The Zapatistas are still

in the mountains, their war on the state long since stalled. Their demands: autonomy for indigenous peoples; the right for communities to determine their own shape; protection against the plundering of Mexico by US money, are still unmet. But Marcos – a false name and an unseen face hidden beneath a black ski mask – is still writing.

And in those seven years, something remarkable has happened. Marcos has been elevated from being just another south American guerilla to an international icon for the new protest movement. His words have shot around the world, via a thousand websites, email lists and magazines. Chiapas, as a result, has become a symbol for all those who oppose the new world order and who seek to change it. A symbol for people all over the world who probably couldn't even find it on a map.

Now, the words that Marcos used to make this happen have been collected into a single volume. And what words. Marcos' revolutionary credentials are clearly first class. His political skills, as recent negotiations with Mexico's equally cunning President Fox have shown, are impressive too. He can lead an army and plan an insurrection. But what has been less commented on is the sheer brilliance of his writing. For Marcos is one of the best writers to come out of Latin America in the last decade, and at his best he ranks with Eduardo Galeano or Gabriel Garcia Marquez for sheer word power.

If you don't believe me, dip in – this is a book for dipping. It's divided into three sections, the first of which, 'Unveiling Mexico', brings together his most important political writing. It's strong stuff, but at even at his most political, Marcos never turns you off; he is always aware that he is talking not just to the government, the Mexican press or the Zapatista communities, but to the world. He is creating his own legend, and that of his people.

And so he delivers flowing rhetorical passages, 'We are the stubborn history that repeats itself in order to no longer repeat itself, the looking back to be able to walk forward', he mocks himself in his account of the rebellion, referring to himself as 'he of the enormous nose', and his threats to political opponents are as elegant as they are chilling (he signs off his first communique to ex-president Zedillo with the words 'a parachute for the cliff that comes with your tomorrow'). In his speeches, he is never self-aggrandising, and the potentially pompous signoff that comes at the end of all his communiqués – 'Subcomandante Marcos, Clandestine Indigenous Revolutionary Committee, General Command, EZLN – is often followed by little postscripts such as, 'PS: It is my duty to inform you that I am a criminal according

to the Supreme Government of Mexico. I beg you to memorise the damning contents of this letter and destroy the evidence immediately... If paper was chewing gum I'd advise you to chew it up and make one of those little bubbles that so outrage a good conscience...'

Part two, 'Beneath the Mask', is perhaps the best, for it shows the 'real' Marcos better than anything else. These writings are more philosophical; reflections, poems and letters that show his breadth of thinking and reading, and the power of his pen. It is here that he tells the story of how he first arrived in Chiapas, how he hiked into the interior, exhausted and disillusioned, how he reached the top of a hill and decided to give up, to go home, not to become a revolutionary after all. And how he went down the wrong side of the hill, into Chiapas rather than away from it, and has been there ever since. Is it true?

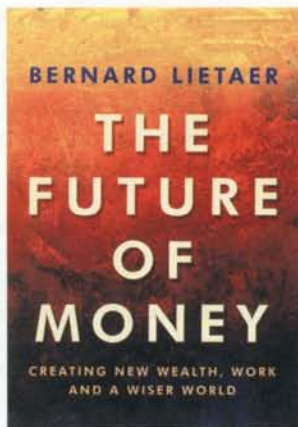
Like everything else about Marcos, it scarcely matters. It is the message, and the poetry, that counts. It is in his power of description, 'the twisted scribble of the river... the moon is a lacquered nail that strums night's strings and makes a storm in every sense... the heavens hang so low over our heads, we can almost scratch the sky'. It is in the stories.

Part three, 'Walking memory', collects those stories, and it is here that Marcos the sentimentalist, Marcos the lover of his country, and Marcos the giver of tales comes into his own. Some of these tales have 'messages', but others are just written for the fun of it; for the need or desire to tell a story. The 'Stories of Don Durito' ('knight errant, undoer of wrongs, the ladies' restless dream, the young men's aspiration') bear a passing resemblance to Don Quixote, with their heroic humour and attention to detail. 'The tale of the little seamstress' – half a page long – is a classic, and 'The tale of the lime with an identity crisis' should be read by all in the deracinated West who don't know where they belong.

This is not a book that fits into any conventional category. Not exactly politics, not exactly fiction, not exactly humour, not exactly history. Exactly all of those, and more. Exactly what we need as we try and make sense of a world recovering from the hangover of the twentieth century. Exactly what the revolutionary in all of us needs to hear – confirmation that everything matters, that the personal is always connected to the universal, that none of us are alone. That things can – and will – change.

'From the clash of these two winds a storm will be born. Its time has arrived... When the storm calms, when rain and fire again leave the country in peace, the world will no longer be the world, but something better.'

Paul Kingsnorth



THE FUTURE OF MONEY

CREATING NEW WEALTH, WORK AND A WISER WORLD

by Bernard Lietaer
CENTURY/RANDOM HOUSE 2001
£18.99

'Unless precautions are taken, there is at least a 50-50 chance that the next five to

ten years will see a dollar crisis that would amount to a global meltdown.'

Right. Global Economic Meltdown. Well, we are aware of the alarmist theories of the militiamen of the midwestern United States and their conspiracy theories, so what's the surprise that they should write a book about them? The thing is, the citation above is from Bernard Lietaer, an ex-senior executive of the central bank of Belgium, from his book, *The Future of Money*. His message is clear.

This is not a book loaded down with economic mumbo-jumbo; the text is in plain English and easy for the layperson to understand, but economists will not be disappointed either.

So, for people who are generally concerned with social and environmental issues, why bother with economics? Lietaer's answer is that social and environmental breakdown are directly associated with how currencies are designed. Most of us never consider the 'design' of money, because we think of money as something that 'just exists', like air and water. But for Lietaer, who was on the team that designed the euro, and has devoted considerable thought and research to the design of money systems, money is designed with

features that affect how societies and communities function and their relationship to the environment (see Lietaer's website www.transaction.net).

For example, he notes, 'the historian Arnold Toynbee concluded that only two common causes explain the collapse of 21 past civilisations: extreme concentration of wealth; and inflexibility in the face of changing conditions.' Root cause: the design of their money.

Here are some design features of modern money worldwide.

- It is all fiat money: created from nothing
 - All money is lent into existence
 - All money is created with interest
 - Money is the tool of nation states
- These design features lead to:
- scarcity of money; leading inevitably to poverty and bankruptcies
 - systematic competition
 - the need for continuous economic growth
 - concentration of wealth into the hands of a few individuals

Those of you concerned with social issues and the environment would do well to note the last four points. Each carries severe consequences. As a single example, the need for continuous economic growth,

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carried to its logical conclusion, means that environmental and social devastation would continue unchecked until the Earth, in its entirety, looks like New York City... at which time we presume the whole system will collapse, for any number of reasons.

Says Lietaer, 'The world's 200 largest corporations now control 28 per cent of the global economy, yet need to employ only 0.3 per cent of its population to achieve that'. How is that possible? The design of the money system actively promotes it.

In chapter six, Lietaer describes how community breakdown is caused by a single major factor: 'both the cause of the problem and its solution can be found in money systems.' Money systems of the past were designed with features that served the creators. The new development on the horizon, Community Currencies, were designed by people interested in their local communities.

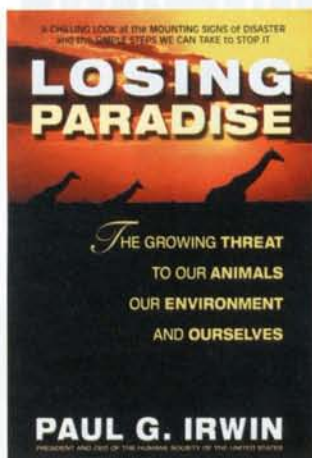
As regards money being the tool of nation states, Lietaer observes, 'the US dollar has become the global currency. This arrangement has serious negative consequences for all participants, including the US.' The recent collapse of the currencies of Asia, Mexico, Brazil, Argentina, Turkey and Russia are a direct result of dollar hegemony, and the ecological and social devastation are clear. These multiple crashes – previously unknown in world history – are 'signs of systemic dislocations of the official monetary system.'

