

THE Ecologist

VOLUME 32 NO 5 £3.50

RETHINKING BASIC ASSUMPTIONS

JUNE 2002

GREEN ZEBRAS
Facing extinction

PROFITS BEFORE HEALTH
Why charity logos can't be trusted

HUNGRIEST COUNTRY
Should Somalia reject the UN?

STARBUCKS VS THE REVEREND BILLY
A multinational meets its match

US NAVY BOMBS —
'Good for birds'

WILD AND FREE
Happy as a pig...

MAJOR NUCLEAR THREAT

SPECIAL INVESTIGATION:

AS MILLIONS SIT BACK TO WATCH THE WORLD CUP, TWO SHIPS LADEN WITH ENOUGH PLUTONIUM TO MAKE 50 NUCLEAR WARHEADS WILL SET SAIL FROM JAPAN. HAVE BLAIR AND SELLAFIELD PUT THE WORLD AT RISK?



Everything in the garden's threatened



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**Your countryside
your voice**

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What do the elections in France and the May Day protests have in common? On the surface, very little. But in

real terms, they are different reactions to the same pressures. Both very clearly represent a mass disaffection with mainstream politics.

Certainly, there are significant differences between M Le Pen's worldview and that of the majority of May Day protesters. But the common denominator between them is a growing realisation that our mainstream politicians are unwilling to address the real issues. They debate how to slice the cake, but they won't question its ingredients.

I personally don't accept that one fifth of the French electorate genuinely subscribes to the Le Pen agenda. More likely, those who voted for him did so as an act of political sabotage against an establishment riddled with corruption and subservient to big business.

But the big issue now is whether or not the establishment will listen.

So far the signs are not encouraging. As ever, it has sought to shift the blame of the outcome onto the symptoms not the cause. This means the problem will grow. It's not good enough simply to blame individual manipulators of a stupid populace. Not only is that patronising, it is disingenuous and will backfire. Our current leadership, after all, is expert at voter manipulation. And people know it.

Nor can the problem be legislated away. Laws do not dissolve political expression. They strengthen them. As Le Pen pointed out last week, he is

'merely a thermometer of political sickness'.

Surely, now is the time to assess the reasons for the rise of the anti-establishment.

What's clear is that politics is falling into the hands of giant corporations, and that nations compete acrobatically for investment from these corporations. The new rules of the global economy are set by these corporations, and enforced by institutions like the WTO. Democracy is malfunctioning, the environment is being desecrated and communities are being plunged into economic vulnerability.

Meanwhile, the monoculture continues. And what better conditions can there be for corporations than a world where tastes, customs and fashions have been bulldozed – a homogenous world made up simply of consumers and producers, uncomplicated by different cultural identities?

How else could Barbie Dolls be sold two to a second? How else could Coca-Cola (in a recent advertisement, featuring Napoleon, Hitler, Lenin and a can of coke) boast that theirs is the only campaign that has successfully conquered the world?

Mr Blair loves talk of multiculturalism. Yet he and his big business comrades are as determined as ever to ensure more people, North and South, are removed from self-sufficiency and propelled into dependence on the global consumer culture. His diversity is only skin-deep. Lots of colours, one worldview, one way of life.

The result is a homogenous – not harmonious – world, where people are succumbing to the pressures of alienation and anonymity. One symptom of that is the inevitable rise of opportunists like Le Pen ■

ZAC GOLDSMITH

LETTERS

Pressure group tyranny

In your excellent profile of Douglas Hurd (Vol 32/3) you omitted to mention a radio interview in which he identified pressure groups with 'serpents which strangle democracy'. This chimes with the views of Mr Blair, who recently referred to the 'tyranny of the pressure groups'.

In the absence of proportional representation and appropriate article references, I shall continue to support these organisations in the capacity of a serpentine, tyrannical strangler of 'democracy'.
PC Meyer, Hertfordshire

Milking Machines

Devinder Sharma makes very valid points about the iniquitous and wasteful subsidies to the farming industry ('From the bovine to the ridiculous', Vol32/3).

But he overstates the luxury that the Western dairy cow experiences in her short life. Those huge udders are the result of genetic manipulation and cause lameness. She is nothing more than a machine being milked three times a day to produce a massive 7,000 litres a year. The high milking regime means a good chance of mastitis, which will be treated by antibiotics.

She will lose her calf after one or two days. If the calf is male, he will be shot as an unwanted by-product of the dairy industry. A female calf will share the fate of her mother.

I have calculated that, the intensity of the cow's life is the equivalent to a jogger running for six to eight

hours a day. Not surprisingly, the average Western dairy cow will only live to the age of three. A cow's normal life expectancy is 21.

In Third World countries, people are starving to death because their land is being used to grow grain to fatten cows in the West. And fat the cows may be, but the life they lead is one of utter misery.

Perhaps Sharma should be comparing the lives of farmers in First and Third World countries. Their animals share the same fate.
Jennifer Coleman, Viva! (Vegetarians International Voice for Animals), Brighton, UK

National self-indulgence service

I agree with Dr Peter Mansfield ('Don't throw money at health', Vol 32/4). We should have a rethink on what constitutes good healthcare.

Most medics seem to be happy to just throw more money into this black hole called the NHS. This year's budget means we will all be paying higher National Insurance.

I am sick to death of this so-called National Health Service taking yet more of my low-waged hard-earned salary to fund what amounts to many people's appalling lifestyles.

Your average Brit now indulges in a diet that consists of too much value-added, refined, high-calorie, low-nutritional junk food. Food is saturated in unhealthy 'more-ish' amounts of sugar, fat, salt and E numbers. Add to this our huge consumption of alcohol, fizzy drinks,



tobacco and drugs (both licit and illicit), and you see that we are on the way to being an extremely unhealthy nation. In addition, so few people now exercise – preferring instead to sit staring at the telly or the computer. They also use their cars for the slightest trip.

Instead of taxing us through our wages to pay for the epidemic of obesity (and other Western lifestyle diseases like diabetes, heart disease, cancer and constipation), why not put a 10p tax on every sweet, biscuit, crisp packet, chocolate bar, ice cream, fizzy drink, hamburger and sausage roll?

In other words, let the junk food manufacturers and those who buy their products, take the strain of under-funding in the NHS.

Perhaps the higher prices would make people decide to buy fewer of these foods. They would then be healthier and would need less remedies from the NHS.

I know it is an old-fashioned concept, but it is

often the case that you are what you eat. A National Self-Indulgence service of ever more medication, procedures and surgery for every self-inflicted malady, really is not the answer. It comes as no surprise that hospitals and surgeries can no longer cope under the pressure of trying to give people this 'easy' option.

There really do have to be more medics out there like Dr Mansfield who have the courage to tell their patients the facts: that their health is often in their own hands. It doesn't matter that this is not what people want to hear when they go to the surgery for a little white/blue/yellow pill.

Sara Starkey, Kent

Falling on deaf ears

On 13 March in Strasbourg, the European Parliament voted to restrict the UK's long standing right to buy the health supplements of their choice. These supplements include vitamins, minerals, amino acids and trace elements.

This was in spite of the

MEPs receiving over four million protests in the form of e-mails, faxes, letters and telephone calls.

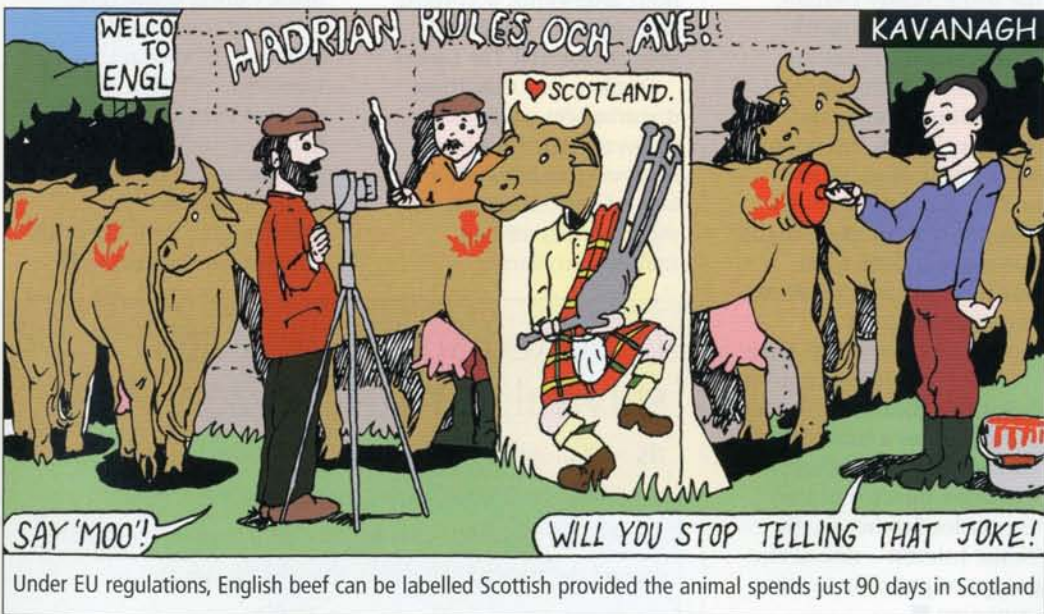
Now that two thirds of the MEPs have ignored this mass protest, the directive will be passed to Europe's Council of Ministers for them to approve. Such approval will ensure that millions of people will suffer disease and continue to die from prescription drugs. These drugs are now the world's fourth biggest killer of human beings.

Why they voted this way is no secret. There are twice as many pharmaceutical paid lobbyists in the European set-up, as there are MEPs. It is also well known that corruption in Europe is rife. This vote also shows the contemptible derision MEPs hold for the people they are supposed to represent.

If you believe that people should have the right to have unrestricted access to vitamin and mineral supplements, please register your protest on: www.petition450.org.

The world must not go back to the Dark Ages.

Keith Rymer, nutritional consultant, Yorkshire



Under EU regulations, English beef can be labelled Scottish provided the animal spends just 90 days in Scotland

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Child workers' rights violated

ECUADOR – Workers on banana plantations in Ecuador, including children as young as eight, are having their labour rights violated, according to Human Rights Watch.

The report, *Tainted Harvest – child labour and obstacles to organising in Ecuador's banana plantations*, found that the Ecuadorian national government and the three giant multinational banana companies (which buy around 25 per cent of the country's banana exports) are all failing to enforce necessary codes of conduct and labour standards.

Ecuador exports more bananas than any other country. But its government is failing to enforce international labour standards or even its own national labour code. Adult workers earn on average only US \$5.44 a day.

In recent years the big three banana companies – Chiquita, Dole and Del Monte – have made much of their own codes of conduct. However, Human Rights Watch found that the corporations are not enforcing these codes on the producers from whom they buy their bananas. Instead, the report claims, the multinationals have disclaimed 'any obligation to demand respect for workers' rights on the plantations from which they buy their bananas'.

Of the 45 children interviewed for the report, all but four began working in the banana plantations or packing houses between the ages of eight and 13. On average they work for 12 hours a day. The children said they suffered a range of symptoms caused by exposure to dangerous pesticides.

The pesticides are often sprayed from aircraft while the children are still working in the fields. The symptoms include head and stomach aches, dizziness, nausea, vomiting, trembling and shaking, burning nostrils and red eyes ■

US Navy says 'bombing good for birds'

MARIANAS – The US Navy has come up with an unlikely response to complaints that its armaments exercises on the tiny Pacific islands of Northern Marianas are reducing the native bird population.

First it argued that using the island of Farallon de Mendinilla as a firing range is actually beneficial to the birds. Apparently,

it discourages other people from coming onto the island and posing a threat to the birds.

When this approach was rejected the Navy tried another tack. 'In some respects,' its spokesman said, 'bird-watchers get more enjoyment spotting a rare bird than they do spotting a common one.' ■



CORBIS

Sunny deceit

US – A campaign has been launched against Proctor and Gamble, makers of the drink Sunny Delight, claiming that the drink is not juice and that the company is guilty of misleading parents and children. When interviewed, 65 per cent of children and 46 per cent of adults thought that Sunny Delight was made mostly from real fruit. In fact, the drink contains less than 2 per cent of any fruit juice.

'There is nothing sunny or delightful about a junk food dressed up as a fruit juice,' said Michael F Jacobsen, executive director of the Center for Science in the Public Interest – one of the groups responsible for the campaign ■

Mobiles alter childrens' brains

UK – A two-minute call on a mobile phone can alter a child's brain activity for an hour afterwards, according to a report in the British medical journal *The Lancet*.

Doctors fear that these disturbances could lead to psychiatric problems, aggressive behaviour, a lack of concentration, memory loss and an inability to learn.

The report suggested that classroom behaviour could be affected if calls were made during break time.

One of the report's authors, Dr Michael Klieesen, said: 'We are worried that delicate balances, such as immunity to infection and disease, could be affected by interferences with chemical balances in the brain.' ■

Imported species threaten survival of native Arizona fish

US – 24 of the 32 remaining species of native fish in the state of Arizona are listed as endangered or threatened. According to *The Arizona Republic*, this is largely due to 'species imported to support the state's \$350 million sport fishing industry'.

Polluting power firm buys every house in Ohio village

US – A power company has bought an entire village which last year was afflicted by blue clouds of sulphuric acid produced by the utility's nearby coal-burning plant.

The 221 residents of Cheshire, Ohio, will all have to move. Last year they reported a range of symptoms – including burning eyes and white-coloured burns to their lips, tongues and insides of their mouths.

'This meets the needs of all involved,' said Bill Sigmon of American Electric Power (AEP).

But the village's mayor Tom Reese disagreed:

'Relocation will not be easy, especially for some whose families have lived in Cheshire for generations. It will be sad indeed to see our village disappear.'

Meanwhile, a study conducted for the Rockefeller Family Fund, predicts that in the year 2007 alone 1,400 people will die prematurely because of pollution from AEP's 21 plants across the US.

AEP was found to be the worst polluter in the study, which concluded that the 80 US power plants investigated would cause nearly 6,000 deaths that year ■

Bushmen lose vital court case

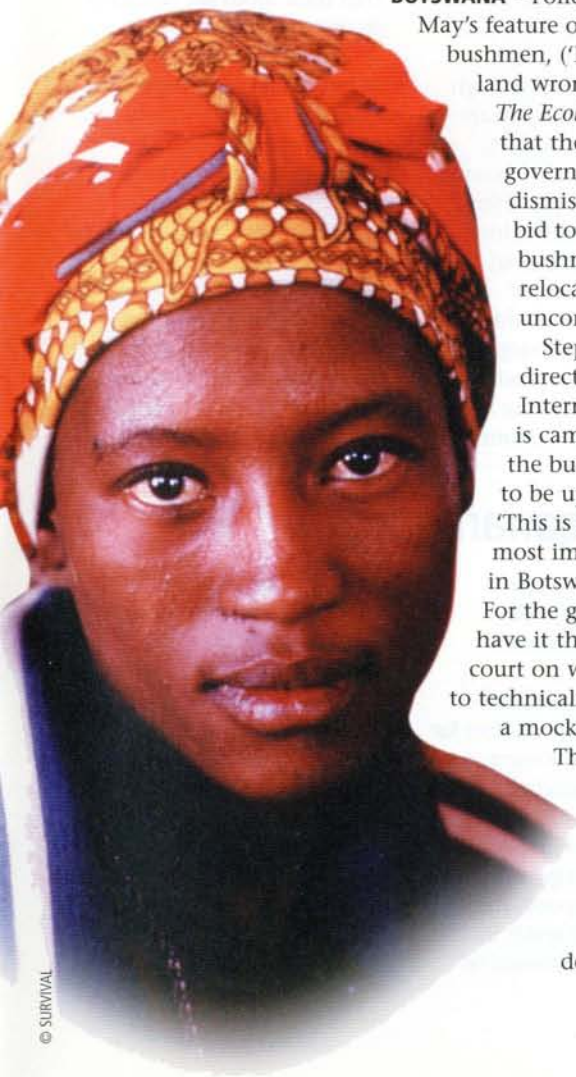
BOTSWANA – Following on from May's feature on the Kalahari bushmen, ('Land rights, land wrongs', Vol 32/4)

The Ecologist has learnt that the Botswanan government has dismissed a legal bid to declare the bushmen's forced relocation unconstitutional.

Stephen Corry, director of Survival International, which is campaigning for the bushmen's rights to be upheld, said:

'This is one of the most important cases in Botswana's history. For the government to have it thrown out of court on what amounts to technicalities just makes a mockery of justice.

The government doesn't want to develop the bushmen, it wants to destroy them.' ■



Ros COWARD



Suggest the environment should come before poverty and you might as well own up to paedophilia. Yet extreme human misery is increasingly caused by man-made ecological catastrophes.

Poverty is the concept most often used to derail environmentalists. UK development minister Clare Short asserts that so long as Third World children live in poverty the environment can never be a priority. Development charities say they will only take the environment seriously if it is coupled with poverty elimination. Even in the UK, consensus dictates that the environment is something to be tackled only after living standards have been raised. But do we really understand who is poor these days?

Any challenge to the poverty-comes-first mantra is greeted with the horror usually saved for paedophiles. But this has as much to do with challenging vested interests as offending humanitarian beliefs. There's a juggernaut of government departments, voluntary organisations and international agencies devoted to obliterating poverty – whether it's found in drought-ridden Africa or on London housing estates.

No one wants an avoidable death from starvation on their conscience. But too many assumptions about world poverty go unexamined. Take the UK, where one in three children are said to live in poverty. Really? In a society where no child dies of hunger or has to work, where all have access to free healthcare and education? The Child Poverty Action Group's (CPAG) current campaign speaks volumes: one million children need to be persuaded to overcome inhibitions and claim the free school meals that are their due. These children may be deprived and may be eating a poor diet, but it's an insult to those who are dying of starvation and thirst to call this poverty.