So what to do about the problems of money? The resolution, Lietaer suggests, is found in the 'new monetary experiments' that have been cropping up all over the world – Community Currencies. They deserve the support of the state. 'My view is that these innovations offer realistic possibilities for gradually correcting the excesses and imbalances of the current system without revolutions or violence.'

Lietaer's citation of John F Kennedy may be relevant here: 'Those who make peaceful revolution impossible will make violent revolution inevitable.' To which we might add, the sooner the changes are made the less drastic and disruptive they will be. And doing nothing is not much of an option. Those who would be clever by moving the WTO meeting to Qatar or by developing new 'anti-protest' weapons are demonstrating their opposition to peaceful revolution.

What is more, if the individuals and organisations now protesting about the WTO, IMF, World Bank, GATS, FTA and the like, remain oblivious to the information in this book and many others, they will be lacking powerful weapons which they cannot win their battle without.

J Walter Plinge



LOSING PARADISE

by Paul G Irwin
SQUARE ONE PUBLISHERS 2001
US\$14.95

In the last half-century, we have witnessed an assault of unprecedented ferocity on nature and wildlife throughout the world. As a result, we are now facing a veritable tidal wave of ecological challenges, which threaten to sweep away whatever progress we have achieved in our millennial efforts at building a better world. In this landmark book, Paul G Irwin presents a compelling and alarming look at what we have done – and keep on doing – to our natural resources and to ourselves. As president of the Humane Society of the United States and the World Society for the Protection of Animals (based in London), the author is eminently qualified to assess the depth and extent of this abuse, which his fellow author and naturalist Gerald Durrell once characterised as 'a weird form of suicide'.

Losing Paradise examines the beliefs that lie at the core of our destructive behaviour – beliefs that proclaim man to be the Lord of all creation, to use and abuse it as he sees fit, without regard for the consequences of his actions. It goes on to detail the results of these distorted values, including the cruel treatment of animals, contamination of our food supply, and the explosive population growth that threatens the wholesale destruction of our biosphere.

In a chapter that poses the rhetorical question 'Are We Killing Our Planet?', the author lists some of the factors contributing to environmental degradation, starting with 'the one that contributes to and exacerbates all the others: human overpopulation.' In the last 100 years – a blink of an eye, geophysically speaking – world population has quadrupled, and though some 40–50 thousand children die every day from malnutrition and disease, the net annual increase is about 75 million, the

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Oregon, USA. greenanarchy@tao.co

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HOPEDANCE

California, USA. Tel: 001 805 544 9663.

hopedance@aol.com

OK, it's a horrible name, but this inspiring mag is full of positive practical solutions. Want to build your own eco-home or find out how to put 'sustainability' into practice? Try here first.



ALTERNATIVES JOURNAL

University of Waterloo, US.

Alternat@fes.uwaterloo.ca

Nicely presented American mag focusing on everything 'alternative', from pie-throwing to how to ecologically rejuvenate the suburbs.

Do you read a magazine or newsletter you think we should feature in the rack?

Send a copy to: Stephanie Roth, Magazine Rack, The Ecologist, 18 Chelsea Wharf, 15 Lots Road, London SW10 0QJ

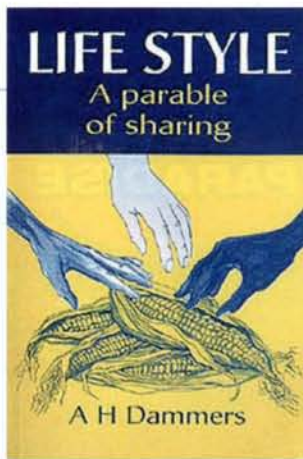


How valuable is possession of the world's knowledge if the result is ignorance of the very foundations of your own life – the food you eat, the people you affect, the land you live on? Horace Dammers, the Dean of Bristol, documents his own efforts to reconcile these two in this ego-less account of the downshifting 'Life Style' Movement he began in 1972.

Wholly inspired by his Christian beliefs, his first intention is nevertheless not to let his religion get in the way of the wider debate – and it doesn't. Unfortunately, excessive use of well-worn statistics and retreading of old ground – the consequence of only a patchy reworking of the 1982 original edition – will test the concentration of many readers, but any tedious passages should not detract from the importance of Dammers' story.

For the book offers an alternative voice at a time when public protest, often apparently motivated by a desire to achieve total publicity, has reached a new pinnacle as an artform. Not for Dammers simple acts of direct action. The efforts of a whole variety of active protest is needed to stimulate change, from the most direct all the way through to the parliamentary, each an essential link in the chain carrying key issues to a wider audience. Even so, Dammers is an example to all sides of the environmental and anti-capitalist movements, which have been hijacked by loose virtues and too much shouting for too little result.

The Life Style movement helps allay the greatest fear of anti-



LIFE STYLE A PARABLE OF SHARING

By A H Dammers
JOHN CARPENTER 2001
£11.99

Whether campaigning for their removal or bypassing them completely, both approaches require the forcefulness of a strong community.

The Life Style movement reflects this concern by remaining steadfastly local, making the effort to adhere to that much acclaimed yet ignored mantra – think globally, act locally. Or, as the words of the movement's slogan put it: 'To live more simply that all may simply live.'

Danny Winkler

majority of whom are doomed to a life of misery – and are without adequate housing, sanitation, or safe drinking water.

He goes on to remind the reader of the many weather-related disasters of the last decade – the warmest in recorded history – which were largely caused by man-made changes in the global climate, and greatly exacerbated by large-scale deforestation and subsequent soil erosion. Other critical environmental problems addressed by the author include the ever-widening hole in the ozone layer and the severe depletion of groundwater, fisheries, wetlands and topsoil from croplands – the latter at a yearly rate of 25 billion tonnes worldwide. Pretty scary, considering that it takes five centuries to create just one inch of new topsoil. In the United States, thousands of acres of farmland are lost to 'development' every day, while tropical forests are being cut at a rate of one or two acres a second, clearing an area the size of the British Isles every year, and eliminating plant species which might one day have proved to be valuable sources of food or medicine.

Because of the extensive use of pesticides and other chemicals in industrial farming, the incidence of cancer has

increased sharply in recent years, afflicting one out of three Americans and killing more than half a million every year – more than died in combat in World War II, Korea and Vietnam combined. The author quotes Dr Paul Epstein of the Harvard Medical School, who says that 30 new infectious diseases have emerged in the past twenty years, and believes that global warming may have grave consequences for future disease control.

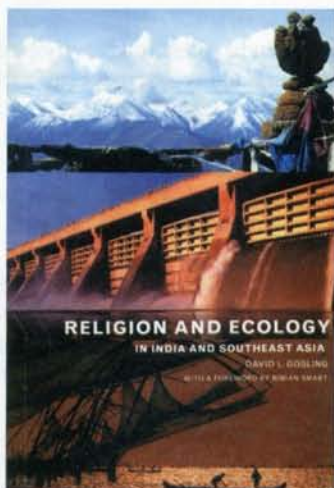
Irwin laments what he calls the demise of US agriculture, which has become 'an industry of waste and destruction', posing a threat to consumers as well as to the family farm and the environment. His contention is supported by some telling statistics. In the half century from 1940 to 1990 the US farm population declined by 85 per cent, from 30 million to less than five million. (According to the latest US census, that number has now shrunk to about two million, or less than one per cent of the current population.) The remaining farmers find it increasingly difficult to stay in business, and are forced to raise crops or animals for the giant agribusiness corporations in order to survive. Even Secretary of Agriculture Dan Glickman feared that 'this

will turn into [a new] feudalism'. Richard Clugston, director of the Center for Respect of Life and Environment, points out that the rapid industrialisation of agriculture will ultimately result in the deterioration of the quality of life for the global population, saying that, 'because it depletes, erodes, and pollutes the land and environment, its true cost will be paid by future generations.'

It was perhaps unfortunate that Al Gore, who gave at least some priority to protecting our environment, was thwarted in his bid for the US presidency. Instead, Americans now have a president whose first executive order was to stop all funding for programmes designed to put a break on the explosive population growth in Third World countries – an act that will add to the misery of millions, accelerate the depletion of finite resources, and aggravate environmental degradation.