The CPAG's definition of child poverty is: those living in households with incomes below 50 per cent of the national average. Such an income level may be shocking, but it certainly is not 'absolute' poverty. 'Poverty' here is used to describe lives devoted to subsistence, with nothing left for the pleasures of affluence. In the Third World context, too, 'poverty' is often mobilised to describe not just catastrophic shortages but lives dominated by subsistence.

Yet there is no correlation between human happiness and freedom from a subsistence economy. In Western society, misery, depression and suicidal malaise are rampant, and seemingly growing in direct proportion to the distance moved from subsistence level. Conversely, people in poor societies are often far from unhappy. The poverty lobby gasps with horror at these points. There's nothing worse, it says, than a child forced to do chores, to walk miles for water, to look after sick relatives. How would you feel if it was your own child?

Well, my children's generation is growing up with a different kind of poverty: the poverty of affluence. Here, adolescent mental problems are spiralling out of control. Clinics are full of teenagers with eating disorders and depression. An ever increasing number of young men kill themselves. Remote from natural risks, many young people seek out more destructive extreme experiences like drug taking.

Many dismiss as obscene the suggestion that those with less might actually have more; isn't it a version of the racism inherent in the idea of the happy primitive? No, actually. That was imperialist ignorance. Times have changed. My views result from including the environment in perceptions of need; this changes our understanding of societies. A balanced relationship to the natural world is a blessing still enjoyed by some poorer countries. By contrast, the West has catastrophically undermined that relationship, creating disasters like modern food production. Aren't children suffering from BSE, cancer, diabetes and obesity as impoverished as some of their Third World counterparts?

Now we want to cure Third World poverty with Western practices which fuel global discontent and population movement. Only when these solutions have been applied, we are told, can the environment be tackled. But, increasingly man-made environmental catastrophes cause extreme human poverty. Only environmentally sensitive solutions will solve hardship in the long term.

It's time for a more truthful look at poverty. And if the poverty lobby wonders how I can see children starving and live with my conscience, I ask in return: how can it peddle sticking-plaster solutions and a view of the world which pretends poverty can be divorced from respect for the environment?

Ford plant puts Czech food at risk

CZECH REPUBLIC – The Ford Motor Company has been urged to stop construction of a manufacturing plant which opponents say will release dioxins and other toxic substances into the environment.

The plant, which is being built by Ford subsidiary NEMAK Co, is being sited on one of the last remaining tracts of farmland in north Bohemia. Environmental groups are concerned that the pollutants would increase the risk of contamination of food grown in the region. The Czech national health institute says that the country's population is already exposed to substances with dioxin-like effects at levels well above limits set by the World Health Organisation.

'Ford claims that it wants to be the world's most environmentally responsible car maker,' said Pavel Pribyl of Friends of the Earth Czech Republic. 'Yet it owns 25 per cent of NEMAK's shares. 'Ford's potential profit from this NEMAK deal will come at the expense of the Czech environment and public health.' NEMAK has shrugged off the fact that it was building the factory on a greenfield site even though brownfield sites were locally available.

'Investors like greenfield sites,' said NEMAK spokesman Pavel Kueera. 'There are brownfield sites, but why would we build a factory in the middle of a former coal pit? They would have to pave the roads with gold for us to go there.'

For more on this issue, visit: www.i-eps.cz/eng/index.html ■

WWW.I-EPS.CZ



A north Bohemian farmer stands beside the first signs of the construction work at the NEMAK factory site. The plant is likely to destroy his livelihood.



US – The Save the Manatee Club protesting the Bush administration's 'undeniable strategy to undermine the US's environmental laws'.

MARK FERRELL/FLORENZA PIRELLA

Health charity logos boost food industry profits unjustifiably

UK – Health charities do more for company profits than they do for public health when they let their logos appear on certain food products, a survey by UK food regulator the Food Commission says. Although the charities claim they are not endorsing a product, consumers inevitably assume otherwise. Logos are often found on foodstuffs with questionable nutritional benefits. The charities' endorsement also enables manufacturers to charge a premium for their products.

'It's all about making a profit,' said Food Commission

research officer Kath Dalmeny. 'Food companies use health charity logos because they want to give the impression that their foods are healthier in order to increase sales.'

'But charities and medical associations aren't there to make money for food companies. They should promote healthier affordable foods, and use every opportunity to improve public education and public health.'

Organisations whose logos are put on food products include Cancer Research Campaign, the British Heart Foundation and the British Dental Association ■

Unnecessary road will destroy beautiful Bulgarian gorge

BULGARIA – A group of Bulgarian environmentalists has been fighting for five years to save the country's beautiful Kresna Gorge. But now all that work may be wasted because of a decision which took just two days to be made.

Italian company Spea Ingegneria Europe was paid 394,000 euro by EU expansion facilitator PHARE to look into possible

alternatives to the proposed Struma highway. If routed through the gorge, the highway would destroy the landscape irrevocably.

After two days Spea presented a two-page document and several maps which concluded that no alternative was possible.

Yet the road had already been found to be unnecessary by no less than the European Court of Auditors. It said in

1999 that there was not enough traffic to justify a bigger road, let alone a highway.

'EU money was wasted once again, and a solution for the protection of Kresna Gorge was not reached,' said Stoyan Beshkov of Bulgaria's Academy of Sciences.

'The Bulgarian government is pushing the option through the gorge. It will result in violation of the Council of

Europe's Bern Convention on the Conservation of European Wildlife and Natural Habitats as well as the EU's habitat and bird directives. And it will destroy many rare species, some of them locally endemic and not found anywhere else.'

For more on this story go to www.bankwatch.org, or email Magda Stoczkiewicz of CEE Bankwatch Network via magdas@foeeurope.org ■

Monsanto and DuPont to create 'global biotechnology cartel'

US – Monsanto and DuPont are to share technologies with each other in a move that is being seen as the creation of a 'global technology cartel'. But rather than actually merge – which would provoke outrage from regulatory bodies opposed to potential monopolies – the two companies will swap key patented technologies and drop a raft of outstanding patent lawsuits against each other.

In a joint statement on the alliance, which only covers agricultural biotechnology patents, a DuPont vice president stated: 'Farmers can use the best of what both companies have to offer.' A Monsanto spokesman added: 'It's a win for farmers.'

Under the terms of the deal DuPont wins a royalty-bearing licence for Monsanto's latest infamous Roundup Ready maize and soya bean technologies. And Monsanto now has 'freedom to

operate' DuPont's maize transformation technologies.

'Exactly why this should thrill farmers is not clear,' declared Pat Mooney, executive director of the Canadian Action Group on Erosion Technology and Concentration. 'The agreement appears to encourage the two corporations to extend the use of existing technologies rather than to invent better ones. And it cuts the major players down from five to four. This means less choice and less innovation for higher prices.'

DuPont is the world's largest seed company, with sales in excess of \$1.9 billion in 2000. Monsanto is the second largest player in the global seed trade, having made sales in 2000 of £1.6bn. Together the two companies account for almost 15 per cent of global commercial seed sales. They command 41 per cent of all significant agricultural patents, and share about 93 per cent of the GM seed market worldwide ■

Eduardo GONÇALVES



With his plans to wed atomic energy with genetic engineering, Lord Rothschild was the Dr Strangelove of the biotech world

I was relieved to read the other day that the nuclear industry has all the answers to the world's global warming problems. By building more power stations, it tells us, we can have cheap (er, Sizewell?), safe (er, Chernobyl?) and clean (er, Sellafield?) energy, and everyone will be happy (er, the entire population of Ireland?). What people don't seem to understand is why it didn't come forward and tell us this before.

Actually, I have the answer. The nuclear industry has a long history of being coy – even when it has the solutions to virtually all of humanity's most pressing problems. You don't believe me? I can prove it.

Take world hunger, for instance (and you thought the GM industry had all the answers? Shame on you). Say you want to grow bigger vegetables to feed the world's poor, and you need a way of heating massive greenhouses. Plus, you need to develop different varieties of seeds to suit previously forbidding climates and soils. Then you need a vast new irrigation system to water all the greenhouses and previously arid fields. Tall order? Hell, no! The boys from the British nuclear industry have all the answers.

Or so thought the legendary Lord Rothschild, who once led the country's scientists at the UK's Agricultural Research Council. One day he hit on a terrific wheeze. He had discovered a way to grow huge tomatoes in south Wales at hardly any cost at all. All you needed was to pipe waste steam from a nuclear power station built next door to row upon row of giant greenhouses. He called straight away for 'an investigation into the cost of growing tomatoes under glass using a future type of reactor as a source of heat'. Oddly enough, the Atomic Energy Authority was not as keen on the idea as Rothschild. Politely, they suggested that the cost might be somewhat higher than he had anticipated. Never fear, came back Rothschild. Use plastic instead of glass.

Not one to be put off by the weak-minded mortals he had to deal with, Rothschild then hit upon another brilliant idea: using radiation to create new varieties of plants, so that flowers could be prettier and vegetables more plentiful. Here, he seems to have had more luck. According to Public Records Office documents, some research in the 1950s did indeed go into the 'irradiation of seeds to produce mutations of agricultural and horticultural interest'. In 1950, for example, a Professor Stroughton of Reading University irradiated nine flower seeds which resulted in 'mutations of size, colour and form'. Sadly, say the files, subsequent experiments with rhododendrons resulted in 'overcooking'. Rothschild's researchers also irradiated tobacco seeds for an Italian company, although the lord wryly suggested that his Italian tobacco work did 'not justify a press release'. You see what I mean about these guys? Credit where credit is due, surely?

If only others had recognised the real value of Rothschild's experiments. Surely then, today's world would be a much better place. That seems to have been Rothschild's message for Levi Strauss, head of the US Atomic Energy Commission and with whom Rothschild discussed his wonderful views. Yet even Strauss apparently displayed some coolness. 'This subject [is] not being tackled with sufficient intensity in the UK,' he later wrote. 'Our geneticists are not wildly enthusiastic [because] they are not convinced that irradiation is a markedly superior way of getting useful mutations.' Tsk. Tsk.

Perhaps the real reason why Rothschild's ideas flopped is because he never found a way to irrigate those mile-long greenhouses full of genetically mutated tomatoes. If only he could have asked the Chinese. They had it all worked out.

True, it's taken them a while. But in 1996 they finally worked out a way of irrigating the huge, inhospitable and barren Taklimakan Desert, and turn it into a green field of plenty. They detonated a series of 'peaceful nuclear explosions'. Using several megaton bombs, the Chinese would 'dig' a 500-mile underwater canal to carry water from a distant river into this huge area of north-western China near the country's border with Kazakhstan. You couldn't make it up.

PCB pollution 8.5 million times above recommended levels

CANADA – Montreal's Technoparc Saint-Laurent is releasing PCBs into the St Lawrence river in concentrations that exceed government guidelines by more than 8.5 million times. The claim was made in a report by the Environmental Bureau of Investigation (EBI).

'This report is real evidence of a real environmental crime,' said Mark Mattson, executive director of the private, non-profit-making EBI.

Technoparc is a 30 million square foot site about 15 minutes from Montreal. About 5,000 people work on the site carrying out research for aerospace, telecommunications, pharmaceutical and biotechnology companies ■



Rich countries' environments no cleaner than poor

WORLD – A global index of nations' environmental sustainability ranks the US 45th, and the UK a dismal 95th.

The results of the 2002 Environmental Sustainability Index, which were published by the World Economics Forum (WEF), would seem to negate the argument that economic progress necessarily brings with it improvements to the environment.

'The index shows that a nation's economic status does not necessarily predict its environmental success,' said Marc Levy of Columbia University's Center for International Earth Science Information Network (CIESIN). Levy's centre undertook the project in cooperation with Yale University and the WEF.

Peter Cornelius, of the WEF's Global Leaders for Tomorrow environmental task force, added: 'Every country has room for improvement. No country can be said to be on a truly sustainable path.' To see the entire results, visit the CIESIN website at www.ciesin.columbia.edu/indicators/ESI ■

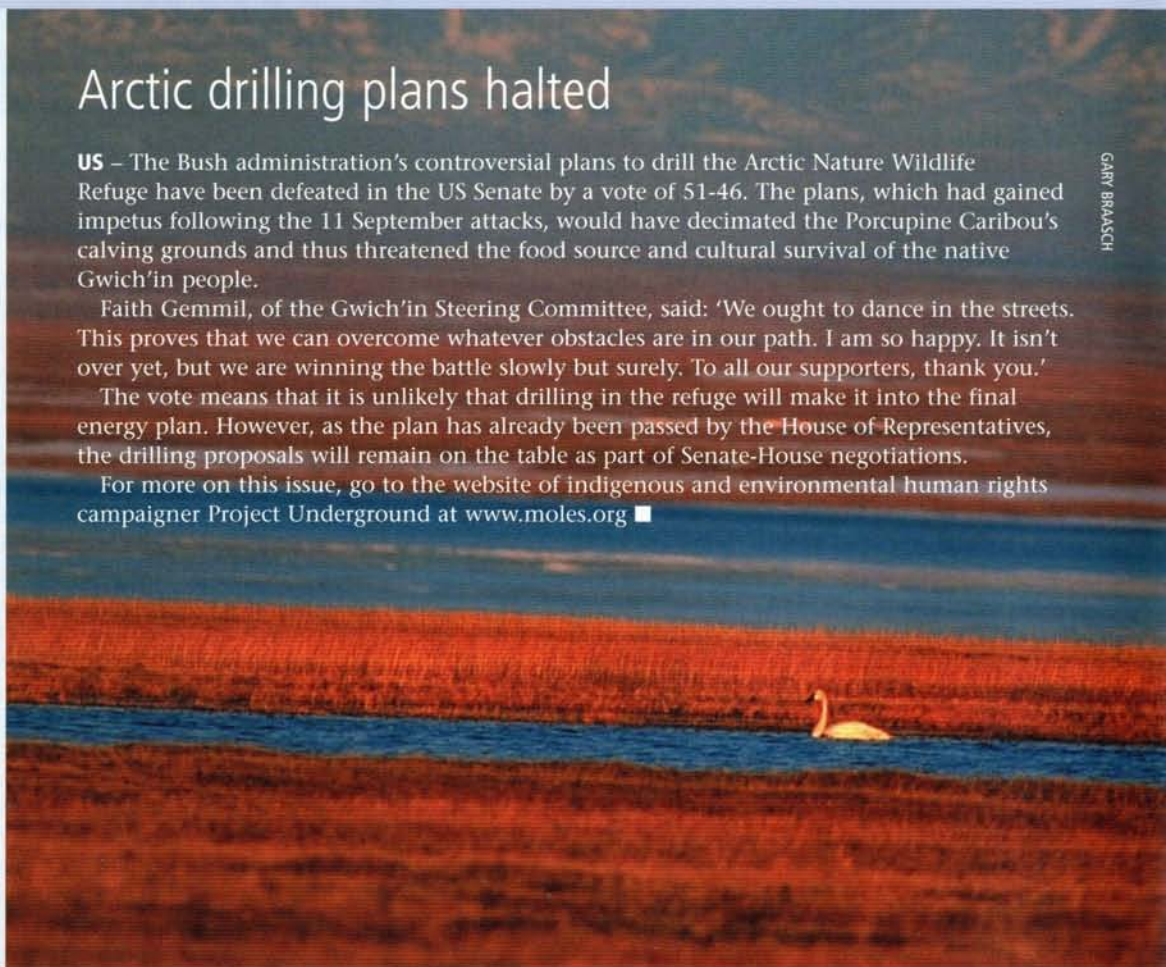
Arctic drilling plans halted

US – The Bush administration's controversial plans to drill the Arctic Nature Wildlife Refuge have been defeated in the US Senate by a vote of 51-46. The plans, which had gained impetus following the 11 September attacks, would have decimated the Porcupine Caribou's calving grounds and thus threatened the food source and cultural survival of the native Gwich'in people.

Faith Gemmil, of the Gwich'in Steering Committee, said: 'We ought to dance in the streets. This proves that we can overcome whatever obstacles are in our path. I am so happy. It isn't over yet, but we are winning the battle slowly but surely. To all our supporters, thank you.'

The vote means that it is unlikely that drilling in the refuge will make it into the final energy plan. However, as the plan has already been passed by the House of Representatives, the drilling proposals will remain on the table as part of Senate-House negotiations.

For more on this issue, go to the website of indigenous and environmental human rights campaigner Project Underground at www.moles.org ■



GARY BRASCH

Drugs war's true cost

COLOMBIA – Some 7,000 hectares of food crops have been damaged by a campaign of aerial herbicide spraying in Colombia. Plan Colombia, the US-sponsored effort to eliminate the country's cocaine and heroin fields, has also been linked to 4,000 cases of humans and 178,000 cases of animals with serious skin, eye, respiratory and digestive problems ■

Birth defects linked to landfill

UK – Children born to mothers living near hazardous waste landfills are 40 per cent more likely to develop chromosomal abnormalities, according to a study by a team from the

London School of Hygiene and Tropical Medicine. The study also found that such children were one third more likely to suffer from non-chromosomal abnormalities like cleft palate ■

GM breast milk – what next?

US – Genetically modified rice containing protein from human breast milk could be used to enhance infant formula, according to report in Nature. Scientists at the University of California have adapted rice plants to carry a human gene for a milk enzyme called lactoferrin.

STAN AT EASE by Stan Eales

CONTEMPORARY CLONES

POLITICIANS...



POP GROUPS...



CARS...



MODELS...



FILMS...



TEENAGERS...



Secret EU plans to sell off essential services exposed

EUROPE – The European Union (EU) is plotting to use the General Agreement on Trade in Services (GATS) to force open essential service sectors to private competition in 29 selected countries. According to EU plans leaked to the World Development Movement (WDM), the countries targeted include India, Canada, Egypt, Mexico and the US.

The WDM declared: 'The EU is preparing to trample all over sustainable development objectives in the naked pursuit of the interests of European multinational corporations.' Services that will be affected include water supplies, electricity generation and telecommunications. GATS is currently being negotiated by the WTO.

The EU is specifically demanding the scrapping of laws allowing developing countries to regulate foreign investment. These include: laws in Malaysia which ban purely speculative land purchases, and subject takeovers by foreign corporations to government approval; Egyptian laws which limit the number of hotels and bank branches according to an economic needs test; and rules in Mexico and Chile which restrict ownership of land along the countries' coasts.

WDM campaigner Clare Joy said: 'This demonstrates the extent to which Europe's negotiating priorities reflect the interests of European business alone. They target essential services, such as water distribution, where there is no evidence that liberalisation benefits the poor.' ■

Monsanto to silence critic

www.monsanto.org a website that is critical of Monsanto's practices and products, could be nearing the end of its life. In April the owners of the site received a complaint from Monsanto's Chicago based lawyers, Ladas and Parry. Depending on the outcome of the arbitration, the website may soon be offline. Interested parties are therefore advised to log on and copy the information while it is still available.

Last hope to save Iberian Lynx?

SPAIN – Following on from an article in the February *Ecologist* (The Algarve tiger Vol32/1), two Iberian lynx cubs are now safe in captivity. It is hoped they will form part of a breeding plan to save the world's most endangered big cat. The two cubs – named Aura and Saliega – are both reported to be in good health ■

EDUARDO GONÇALVES



Paul KINGSNORTH



The Reverend Billy, spiritual leader of the Church of Stop Shopping, is a man on a mission. He spreads a gospel of anti-consumerism where angels fear to sip latté.

It is a cold winter afternoon, and I am sitting outside the biggest Starbucks in Manhattan, drinking – for reasons of camouflage – the cheapest coffee it sells. Ten minutes late, a man with a vast bouffant of bottle-blond hair, and a grin so toothy you can see your face in it, pulls up on a bicycle and greets me with a large outstretched hand. 'You must be Paul,' he says. 'You didn't pay for that, did you?'

The Reverend Billy (for it is he) escorts me across the square to a truck where a friend of his sells much better coffee. Billy will not drink in Starbucks. He is, however, quite happy to hang around on the premises. Usually, though, he is not a valued customer. For when the Reverend Billy, spiritual leader of the Church of Stop Shopping, visits Starbucks, he is on a mission: to convert the heathen.

He enters the premises and begins to spread a gospel of anti-consumerism. Sometimes he will stand and – in his booming voice, his dog collar and white tuxedo – deliver a sermon on the evils of consumerism and sweatshops and the perils faced by New York's independent coffee houses. On other occasions he will organise performances. Fellow participants will: pose as customers and talk excitedly about how they're about to have sex in the toilets; pretend to be recently-released prisoners discovering they glued the Starbucks packaging themselves while inside; discuss loudly the bovine growth hormones in the milk; and say things like 'we have global logo tattoos on our genitals because we are good Americans'.

Starbucks hates the Reverend Billy. The Reverend Billy has an uncanny ability to empty out Starbucks branches in a very short time. Such is Starbucks' loathing of the reverend that it sent a memo to all its staff entitled 'What to do if the Reverend Billy is in your store'. Read it, along with suggested scripts for your own Starbucks performance, at www.revilly.com.

The point of all this, Billy explains as we sip our non-Starbucks coffee, is to take on this monster coffee chain in a way that will make people sit up and think. You could write letters to Starbucks, or hold demos which no-one would attend. Or you could drink coffee elsewhere. But it wouldn't make much of an impact. Billy does make an impact, because he has an entirely different approach, one that is creative, cunning and thespian – he used to be an actor. In a society saturated by adverts, marketing and wall-to-wall consumerism, new approaches are needed to get alternative messages across. This, in a nutshell, is culture jamming.

A mile or so away from Billy's 'favourite' Starbucks is Times Square. Here, a group calling themselves the Surveillance Camera Players is performing subversive street theatre into the lens of a surveillance camera. The point is to make people think about how they are being watched. Meanwhile, over in San Francisco, the Billboard Liberation Front and the California Department of Corrections are smoothly altering the billboard ads that corporations pay through the nose for, and putting out an anti-consumerist message instead. Elsewhere, the Biotic Baking Brigade is throwing pies in the face of the powerful. And a scurrilous bunch known as the Yes Men is posing as WTO executives – giving speeches at business gatherings in favour of slavery and the punishment of idle employees by electric shocks. These are just the tip of a very subversive iceberg.

This is activism for and by the consumer generation. How can such a modern phenomenon as mass consumerism be tackled with traditional methods of protest like banners, marches and letters to the editor? It can't, say the culture jammers. They say the way forward is to take on the purveyors of the buy-it-all, buy-it-now culture on their own turf. Subvert their message by stealing their methods. Could Starbucks' profit margins ever be threatened by a crusader in a dog collar? Who knows? But even if the reverend fails in his mission, at least he can say: 'Whatever else happens, I'm having a lot of fun.'



Digest

'Under the presidency of George W Bush the environmental and energy policies of our government are completely dominated by a group of former oil and chemical company executives who are trying to dismantle the US's ability to force them to reduce the extremely dangerous levels of pollution in the Earth's atmosphere.' AL GORE

'This foreign policy stuff is a little frustrating.' GEORGE W BUSH

ON THE PAYROLL OF THE DRUG GIANTS

- In 1999 the US's National Institutes of Health (NIH) provided \$17.8 billion for research – most of which was for basic research only. The country's top 10 drug companies, meanwhile, spent \$22.7 billion, primarily on clinical research.
- More than half of the research activity in many university UK hospitals would collapse if financial support from drug companies (or other third-party funding) was not available, according to an April 2000 report in the *British Medical Journal*.
- Up to 90 per cent of the published research into a drug is often sponsored by the very same industry that made it.
- 170 per cent of the money for clinical drug trials in the US comes from industry rather than from the NIH.
- Worldwide, the drug industry generates \$6 billion yearly for clinical drug trials. Of that figure, \$3.3 billion goes to US researchers.
- Industry funding for academic research in the US increased eight-fold between 1980 and 1997.

THE RESULT...

- 98 per cent of papers on industry-sponsored research reflected favourably on the drug in question, according to a 1996 study in the *Annals of Internal Medicine*.

THIS INFORMATION WAS EXTRACTED FROM AN ARTICLE APPEARING ON THE THIRD WORLD NETWORK.

BUSH'S KEN LAY DECLARES MORAL BANKRUPTCY

Legal move cements Enron CEO's sleazebag status

In an attempt to protect his personal finances from shareholder lawsuits and IRS tax liens, embattled former Enron boss Kenneth Lay has taken the unusual step of declaring moral bankruptcy.

'Mr Lay has been morally bankrupt for some time,' said Lay legal team member David Wharton. 'All this move does is make Lay a sleazebag in the eyes of the law.'

While declaring moral bankruptcy would be an unusual step for most

Americans to take, legal experts say it is a legal tool widely used by swindlers, chisellers and lying scumbags.

Lay's move may have been inspired by recent difficulties he encountered while filling out his 2001 tax returns. In particular, he failed to produce the receipt for an \$8.9 million lunch he enjoyed at an Applebee's restaurant in Springfield, Missouri.

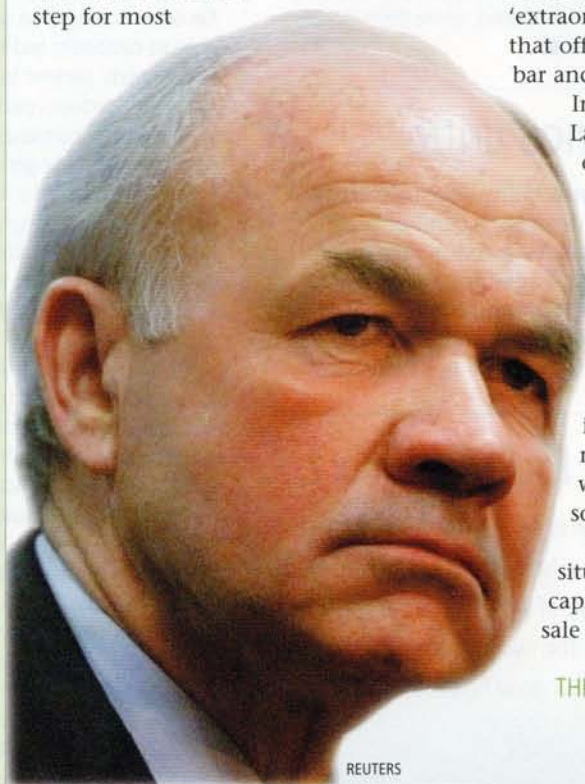
The Applebee's deduction set off alarm bells at the IRS. Auditors noted that the amount seemed 'extraordinarily high' for a restaurant that offers an all-you-can-eat salad bar and free refills of Sprite.

In addition, the IRS questioned Lay's inclusion on his return of 19 different dependents.

Many of their names, such as 'Spot' and 'Fluffy', raised eyebrows at the federal tax agency.

When challenged by the IRS, Lay and his wife Linda said that they could not recall whether the dependents were in fact children or merely mammals. But they said they would look into the matter 'as soon as possible'.

Further complicating Lay's tax situation, sources say, are the capital gains that resulted from the sale in early 2001 of his soul.



REUTERS

THIS ARTICLE FIRST APPEARED ON THE BUSHWATCH WEBSITE

MCDONALD'S SOCIAL RESPONSIBILITY REPORT A MCFANTASY

The 14 April McDonald's Report on Corporate Social Responsibility www.mcdonalds.com/corporate/social/report/index.html is a low water mark for the concept of sustainability and the promise of corporate social responsibility.

The McDonald's Social Responsibility Report is like Ronald McDonald-a fantasy. It presupposes that we can continue to have a global chain of restaurants that serves fried, sugary junk food that is produced by an agricultural system of monocultures, monopolies, standardisation and destruction, and at the same time find a path to sustainability. As the founder of The Natural Step (TNS) in the United States, I can say that nothing could be further from the idea of sustainability than the McDonald's Corporation.

EXTRACTED FROM AN ARTICLE BY PAUL HAWKEN ON THE FOOD FIRST WEBSITE

Focusing on magazines, websites and newsletters that the mainstream often ignores, *The Ecologist's* new monthly Digest brings you a roundup of the best environmental stories from around the world.

PR FIRM 'BRANDS' CRISIS MANAGEMENT

Spokesmen, logos, jingles, slogans, swooning models and a talking dog or two. This is the typical advertising agency arsenal. Now add counter-terrorism to the list.

Ogilvy Public Relations Worldwide, one of the largest public relations concerns on the planet, has established Counter Threat – a new division meant to usher corporate clients into the potential dangers of a post-11 September world.

Kamer Davis, the co-ordinator of the service, says: 'The terrorist attacks have brought home the idea to many companies that they can be seriously affected by things completely beyond their control and out of their own geography.'

It must be a sobering moment for an industry preoccupied with getting and spending. Ogilvy plans to offer 'emergency scenario-based' exercises for employees, crisis counselling, and threat

assessment of telephones, computer data and internet resources. The services are based on work the agency has done for federal, state and local agencies. The market, Ogilvy believes, is expanding. 'The corporate sector can't afford to ignore this any more,' says Davis.

But critics believe Counter Threat is a wily marketing move by Ogilvy, which counts Coca-Cola and drug giant Pfizer as clients. 'This is an effort to be taken more seriously, to get really close to clients, right down to their desk drawers,' says Richard Linnet, a columnist for *Advertising Age*.

'Ogilvy is reinventing some old stuff, but they're getting beyond advertising. Anti-terrorism services are another way to tap into more business, to be needed on a very basic level.'

EXTRACTED FROM AN ARTICLE
BY JENNIFER HARPER IN *INSIGHT*
MAGAZINE, 22 APRIL, 2002.

ORGANOPHOSPHATE DIPS DAMAGE WORKERS' HEALTH

Research published in *The Lancet* shows that organophosphate sheep dips are damaging workers' health. Lead researcher Professor Nicola Cherry said: 'The results provide support to those who believe that repeated exposure to organophosphates may cause chronic ill health.' Farm-worker symptoms include fatigue, memory loss, weakness, joint and muscle pain, and depression after coming into contact with sheep dip. Elizabeth Sigmund, from the Organophosphate Information Network, said: 'We have just had a lot of court cases struck out due to lack of evidence. This study would have made a great deal of difference.'

TAKEN FROM *HAZARDS* APRIL, 2002

IGNORING NUCLEAR PROTESTS

Krasnoyarsk is a city of a million inhabitants located in the Siberian part of Russia near where the country's spent nuclear fuel is stored. A local citizens' committee collected over 100,000 signatures for a regional referendum over whether to stop the storage, reprocessing and dumping of nuclear waste in the region.

Normally, a regional referendum requires the collection of 35,000 signatures. In February, however, the Krasnoyarsk election committee decided to accept only 4,000 of the

100,000 signatures, thereby stopping the referendum.

Secret plans have also been made to store the imported radioactive waste on an uninhabited Russian island in the Pacific. Simushir Island has elevated seismic activity, which is not conducive to safe storage of nuclear waste.

The plans for the storage at Simushir of radioactive waste from Taiwan were discovered by the environmental NGO Ecodefense in March. Several NGOs have protested these (possibly illegal) proposals.

FROM *SUSTAINABLE ENERGY NEWS*, MARCH/APRIL 2002

Highs and Lows

Looking back at 32 years of *The Ecologist's* analysis of the real state of the world.

32 years ago



We used to hear a lot about rights from the US. Now we hear a lot about conservation. In Alaska, the US administration has the opportunity to demonstrate its sincerity (or lack of it) about both. If it rejects it we may one day recall the words of Alaskan senator Ted Stevens. Exasperated by the killjoy meddling of the ecologists, Stevens was driven to quote a dictionary definition of ecology. 'Ecology deals with the relationships between living organisms... but there are no living organisms on the North Slope.' We may scoff at his ignorance, but one day the senator may be hailed for his prescience.

From 'Eskimo Knell', by Robert Allen, Vol 1/1 July 1970

20 years ago



It is not so much that we are systematically annihilating life on this planet, but that there is nothing really being done about it – and, worse still, nobody cares. 'For want of interest, the future has been cancelled', ran the title of

Paul Ehrlich's film.

'Editorial', Edward Goldsmith, Vol 12/3 May/June 1982

10 years ago



For the poor, the landless, those who have been marginalised by the development process, and those whose livelihoods are under threat, 'new and additional funds' hold no attractions.

The solutions they seek are not financial, but political and cultural. Their concern is not to fund inherently destructive projects, but to stop such projects. It does not cost money to reduce consumption in the North, to reclaim large plantations for peasant agriculture or to plant the trees that will restore their ravaged homelands. But it does require addressing the problems of who owns the land, who controls decision making, who should manage the commons, and in whose interest.

'Green dollars, green menace', Oliver Tickell and Nicholas Hildyard, Vol 22/3, May/June 1992

THE CONCLUSIVE PROOF ARGUMENT by Barry Trower

Government scientists will often ask for conclusive proof when they are challenged. Yet the fact is, scientifically, conclusive proof is impossible to obtain. Let me explain.

I was at a legal hearing in Torquay representing a community, and the opposing barrister, who was representing the communications industry, said: 'There is no conclusive proof that these microwaves will cause damage.'

I argued: 'If somebody stood up and shot me in this court room there would be three levels of proof.'

'You would have everybody as a witness, and that would be accepted in a court of law.'

'A pathologist could perform a post mortem and decide that the bullet killed me, and that would be a second level of proof.'

'If, however, you wanted conclusive proof that the bullet killed me, you would have to argue that at the split second the bullet went into my body every system in my body was working perfectly.'

'There are thousands of reasons why I could drop dead on the spot before the bullet went in.'

'Clearly, this is scientifically impossible. There is no such thing as conclusive proof. Yet it is what is demanded by government scientists when their decisions are challenged.'

'Conclusive proof has been demanded by scientists defending their decisions after they have said the following are safe: thalidomide; asbestos; smoking; sheep dip; GM foods; and vitamin B6.'

'With the above list, it will be recognised that evidence of damage comes only from counting the people who are injured.'

'I am arguing scientifically that there is blanket denial by some scientists. The only way to show them they are wrong is to present them with a certain number of bodies.'

'When commercial interests are at stake there seems to be a denial of relevant scientific data. The problem with the microwave communications industry is that it does not have to prove it is safe. *You* have to prove it is *not*, and that is an entirely different ball game.'

'As a scientist, if I develop a new pill I have to run a five- or 10-year clinical trial and convince a board of my peers

The top five patents on life

NB: EP = European patent only; WO = world patent, which includes EP

1 EP 744 888 SUPER MAIZE

This one has it all. Granted to the US chemical firm DuPont de Nemours, it patents all maize varieties (not just GM varieties, but traditionally bred ones too) with a fat content above a certain percentage – as well as the use of the products derived from these maize varieties.

As special maize varieties with both higher and lower contents of fat have been known to exist and have been bred for more than 5,000 years in South America, this is blatant biopiracy.

2 EP 412 006 TERMINATOR

This technology makes it impossible to save seeds, as the reproducing genes are 'shut off' by a chemical process. Currently banned in Europe, but the patent has been granted to Belgium's Plant Genetics Systems (partly owned by Aventis and Hoechst) in case the European ban is lifted.

3 EP 169 672 ONCOMOUSE

Held by Harvard University in the US. A genetically modified mouse designed for human cancer research. This patent was granted in 1992. It has been upheld since that time despite numerous lawsuits and the fact that these types of cancer research 'tools' are seen as unethical by many people.