In the words of the author: 'Never again will a generation of humans have a mission so awesome as the one given us today – to take a world teetering on disaster, and make it safe and healthy again. This is our last chance on earth. We must not fail in this task.'

Gard Binney



RELIGION AND ECOLOGY IN INDIA AND SOUTHEAST ASIA

By David Gosling
ROUTLEDGE 2001
£15.99

David Gosling, nuclear physicist and scholar of religion, sets out in this book to consider social and environmental problems through the prism of Hinduism and Buddhism. More specifically, Gosling is looking for the potential for solving global environmental problems in these religions. Apparently, the book is also an attempt to explain the preponderance of Indian NGOs at the Earth Summit in Rio, and why Indian and Thai delegations presented their views in religious terms.

Unfortunately, the former aim is only obliquely expressed in the last chapter of the book, and the latter, rather limited one, only in the concluding paragraph of the book. And this problem, sadly, is only one of the many difficulties with this book, which never quite lives up to its potential.

One encouraging aspect of the book is emphasis on historical narrative. This helps to elaborate the need to understand religion and environmental concerns (the former being an especially strident issue in India) in political and historical contexts. But the historical narrative is haphazardly employed, and analytical rigour is absent.

Attempting to trace the ecological context of the earliest treatises on Hinduism, Gosling says that his aim is to 'enlarge the framework of the relationship between human communities and their natural surroundings by putting what has often been omitted back into context.' As the preceding chapter deals mainly with

WORTH READING

Ah, ecology, ecology. What does it mean? In one sense, it's a strict science. In another – the sense in which we at *The Ecologist* use it – it is a world view. A way of living with nature, of designing societies, of affirming values. A way of living. In that sense, ecology, as a political view, covers everything there is to cover. No issues go unsung, no topics unexplored.

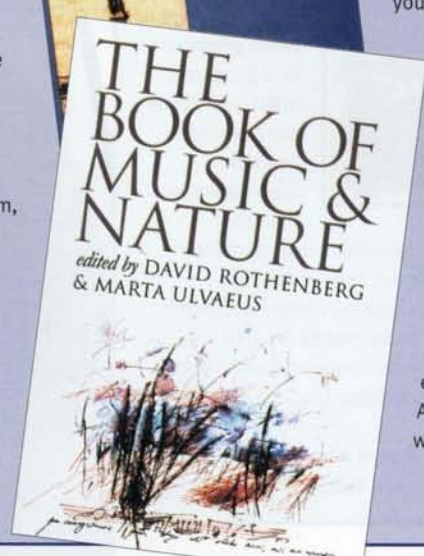
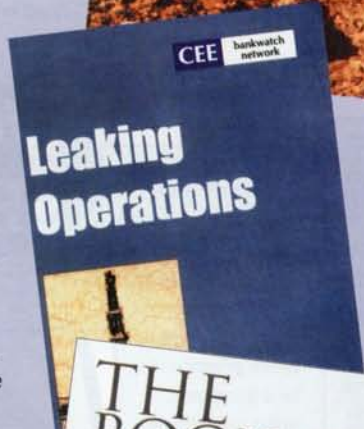
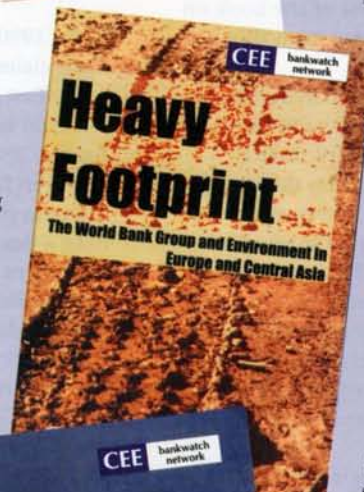
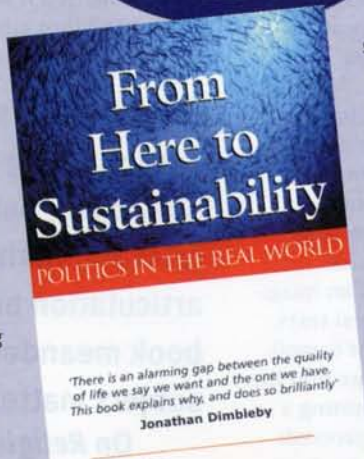
So here are some books that, between them, cover the whole gamut. Start with the general, and a new tome published by the Real World coalition, which has been getting some heavyweight support elsewhere. *From Here to Sustainability* is subtitled 'politics in the real world', and it aims to introduce that nifty little phrase 'joined-up thinking' into mainstream politics. How does traffic relate to income? What does inner city squalor have to do with species decline? What does income inequality have to do with global warming? Ask most politicians and they wouldn't have a clue. And that, says the book, is the problem. Make the links, and things will change; this book has practical suggestions for doing just that. Unashamedly mainstream, but decisively thought-provoking.

Meanwhile, down at the end of the industrial waste pipe, the CEE Bankwatch network, based in Budapest, have produced two

valuable little books on the effects of the World Bank's policies in eastern Europe. *Heavy Footprint* is a strong and detailed critique of the Bank's activities in Europe and central Asia, and demonstrates convincingly how the Bank and the IMF have helped accelerate environmental destruction in the post-communist states. Meanwhile, *Leaking Operations* digs into the Bank's involvement in the Russian oil industry, and highlights similar problems. Not exactly light reading, but vital stuff for those who want the real picture.

You might think that David Rothenberg and Marta Ulvaeus' *The Book of Music and Nature* is in another world entirely – but not so, for ecology ropes this into the same universe that the World Bank and the Real World Coalition inhabit. This sprightly, intelligent book (with accompanying CD, though I didn't get mine!) is the first anthology to be published on the subject of music and nature. Where else could you find Brian Eno and Rainer Maria Rilke writing on the same subject, in the same book? Fun, smart and educational. And if you get your CD, enjoy the music of the Australian butcherbirds. The mind boggles. They are all there in this extremely useful read. A bit US orientated, but worth it.

Paul Kingsnorth



the spiritual content of these texts, it appears that the environmental interpretations Gosling advances are meant to be this novel 'context'. But the author seems ignorant of the fact that these religious texts are routinely used as historical evidence, as well as for tracing the environmental milieu.

As well as this, conclusions about the environmental scenario are drawn in an anecdotal manner, focusing on stray phrases in the texts and then stating uncomplicated environmental explanations for that phrase. Such reasoning, while making use of an imaginative interpretation of historical texts, completely ignores the scores of complicated factors that may have gone into the writing of that text. While admitting a sketchy historical analysis, he proceeds to base much of the rest of the book on slight conclusions drawn from this analysis.

Alongside this is the troubling use of scant proof to make supposedly conclusive statements. Not the least of these is Gosling's strong insinuation that the Indian environmental movement has a religious basis – based on the views of a single author. In a similar vein, lay nuns in Thailand are repeatedly cited as one of the main pillars of the potential for Buddhism to spearhead environmental conservation, based on a survey where those nuns express interest in socially-minded professions.

Even more troubling is the selective

use of information to ground arguments – with availability rather than relevance seeming to be the determining factor.

Description of the environmental situation in Thailand is based largely on surveys of Thai Buddhist urban movements and health practices carried out by the author

'Gosling has succeeded in paraphrasing a plethora of opinions... but lacking a relevant methodology, in articulation or practice, the book meanders through its subject matter.'

On Religion and Ecology

in the 1990s. Further, it is interesting that while claiming to examine India and South-East Asia, the work looks only at Thailand in South-East Asia, and that country also receives a fraction of the attention focussed on India.

In the penultimate chapter, intended to be a description of the environmental movement in India from a Hindu perspective, Gosling paraphrases the views of two sets of Indian authors on the development-environment question. It is interesting that of these, one set are not even in the main concerned with environmental issues. The author also recapitulates a few

interviews with some environmental thinkers of India, presenting their opinions on Hinduism and ecology. But this sort of juxtaposition of select opinions is not a replacement for analysis of the subject.

In all, Gosling has succeeded in paraphrasing a plethora of opinions, with the hope that these will help to direct further research on the subject. In the absence of a specific thesis, or even rigorous analysis, this seems unlikely. Hints of an analytical framework contained in parts are unfortunately not developed. What promise there is, is damaged by the author's questionable assertions.