4 WO 942627A1 POSITECH

This is a technology that makes it possible to 'see' if the transfer of a specific gene to a plant has succeeded without the use of resistance to antibiotics. The patent, which is held by Syngenta, covers all technology using positive selection and, therefore, forces other GM researchers to use inherently dangerous antibiotic resistance technology or enter into an agreement with Syngenta. Researchers then have to pay a 'reasonable fee' and give Syngenta first rights to any results. They are forbidden to share the latter with any third parties. The even riskier, antibiotic marker technology is the subject of a US patent held by Monsanto.

5 EP 576483 MIRABILIS JALAPA (PICTURED)

Another classic case of biopiracy.

The patent, shortly to be granted to Syngenta, covers essential ingredients and genes of the Peruvian 'miracle plant' (left), and the uses of these ingredients to treat fungal infections. The plant is used as a medicinal plant in Peru on a daily basis, but the European Patent Office still intends to award the patent. The Peruvian communities who developed the plant's uses have not been compensated at all for what is, among other things, the effective ban of their product from Western markets.



THIS LIST WAS FOUND IN THE APRIL 2002 ISSUE OF *THE EARTH CRIMES*.

that it is safe before I have permission to release the pill onto the market.

'With the telecommunications industry the tables are completely turned around. They do not have to show these instruments are safe. You have to show they are not.'

EDITED FROM A CONFIDENTIAL REPORT FOR THE POLICE FEDERATION OF ENGLAND AND WALES ON TETRA (THE NEW HIGH-FREQUENCY POLICE COMMUNICATIONS NETWORK) FROM THE WEBSITE OF THE CAMPAIGN FOR PLANNING SANITY (WWW.CFPS.FSNET.CO.UK)

- Of the approximately 9,900 bird species in the world, 12 per cent are threatened with extinction.
- 99 per cent of threatened birds are at risk because of human activities such as agriculture, logging and trapping.
- In 1994 out of a total of 17 different species of penguin, five were at risk. By 2001 that number was 10.
- 95 per cent of Singapore's native lowland forest has been lost, and with it 61 species of birds.

THE REVOLVING DOOR

Under Bush, pharma-politics centres around the Health and Human Services Transition Team. Its job? To advise the Oval Office on new policy directions (eg, the role of the Food and Drug Administration, Medicare prescription-drug benefits, and the privatisation of Medicaid programmes), and recommend candidates for administrative positions. Of the 46 members, 31 were previously lobbyists or representatives of the pharmaceutical and health insurance industries. These appointees include Raymond Gilmartin, Debbie Holt and Anne Mari Lynch.

■ Gilmartin is CEO of pharmaceuticals firm Merck & Co. He personally contributed \$32,000 to the Republicans. Merck gave \$526,534 in combined contributions – 78 per cent to the Republicans. In 1999, Merck reported lobbying expenditures of \$5,320,000.

■ Holt is director of public affairs for medicines manufacturer Eli Lilly. The company contributed \$1,636,995 during the 2000 election cycle – 82 per cent to the Republican Party. In 1999, Lilly reported lobbying expenditures in excess of \$4 million.

■ Lynch is vice president for policy of the Pharmaceutical Research and Manufacturers of America (PhRMA) – perhaps the major player in pharma-politics. The lobby contributed \$454,332 during the 2000 elections, with 92 per cent going to Republicans, and contributed \$100,000 to the Bush inauguration. In 1999, PhRMA reported lobbying expenditures of \$5,020,000.

TAKEN FROM *ADBUSTERS* MAY/JUNE 2002

SOMETHING FISHY

CHINA – Biologists at the National University of Singapore have created transgenic zebra fish that flash fluorescent red and green when exposed to toxic chemicals.

Project leader Zhiyuan Gong boasts that 'bio-monitoring fish' are the perfect tool to check 'aquatic environment and water quality'.

On the other fin, Richard Winn, of the Aquatic Biotechnology and Environmental lab at the University of Georgia in the US, worries that the consequences of releasing transgenic



fish into the environment could result in the localised extinction of native species.

Since zebra fish rely on colour as a 'mate-attraction strategy', these flashy man-made creatures might have an edge over nature's originals.

TAKEN FROM *EARTH ISLAND JOURNAL*, SUMMER 2002

WORLD BANK OFFICIAL PLEADS GUILTY TO CORRUPTION

A senior World Bank employee supervising a major project in Kenya has pleaded guilty to charges of corruption. He admitted to entertaining a request for a kickback from a Kenyan government official involved in a roads project.

The bank's own investigations have also shown that a company which had been given two contracts under the project had paid bribes to one of its employees and a Kenyan official.

This puts the project concerned – the Kenyan Urban Transport Infrastructure Project (KUTIP), whose funds the bank cut off last October – in more trouble.

The man on the spot is a former senior World Bank official – Gautam Sengupta. Sengupta worked in Washington as the task manager for KUTIP.

A statement from the bank revealed that Sengupta recently admitted in a US federal court that he received a request from a foreign government official for a \$50,000 payment.

The statement added that Sengupta also admitted that he agreed to pass on the request. He said he did so with the knowledge that the payment was to corruptly influence the Kenyan official.

Sengupta is yet to be sentenced by the court.

TAKEN FROM *ALLAFRICA.COM*

- At one time, 111 bird species were native to Hawaii. Now, 51 are extinct, and 30 are threatened.
- Between 450,000 and 600,000 live birds are traded each year. 40-50 per cent of them are sent to the US. Especially popular are macaws, cockatoos and parrots.
- Intensive trapping, exacerbated by habitat loss, has reduced the wild population of Brazil's brilliant blue Lear's Macaw to approximately 150 individuals. In the 1990s, about 15-20

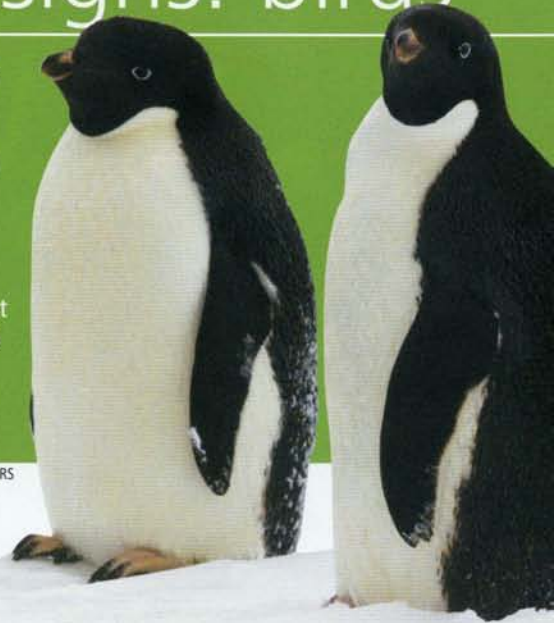
TAKEN FROM *VITAL SIGNS 2001-2002* (PUBLISHED BY EARTHSCAN)

vital signs: birds

Lear's Macaws were being stolen from the wild a year.

- As a species' vulnerability increases, so does its value.
- In the US and Canada, there are now roughly 1,600 breeding pairs of the once endangered Peregrine Falcon. That is up from 324 pairs in 1975. The bird's recovery is largely due to a 1972 ban on the insecticide DDT.

REUTERS



Fire and rain

It's known as 'The Hungriest Country on Earth'.

Life expectancy is only 47 years; one in four children dies before the age of five; and three quarters of the population have no access to clean water. Now Somalia is facing another drought, predicted to be worse than the one that killed more than 200,000 people 10 years ago. Jeremy Smith spoke to Somali environmental activist Fatima Jibrell about her country, its problems, and why she has no faith in the UN.

Considering the endless cycle of televised appeals, the global conferences to alleviate hunger and the ubiquitous twentysomethings standing on street corners asking us to fill out direct debit forms, one might assume that the more that rich countries give to the Third World, the better things would be there.

So when the United Nations Development Project (UNDP) said recently that it was planning to return with 'interventionist strategies', everyone must have breathed a sigh of relief. Help was on its way at last. In the hotel where we meet I ask Fatima Jibrell what she thinks of the news.

'I don't think the UNDP – or any UN agency, for that matter – will make any difference if it comes back to Somalia,' she tells me. 'And if it doesn't come, it won't be missed. If the UN comes, it just stays and rents a big house and drives its cars around and then leaves. I don't see any improvement. You tell me where it is working?'

To understand her answer, and to understand why so many other Somalis have such a mistrust of outside aid, one needs to know something of Jibrell's, and Somalia's, history.

54-year-old Fatima Jibrell first awoke to the severity of Somalia's plight when she returned to the country after attending university in the US. As a student she had campaigned for the world to do something to stop the fighting in her country, to stop arming the warring factions, so that Somalia



might be given a chance to find peace. Returning home she saw thousands starving as millions of dollars were spent on a useless war, and watched as the baby goats she had played with as a child were unable to find enough food to eat, because all the acacia trees whose leaves formed the staple of their diet were being felled to fuel the country's most economically profitable, if environmentally destructive industry – the production of charcoal.

But rather than give up, or leave the country, Jibrell committed herself to working to bring about the changes that might help her country recover. To this end she has set up and worked with numerous different groups. Though they may work in disparate fields, all these groups are driven by the same ethos. As Jibrell insists: Somalia's future can only be built from inside Somalia, by the Somali people using their own indigenous knowledge and resources.

The list of these groups is impressive. Jibrell was instrumental in creating the Women's Coalition for Peace, set up to counter political crisis in the Puntland region of north-east Somalia. She is co-ordinator of the Resource Management Somalia Network, which unites environmental groups across the Horn of Africa. And she has joined with several villages in the region of eastern Sanaag to form the Buran Rural Institute. Last May the institute organised a camel caravan: young people loaded tents and equipment onto camels and spent three weeks walking through nomadic areas. The volunteers educated people about how to use and protect their fragile resources, healthcare and livestock, and how to live peacefully with one another.

But her most notable

success is her work with Horn of Africa Relief and Development Organisation, which she founded and still runs. This year, that work has been awarded with a Goldman Prize – environmentalism's equivalent of a Nobel. And Jibrell is en route for the US to receive her award when I meet her.

Somalia's Black Gold

Traditionally Somalia only produced charcoal for its own local market, employing a small number of people. However, ever since the collapse of the country's central government in 1991 and the ensuing civil war, the lack of central control has led to widespread, environmentally destructive logging, accompanied by inter-clan warring over control of the trade. Following the livestock export ban imposed by the Gulf States in 2000, charcoal replaced beef as the number one export, earning it the sobriquet Somalia's Black Gold. However, like oil, this black gold comes with a heavy price for the environment.

At the height of the trade, hundreds of square kilometres of trees were being cleared a month. Once the trees have been burned, the scarred land that remains cannot support life.

Most of the trees felled are acacia, important in Somalia, not least because the leaves provide food and shelter for the livestock that forms the basis of Somalis' traditional diet. Full-grown trees, which are aged between 50 and 500 years, were being turned into charcoal and exported at the staggering rate of 30,000 tonnes a month.

In addition, many other bushes and

plants in the logging areas are used as kindling to help burn the larger trees. This is a dangerous process that can cause runaway forest fires which wipe out hundreds of kilometres of much needed bush and forest at a time.

Finally, the trucks that carry the charcoal leave rutted tracks in their wake. These tracks end up as eroded gullies when the rains came.

Working with her group, Jibrell trained a team of young people to organise awareness campaigns telling people about the irreversible damage the charcoal trade caused. This culminated in a peace march through Puntland's main town, calling for an end to the 'charcoal wars' being fought by the different clans over control of the trade.

It worked. In 2000 the Puntland regional government banned the export of charcoal. The ban has remained in place ever since, and has resulted in an 80 per cent reduction in charcoal exports.

But Jibrell was aware that it was not enough just to stop the trade. She had to offer sustainable alternatives. So, at the same time as she was explaining to people why they must stop making and using charcoal, she promoted the use of simple solar cookers – so breaking the domestic dependence on charcoal, replacing it with a clean, and cheaper alternative. ♣

CORBIS



SOMALIA

Old glories

She may have won an 'Environmental Nobel' for her efforts, but Jibrell would rather emphasise that she was just part of a team and is reticent about any discussion of the prize itself. She seems utterly unimpressed by the trappings of so-called Western progress. She has good reason.

'Somalia was not always like this,' she says, adding that, in order to learn how her country can survive, she spends much of her time speaking with and listening to the many nomadic peoples that make up nearly 80 per cent of her country's population. It is their indigenous knowledge, she insists, passed on from generation to generation of pastoralists who have lived and survived in Somalia's difficult conditions, that holds the key to her country's future.

'In the past,' she continues, 'before the arrival of the colonialists, these nomads had their own way of protecting against the cycle of drought. When the weathers were good, they would take their cattle far away from the watering holes and leave the land nearest the water, which is, of course, the most fertile, untouched. When the droughts did come they could return to these fields that they had saved, which now would be the only ones still rich with water.'

All this changed with the arrival of first the British and then the Italians in

the 19th century. For the Somalis, surviving for themselves was no longer enough. Now they had to compete for a share in the markets for which the Europeans compelled them to work. Inevitably greed got the better of some, who rejected all that their old wisdom had taught, and began to farm the land near the water holes in the search for quick profits. Fighting broke out over who controlled these profitable lands. And then, when the inevitable droughts returned, there were no fertile pastures to return to.

So began Somalia's collapse, a century of division and drought where tribes fought one another relentlessly, while the people starved in their thousands.

In 1992, with the country torn apart by civil war and facing the worst drought in a decade, the international community finally acted. (Actually it had been acting all along behind the scenes, supplying arms and influence, with the US alone providing Somalia with military aid worth \$390 million between 1980 and 1989).

In December of that year, 28,000 US Navy Seals and Marines charged up Mogadishu beach to the delight of the attendant crowd of camera crews and reporters, all of whom

had been briefed by the Defense Department in advance of the landing. What followed was one of the most painful episodes in recent US and Somali history, jingoistically recast last year in the US' favour by Ridley Scott's film, 'Black Hawk Down'. The tragically misnamed Operation Restore Hope was a cruel and unmitigated disaster, in which 10,000 Somalis died, mostly women and children. Former US ambassador to Somalia T Frank Crigler accused the US and UN of 'turning triumph into tragedy, applying brute military force to a situation that calls for quiet diplomacy, patient mediation, steadiness and understanding'. As if to emphasise the total lack of all the above qualities, certain US leaflets distributed to civilians during the campaign had mis-translated 'United Nations' when turning it into Somali. Instead it read 'Slave Nation'.

Fatal cycles

It is now 10 years later. Somalia is once again facing a devastating drought, which local people say could be the worst for 50 years. Up to 800,000 people are



HORN OF AFRICA RELIEF AND DEVELOPMENT ORGANISATION/JEREMY SMITH

at risk of death.

I want to know what Jibrell thinks her country needs. She doesn't have any time for the UN, or for its development arm the UNDP, yet her organisation is called Horn of Africa Relief and Development. Does she think, then, that there is still a place for development in her country's future?

'Development is not about doctorates and PhDs,' she replies. 'It's about us developing our natural resources holistically on our own terms. By which I mean that we will use our indigenous knowledge, and then choose to use what outside help we believe can support us.'

This is a long way from the open-market mantra of globalisation which puts all knowledge up for grabs to the highest bidder. As Jibrell sees it, those pushing development on her country now are little better than the colonists of the 19th century. She once wrote: 'Slavery was also about profit for the then developing [Western] world. It provided free human resources. Profit makers of today do not claim ownership of individuals, but they are busy making fast profits by exploiting and destroying the natural and human resources in a very cruel and greedy manner.'

Nothing Jibrell has seen since has changed her mind.

'Don't you see what the fishing fleets are doing to the reefs?' She asks the question in such a way as to make me feel directly responsible for the damage. 'The reefs took millions of years to grow. Now they are using nets that are destroying them in seconds. Do we have another two million years to wait for them to grow back? The acacia tree that took between 50 to 500 years to grow is gone. Do we have time to wait for that to come back?'

'And don't listen when they blame the corruption of our ministers. In Somalia now we are not saying that we wish we had received the IMF loans that the presidents and ministers were putting in their pockets and calling aid. We don't miss them. We're happy not to get them.'

The evidence supports her. In a 1995 article, Somalia expert and former editor of *Somalia News Update* Bernhard Helander wrote: 'Militia strength and the ability of factional leaders to hijack Somalia's future are functions of the levels of influx of dollars and aid. The more funds that come in, the more likely

it is that the artificial factions will be able to cling on to aspirations of power.' On the other hand, he added, 'In areas which have received minimal levels of aid and political involvement, quite different processes have emerged... Since then, clans of the area have been engaged in an impressive series of conferences engaging continuously widening spheres of clan elders, professionals, intellectuals and politicians.'²

The trouble is, explains Jibrell, the nature of globalisation is such that even when Somalia isn't being crippled by debt-related aid European fishing fleets

'What is better? For your countries in Europe and the US to get rich for a little while from our resources, or for those resources to sustain whoever lives in Somalia?'

are dumping illegal waste off its shores, and DDT is still being exported to the country despite its being banned in America and Europe.

'There are certain insects in hot countries that live off and decompose the animal droppings before they get too hard and dry,' she tells me. 'But DDT has wiped them out. So now, the manure just hardens in the sun, the soil does not get fertilised, the trees don't grow and there are no leaves for the baby goats to eat and turn back into manure.' It is a fatal cycle, and the only amount of foreign interference that will solve it is none.

'How are we going to survive?' she asks. 'We don't want to leave, we love our hot country. But if there is nothing left in our land and we have to, then the survivors will come to your shores. The rest will die. So which is better? For your countries in Europe and the US to get rich for a little while from our resources, or for those resources to sustain whoever lives in Somalia?'

The answer: build hundreds of dams

Although she urges the outside world to pressure its companies and governments not to abuse the Third World, Jibrell does

not believe the solutions to her country's problems will be ones that are externally introduced, financed and controlled. For her, the answers are simpler, smaller, cheaper and indigenous. If only we would leave Somalia alone.

'Imagine there is a seven-year-old boy working as a herder for baby goats,' she says – and the changes in her face show that, while she is deeply angered by the injustices inflicted upon her country and the world, she is also an optimist.

'Instead of this child just sitting around all day idly, what we have him and his friends doing now is studying the land that they know so well, and seeking out the traces of the rivers. Whenever they find a trace they follow the line to its weakest point, which is just where the bends start. There he puts some stones, one on top of the other – say eight or nine, to form a small rock dam. Then he continues downstream to the next bend. He builds another dam, and another, until the end of the day.

'Then when everyone comes home they will sit around the fires and talk and share their experiences. "How many dams did you build today?" It becomes a game, with everyone involved – the mother, father and all the children.

'You do not want the water to stop,' she adds, picking up a little chocolate wrapped in the logo of the hotel we are talking in and turning it on its side on the table. 'It will create a gully. You want it to slow down, so you have to position the stones so.' She lies the chocolate down flat, mimicking the dam building.

'You want it to slow down so that the water will deposit soil and manure and seed. Then, after seven or so days something may grow up from the soil – maybe some grass, or an acacia bush, or a tree. And if it grows, then later the baby goats can come up and munch at its leaves.' She accompanies her last sentence with little munching sounds, her fingers and thumb snapping together like a shadow puppet.

'Suppose one tree lives. It will grow and become bushy. It will become cover for the land, and this will stop soil erosion and the leaves will provide food for the goats and the sheep and the cattle. And we repeat the process all across Somalia.

'Slowly but surely, over 20 years or more our country will recover. It is not a difficult solution. It's not quick, but nor is it expensive. And, most importantly, it does not involve the UN.' ■

JEREMY SMITH is assistant editor of *The Ecologist*.



Seasickness

In the face of massive opposition and fears of terrorist attacks, the UK government is about to ship a cargo of weapons-grade nuclear waste on a 18,000 mile journey from Japan to Sellafield. It is, writes **Mark Townsend**, an extraordinary gamble.

At the height of the World Cup in Japan this summer, two British boats holding enough useable plutonium to create 50 nuclear bombs will depart Japanese shores for the UK. Their cargo is so highly prized by rogue states and terrorists that security experts warn the ships could become floating targets during the 18,000-mile journey from Takahama to Barrow-in-Furness. The port of Takahama is little more than 70 miles from the glittering World Cup venues of Kobe and Osaka, where England face Nigeria on 12 June.

Investigations reveal mounting concern over the trip being made by the Pacific Pintail and Pacific Teal. The vessels have become potent symbols of the deep flaws running through Britain's nuclear policies, particularly the government's determination to press ahead with the high-risk global trade in mixed reprocessed plutonium and uranium oxide, a substance known as MOX fuel.

Former government nuclear physicists, ex-MoD senior staff and authorities on international terrorism warn that the trip is too risky and that security measures are inadequate.

These experts believe that the prized payload is so tempting to organisations like Al-Qaeda that the unthinkable may happen. They forecast scenarios where the vessels are attacked by missile, or rammed by boats or aircraft.

BNFL admit faked safety records

The fact that the voyage is being made at all is already a cause of deep humiliation for Tony Blair.

The Mox fuel in question was originally transported from Britain to Japan three years ago. But upon its arrival in the Far East, staff at the UK's state-owned nuclear power provider

BNFL admitted to faking the material's safety records. Now, the furious Japanese authorities have finally succeeded in ordering Britain to take back the contentious cargo.

With the huge security risks involved, the trip could prove a scandalous price to pay for the suspect practices which led bored UK production line workers to systematically pass off nuclear fuel rods as having been approved, when insufficient checks had actually been made.

Tony Blair, however, has little room for manoeuvre. Refusal to take delivery of the shipment would sabotage around £4bn of investment between Japan and BNFL. It would also signal the end of Sellafield and its £472m nuclear reprocessing MOX plant, where the cargo was originally produced.

And with BNFL desperate to drum up business – its order books for MOX exports remain way below what is required for viability – Japan, its biggest potential customer, needs to be courted.

It also offers Britain the chance to start reducing the large, dangerous plutonium stockpile it has steadily built up at Sellafield as a result of reprocessing.

The prime minister is acutely aware he has taken a high-risk political gamble. Just days after 11 September, Blair told the Commons that terrorists would use nuclear weapons if they could. He demanded that the trade in the technology of such weapons be 'exposed, disrupted, and stamped out'.

Yet less than three weeks after that tub-thumping speech, Blair gave the go-ahead for Sellafield's MOX fuel plant to reopen for reprocessing after five years of inactivity. His decision paved the way for a worldwide trade in plutonium at a time of unprecedented

heightened alert.

Suddenly Blair's vow to end weapons of mass destruction seems faintly ludicrous after sanctioning a bankrupt, state-owned company to transfer potentially deadly nuclear material halfway across the planet.

And just recently General Richard Myers, chairman of the US joint chiefs of staff, ordered Japan to be on high alert for possible terrorist attacks as the World Cup approaches.

Observers from Greenpeace, meanwhile, are concerned that the festival of football is being deliberately used as a colourful decoy for the controversial shipment.

Pacific Pintail and Teal are expected to arrive in Japan around 8 June – the day after England play Argentina in Sapporo, before heading back to Britain days later.

Already, the BNFL boats have passed through the Panama Canal. They are currently navigating the north Pacific Ocean, after quietly slipping away from Barrow-in-Furness in a shroud of secrecy on the morning of 26 April.

To the casual observer, the Pacific Pintail and Teal – the first commercial ships since WWII to be armed – seem like any ordinary maritime vessels. Their three 30mm cannons sit obscured under tarpaulins.

Upon their return journey, however, a full complement of British armed nuclear guards will protect the ships' decks from potential terrorist attack.

And yet fifty feet below their polished boots, wrapped in a protective casing of reinforced iron, lie 225kg of plutonium. Enough to construct dozens of nuclear devices within weeks.

Meanwhile, opposition to the shipment is mounting closer to home. Just 70 miles across the Irish Sea from Sellafield, a protest movement is growing. Ali Hewson, wife of U2

✦ Bono, is spearheading a campaign against Sellafield's radioactive pollution. In conjunction with the Irish government and citing safety fears, she has threatened legal action to stop the shipment.

The Irish government is convinced that the decision to restart producing MOX fuel at Sellafield contravenes international laws on sea pollution and poses massive security concerns. A fresh legal challenge against the plant is likely to proceed this summer.

Such fierce anti-MOX sentiments are shared across the globe. New Zealand, South Africa and Chile have joined the lengthening queue of countries protesting against the shipment. In short, Britain faces a major diplomatic row.

Terrorist bomb material

Yet it is the grave concern about terrorism that raises most alarm. Already, the Royal Society – the UK's national science academy – and the US government's Office of Arms Control and Non-proliferation warn that it is possible for a terrorist group to extract plutonium from MOX fuel and use it for bomb-making.

Dr Frank Barnaby, a former scientist with the UK Atomic Weapons Establishment who was involved in the testing of nuclear devices in Australia during the 1950s, is in no doubt that the cargo constitutes a 'highly prized possession' to terrorists.

Barnaby believes that if the cargo of plutonium and uranium was seized en-route – and he dared not rule out the possibility – it could easily be converted into nuclear devices. 'The two components can be easily chemically separated to end up with just plutonium oxide,' Barnaby has said. 'Any significant terrorist groups would be able to do this or have sympathisers that could.'

A confidential report submitted by Barnaby to the Department of the Environment warns that any terrorists who obtained the MOX fuel would need no more technical knowledge to build an atomic device than that used to make the Lockerbie bomb.

Instructions on turning plutonium and uranium into a bomb are openly available in published literature or on the internet. According to Barnaby, the

chemistry expertise required is less than that needed for the illegal manufacture of designer drugs.

Meanwhile, William Hopkinson, former assistant under secretary of state at the MoD and deputy director and current expert on military security for the Royal Institute of International Affairs, warns that the shipment is coveted by Saddam Hussein and groups such as Al-Qaeda.

Iraq reportedly spent billions of pounds on a clandestine nuclear weapons programme. Yet it never succeeded in gaining the amount of weapons-usable plutonium that is held on board the Pacific Pintail alone.

Professor Magnus Ranstorp, at St Andrews University's Centre for the Study of Terrorism and Political Violence, points to documents seized from Al-Qaeda that betray detailed plans to acquire crude nuclear devices. Ranstorp believes Al-Qaeda's global network offers a real threat to a shipment travelling vast distances over a six-week period.

But BNFL, acutely aware its battered reputation must avoid fresh controversy, maintains the vessels are among the most foolproof in the world. Should their armed guards be overpowered in a gun battle, BNFL believes that terrorists would face enormous difficulties cracking open the ships' reinforced hatch covers.

Critics, though, point to a US government study by the Sandia National Laboratories which concluded that armed terrorists could seize a ship's nuclear cargo by using explosives to access plutonium inside transport casks.

Another scenario, warns Hopkinson, involves the vessels being captured and their store of weapons-useable material used as a bargaining chip by its new owners. The MOX fuel would become a hostage against world governments.

And there is, of course, a possibility that the boats could be targeted for destruction.

Hopkinson adds that an attack using missiles, captured aircraft or boats employed as battering rams – a threat taken seriously by both US and UK intelligence sources – 'could have very grave consequences'. In such an audacious event it can only be hoped that enough protection would be provided by the vessels' specially

Mixed oxide fuel

When spent nuclear fuel is extracted from the reactor, not only is it intensely radioactive – many millions of times more so than when it went in as fresh fuel – it also contains residual amounts of plutonium and uranium.

In the US such 'spent' fuel is stored at nuclear reactors until such a time as a satisfactory repository is found for a nuclear waste dump. In the UK and France, the spent fuel is reprocessed to extract the unused plutonium. When mixed with uranium, this creates mixed oxide fuel known as MOX.

BNFL claims that the use of MOX fuel will help burn up stocks of plutonium, including that from dismantled weapons. Scientists indicate that the relatively high concentrations of uranium-238 in MOX make it inevitable that more plutonium is generated than is consumed.

In fact the whole process is fraught with problems, not least the need to transport highly radioactive spent fuel from the reactor back to Sellafield. Other issues include:

1 MOX production is loss making

Though the Japanese contract for MOX gives BNFL the justification for its MOX fabrication plant at Sellafield and for continuing reprocessing, testing the fuel for discrepancies is expensive and time-consuming. BNFL routinely inspects about one pellet in every 40,000. As many as 20 per cent are found to be sub-standard.

2 Huge radioactive waste problems.

Recently BNFL has spent £100m on a new waste storage building at Sellafield. It takes waste from 50-year old tanks, which have been leaking material such as technetium-99 into the surrounding ground for years.

3 Plutonium is highly sought after.

The extracted plutonium has to be handled with extreme care to prevent theft. Many of the world's dictators and oppressive regimes are itching to get hold of plutonium for swift adaptation into nuclear bombs.

strengthened double hulls, compartmentalised interiors and the reinforced casks the size of articulated lorries which will hold the nuclear cargo.

But the fact remains that the vessels are relatively slow. Their top speed is in the region of 15 knots, making them unable to outpace faster more modern

boats. A US Department of Defense assessment has already suggested that plutonium transports are vulnerable to attack from 'small, fast craft armed with ship-to-ship missiles'.

Furthermore, in 1999 the highly-respected *Jane's Foreign Report* concluded that security provided by the 'lightly-armed' Pintail and Teal 'is totally inadequate for transporting half a ton of plutonium half way around the world'.

Multiple risks

Then there is the risk, inherent with all maritime trade, of collision with another vessel. This is not an altogether outlandish scenario for the MOX shipment, since the routes being considered would navigate what Lloyds Register of Shipping classifies as among the most accident-prone waters in the world.

Should the unthinkable occur and the vessels do sink, BNFL maintains that the cargo poses no immediate danger because the fuel pellets are encased in ceramics and would not dissolve in water.

But the threat of fire following attack or collision is another major worry. International standards for nuclear transports require nuclear containers to resist fires at temperatures of 800° centigrade for 30 minutes. This is despite average ship fires burning for more than 24 hours at over 1,000° centigrade.

An ominous reminder of the fire risks took place in March when a BNFL nuclear transport ship – the Atlantic Osprey – caught fire as she sailed through the Manchester ship canal.

Even a failed attack – one that damaged the boats but failed to puncture the flask – would constitute a devastating blow to the future of Britain's nuclear industry and further political humiliation for Blair.

Long before 11 September there was considerable concern that security measures for the shipment were not tight enough. Yet there is still no suggestion that security has been upgraded since the original transportation from Sellafield to Japan in 1999.

Security arrangements for the return trip were in fact agreed by Japan and the UK weeks before 11 September when in August Japanese authorities submitted a transport plan to the Bush administration.

Although BNFL will not divulge security precautions, a spokesman admitted 'arrangements would be no less than before'. And the Department of Trade and Industry denies

accusations that security is susceptible. It insists that 11 September has 'concentrated minds on this issue'.

Bending the rules

Both Greenpeace and Friends of the Earth maintain that the UK government has bent the rules to ensure the controversial trade in plutonium can proceed. Under European law, Sellafield's MOX plant has to be economically viable to justify the radioactive discharges from the plant.

Consultancy firm Arthur D Little conducted a study for ministers to prove the MOX plant's viability. The study – which incidentally avoided recommendations from experts on a potential terrorist threat – claimed the facility would earn £200m in trade.

What it chose to ignore was the actual cost of building the plant – £470m. This cost alone ensures it is uneconomic and that the taxpayer must subsidise a venture that threatens their very wellbeing. The unique status of BNFL – a bankrupt, state-owned company that is unaccountable – ensured the building costs could be written off without reproach.

According to industry experts, BNFL effectively acts as a screen to divert flak away from the government's nuclear policies, particularly given the fact that Mox fuel remains more expensive than conventional nuclear fuel.

Even British Energy, which owns and operates eight nuclear power stations in the UK, has called for the Mox plant to remain mothballed. In evidence to a parliamentary select committee, the company said there should be an immediate moratorium on the reprocessing of spent fuel at Sellafield. It said the practice was uneconomic and added to the UK's plutonium stockpile.

And then there is the small matter of taxpayers' money. With BNFL claiming bankruptcy late last year, the cost of the current shipment is estimated at a staggering £90m. This is on top of the £40m worth of taxpayers' money the British government gave Japan in compensation for BNFL's original blunder.

The fuel will be transported from Takahama next month along one of three routes still being considered by the UK and Japanese authorities. These are via the Panama Canal and Caribbean Sea; across the South Pacific, Tasman Sea and round the Cape of Good Hope;

or via South America and Cape Horn. In effect all the possible countries en-route – in Latin and Central America, in the Caribbean, East Asia, the South Pacific and Australasia – are now threatened by the shipment. Most of these countries have demanded on security and safety grounds that nuclear shipments do not enter their waters.

Britain and Japan will want to choose the path of least resistance, although each route is fraught with difficulties. The shortest – and cheapest – is via the Panama Canal, although two relatively slow moving hulks crawling along the canal would also be vulnerable to attack from Colombia's notorious guerrillas. The latter are equipped with surface-to-surface missiles, and have indicated they would target canal shipping.

This leaves the two joint-favourites. Crossing the South Pacific and Tasman Sea between Australia and New Zealand and rounding the Cape of Good Hope before heading north to Cumbria would mean circumnavigating the Indian Ocean. There the ships would encounter monstrous weather conditions and a vicious, prevailing current between Australia and Africa. During the 1999 outward bound trip, high seas buffeted Pacific Pintail with such force a policeman was thrown violently to the deck and had to be airlifted to Perth.

But circumnavigating South America would mean the vessels would endure fierce opposition from neighbouring countries as well as the typhoon season.

Ultimately, even if the shipment avoids disaster, the world will be a more dangerous place for Britain's global trade in plutonium. A successful shipment will pave the way for Japanese Nuclear Utilities and BNFL to sign new contracts that could result in up to 40 high-risk shipments over the next decade from Europe to Japan.

Anti-Mox sentiment in Japan is strong. The nuclear accident in Tokaimura in 1999 which killed two workers, the BNFL falsification scandal, and wider security concerns over a further increase in Japan's plutonium stockpile (it grew by more than 300 per cent between 1992 and 1999) have all stoked opposition.

Blair's commitment to the future of nuclear power and Sellafield's Mox plant, however, have left him little choice but to take this extraordinary gamble. Over the next few weeks he will be among the millions glancing nervously at the progress of the Pacific Pintail and Teal ■

MARK TOWNSEND is an award-winning environmental journalist.



Pigtales

'Beautiful little black pigs grazing under evergreen oaks' – traditional farming in the deep south of France

BY AUGUSTIN THYSSEN

Once upon a time, and more than once to begin with, I would stand on cold winter nights watching the heaving heap of warm black-furred bodies. They smelt nicely of Berber carpets and forest soil. Grunts, belches and farts would rise from the heap, and I would experience a strange feeling – a sudden craving to strip off and lie down naked with the pigs, and thus become a part of Mother Nature's great peace.

If I never succumbed it was because of the hooves. Such a living pyramid is in a continuous process of convection, especially during freezing weather. The animals lying on the outside crawl towards the centre, while the summit spews out like a volcano the bodies of the warm, which – probably because they are almost suffocating – offer no resistance. When it's less cold, small groups lie in single layers, the little ones on top or in between.

If they are not hungry they take life easy. They sleep till the sun shines nice and warm, and then slowly rise to form foraging parties with friends and family. If it's dry they then return to the watering place for another siesta, or stay all day in the woods till feeding time.