Gosling's grasp of the tenets and evolution of the two religions is impressive, and he is able to effectively present concepts of spiritualism. He has also conducted a wide-ranging exploration into the evolution of scientific and environmental thought, Hinduism and politics in India and Thailand. But lacking a relevant methodology, in articulation or practice, the book meanders through its subject matter.

The contribution of the book may lie only in the consideration of belief systems that can lend themselves to environmental and social concerns.

The overall result is an interesting read about the environmental problems, and some cross currents (including the religious) in India and Thailand, but not a contribution to serious thinking on the interaction between religion and ecology.

Bansuri Taneja



'Amazon Guardian' and capturing images from their work to protect the rainforest. The result is this exhibition of 30 paintings inspired by the trip which is, unsurprisingly perhaps, sponsored by Greenpeace. To find out more you can email peter.myers@uk.greenpeace.org and get all the details.

If, however, you'd rather stay at home, or indeed, work, staring into that liquid crystal display, it's well worth

WORTH SEEING

You only have until 7 July to get yourself down to an exhibition at the Flowers East Gallery in Hackney, London, which promises to be a good one. Artist John Keane has been travelling with Greenpeace, on their ship

you checking out the website of the Critical Art Ensemble (www.critical-art.net) if you want to see/can cope with, work that combines 'art, technology, radical politics and critical theory.



Often valuable, sometimes thought-provoking, occasionally pretentious, there is interesting stuff here. A video show about reproductive technology, for instance, has its moments, as does a dry take on 'useless technology' ('technology so pure that its only function is to exist'). Is this 'art' or 'culture jamming'? Or are they both the same thing? Check it out and judge for yourself.

Paul Kingsnorth

THE CROW

THE CROW family: collectors of fascinating trinkets, portents of doom; symbols of spirituality, emissaries across the flood. And if THE CROW should make wing to the rooky wood, then the world will be turned on its head. To see which way the wind blows, keep your eye on THE CROW.

THE PETRO-POPULATION PARALLEL

THE CROW is perturbed by the parallel curves of petroleum production and population growth

According to the American geologist Walter Youngquist, PhD — a leading authority on non-renewable resources — oil production worldwide is currently outstripping the discovery of new petroleum deposits by a ratio of 4 to 1, and is expected to peak in the year 2007. In reading his article in the scientific journal *Population and Environment*, entitled 'The Post-Petroleum Paradigm — and Population', one is struck by the congruency of the curves for petroleum production and population growth in the past century. But, while the human propensity for procreating shows no signs of abating, the remaining petroleum reserves are rapidly being depleted.

In many oil-producing countries, including Iran, Libya, Mexico and the US, domestic production has already peaked, and some of the Gulf states, whose economies are entirely dependent on petroleum exports, have been forced to cut down on their social welfare spending, including such benefits as subsidised housing and free universal education. Due to the explosive population growth in much of this Gulf region — which in some cases has resulted in a doubling of the population every 10 years — this oil-based largesse had to be curtailed even at peak production. But when the oil revenues are reduced to a trickle, so too will be the welfare handouts, with disastrous socio-economic and political consequences.

What makes this scenario even more chilling is the fact that more than half the people in these countries are now under the age of fifteen, and will reach their reproductive peak at about the same time that oil revenues dry up. This in turn will lead to civil unrest, starvation, and mass migrations, posing a threat to the political stability of the whole region — including, but not limited to, Israel, which nation's non-petroleum based prosperity is already viewed with envy by its Arab neighbours.

In oil-consuming, but not producing, nations, the rapidly diminishing supply of petroleum will have different, but equally disastrous consequences, forcing a radical change in lifestyles and the very structure of society. In the US, where the cost of petrol has doubled in little more than a year — even if it still has a way to go before catching up with prices at the pump in Europe — suburban commuters are already feeling the pinch

in their pocketbooks. As this trend continues, pressure will be put on the government to divert most of the \$50 billion annual expenditure on new roads toward public transportation, and the gas-guzzling Sport Utility Vehicles, or SUVs, will mercifully meet the same fate as the dinosaurs 65 million years earlier. On the positive side, it can also be noted that the rapidly rising prices of petroleum products will bring the current globalisation of trade to a grinding halt. Members of ISEC and other advocates of localised production will see their fondest dreams realised, not because of a change of heart in corporate boardrooms, but because of economic necessity.

What about other energy sources? While it is incumbent on us to develop all other available sources of energy — such as wind and wave power, solar and lunar [tidal] energy — as rapidly as is technologically feasible, they can be used primarily to generate electrical power, and are no substitute for petroleum products. As Professor F E Trainer of the University of New South Wales so clearly elucidated in an article for *Energy Policy* in 1995: 'Although renewable energy must be the sole source in a sustainable society, major difficulties become evident when conversion, storage and supply are considered.'

'The "reverse industrial revolution" might be a change for the better.'

Along with Youngquist, Trainer agrees that such sources alone will not be able to sustain present levels of energy use. Thus, in the post-petroleum era we will have to resign ourselves to reduced energy use, lower living standards and a zero growth economy. The alternative is a reduction of world population to the pre-petroleum number: about 1.5 billion, or one fourth of the present — and still crescent — figure of 6 billion!

In case you wonder why so few politicians address the issue of overpopulation, there is a simple explanation. By and large they do the bidding of their corporate benefactors, without whose financial contributions they have no chance of being elected to office in today's plutocracies masquerading as democracies. And an unlimited supply of cheap labour is the *sine qua non* for the continued success of the transnational corporations. As Voltaire put it so succinctly more than two centuries ago: 'The comfort of the rich depends on an abundant supply of the poor.'

But when the oil wells run dry, the survivors of the profligate consumer society will all be scrambling for a simpler, more sustainable lifestyle. And then the coming 'reverse industrial revolution' might just be a change for the better — a healthier existence attuned to our natural environment and our fellow denizens of Mother Earth.

Gard Binney

THE Exchange

The Exchange is a noticeboard for environmental and ethical services and needs, open to all. Entries are FREE for individuals and NGOs, charities and campaign groups. For businesses and educational institutions, the cost is £54 per listing, including a year's free subscription to the magazine. Repeat listings are £20 per issue, £10 extra for a boxed ad. Please send entries – no more than 40 words long – together with cheques where necessary made payable to *The Ecologist*, to Sally Snow, The Ecologist, Unit 18, Chelsea Wharf, 15 Lots Road, London SW10 0QJ, or email sally@theecologist.org. For more information, call Sally on +44(0)20 7351 3578. Free listings are allocated first-come first-served, and we reserve the right to refuse any entry.

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Yellowstone's wildlife is endangered by Montana Department of Livestock's Buffalo Management Plan. For information regarding the buffalo and how you can help, visit: www.wildrockies.org/Buffalo

Britain's hedgehogs need you! Nationwide survey to determine how many hedgehogs there are in Britain, leading to development of national conservation strategy. For more information or a survey pack, call the Hedgehog Survey Helpline on 020 7498 5262 or email hedgehog@mammalstrustuk.org

Sonar System threatens marine mammals. The US government may allow use of a powerful new Low Frequency Active Sonar system despite evidence that military sonar kills marine animals. Act now to protect the whales, petition at www.nrdc.org/wildlife/marine/nifa.asp

We are now only 5 months away from the **WTO 4th ministerial conference** in Doha, Qatar. Visit our website for the most comprehensive information on globalisation and resistance. Research Training and Information Unit on Globalisation www.urfig.org The site is in English and French.

The Campaign Against Depleted Uranium aims to fight for a global ban on the manufacture, export and use of depleted uranium weapons. For more information, contact

us at 22a Beswick Street, Manchester M4 7HS Tel/fax: +44 (0)161 273 8293, email gmdcnd@gn.apc.org or visit our website www.cadu.org.uk

Help us **stop the use of cruel and torturous battery cages** in the egg industry. Visit our website www.banbattery cages.org

The Organic Targets Bill which aims to transfer 30 per cent of farm land to organic use by 2010 needs your help for lobbying your MP, providing funding, or volunteering. Find out more by visiting www.sustainweb.org and click on organic targets.