When I blow the bugle, the pigs all come running for whatever I have for them. This is either bread (recovered from the local supermarkets), fish once a week (recovered from my friend, the market fishmonger), or sprouted barley or wheat from a local farmer who is too poor to put much fertiliser or herbicides on his fields. For about six months in the year, when there are sufficient chestnuts and acorns, this feeding is largely symbolic and is intended only to keep in touch. Apart from this, the pigs draw their health and happiness from roots, insects, earth, grass and leaves, and the occasional fox or, since this is a hunting area, stray dog.

My farm is in the south of France. For 15 years or so, I have been living with a small herd of pigs: me in the house, and the pigs in the forest around it. When I bought this old derelict farm I had no idea about what to do with it.

But during a holiday in Spain I saw these beautiful little black pigs grazing under evergreen oaks. I thought how they would enjoy rummaging in the dense undergrowth of the steep hills surrounding us, where the wild boar is a thriving native.

Nowadays everybody knows how clean and smart pigs are. They are the most intelligent of mammals after the dolphins and the apes. In many respects they resemble human beings, and this is the probable reason for their historical discredit by man: they are too close a relative to a jealous God.

In truth, they are neither Orwell's Napoleon or Hollywood's Babe. Nor are they the poor monstrosities human



recklessness has turned them into. My personal motto has become: happy meat is healthy meat. Some day, I'm sure, we'll discover why this is so.

The oldest sows on my farm are now 14 years old – we buried 16-year-old Beatrice the other day –, and are in splendid shape. They have at least one litter every year, usually in April. When they give birth they make a huge nest of branches, heather and gorse. In very cold weather, or during a spell of snow,



they hide under this blanket. Walking under the trees, one sees from afar a little white hillock – a tiny fumarole rising from it, and a ferocious grunting if one approaches too close.

A litter consists of seven to nine piglets. I don't know much about casualties. If they occur, nature has her ways. Buzzards and ravens take care of the little corpses. I've also seen mothers reluctantly eating them so as not to leave rotting meat near the nest. Or the presence of other, unrelated sows is tolerated. In that case, the discarded piglets are devoured with relish. Smart foxes sometimes watch from behind a tree the first few days after a litter is born, and snatch a little one when the sow has gone for a drink. The pigs, anyhow, are keen on chasing them and any other intruder such as badgers.

If a mother pig has been overfed, she gives birth to maybe 13 little ones. When this happens I normally lose two or three early on. Heavy sows are awkward, and when there are more than nine piglets they get split up into two groups as the mother lies down to

feed them. If they can, the mothers seek out a place on high, dry ground for farrowing. But one mother, not the brightest, dug out a nest on low-lying ground and lost her entire litter when they drowned during a downpour. A sad sight, which we will not forget.

One advantage of having pigs, possibly in company with sheep, is the fact that they live in almost perfect symbiosis with the forest. That is as long as the youngest trees are big enough, let's say two years old, so that they cannot be destroyed by the uprooting habits of these little devils. Pigs plough where they can, aerating and manuring the soil, digging out and eating the roots of bracken and bramble. Thus, they prepare a perfect fire-free medium for the development

of the original forest trees – here mainly chestnut, holm oak, varieties of maple, cherry and apple, which, once established, will be essentially immune to forest fires.

In forestry terms, the only human intervention we will make will be the more or less total eradication of pine trees. The latter present the happy peculiarity of not growing back from their roots. Their seedlings will either be uprooted by the pigs or eaten by sheep, or they will be unable to develop under the commencing canopy of the deciduous trees. Once the original forest is restored, the pig population will have to adapt to its intrinsic nutritive capacities – whether they come from chestnuts or acorns.

The area covered by forests in our commune is huge. A big part of it burns every 10 years as a consequence of neglect and the presence of alien pine introduced when mining began. Pine wood has been used all over the world for pit-props: it is believed to creak before snapping. For the moment, only hunting societies are active in this landscape. The state draws a questionable profit from their activities – through the sale of arms and licences. A rather flourishing parallel economy, based around the

illicit trade of game, has developed over the last few years. But clearly the hunting is going to be more and more regulated. It will either end up as an affair mainly for rich people and poachers – a case of back to the Middle Ages – or it will disappear altogether as a result of the hardening of our moral outlook on this kind of activity.

If the village council were to decide upon a policy of having pigs take care of the rough maintenance of these forests, it would be possible to sustain a herd of several thousands. For that purpose it would suffice to enclose the village, its gardens and the roads crossing it with simple sheep fencing, plus – on one or both sides – an electric barrier consisting of a single, well-tended cable with ceramic insulators.

Because of the strong opposition of the hunting community, as well as reasons of practical management, it would probably be wiser to start with smaller parks. They would cover, for instance, a single slope, and would have "green" strips between them for the shelter of wildlife. The size of the herd would be reduced by a corresponding amount. A few swineherds would have to be employed, according to the size of the herd. Expenses would be limited to the acquisition of a few kilometres of fencing. I have put up approximately seven kilometres of it myself, using my own chestnut posts and, where possible, trees – an underused form of fencing needing less maintenance –, a chainsaw and a couple of winters working in the healthy mountain air.

The situation in which pigs, sheep, cattle and chickens are kept today is an untenable and rather incomprehensible one. It is, however, typical of our values. Nevertheless, carrying on in this way is increasingly felt to show not only a lack of respect towards nature, but also – as a liability to public health – to ourselves. The longing for beauty and honour is deeply ingrained in each of us. Strangely enough, we run like sheep after things and ideas which are often only pathologically related to these values.

We need to remember that the earth is our mother, not our enemy ■

AUGUSTIN THYSSEN is a French pig farmer

CORBIS, MEAT AND LIVESTOCK COMMISSION

world views

1

**HANDS OFF
MY FOREST
HOME**

GREENPEACE



- 1 This Greenpeace advert protests the logging of ancient forests.
- 2 The different catches brought in when the fishing methods are either sustainable (l) or not (r).
- 3 The bull has been selectively engineered with a double-muscling gene.
- 4 A carnival took place in Nice protesting against the Euro. The inflatable businessman is swallowing the different currencies of Europe and excreting euro.



Frustrated by the mainstream media's unwillingness or inability to tell the truth about the world's most pressing problems? Then read on. **David Edwards** and **David Cromwell**, co-editors of the **Medialens** website, provide a much-needed corrective to the so-called 'free' press.



www.medialens.org

MISREPORTING VENEZUELA

On 12 April Venezuela's leftist president Hugo Chavez was ousted and taken into military custody, only to return to power two days later. According to *The Guardian*, a prime reason for the initial coup was that 'pro-Chavez snipers had killed at least 13 people and injured more than 100 at a big demonstration in the capital'.¹

But an eyewitness account by academic and Venezuela expert Gregory Wilpert gives a very different view. Wilpert said: 'I clearly saw that there were three parties involved in the shooting – the Caracas police, Chavez supporters and snipers from buildings above.'²

The Guardian reported that Chavez responded to the violence by ordering 'five Caracas television stations off the air, accusing them of inciting violence'. The report stated: 'Chavez polarised the country by his attacks on the media and Roman Catholic church leaders, his refusal to consult with business chiefs and his failed attempt to assert control on the unions.'³ Wilpert fills in some of the detail missing from *The Guardian* report: 'One of the television stations managed to film one of the three sides in this battle, and broadcast the footage over and over again – making it look like the only ones shooting were Chavez supporters from within the demonstration at people beyond the view of the camera. The [footage] implied that they were shooting at an unarmed crowd.'

'As it turns out, and as will probably never be reported by the media, most of the dead are Chavez supporters.'⁴ Why the extreme media bias? Wilpert explains: 'Almost all of the media – except the one government-run TV network out of about five major TV networks, and one out of approximately 10 major newspapers – is completely opposed to Chavez.'

'The media regularly cover nearly every single opposition pronouncement and rarely cover government declarations. Chavez, out of frustration with the media, has relentlessly attacked the media for belonging to the old-guard oligarchy and for printing nothing but lies, occasionally threatening them with legal action for slander.'⁵

Since his election in a landslide victory in 1998, the reformist Chavez has not endeared himself to Venezuelan elites. His enemies include powerful landowners, the oil sector, media gatekeepers and the forces of

HOW MANY PALESTINIAN LIVES EQUAL ONE ISRAELI LIFE?

The excellent Fairness and Accuracy in Reporting (FAIR [see www.fair.org]) quotes the main headline on the front page of *The New York Times*' 10 April final edition. The headline read: 'At least eight killed in suicide bombing on a bus in Israel'.⁷ The late edition, which was available to more readers, had '13 Israeli troops killed in ambush; bus bomb kills 10'. The *Times* used the 36-point-sized headline the paper reserves for what it considers major events.

Fully six paragraphs into the story, the *Times* provided the following additional information: 'More than 100 Palestinians have been killed in

Jenin, the Palestinian town that has brought the stiffest resistance to the broad Israeli sweep through the West Bank. Many of the Palestinian dead still lie where they fell.'

Implicit in the *Times*' choice of headlines was the suggestion that the deaths of 23 Israelis are more important than those of 100 Palestinians.

FAIR adds: 'Front-page headlines are... a clear indicator of what a paper's editors consider to be the most important events of the day.'

'In the case of the powerful and prestigious *New York Times*, these headlines can set news agendas around the world.'

WHO IS RETALIATING?

FAIR has also produced some remarkable statistics indicating the profound bias in media coverage of the Israeli-Palestinian conflict. As of 4 April, 300 Israelis and 1,200 Palestinians had been killed since the current intifada began in September 2000.

From the start of the intifada through to 17 March 2002, the three major networks' nightly news shows used some variation of the word 'retaliate' 150 times to describe attacks in the conflict. About 79 per cent of those references were to Israeli 'retaliation' against Palestinians. Only

9 per cent referred to Palestinian 'retaliation' against Israelis. Approximately 12 per cent were ambiguous or referred to both sides.

This disparity is significant. FAIR argues: 'The term "retaliation" suggests a defensive stance undertaken in response to someone else's aggression. It also lays responsibility for the cycle of violence at the doorstep of the party being "retaliated" against... They presumably initiated the conflict.'⁸

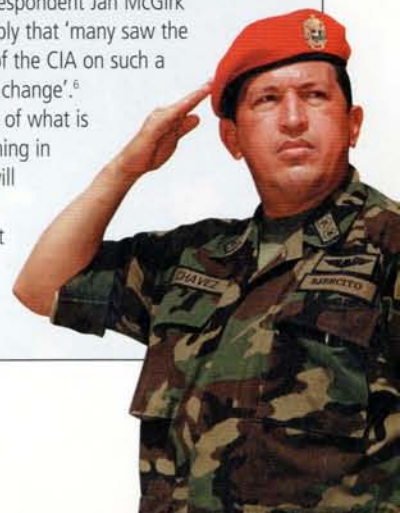
This bias in the use of the word 'retaliate' will be familiar to all readers and viewers of the UK media ■

international capital. Chavez also defied Washington by selling oil to Cuba and refusing overflying rights to US military aircraft supplying Plan Colombia – the US campaign in support of the murderous regime in neighbouring Colombia.

Last November, the US's State Department, Pentagon and National Security Agency held a two-day meeting to discuss 'the problem of Venezuela'. The US said it would 'put Venezuela in diplomatic isolation'. US Secretary of State Colin Powell warned Chavez to correct 'his understanding of what a democracy is all about'. Meanwhile, the International Monetary Fund indicated it supported a 'transitional government' for Venezuela. These ominous rumblings from the

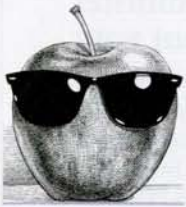
US made little impact in the UK's mainstream media. When Chavez was momentarily deposed by a business stooge, *The Independent's* Latin America correspondent Jan McGirk reported simply that 'many saw the fingerprints of the CIA on such a rapid regime change'.⁹

The reality of what is really happening in Venezuela, will eventually emerge – but not in the mainstream media ■



ECO-TERRORISTS UNDER THE BED

AS THE WHITE HOUSE CONTINUES ITS WAR ON TERRORISM, CORPORATIONS AND THEIR FLUNKIES IN CONGRESS ARE USING THE TRAGIC EVENTS OF 11 SEPTEMBER TO PAINT ALL MANNER OF ENVIRONMENTALISTS AS TERRORISTS. **AGENT APPLE** TAKES A LOOK AT THE ABSURDLY-NAMED PATRIOT ACT AND ITS IMMEDIATE IMPLICATIONS FOR THE GREEN MOVEMENT IN THE US.



AGENT APPLE
WORKS FOR
EARTH FIRST!
JOURNAL IN
THE US.

Readers of *The Ecologist* will not be surprised to learn that the US environment is under attack from the Bush administration. They may be more surprised to discover that the US environmental movement faces a similar assault. As the White House continues its war on terrorism, corporations and the politicians they fund in Congress are using the tragic events of 11 September to paint environmentalists as terrorists.

'The point has come,' claimed Congressman for Colorado Scott McInnis, 'when we need to strip away the Robin Hood mystique from this eco-terrorism in our country.' Congressman Don Young of Alaska went so far as to say that the September attacks were connected to anti-corporate protests. Young observed: 'If you watched what happened in Genoa and Seattle, there's some expertise in that field.'

Whether the two Republicans truly believe in what they are saying is debatable. But the impact of their efforts to equate freedom with free trade and ecology with violence cannot be ignored. The legislature has been quick to exploit public fears over terrorism, striking down civil liberties and constitutional rights. On 26 October President Bush signed into law the ludicrously named USA Patriot Act. The title is, of course, an acronym for 'Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism'.

In a statement made before the US House of Representatives Committee on the Judiciary, Rachel King, legislative counsel to the American Civil Liberties Union (ACLU), said: 'The definition of terrorism under current law is already broad enough to include certain acts of civil disobedience. The USA Patriot Act would expand the already broad

definition. For example, people involved in the demonstrations at the World Bank or protesting the US bombing missions near Puerto Rico's Vieques Island may fall within the definition of terrorism.'

King offered the hypothetical situation of a college student charged – after breaking a window during a demonstration – under the new federal terrorism statute for damaging federal property. In such an event, the government could: obtain a sample of the person's DNA; eliminate the statute of limitations; release secret grand jury evidence to military, intelligence or immigration authorities; use federal racketeering laws to investigate anyone who has ever attended a meeting with the defendant; or sentence the person to life in prison.

McInnis and other Republican legislators also wrote to the major mainstream environmental groups, demanding that they disavow radical groups. The Colorado congressman compared his domestic efforts to the US government's international coalition building in its war on terrorism. Attorney General John Ashcroft, meanwhile, has indicated that the US government has begun an intensive investigation of domestic NGOs. These intimidating tactics have already effected the ability of grassroots environmental groups and activists to raise funds.

During the drafting of USA Patriot, Ashcroft lobbied Congress to give the police greater freedom to use wiretaps and arrest and deport people without warrants or hearings. Similarly, the act allows law enforcement officials to track the addresses of 'suspected terrorists' emails without recourse to a search warrant. Allowing the seizure of email and voice-mail will encourage greater cooperation between the CIA and FBI. This is especially so now the decades-long ban on domestic CIA operations has been lifted. Both agencies' domestic anti-terrorism budgets have recently rocketed. Other parts of the act that worry the ACLU include secret 'sneak-and-peak' search and conspiracy provisions. The latter have been widely

and spuriously used against dissidents for more than a century.

The strategy of marginalising and repressing dissident groups seems rather transparent. But, historically, the governments and corporations employing it have enjoyed a high success rate. Some immediate results of the current climate of fear are obvious. In early September Washington police estimated that more than 100,000 demonstrators would attend the World Bank/IMF meetings scheduled in the city later that month. NGOs predicted that the protest would be even more intense than the anti-WTO 'Battle of Seattle'. But with the fervid patriotism and anti-radical backlash since September, almost all of the groups due to take part in the Washington demonstrations withdrew. They have continued to shy away from any kind of protest ever since. Even months later, there was a stunning lack of NGO participation at the demonstrations against February's World Economic Forum meeting in New York.

The US's largest and most influential mainstream green group, the Sierra Club, went so far as to issue an internal memo which declared: 'In response to the attacks on the US, we are shifting our communications strategy for the immediate future. We have taken all of our ads off air, halted our phone banks and removed any material from the web that people could perceive as anti-Bush... We are taking steps to prevent the Sierra Club from being perceived as controversial during this crisis. For now, we are going to stop aggressively pushing our agenda, and will cease pushing President Bush.'

Most other mainstream environmental groups also caved in to the pressure. The Bush cartel has carte blanche to continue its anti-environmental agenda. Yet, as has been pointed out, principles are never more important than when it is inconvenient or dangerous to stand up for them. By throwing in the towel at such a critical time, the mainstream has left radical greens wide open for attack ■

Genetic modification is being sold to us as a great benefit to mankind. Yet there is probably no field of science with such a poor record on transparency, ethics and legislation. GMWatch is brought to you monthly by Jonathan Mathews, co-founder of the Norfolk Genetic Information Network (www.ngin.org.uk)



SUCCESS! GMWatch revelations of a dirty tricks campaign to discredit research into GM contamination of maize in Mexico triggered noisy protests outside the US offices of PR firm the Bivings Group ('Amazing disgrace', Vol 32/ 5).

Bivings counts Monsanto among its clients, and played a key role in the scandal.

Contamination worse than originally reported

Meanwhile, at April's Convention on Biodiversity in the Hague, the Mexican government confirmed there had been GM contamination of the country's maize.

Despite Mexico's ban on GM maize, contamination had occurred in areas that act as the gene bank for one of the world's key crops. The contamination had originally been shown in preliminary research reported last November in *Nature*. It was then disowned after the biotech PR campaign (see above). Embarrassingly, the Mexican government research has now shown

that the level of contamination is even worse than first reported. Contamination was found at 95 per cent of the sites tested, and one field showed a 35 per cent level of contamination.