Advocates of incineration have argued for decades that there is no evidence of ill-health around incinerators. **Incineration and Human Health** summarises a number of epidemiological studies that show otherwise. www.greenpeace.org/~toxics/html/content/action_incinreport

Aldermaston Women's Peace Campaign. Based around a monthly camp at AWE Aldermaston, centre of Trident nuclear weapons production, AWPC is a women-only, non-violent campaign. For more information on how to get involved, telephone 07808 553778, email aldermastonwpc@hotmail.com or visit www.gn.apc.org/aldermastonwpc

One million Agent Orange victims need your help. Our ongoing campaign aims to raise funds and get the US to pay compensation. Will you help? Contact Len Aldis, Britain-Vietnam Friendship Society, 26 Tomlins Grove, London E3 4NX. Email lenaldis@compuserve.com

Baby Milk Action is a non-profit organisation aiming to save infant lives and end the avoidable suffering caused by inappropriate infant feeding. Visit us at www.babymilkaction.org

Help ban untested GM Maize – Join Friends of the Earth's lobby of MPs. We are organising a lobby soon after the general election. It is important that as many people as possible lobby their MPs to keep up pressure on government in the early days after the election. For details call Clare on +44 (0)20 7566 1600, or visit www.foe.co.uk/campaigns/food_and_biotechnology

Join **Pruninghooks** – cutting back the excess growth of industrial agriculture. Encouraging debate and action. To subscribe, email Lucy Michaels lucy@corporatetwatch.org

Scotland faces becoming the main source of opencast coal in the UK and exhausted opencast sites are being used for landfill. **Scottish Opencast Action Group** exists to network people with experience. Please contact SOAG, 42 Woolfords, By West Calder, Edinburgh EH55 8LH, or email soag.info@virgin.net

Campaign Against Arms Trade (CAAT)

Our campaigns happen only with the support of people like YOU. If you care about peace, justice and development, become part of the campaign today. Telephone +44 (0)207281 0297 or visit www.caat.org.uk

www.boycottbush.net has been set up to allow individuals to influence the global politics of climate change. Lists top 20 corporate donors to the Republican Party and ethical alternatives.

Totnes Genetics Group, grassroots campaign that focuses on Genetic Engineering and related issues such as Patents on Life, WTO, World Bank/IMF and Climate Change. Write to us at PO Box 77, Totnes, Devon, TQ9 5ZJ, telephone +44 (0)1803 840098 or email info@togg.org.uk

An international day of action targeting ExxonMobil and putting pressure on the US to return to the Kyoto negotiating process. To take part or learn more, contact **Pressurepoint** at info@pressurepoint.org

Simultaneous Policy – breaking the barriers to global change. Endorsed by Noam Chomsky, Helena Norberg-Hodge, Ed May and others. Visit www.simpol.org

World Court Project UK. We know that nuclear weapons are immoral and a threat to our planet. Have you thought that they might be illegal as well? Contact George Farebrother, 67 Summerheath Road, Hailsham, Sussex, UK. Tel/Fax: +44 (0)1323 844 269, email geowcpuk@gn.apc.org or visit our website www.gn.apc.org/wcp

I am assisting the United Nations in developing **analytic tools to calculate greenhouse gas emission reductions** resulting from energy efficiency or renewables-based projects. Can anyone provide information on tools already developed and in the public domain? Contact John Palmisano johnpalmisano@yahoo.com

VOLUNTEERS

The British Holistic Medical Association is committed to the self-healing potential of patients and health professionals, and a range of healing interventions. The BHMA seeks committed trustees to develop projects. Contact Wendy Miller on +44 (0)1273 725951.

Summer Interns Needed. Spend part of your summer protecting Colorado's public lands. For more information email johng3@earthlink.net or telephone +1 303 444 4814, ext 23.

Mineral Policy Institute seeks volunteers to undertake investigative research into Australian mining companies to provide threatened communities with adequate information. Visit our website www.mpi.org.au or telephone Nina Lansbury on +61 (0)2 9386 1497.

Farmers World Network needs UK-based volunteers to assist on their programme at agricultural and rural shows between July and September. Volunteers need some knowledge of agricultural, development or rural issues. Some training offered if necessary. Expenses paid. Contact Michael Barker on 02476 696969, ext 420 or email michael@fwn.org.uk

Richmond BTCV requires a volunteer officer. Role involves leading practical conservation projects and community development work. Free training and environmental qualifications. All travel expenses paid. Excellent opportunity to develop skills. Contact Kath Rosen on 020 8332 1995 or email k.rosen@bctv.org.uk

Amaudo UK are looking for volunteers to work on a maintenance project in Nigeria. We need skilled carpenters, mechanics, electricians, masons, decorators and an erosion control adviser. Placements for 2-4 months. Contact Kate Lumley, telephone +44 (0)20 7834 0477.

Global Vision International is running volunteer workshops throughout the year. Projects and expeditions range from 4-12 months. Call Andrea Walsh on +44 (0)1582 831300, email gviquiries@aol.com for information pack or visit www.gvi.co.uk

The Virunga website is looking for editors, committed to the animal rights and conservation movement, to spend a minimum half a day a week updating the website. In exchange, each editor receives a share of revenues generated and shares in the company. For information contact Mark Austen mausten@virunga.org

COURSES

MSc in Human Ecology. The Centre for Human Ecology, Edinburgh, Scotland, champions environmental sustainability and social justice, and is accredited by the Open University. Call +44 (0)131 624 1974, email registrar@che.ac.uk or visit www.che.ac.uk

GreenNet, a non-profit collective, offers training in the use of email and Internet, web design training and training in the secure use of email. Courses, specifically developed to meet the needs of NGOs and individual campaigners, are run monthly at GreenNet, Islington, London. For further details, visit our website at www.gn.apc.org/training/index.html

Renewable Energy in the Urban Environment are organising a free training course for plumbers to do solar water heating installations. For more information, contact RENUE on +44 (0)20 8542 8500 or email cleanpower@renew.treeserve.co.uk

Environmental Management Training Programme. Aimed at enterprises with less than 250 employees, the programme

is designed to encourage local companies to address environmental issues. Visit www.mabbett.com for more information on the full range of services.

29 June-27 July. **Institute for Social Ecology**. Ecology and Community. This intensive month-long learning experience offers workshops and practice in the field of social ecology. www.social-ecology.org

10 September-3 December. **Living with Climate Change**. Stafford College, Earl Street, Stafford ST16 2Q. Monday evenings 7-9 pm. Led by Paul Newman. Telephone 01785 223 800, email pabn@gn.aoc.org

19-26 August. Ammerdown Centre, Somerset, UK. **Summer School Retreat**. Karos is an educational charity promoting the recovery of traditional values in the arts and sciences. For more information on the Summer School Retreat or membership, please contact Amanda Critchlow Horning, 4 Abbey Cottages, Cornworthy, Devon TQ9 7ET.

The Temenos Academy. A course of 24 lectures on the deeper significance of Dante's Divine Comedy, during the academic year from September 2001. To book, write enclosing cheque for £50 (to cover autumn term). The Temenos Academy, PO Box 203, Ashford, Kent, TN25 5ZT. Tel: +44 (0)1233 813 663; email: stephen.avery@ashfordtelecom.net

1-21 October. **Holistic science, ecological economics, biodiversity and sustainable living**. Research Foundation for Science, Technology and Ecology, India, in collaboration with Schumacher College. For more information on this and other courses, call Bija Vidyapeeth on +91 11 696 8077, fax: +91 11 685 6795 or email: vshiva@vsnl.com

26 November-1 December. **The Alternative Education – a Creative Gathering**. For information on this project, contact Garden of Fruition, 117 Fuang Nakorn Road, Opposite Wat Rajabopit, Bangkok 10200, Thailand. Telephone +66 2 222 5698, fax +66 2 225 9540, email suancompany@access.inet.co.th

Environmental Trainers Network. Established in 1991 as a network of trainers in environmental organisations. To receive further information, contact ETN, c/o BTCV, Red House, Hill Lane, Great Barr, Birmingham B43 6LZ. Tel: +44 (0)121 358 2155, fax: +44 (0)121 358 2194, email: etn@ukgateway.net

29 September-4 October. **European Vegetarian Union Nutrition** for environmental health and sustainability. For registration and information, visit www.evu2001istanbul.org or contact Victor Ananias, EVU Congress Halaskaragazi cad. 321/1, Sisli 80260, Turkey. Tel: +90 212 230 0000, email: congress@magister.com.tr

Cordon Vert Cookery School at the Vegetarian Society. Imaginative, creative and delicious vegetarian food. Day, weekend, leisure, professional and diploma courses. Call Maureen on +44 (0)161 925 2014 for a brochure or visit www.vegsoc.org/cordonvert

Gaia Research is running courses (Edinburgh and London) in sustainability for building designers. For further information, contact Sandy

Halliday, Gaia, The Monastery, Hart Street Lane, Edinburgh EH1 3RG. Telephone +44 (0)131 558 7227, or visit www.gaiaigroup.org

RESOURCES

MERCi is a new centre in Manchester for local community groups and anyone interested in finding out more about and taking action on issues of sustainable development. Tel: +44 (0)161 273 1736, fax 0161 274 4598, email: merci@gn.apc.org

Sinclair Consultants provides PR and marketing expertise to environmentally and socially responsible organisations. We share your values and can help you achieve your business objectives. Contact Christopher Biggs on +44 (0)777 96 171 091 or cbiggs@sinclair-consultants.com

Concord Video and Film Council Videos on social subjects including ecology, recycling, development issues, peace etc. Catalogues £3, free lists. Tel: +44 (0)1473 726012, fax: +44 (0)1473 274531.

The Listed Property Owners Club provides information about the legal, financial and technical responsibilities of owning a listed building. Full details of membership from Peter Anslow, Listed Property Owners club, Lower Dane, Hartlip, Sittingbourne, Kent ME9 7TE. Tel: +44 (0)1795 844939.

Leeds Environmental Design Associates. Architects and environmental engineers committed to improving the environmental performance of buildings. We have extensive experience of low energy design and construction, as well as other areas of environmental design expertise such as water recycling and waste minimisation. Tel: +44 (0)113 2785341, email: office@leda.lrg.uk

NewsEdge is a leading provider of innovative eContent global news solutions for business websites, intranets, extranets and portals. For more information visit www.newsedge.com or telephone us on +44 (0)20 7448 4400.

LIVITY is a new marketing agency with an ethical, conscientious, responsible and positive approach. We offer an unrivalled understanding of developing contemporary culture and the people within it. We provide research, marketing and development skills. Livity can help bring your campaigns to life. Telephone: +44 (0)20 7346 6827, email: livity@livity.co.uk, or visit: www.livity.co.uk

The Maperton Trust, an educational charity concerned with the holistic approach to health. Has a wide range of equipment helping people all over the world and offers free treatment over the internet at www.mapertontrust.com

OrganicMD.org is a non-profit organisation dedicated to non-pharmaceutical common sense health education. Visit www.organicMD.org

ECO-BUYS

www.womenstand.com feminist shopping site for postcards, greeting cards, T-shirts, mugs, badges and lots more. Full range of Cath Tate cards, Jacky Fleming and Annie Lawson. For more information, write to PO Box 30453, London

NW6 6FR. Tel: +44(0)20 8960 8166, email enquiries@womenstand.com

Give your Wedding a Green twist. The Centre for Alternative Technology is launching a wedding list with a difference that will make a difference. Choose from hundreds of fantastic environmentally-friendly gifts. Telephone: +44 (0)1654 705 959 or email: mail.order@cat.org.uk

Recoup. Peterborough-based company, registered charity, whose goal is to get environmentally-sound, cost effective plastics packaging recycling throughout the packaging and consumer chain. For further information and membership details, call +44 (0)1733 390 021, or email enquiry@recoup.org

Green Baby Co Ltd. The natural baby products retailer. For more details contact Eluned Rogers, on +44(0)20 7226 9244, or email eluned@greenbabyco.com

Sow Organic Seed Company offers over varieties of certified organic, non-GMO garden seeds. Vegetables, herbs, flowers. Free online catalogue at www.organicseed.com

Truly fresh **organic fruit and vegetables** straight from the grower to your table. We offer a range of boxes containing seasonal selections tailored to suit at www.abel-cole.co.uk, or call +44(0)20 7727 3648.

BigBarn.co.uk. The virtual Farmers market - the online solution for both producers and customers. Simply type in your postcode and see a map of your area showing local producers and produce they sell. For information, contact Anthony Davison on +44 (0) 1234 871 005, or email ant@bigbarn.co.uk

EVENTS

12/13 July, Stroud, UK
Renewable Energy Fair
4 half-day seminars. For information, write to Energy 21, PO Box 154, Stroud, GL5 4YS tel: +44(0)1453 752277 or www.energy21.org.uk

14 July, London, UK
Christian Ecology Link Conference
Bloomsbury Central Baptist Church, 234 Shaftesbury Ave., London WC2, 12pm
Non-members welcome. Free entrance. Visit our website www.christian-ecology.org.uk

23-25 August, Montreal, Canada
Ecological Sustainability of the Global Market Economy
Keynote speaker Lester R Brown.
Visit www.mggill.ca/mse/cansee for details.

3-5 September, Durban, South Africa
Racism and public policy. Visit the website www.unrisd.org/racism/index.htm for information.

4-7 September, Aberdeen, UK
Offshore Europe 2001 Oil & Gas
Exhibition and conference. For information, visit www.offshore-europe.co.uk

16-24 September, Cochabamba, Bolivia
Third International **Conference of Peoples' Global Action**. Visit www.agp.org for details.
13 October, Coventry, UK

Heaven and Earth: Christianity, Food and Land Use – Christian Ecology Link conference at Ryton Organic Gardens, 10.30am. Booking essential. Contact Tim Cooper, 20 Carlton Road, Harrogate, North Yorkshire, HG2 8DD, Tel: +44 (0)1423 871616 email info@christian-ecology.org.uk, website www.christian-ecology.org.uk

8-10 November, Delevan, Wisconsin, USA
Working Landscapes in the Midwest: Creating Sustainable Futures for Agriculture, Forestry and Communities. For details visit our website www.eeeee.net

13-15 December, Japan
International Organic Trade Fair
For more information, visit the website www.nuernbergglobalfairs.com

4-10 June, London, UK
Festival 2001, encompassing World Environment Day. The West London Festival is being held at Headstone Manor Ground, Pinner View, North Harrow, Middlesex. Including many zones and themes based on energy issues, nature conservation, waste and water issues, greener travel. For information, contact Danae Meacock Mashir, call +44 (0)20 8424 1913 or email danae.mecock.bashir@harrow.gov.uk

21-28 October
One World Week 2001
We're on our way. Join local activists around the world celebrating, acting on and learning about issues of global justice. To find out how to take part, email us at enquiries@oneworldweek.org or call +44 (0)118 9394933.

The Temenos Academy is a Registered Charity which aims to offer education in philosophy and the arts in the light of the sacred traditions of East and West. For details contact Stephen Overy, PO Box 203, Ashford, Kent TN25 5ZT. www.princes-foundation.org.

Elm Farm Research Centre have organised a wide variety of seminars and farm walks throughout the year. For details contact Judith Towers, Elm Farm Research Centre, Hamstead Marshall, Newbury, Berkshire, RG20 0HR. Telephone +44 (0)1488 659698, fax +44 (0)1488 658503, email education@efrc.com, website: www.efrc.com

21 June, 7pm-10pm. Turn out your lights, televisions, radios and more and join **The Great International Voluntary Rolling Blackout** – an alternative to George W Bush's energy policies. www.politicsnj.com/nathan

30 June-1 July, London, UK. **Re-energise: Anti-sanctions Conference** and gathering in solidarity with the people of Iraq, featuring former UN Humanitarian Co-ordinator Denis Halliday and fellow Nobel Peace Prize nominee Kathy Kelly from Voices in the Wilderness US. For information, telephone +44 (0)1865 243 232, email: glenn@voices.freeserve.co.uk or visit www.viwuk.freeserve.co.uk

30 June, London, UK. **Statewatching: The New Europe 2001**. International conference on the state, civil liberties and secrecy, at the University of London Students Union, Malet Street, London WC1, 10am-6pm. For more information, tel: +44 (0)20 8802 1882 or visit www.statewatch.org

20-21 July, Sheffield, UK. **Lakeside Festival** Spectacular Summer Music Event, Rother Valley Country Park. Five live stages, plus so much more. Festival Information Hotline: +44 (0)709 102 3360. www.lakesidefestival.com

4 August, Dartmoor, UK. **Royal Geographical Society: Conservation on Dartmoor.** A Field Day visiting various areas conserved by MoD, of interest for their flora, fauna, archaeology and geology. Directions to venue, map and programme from Chris Brightman, 61 Exeter Road, Topsham, Exeter, Devon EX3 0LX. Send £8 with s.a.e.