Mexico's indigenous communities have called for action to halt and repair the long-term damage, and submitted a complaint under the North American Commission for Environmental Cooperation. They propose a mandatory fee on trade in GM crops to finance the massive cleaning and control operation now needed. See: www.mesoamerica.org.mx/uzachi

Protestors destroy Scottish rape trials after minister ignores parliament vote

In late April five acres of GM oilseed rape were destroyed at Munloch in Scotland. The action took place after Scotland's rural development minister, Ross Finnie, refused to act on a vote by the Scottish Parliament's Transport and Environment Committee in favour of destroying the crop. The committee had earlier received a petition supported by 4,000 protesters, including Liberal Democrat leader Charles Kennedy, expressing opposition to the crop trial.

Finnie is increasingly isolated – even suffering a defeat at the conference of his own party, the Scottish Liberal Democrats. The conference voted by two to one against the continuation of the trials. It supported instead an amendment calling for GM testing to be restricted to enclosed laboratories.

The recent protest action was the second time a trial at Munloch has been damaged. On the day of the general election last June, protesters cast 'the first vote' by trampling a huge 'X' into a field of GM crop. One of the protesters, organic farmer Donnie MacLeod, was later jailed for 11 days for contempt of court when he refused to identify others involved.

MacLeod said he was 'amazed and humbled' by the support he received in prison from prisoners, wardens and the public. He received hundreds of letters, and more than 300 local people marched outside Inverness prison.

Letters of support, donations, etc, should be sent to: Munloch Vigil, By Roskill Farm, Munloch, Ross-shire, Scotland, IV8 8PA

The Sainsbury Laboratory – rotten to the core?

Tony Blair's government has given a grant worth £1.2 million of taxpayers' money to the Sainsbury Laboratory at the John Innes Centre (JIC) in Norfolk.

The laboratory researches GM crops. Given that its principal patron (apart from biotech firm Syngenta) is Lord Sainsbury of Turville, cynics have suggested a conflict of interest. Sainsbury has given £9 million in donations to the Labour Party, and the laboratory's grant has more than tripled since the former supermarket boss became Blair's science minister.

Sainsbury Laboratory employee Dr Paul Christou played a significant part in the attacks on the findings reported in *Nature* of widespread GM contamination of Mexican maize (see above). Christou wrote a scathing

editorial in the journal *Transgenic Research* (11, 3-5; 2002).

The Sainsbury Laboratory has long acted as a faithful henchman in campaigns to discredit researchers who fail to toe the GM line.

In the case of John Losey's famous monarch butterfly study, for instance, the laboratory's head Professor David Baulcombe claimed that butterfly larvae were harmed just as much by the non-GM corn pollen in the experiment. This was despite the fact that only those larvae which ate the GM corn pollen died.

As a result, NGIN has awarded the laboratory a 'Pants on Fire Award' for its services to scientific deception. See: <http://members.tripod.com/~ngin/pants3.htm>



Indian government approves the commercial growing of GM cotton.

GM Bt cotton has an insecticide genetically engineered into every cell in an attempt to kill the cotton boll worm pest. Indian health minister CP Thakur protested its approval to the press, saying: 'GM products could have long-term environmental and health effects. It is essential that the health ministry [is] involved more in such decisions.'

In India's Haryana district farmers ritually burned Bt cotton seeds. They took a solemn oath to boycott the 'anti-nature' seeds, and to protect other farmers and nature from them. The ritual was part of the sacred festival of Holi. The festival commemorates a girl who died as a result of the murderous actions of her father, a foolish king who thought he was God and that he could do no wrong. Now, where have we seen that attitude before?

Pink Castle: In the early hours of the 25th April, a diverse group of determined individuals took possession of a pink castle located at the entrance to one of the fields in which the government hopes to plant GM maize this year. They plan to stay in occupation long enough to prevent the planting. Good Luck!



ANTI© WILLIAM POSTERS

Doctor's Handwriting

Columnist **Peter Mansfield** resigned as a GP following attacks on his stance against the MMR vaccine. He now runs GoodHealthkeeping. The practice aims not just to cure illnesses, but to educate people how to avoid becoming ill in the first place. This month he asks why we assume scientists have all the answers, and what do we do if those scientists are the problem.



Last week I was asked by a group of anti-vivisectionists to discuss on radio a WHO report about the use of primates in medical research. I declined, despite strongly held views. Sound bites may be the oxygen of broadcasters, but they make for very unsatisfactory debates.

It always comes down to what you choose to assume. No science is possible without making some assumptions from which questions are framed for the scientist to answer. To start with, we assume that *the methods of science are appropriate for answering questions.*

That in itself may not be a problem. The trouble is that we let scientists ask the questions as well as answer them. That is unwise, because scientists tend to ignore the big picture in favour of their special interests. Inevitably, they frame questions which they will enjoy tackling. They then invariably find that the answer, at least in part, is the need for more research.

In consequence, we find ourselves endorsing a huge haze of abstract ideas we do not understand. We, our politicians and commentators avoid challenging these ideas, lest we appear foolish. The scientific establishment, meanwhile, seldom admits to the fragility of its ideas – far less its assumptions. It has awarded itself a god-like status, and we tolerate that.

But what if scientists' undeclared assumptions are in fact false? In that case, any questions and answers that follow from them will merely compound the initial falsehood.

Take research on primates – or any other animals, come to that. The initial assumption goes like this: *human rights supersede animal rights.* It matters not that the human disease being researched might result from self-abuse – the wrong food, or too little exercise, for instance. No, we conduct research on animals to find cures for our self-inflicted illnesses, instead of looking at what we are doing wrong so as to stop these illnesses from occurring in the first place.

Secondly, we assume that *similar genetic codes mean similar animals.* Yet the few genes that distinguish us from

other mammals cannot possibly account for the striking contrasts in form, function and talent. Genes are the same in all the cells of one individual, yet different cells within the same animal have radically different forms and functions. What makes one cell part of your eye, another your heart and another your brain? Hi-tech gene-speak only camouflages our ignorance.

Ostrich mentality

In September 1997 *The Lancet* – an internationally-respected journal of medical science – published an analysis of the findings of a series of scientific trials of homoeopathic medicine. It set out to check whether the apparent benefits of homoeopathic medicine were actually just examples of the placebo effect – in plain language, self-delusion.

The result was positive. The studies found that homoeopathic remedies did indeed have a net positive effect after self-delusion, bias and all other confounding factors had been carefully ruled out. The paper then survived review by at least two other experts before *The Lancet* agreed to publish.

Even then, in the same edition *The Lancet* published not one but two leading articles by placebo sceptics. One simply refused to accept the result at face value – ultimately, because 'the "infinite dilutions" of the agents used cannot possibly produce any effect'. The other conceded that 'there is enough in the study to [ask] for good controlled trials', but doubted whether 'resources [for] these trials can be justified when a rational basis for... homoeopathy... is lacking'.

In other words, even though a system of medicine has effectively been acquitted of quackery in the highest available scientific court, it remains in the dock because the scientists don't know how it works.

That's as philosophical as it gets. Fixed mind-sets and vested interests are the usual obstacles. The UK's Medical Research Council (MRC) is, for example, about to publish its thoughts on how to fill the embarrassing black hole in

research on the fluoridation of water. A fabric of dogma, constructed through 70 years of tendentious research, hailed water fluoridation as the best way to correct inequalities in dental health. That dogma began in the US with the then reasonable assumption that *people only obtained fluoride from water.* But Americans don't drink much tea, which is a rich source. And then toothpaste became fluoridated anyway, and food items began to be processed and manufactured with fluoridated water.

Now, the facts are that many people in non-fluoridated areas consume as much fluoride as those with fluoridated water supplies. Sometimes they consume a lot more fluoride than could ever possibly be good for them. This effectively rubbishes all the studies that compared populations simply on the basis of the fluoride content of their water supply. Yet it took a systematic scientific review and about five years to force dental academics – their banners long nailed to fluoridation – to take into account personal consumption of fluoride from all sources. We have yet to see if this concession finally makes it into the MRC report.

I can't help noting the parallels between the fluoridation saga and the way the MMR story is unfolding. Creating MMR was little more than an act of technical cleverness. But it also exceeded nature, and was, therefore, wrong in principle. But so little do its protagonists care for public opinion that they intend to compound the error by adding chicken pox vaccine to MMR. It will then become a quadruple hit. A pathologist friend of mine reacted to this proposal with dismay: 'Two immuno-suppressant viruses in the same vaccine? Whose bright idea was that?' Were he a pharmaceutical industry employee instead of a private practitioner, he wouldn't have to ask.

This sort of 'science' abuses both the resources and trust of the public. As Richard Asher said: 'If you can't explain a complex technicality to your landlady's daughter, you don't understand it yourself.' Nor are you earning your corn.



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National Biodiversity Network



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"A successful National Biodiversity Network is a linchpin of the whole Biodiversity Action Plan." Select Committee on Environment, Transport and Regional Affairs Twentieth report – November 2000

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**National
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OF MICE AND THE ROYAL SOCIETY

WHILE THE INTERNATIONAL SCIENTIFIC COMMUNITY SPARES NO EFFORT IN BRANDING GM FOOD AS 'SUBSTANTIALLY EQUIVALENT' TO CONVENTIONAL FOOD (ESSENTIALLY SO AS TO PROP UP THE AILING BIOTECH INDUSTRY), A 17-YEAR-OLD DUTCH UNDERGRADUATE HAS CREATED SCIENTIFIC HISTORY WITH SOME SIMPLE AND DISTURBING EXPERIMENTS ON MICE. **BY DEVINDER SHARMA**



DEVINDER SHARMA IS A NEW DELHI-BASED FOOD AND TRADE POLICY ANALYST. RESPONSES TO THIS ARTICLE CAN BE MAILED TO: DSHARMA@NDF.VSNL.NET.IN

The first genetically modified (GM) food product to hit the market was a brand of tomato called Flavr Savr. Before it was made available in supermarkets, scientists had fed it to laboratory rodents. The rodents refused to eat the GM tomatoes, which contained an alien gene to make them ripen more slowly. When force-fed, the rodents fell sick. Subsequently, Flavr Savr was a commercial disaster.

Unfortunately, since Flavr Savr the rich and industrialised western countries, and the US in particular, have brought scores of GM foods to market shelves around the world. The consumer has invariably been told by the powerful US propaganda machinery that these 'novel foods' are no different from conventional ones. Sadly many agricultural scientists – desperately fighting for financial support in an era of fast shrinking public funding – have toed the propaganda line too.

Any voice that threatens the sources of funding is met with a combined and frenzied attack. This happened when the British scientist Dr Arpad Pusztai reported harmful effects in rats fed with GM potatoes. Pusztai's independent research showed damage to the kidney, thymus, spleen and gut of young rats. Pusztai not only lost his job but became a *persona non grata* for the entire scientific community.

Great scientists have always had the foresight and vision to see where their own community can go wrong. Great scientists do not necessarily have to be educated at Berkeley, Harvard or Cambridge. And great scientists have always stood for 'good science' and not 'sound science' as advocated by industry.

Science is for the good of humanity, and cannot be compromised for the sake of the profits that it might create for the corporate world.

While the international scientific community spares no effort in branding GM food as 'substantially equivalent' to conventional food – essentially so as to boost the sagging fortunes of the biotech industry – a 17-year-old Dutch undergraduate has created scientific history through some simple experiments on rodents. Hinze Hogendoorn conclusively demonstrated that not everything endorsed by Nobel laureates and other so-called authorities like the UK's Royal Society is scientifically correct. Hogendoorn may not find a place of honour in the pro-GM stuffed Royal Society, but he has surely put the august body to shame.

Following basic scientific conventions, Hogendoorn conducted his experiments on mice. He picked up 30 female six-week-old mice from a herpetology centre. These rodents were originally bred to feed snakes. Then, like any other net-savvy teenager, he searched the web for information on how to take care of mice. Accordingly, he bought some rodent mix, some Kellogg's and Quaker cereals and some oatmeal that was specified to be 'GM-free'. Hogendoorn also bought some GM maize and soya. These foodstuffs were to form the staple diet for the mice.

The mice were let loose in big cages with the two piles of food – one GM and one non-GM – stacked in four bowls. Unaware of received opinion on the virtues of GM 'functional foods', the mice delivered their own verdict. They completely emptied the bowls containing the non-GM food. The bowls with GM food remained untouched.

But Hogendoorn was still not satisfied. He conducted a series of other tests to find out what would happen when the mice were force-fed with GM foods. Significantly, but for unknown reasons, one of the mice died. The other GM-fed mice initially appeared heavier, but by

the end of the experiment they had actually lost weight. A rival group of mice was fed a non-GM diet. These mice ate less and gained more weight, and continued to gain weight.

Equally worrying were the behavioural changes that the diet induced in the mice. The GM-fed mice 'seemed less active', 'more nervous and distressed' and were completely at a loss. 'Many,' Hogendoorn was quoted as saying, 'were running round and round the basket, scrabbling desperately in the sawdust, and even frantically jumping up the sides – something I'd never seen before.'

The Royal Society has so far refrained from commenting on Hogendoorn's experiments. But to restore its reputation (tarnished by the way it tried to indoctrinate the media into rubbishing Arpad Pusztai's experiments) it released in February a report entitled *Genetically Modified Plants for Food Use and Human Health*. British and, for that matter, European consumers continue to question scientific claims about food safety. Responding to this pressure, the Royal Society has called for tougher regulations before GM food is passed as safe for human consumption. As a face-saving device, it has drawn attention to the potential risks GM foods pose for babies. The latter are particularly susceptible to changes in the nutritional make-up of food.

But the Royal Society report is full of contradictions. It states that consumption of genetically modified DNA has no effect on human health. Are babies not human?

I wonder what the Royal Society would advise the British Prime Minister Tony Blair. The latter has gone on record as saying that he finds GM food safe for his own children. Now the Royal Society has proved him wrong, Blair may find it worthwhile inviting Hinze Hogendoorn to help his children conduct some experiments on mice too. That way they might be able to make up their own minds about the issue. Until then, Mr Blair should direct British High Commission offices worldwide to refrain from issuing press releases stating that GM food is safe ■

CARBON EMISSIONS TRADING

A PERMIT TO POLLUTE OR A STEP IN THE RIGHT DIRECTION?

Should countries and corporations be allowed to plant forests instead of reducing their carbon emissions? Is this the last chance for the rainforests, or just big business trying to avoid expensive emission reductions? Robin Hanbury-Tenison and Ross Gelbspan open the debate.



The reason why I am an enthusiastic supporter of carbon-emissions trading is that it represents the last chance to save the rain forests. This is recognised by most of the world's leading experts. Those experts campaigned vigorously to include the conservation and restoration of natural forests in the Clean Development Mechanism of the Kyoto Protocol.

I have spent years campaigning to stop forest destruction. Collectively, we have failed. Washington-based environmental think tank the World Resources Institute (visit: www.wri.org) has

As Deng Xiao Ping said, 'I don't care if a cat is black or white as long as it catches mice'

ROBIN HANBURY-TENISON, OBE, IS A FOUNDER AND PRESIDENT OF SURVIVAL INTERNATIONAL – THE WORLD'S LEADING ORGANISATION SUPPORTING TRIBAL PEOPLES.

concluded that 'what we thought were still vast, untouched stretches of intact forests... are fast becoming a myth. Much of the green canopy that is left is, in reality, already criss-crossed by roads, mining and logging concessions.'

It is now clear that conventional methods of protection simply have not worked. The reason why forests are being destroyed is that they are of economic value only for their timber and for subsistence agriculture. All the conservation money in the world will never be enough. Small islands of biodiversity can be saved, but without buffer zones even they cannot survive. Recent history is littered with good intentions, charity, aid and debt.

The only way this pattern can be stopped is if someone pays. The example of sulphur dioxide in the US shows that, like it or not, only trade works. The reduction in sulphur dioxide emissions achieved through trading exceeded all expectations. There is every reason to believe trading in CO₂ emissions will net similar results.

Kyoto provides the means to transfer billions of dollars a year to the world's poorest countries. It would force polluters to pay for taking CO₂ out of the atmosphere by growing – instead of cutting – trees. After often acrimonious debate, terms have now been agreed. At Rio Plus Ten in September, CO₂ trading will become a reality. Already, some 350 million tons of CO₂ have been traded. The British government, recognising the vast potential

for good, has committed £250 million to help London become the world leader in this huge new market.

Everyone agrees that technological innovation is the only long-term solution to global warming. However, improvements in forestry and in land use – the only processes that actually absorb CO₂ from the atmosphere – are essential tools. Trees and plants absorb 40 per cent of the CO₂ released into the atmosphere. Deforestation releases 20 per cent of the global total, and makes global warming worse. In other words, simply by stopping deforestation we would make a major contribution. By encouraging industry to offset its emissions by paying for forest preservation and reforestation, we all win. Industry will do it because carbon sinks are the cheapest short-term solution to the problem of carbon emissions. The tropical countries will do it because they have a competitive advantage in supplying this vital environmental service.

And don't let's fall for the argument that emissions trading and credit for carbon sinks provide a 'loophole' that lets industry off the hook. That is nonsense. Even if we stopped all deforestation today and replanted every hectare of destroyed rain forest tomorrow, that would make up for only 20 per cent of the world's greenhouse gas emissions. The remaining 80 per cent of the problem must be solved by technological advances.

Accounting for carbon sinks is well within our existing technical capacity. It is patronising to suggest that developing countries are incapable of such a task. Kyoto isn't perfect, but it's all we have. We should make it work now as best as we can, and improve it over time – particularly by including credits for forest preservation. Otherwise we'll throw the baby out with the bath water.