2-6 September, Stavanger, Norway. **The International Solid Waste Congress** For information, visit www.stavanger-forum.no/iswa.dk

7-9 September, Powys, Wales. **Centre for Alternative Technology Members' Conference.** For details visit www.cat.org.uk/conference2001 or telephone us on +44 (0)1654 705988.

29 September-4 October, Turkey. **Joy of Life.** Congress on nutrition for environmental health and sustainability. For registration and further information visit the web page at www.evu2001istanbul.org

20-27 October, Scotland. **Sex and Spirit.** International conference, Findhorn Foundation. Key presenters: Margot Anand (Skydancing Institute), Richard Moss. Reconnect with the sacred, humorous and exciting in our sexuality and spirituality. Tel: +44 (0)1309 691 933, email: conference@findhorn.org, visit: www.findhorn.org/sexspirit

30 October-1 November, Birmingham, UK. **Integrated River Basin Management** – an overview of policy, practice, costs and benefits. For more information, contact Paul Tweedale, telephone +44 (0)1895 454540.

1-3 November, Toronto, Canada. **Multiple currents:** Expanding the boundaries of transformative learning. For details, visit www.tlcentre.org or email esosullivan@oise.utoronto.ca

PROJECTS

As part of its groundbreaking **Watch Your Waste Line** service, Chelmsford Borough Council will separately collect paper, glass, foil, textiles and organic waste from South Woodham Ferrers household for recycling.

For details of new waste minimisation project at the Port of Southampton visit www.environmentcentre.com/siena.html

Do you wish to start, or already own an ethical/ecological business? We are two businesses in Dorset and Hampshire wishing to attract other interested parties to a great new project. For further details, please call Sana on +44 (0)11425 674 372 or email us on enquiries@greenchefs.com.

PUBLICATIONS

The Marine Conservation Society **Good Beach Guide 2001** is available at £3 (plus 50p p&p) from MCS, 9 Gloucester Road, Ross-on-Wye HR9 5BU, or all branches of Cheltenham &

Gloucester. The guide is also published on the website at www.goodbeachguide.co.uk

The World Directory of Environmental Organisations. Published by the International Center for the Environment and Public Policy. For information about the book and the Institute, visit www.cipahq.org

Fairmont Hotels & Resorts **Green Partnership Guide.** Forward by world-renowned environmentalist Dr David Suzuki. A step-by-step guide to incorporating environmental initiatives into the workplace. For more information, visit www.fairmont.com

Trees Be Company. An anthology of poetry about trees. Edited by Angela King and Sue Clifford. Available in paperback at £9.95 from bookshops, and by mail order from Sue Clifford, Common Ground, tel: +44 (0)1747 850820.

Ascent – expanding the mind of yoga. Non-profit Canadian magazine that highlights the interaction between spirituality and personal responsibility. Subscribe on-line at: www.ascentmagazine.com.

Wildlife in Church and Churchyard, by Nigel Cooper, for the Council of Care of Churches, a permanent commission of the Archbishops' Council of the Church of England. For details of this and other titles, visit: www.chpublishing.co.uk

Five years on from the UN City Summit in Istanbul the global urban crisis has accelerated. Report by the Panos Institute, **Governing Our Cities: will people-power work?** now available on www.panos.org.uk

Green MPs for the UK. Jean Lambert and Caroline Lucas, report their work on key issues over 2000/2001. Visit: www.carolinelucasmep.org.uk or www.jeanlambertmep.org.uk

New handy format **Green Guide for London.** With 3,000 completely revised listings, this is a comprehensive source of organic, natural and eco-friendly goods. Buy now online at www.greenguideonline.com and get a 20 per cent discount plus a FREE sample copy of the magazine Pure Modern Lifestyle.

VISIT

Sherwood Energy Village. A major innovation for North Nottinghamshire and the East Midlands, built on environmental, ethical and sustainable principles. Unit 1 Boughton Pumping Station, Brake Lane, Boughton, Nottinghamshire, NG22 9HQ. Visit our website at www.sherwoodenergyvillage.co.uk

Centre for Alternative Technology. Machynlleth, Powys, SY20 9AZ, UK. Presenting environmental issues in the context of their solutions. This is a visitor experience that will inspire all ages. The seven-acre site includes an exciting and educational range of displays, with children's theatre and guided tours at peak times. The centre is open 7 days a week from 10am to 5pm all year round.

The Earth Centre. Doncaster, UK. 26 acres of glorious gardens – NatureWorks, where children can pond-dip for minibeasts, a park with free public access, a water cycle simulator ride

(travel round the world with a drop), award-winning café/restaurant, exhibition galleries. Visit the website www.earthcentre.org.uk

FOR SALE

Quantity of **ecological periodicals/magazines** (1960s). Reasonable price. Telephone +44 (0)20 7252 6873 for details.

Irish Cottage, needing renovation, barn, in two acres near forests, on the Clare/Galway border. Electricity, water-tank, organic garden, fruit, willows, mature and planted trees. Suit eco-builder. Local dropout community. £40,000 ono. Telephone: +353 (0)91 633 285

JOIN

Nuclear Information Service. Non-profit, non-party-political organisation in the arms control and disarmament research arena that has gained the respect of governments and institutions in Britain and around the world. Westwood House, 30 Westwood Road, Southampton SO17 1DN, UK. Tel/Fax: +44 (0)23 8055 4434, email: nis@gn.aoc.org

Still incredibly biologically rich but desperately humanly poor, Madagascar is one of the world's top conservation priorities. **Azafady** is working in the southeast on humanitarian development and conservation programmes. Please join our sponsorship scheme. Contact Mal Mitchell on +44 (0)20 8960 6629 or visit www.madagascar.co.uk

The Vegetarian Society is a registered charity providing information to vegetarians and those considering vegetarianism. For a free information pack, including nutritional advice and recipes, write to The Vegetarian Society, Parkdale, Dunham Road, Altrincham, Cheshire WA14 4QG or telephone +44(0)161 925 2000.

Energy 21. An educational charity, generating a greater awareness and understanding of renewable energy. Sustainable, renewable energy, in harmony with nature and closely linked to local communities, is fundamental to quality of life in the future. www.energy21.org.uk

The Shark Trust promotes the study, management and conservation of sharks, skates and rays, and is working to stop the wasteful and cruel practice of shark finning. Visit www.sharktrust.org

Global Forest Society. Canada. What do scientists really know about our wild forests? Come with us. We're just finding out! Visit www.globalforestscience.org

The Game Conservancy Trust is an independent conservation charity whose 60 scientists research game species, their habitats and associated flora and fauna. It spends £1.9 million on research issues concerning moorland, woodland, river and farmland. For more information visit www.gct.org.uk

Cabo San Francisco Foundation NGO working for the protection of the remnants of rainforest and mangroves in Esmeraldas, Ecuador. Regeneration of native species and the search for solutions for sustainable development with the local population. Visit our website www.cabosanfrancisco.ch

Canadian Environmental Network

A non-governmental, non-profit network of over 600 Canadian organisations sharing its mandate to protect the Earth and promote ecologically-sound ways of living. Visit www.cen-rce.org

The Mammal Society. Solely dedicated to the study and conservation of British mammals. We produce information and run courses. For more information, write to us at 15 Cloisters House, 8 Battersea Park road, London SW8 4BG, telephone +44 (0)20 7498 4358 or visit our website www.mammal.org.uk

Care for the Wild International. Protecting wildlife from suffering. Visit our website www.careforthewild.com for information on our work.

Friends of Conservation gained their reputation for community-based conservation work in East Africa. Today they work in partnerships around the world, particularly where tourism impacts on fragile habitats. Visit www.foc-uk.com

Ashoka: Innovators for the Public. We are looking for dynamic, innovative individuals to join our team. For current postings, visit www.ashoka.org/involved/jobs.cfm

United Plant Savers. Our mission is to preserve, conserve and restore native medicinal plants and their habitats of the US and Canada. Visit www.plantsavers.org

The Alaska/Arctic Environmental Defense Fund is a non-profit circumpolar umbrella organisation, endeavouring to unite environmental/social advocacy groups in Alaska, Canada, Greenland, Iceland, Nunavut, Norway, Sweden, Finland, Faroe Islands, and Russia. For more information, visit socwww.cwru.edu/~axh69/aedf/

The Countryside Restoration Trust is an independent charity working to restore the general countryside. It believes that profitable farming, wildlife conservation and landscape creation can, and must, co-exist. The CRT buys land that has been over-intensively farmed and restores it. The CRT now owns 355 acres and has been supported by the Heritage Lottery Fund. The CRT began farming practically in 1993 and is the lead charity working in the field of conservation and practical farming. For more info call Robin Page on +44 (0)1223 870 932.

The Noah Project. Jewish Education, Celebration and Action for the Earth. We promote environmental responsibility throughout the Jewish community through education, celebration of Jewish festivals and practical action projects. PO Box 1828, London W10 5RT. Tel: 020 8994 5988 Email: info@noahproject.org.uk

Envolve. A local charity based in Bath that has been helping individuals, communities, schools and businesses to discover the benefits of living and working more sustainably since 1994. We have a public information library and exhibition area, and a Community Resource room available to local groups working on sustainability issues. Visit our website www.envolve.co.uk or telephone us on 01225 787 910.

Vaccination Liberation. Join Vaccination Liberation and get the documentation you need to feel confident in your decision to abstain from

mass medical experimentation. For more information, email us at vaclib@coldreams.com

Network for Alternative Technology and Technology Assessment. Provides information on renewable energy issues and developments, and produces a bi-monthly journal, *Renew* (£18 per annum, £12 unwaged). Visit our website www-tec.open.ac.uk/eeru/natta/rol.html

World Information Service on Energy. Based in Amsterdam, The Netherlands, we are a campaigning grassroots organisation working on nuclear energy, depleted uranium and connected topics. We publish a newsletter 20 times a year. For more details, visit our website www.antenna.nl/wise

Permaculture Association. We welcome all offers of donations, members, volunteers, organisational support and partnerships. We have an exciting development plan, can you help? Write to: BCM Permaculture Association, London WC1N 3XX, telephone +44 (0)7041 390170/+44 (0)113 262 1718, email office@permaculture.org.uk or visit our website www.permaculture.org.uk

British Wind Energy Association is the professional body for the UK wind energy industry, representing companies and individuals interested in utilising the country's vast wind resource in the production of electricity. Telephone +44 (0)20 7402 7102/3 or visit our website www.bwea.com

Sponsor a child through ActionAid and help provide children and families with safe water, healthcare and education. In return you'll receive field worker reports and messages from the child. ActionAid, Freeport, Chard, Somerset TA20 1FR, telephone +44 (0)1460 238 080, email mail@actionaid.org.uk, website www.actionaid.org

The New Economics Foundation exists to promote economic initiatives for social inclusion and environmental sustainability. It operates internationally through research, advocacy and the development of practical initiatives and tools. The foundation has an exceptional record of social innovation, which includes: promoting local economic renewal, challenging and reshaping globalisation, innovating in participative democracy. Visit our website www.neweconomics.org

The Land Stewardship Centre of Canada is a not-for-profit, charitable organisation that promotes excellence in environmentally sustainable land use. To get inspired to take action in maintaining the ecological health of our landscapes, visit our website at www.landstewardship.org

WEBSITES

www.kumoro.com
For interesting information about Northwest Amazonia, its indigenous inhabitants and political ecology. Includes a short on-line survey questionnaire – the results of which will be incorporated into research project.

www.planorganic.com
Just launched, a categorised guide to organic/sustainable farming sites. Green Pages, magazine and database. Could be a handy catechism for anti-GM, pro-organic activists!

www.ethicalperformance.com
The latest news on companies and their environmental performance. News of Shell, Levi Strauss, Australian mining.

www.protest.net
Protest.Net has a calendar of events, activist's handbook, action alerts and a newsletter. Focusing mainly on US, but still has lots of useful material wherever you are.

www.farmlinking.com
A message board, sources of help and advice for farmers and their families. Find out all you need to know about life in the countryside and the situation regarding foot & mouth disease.

www.internat.enviromn.se
Overview of how long various types of environmental damage last. The report is mainly based on Swedish research and environmental monitoring, but most conclusions are valid worldwide.

www.nativeamericas.com
For information on how to stay informed of emerging trends that impact Native peoples.

www.europarl.org.uk
In December 2000, the European Parliament established a Temporary Committee to examine recent developments in the field of human genetics. This site includes a dedicated page to reflect major developments.

www.ecoplan.org/wtpp/wt_index.htm
World Transport Policy and Practice, quarterly journal edited by Professor John Whitelegg.

www.foundationspa.co.uk
Foundations – quality words and pictures on alternative issues.

www.ecowebo.net
New site for everyone interested in ecology, justice, fair trade.

www.herpdigest.org
HerpDigest is the first free, electronic newsletter dedicated only to reptile and amphibian science and conservation.

www.wdmscotland.org
New website detailing the activities of the World Development Movement's Scottish branch, and how you can help the campaign.

www.corpwatch.org
What's new on the CorpWatch website? A lot! A sharper 21st century look. A revamped and expanded step-by-step Research Guide A new Press Room for journalists. A well-organised Library to help you easily access information on specific globalisation-related topics.

www.urfig.org
URFIG offers comprehensive calendar on globalisation and resistance. Forum for local, regional, national and international activities.

www.greenfront.org
Green Front of Iran is collecting environmental messages from all over the world and recording them on its website.

www.corpwatch.org
Background, news and activist resources on the Free Trade Area of the Americas, the most far-reaching trade agreement to date.

www.savetherefruge.org
New site dedicated to protecting the Arctic National Wildlife Refuge from oil exploration and drilling.

www.fluoridealert.org
The website of the Fluoride Action Network, an international coalition to end water fluoridation and alert people to fluoride's health and environmental risks.

www.CountdownToBonn.org
New campaign to prod Canada to rejoin the world community and commit to fighting the climate crisis.

www.btinternet.com/~clairejr/
Lots of information on the dangers of GM food and crops. Action updates and useful links to other sites.

www.gn.apc.org/haitisupport
All the news from the grass roots, including the latest on the Haitian citrus workers' campaign for union rights.

www.wilsonsalmanc.f2s.com/
Visit Wilson's Almanac for information on celebrations, festivals, humour, permaculture and much more.

www.swedentech.swedishtrade.se
Your guide to Swedish environmental technology. The Swedish Environmental Technology Network makes it easy to find practical and sustainable solutions to environmental problems as well as partners who can help implement new environmental technologies.

VACANCIES

The **United Nations Industrial Development Organisation** is looking for national experts from the industrial sector with good knowledge of climate change issues to undertake project assignments as part of a regional team. Applicants must be nationals of and resident in the following countries: Indonesia, Malaysia, Thailand and Vietnam. UN-approved scales of remuneration will be applied. Please send CV to Peter Pemberton at ppemberton@unido.org

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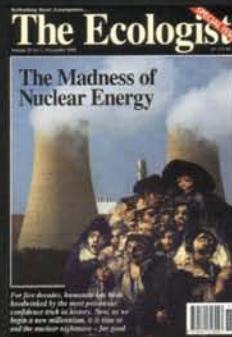
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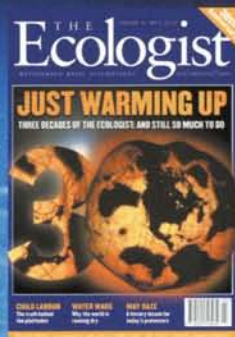
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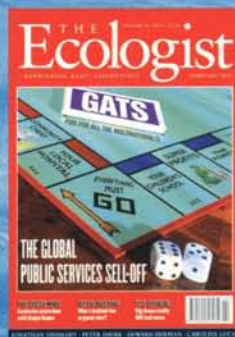
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