The world's population will double in the next 50 years. All of today's poor and all of tomorrow's will need energy to improve their lives. If emissions trading can help keep our world habitable while new technologies are developed, then we should do everything in our power to encourage it. Without a viable planet to live on, it doesn't matter how much we reduce our emissions. As Deng Xiao Ping said, 'I don't care if a cat is black or white as long as it catches mice.'



Given the escalating pace of climate change – and the sensitivity of planetary systems to even a slight rise in temperature – a reliance on international carbon trading seems to represent an institutionalised denial of the scope and magnitude of the challenge.

The deep oceans are warming. Island nations are going under. Glaciers are melting. Infectious diseases are spreading. Violent weather is intensifying and the timing of the seasons has changed. And all this has resulted from a mere 1° Fahrenheit increase in temperature. So, imagine

International carbon trading, which was developed to find cheap ways to cut emissions, has proved to be as loophole-ridden as Arthur Andersen's Enron accounts.

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the consequences should the Earth warm by 3-10° Fahrenheit. This is precisely what the respected Intergovernmental Panel on Climate Change has predicted for later in this century.

International carbon trading, which was developed to find cheap ways to cut emissions, has proved to be as loophole-ridden as Arthur Andersen's Enron accounts.

The mechanism of emissions trading can work well within nations and individual corporations. In such a context it can be accurately quantified and effectively enforced. At the international level, however, the system of 'cap and trade' breaks down. It cannot be monitored effectively. It is not enforceable. Moreover, it is plagued by irreconcilable equity disputes between the developed and the developing economies.

When the world's economies decided on what baseline level to reduce their emissions to, the industrial economies decided to use their individual 1990 levels. Any lower, they maintained, would mean immediate changes in energy use which would have negative impacts on their economies. By contrast, the developing economies felt that using 1990 baseline levels wasn't fair. It would allow the big polluters to keep polluting at relatively high levels. The developing nations contend that only a per-capita allocation is fair. But since each US citizen is responsible for 25 times more emissions than each Indian citizen, this system would decimate the US economy.

A second equity issue focuses on provisions in the Kyoto Protocol which allow industrial nations to buy limitless amounts of cheap reductions in poor countries and to bank them indefinitely into the future. Thus, when developing nations are eventually obligated to cut their emissions, they will be left with only the most expensive

options. This clearly constitutes a form of environmental colonialism.

Even if all these shortcomings could be resolved, international carbon trading is most appropriately used as a fine-tuning instrument. It could help countries attain the final 10-15 per cent of their obligations. It is not the workhorse vehicle which is needed to propel a worldwide energy transition.

Ultimately, not only is emissions trading inadequate; so are the Kyoto Protocol's initial low 5.2 per cent emissions reduction goals. The science is unambiguous on one point: climate stabilisation requires global emissions reductions of about 70 per cent.

One alternative appropriate to the magnitude of the crisis would involve the parties to Kyoto adopting a progressive fossil-fuel efficiency standard. This would be far simpler to negotiate, easier to monitor and ultimately fairer than carbon trading.

Under this mechanism, every country would start at its current baseline and increase its fossil-fuel energy efficiency by, say, 5 per cent every year until the 70 per cent reduction was attained. There would be no need to invoke 1990 levels, or to impose a per-capita standard. It would also be much easier to monitor.

Developing countries have argued for a per-capita system rather than 1990 baselines. They have used the argument to justify their exemption from the first round of cuts. A fossil-fuel efficiency standard – with every country starting at its current baseline – would meet the developing countries' objections and ensure their participation in the system.

For the first few years most countries would meet the 5 per cent goal by capturing low-cost efficiencies in current energy systems. When those efficiencies became more costly, countries would meet the progressive efficiency standard by drawing more energy from non-carbon sources. All of these sources are, according to a fossil-fuel efficiency standard, 100 per cent efficient.

That, in turn, would create the mass markets and economies of scale necessary to make renewables cheaper and more economically competitive.

Such a system would be far simpler to monitor. A nation's compliance would be measured simply by calculating the annual change of its carbon fuel use in proportion to its gross domestic product.

Ultimately, the large oil companies require a set of incentives and regulations which would allow them to decarbonise their energy supplies together, without any of them losing their competitive standing. A progressive fossil-fuel efficiency standard would provide that type of regulation.

POPULATION GROWTH: NO LONGER A PROBLEM? by Theodore Roszak



THEODORE ROSZAK, PROFESSOR OF HISTORY AT CALIFORNIA STATE UNIVERSITY AND BEST-SELLING AUTHOR OF *THE MAKING OF A COUNTERCULTURE*, EXPLORES THE ISSUES RAISED BY OUR GROWING AND AGEING POPULATION.

Remember 'Year Six Billion'? That was the campaign the UN launched in December 1999, when it estimated that somewhere on the planet the six-billionth person had already been born. Year Six Billion was part of the UN's long-standing call for worldwide population control. The pictures that accompanied the campaign showed the familiar heart-breaking horrors of famine and disease raging through Africa, Asia and Latin America. Starving babies, emaciated mothers, and dying elders stared bleakly out at the world.

Nothing about the urgency of such human suffering has changed. But something has changed about the demographic contours of the modern world. In its latest population report, issued in March 2002, the UN takes note of two surprising developments. In both industrial and Third World nations, fertility is diminishing. If the trend continues, we can expect population growth to slow significantly during the 21st century. In a best-case scenario, which an increasing number of demographers now take seriously, the UN predicts that world population will peak in 2040 at 8 to 9 billion before it shrinks back steadily over the next century and a half. The previously predicted high was 10 billion. If fertility rates continue to fall at the current rate, the planet's population could drop as low as 3.6 billion by 2150.

So why is fertility diminishing?

In recent years, demographers have begun standing Malthus on his head. Fertility and life expectancy may be inextricably linked in ways that are only now becoming apparent. In the long run, it may be biologically and sociologically impossible to expect a baby boom from longevous societies. At least that is what we have learned from fruit flies.

As early as the 1970s, population geneticists began to notice a peculiar characteristic among *Drosophila*, the fast-breeding fruit fly on which most of our reproductive knowledge is based. They recognised that flies which are induced to reproduce late in life and to have fewer young tend to live longer. This finding gave rise to a hypothesis called the 'disposable soma theory'. The theory argues that there is a trade-off between fecundity and longevity. Animals which invest heavily in reproduction divert physical energy and resources from the maintenance and repair of cells, and so age more rapidly. In technical terms, the mechanisms underlying the increase in lifespan involved greater investments in somatic durability.

Do those mechanisms, then, have anything to do with human beings? Yes, they do. It may seem a long reach from fruit flies to the lords and ladies of Great Britain, but a recent study of the English aristocracy over a period of 1,000 years indicates the same demographic pattern that is found in *Drosophila*. English aristocratic families can be traced back to the eighth century. That makes them one of the few groups for whom reasonably reliable long-term vital statistics can be

found. A study by Rudi Westendorp and Thomas Kirkwood published in *Nature* in December 1998 shows that individuals – both males and females – who were barren or produced the fewest progeny lived longer than the more prolific members of their class. This corroborates a 1997 study indicating that US women who waited until they were in their 40s to have their first (and usually only) child had a far better chance of reaching the age of 100.

In brief, it looks as if fertility is inversely correlated to life expectancy. In fruit flies, the disposable soma theory may adequately provide a full explanation for that astonishing

'When Malthus wrote his *Essay on Population*, he based his conclusions on the sexual insatiability of men – especially working-class men, whom he regarded as little better than swinish lechers.

Women appear only in the background as submissive, full-time child bearers subject to their husbands' appetites.'

fact. But in humans, there may be another, utterly obvious force at work. Women.

When overpopulation was first identified as an environmental blight, the women's movement had not yet made its full impact felt even in highly developed societies. Those were the baby boom years when US women had a fertility rate as high as 3.7 and supposedly aspired to little more than full-time home-making. As soon as women began to rethink their role in life, their fertility slumped. In the US, for instance, it reached 1.7 by 1976. It has stayed at or below replacement rate ever since. A quarter of boomer women have elected to remain childless. In an even more striking turn-around from the high birth rates that ushered them into the world, 40 per cent of US boomer women between the ages of 36 and 54 have been sterilised.

When Malthus wrote his *Essay on Population*, he based his conclusions on the sexual insatiability of men – especially working-class men, whom he regarded as little better than swinish lechers. Women appear only in the background as submissive, full-time child bearers subject to their husbands' appetites. Since the only known form of birth control at the time – referred to by Malthus as 'vice' – was male-dependent, he never included contraception in his predictions. How surprised he would be to learn that Italy and Spain, Catholic nations with a decidedly macho style to their culture, now have the lowest fertility rates in the world.

Yet a century and a half after Malthus, many environmentalists are working from assumptions not much different from his.

They realise, of course, that Malthus lacked good statistics and that his more extreme projections were flawed, but they continue to view women with a darkly Malthusian bias. Since the 1960s, whenever environmentalists have spoken of 'educating women', they have meant educating women in methods of birth control. It is as if they cannot imagine women in any other role than that of wives and mothers. And since promoting contraception in many Third World countries has pitted women in a losing struggle against their husbands and religious authorities, the prospects for population control have always seemed bleak. In that sense, the environmental movement has been entrenched in a dismal neo-Malthusian orthodoxy. 'We are committed to being population alarmists,' I was told by the editor of a leading US environmental journal.

Yet now that 'educating women' has come to mean offering women the full range of intellectual and occupational options – law, medicine, education, engineering, factory skills – the results are clear. Population declines. At its highest level, modernity – whatever else it does to deplete and pollute – diminishes our human numbers. Environmentalists may be reluctant to admit it, but raising the social consciousness of women has turned out to be a better, less coercive approach to population control than top-down government policy. In a very real sense Betty Friedan's *Feminine Mystique* and Germaine Greer's *Female Eunuch* provided the solution population alarmists once thought could only be achieved by rigorously enforced contraception. As US television producer Population International has recognised, soap operas showing Third World women struggling to gain jobs and education can do more to stem runaway population growth than volumes of contraceptive information.

'As US television producer Population International has recognised, soap operas showing Third World women struggling to gain jobs and education can do more to stem runaway population growth than volumes of contraceptive information.'

Young and old, we are all in it together

The longevity revolution, far from being a geriatric conspiracy, results from intergenerational choices. Young and old, we are all in it together. It is due as much to what the young want (smaller families) as to what the old need (better healthcare). However much we pay for retiring older workers, this is the long-term cost of the values for which young and old alike are spontaneously opting everywhere.

Making longer lives secure and rewarding will surely be the highest goal of social policy in the century ahead. Nobody saw it coming, but at its highest stage of development, industrial society becomes a healthcare economy. Within the next generation, we may view the interests of patients the way we viewed the interests of motorists when ours was a young, mobile, automotive society spreading into the suburbs. Nobody then questioned the necessity of investing trillions in automobiles, highways and gasoline. In the years ahead, we will surely see as much capital, labor, skill and energy invested in longevity as we once saw devoted to the automobile or the computer.

But there will be a difference. In contrast to other economic priorities like automobiles, high-tech industries or aerospace, the needs of an ageing population are as ethically defensible

and environmentally benign as human needs can be. Even if one wishes to classify healthcare as a form of consumption, how can we fault so human a choice? In the days when the population bomb was ticking, one could easily condemn the consumption habits of major industrial societies. Gas-guzzling cars, TV dinners, electronic gadgetry, even the taste for well-marbled beef that turned fertile acreage into pasture – all could be identified as unconscionable extravagance. But investing in good health is not only morally tenable, it actually weighs far more lightly on the planet.

Taken together with the less-than-zero population growth that a longer life expectancy brings with it, the longevity revolution may at last offer industrial civilisation the preconditions for sustainability along with a healthy and extending life span.

Another way to define that eventuality might be to call it true wealth of nations ■

The grey peril – the implications of the longevity revolution

With the hint of a more hopeful demographic future, conservative economists are hardly cheered by what they see ahead. Indeed, they are gloomier than ever. They see a menacing new prospect in the very societies that would seem to have found the secret of zero growth – the grey peril. We are being warned that this longevity revolution is the prelude to an intergenerational war that will see children and parents battling over the wealth of nations. The 'rise of the wrinklies' has begun to loom as a major political threat to the global economy. In the view of Ben Wattenberg of the American Enterprise Institute, ageing is 'the real population bomb'. As Wattenberg puts it, 'I am not a catastrophe-monger, but it is a hell of a lot bigger problem than too many people.'

Wattenberg believes ageing costs too much. Like the conservatives who have been telling the US since the 1980s that the country cannot afford Social Security entitlements for its 'greedy geezers', Wattenberg sees a fiscal train wreck awaiting all the industrial nations that will have to pay for their growing senior numbers. He is hardly alone in his worries. The UK's Institute of Public Policy Research has similarly described Britain's pension plan as 'unsustainable.' Laurence Kotlikoff of Boston University, the leading voice in the new conservative school of generational accounting, believes that 'current fiscal policy is unsustainable and generationally unconscionable'. Kotlikoff says: 'Our kids will be taxed to death.' The generational accountants have reached nearly apocalyptic conclusions, predicting that what they call 'the unfunded pension liability' of the baby boom generation will devour all tax revenues and burden future generations with a tax load amounting to 70 or 80 per cent of their earnings.

The figures used to support panicky scenarios like these are so skewed that they are not to be taken seriously. They have been rigged to serve the purposes of ideological critics who never welcomed welfare state programmes in the first place. Many economists, including those who supervise the US Social Security Administration, which is as reliable an organ of government as Americans have, see no difficulty in keeping the US national retirement system in actuarial balance for the rest of the 21st century. All it will cost is a few percentage points more on the payroll tax. That is hardly a high price to pay for so many more years of life.

LOCAL FOOD, GLOBAL SOLUTION

Increased international trade in food is putting the livelihoods of small producers across the world at risk. Here, **Colin Hines**, **Caroline Lucas**, MEP, and **Vandana Shiva** make the case for a return to a more localised agricultural model.

For Anjamma, who had never before stepped outside her home village, the constant flash from the cameras must have come as quite a shock. But her surprise was nothing compared to the looks on the faces of the reporters as she answered one of their questions. One of them asked what she would do if the UK government's current plan for Indian agriculture went ahead. There was a pause as the translator spoke to Anjamma in her language. Anjamma thought for a second before giving the interpreter her answer. The interpreter then turned back to the crowd of journalists and said: 'There will be nothing for us to do other than to drink pesticide and die.'

Back home in the Indian state of Andhra Pradesh, Anjamma works four acres of land with her seven children, two bullocks and eight buffalo. She has no machines. This March Anjamma left her home for the first time, and came to the UK with a delegation of farmers in the same situation as her. The reason for the trip? To protest against UK development minister Clare Short's plans to spend £65 million of UK taxpayers' money to turn Andhra Pradesh into a massive food export zone. If Short's plan goes ahead, then over the next two decades it is likely to destroy the

livelihoods of around 20 million farmers like Anjamma.

Speaking to the press conference, Anjamma made it quite clear what Indian farmers really want. 'If Britain wants to give money,' she said, 'it should come to the farmers directly. That

'Following a complaint by the US, the WTO decided in 2000 that India would have to remove trade barriers that protected its producers. Indian farmers have since found it harder and harder to survive. The prices of coconuts have fallen by 80 per cent. Coffee prices have collapsed by over 60 per cent, and the price of pepper has plummeted by 45 per cent'

way we can keep our land, make farms more fertile, buy more seed and become completely self-sufficient. Instead, this is being denied to us in the name of modernisation.'

Anjamma's is a message that an increasing number of British consumers are echoing each week in the ways they choose to buy their food. In direct contrast to the way the UK government wishes to spend £65 million of its taxpayers' money, British consumers now spend the same sum at local farmers markets each year. Every penny of their money makes a clear statement that, like Anjamma, more and more people in the UK want to know that the food they put on the table was produced locally, and in ways that they can trust.

Unfair trade

This growing call for the emphasis to be put back on local food production, rather than international trade, is likely to form a contentious backdrop to the debates at a Food and Agricultural Organisation of the United Nations conference in Rome this month. In typically noble style, the meeting has the stated aspiration of wishing 'to alleviate poverty and hunger by supporting sustainable agricultural development'. Yet countless similar meetings have happened before, and they all tend to articulate the solution to world poverty as an increase in the international trade in food.

The idea that farmers can make more money by growing food for export might, on the surface, seem a very sensible one. Unfortunately, it just doesn't work. With more and more

The global food trade – the vital numbers

- For every calorie of carrot flown into the UK from South Africa, we use 66 calories of fuel.
- Of every 100 fruits consumed in the UK, only five will now have been produced domestically.
- One shopping basket of organic products could have travelled 241,000 kilometres and released as much CO₂ into the atmosphere as an average four-bedroom house does through cooking meals over eight months.
- In 1998 the UK imported 61,400 tonnes of poultry meat from the Netherlands. In the same year it exported 33,100 tonnes of poultry meat back to the Netherlands.
- In 1997 126 million litres of milk were imported into the UK, while 270 million litres were exported at the same time.
- In 1999 the EU imported 44,000 tonnes of live bovines from Argentina, 11,000 tonnes from Botswana, 40,000 tonnes from Poland and over 70,000 from Brazil. In the same year the EU exported 874,211 tonnes of live bovines to the rest of the world.



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TOMATOES

The illusion of choice



NOVA



LEMON BOY



BETTER BOY



BLACK KRIM



EARLY GIRL



CELEBRITY



CHEROKEE PURPLE



MILANO PLUM



GREAT WHITE



STRIPED GERMAN



SAN MARZANO



YELLOW BRANDYWINE



MR STRIPEY



BRANDYWINE



DIXIE GOLDEN GIANT



SAN REMO



CARROT PASTE



REIF RED



PERSIMMON



MARBLE WHITE



BLACK CRIMSON



SUNSWEEP



BLACK PLUM



SUNGOLD



CASCADE



GREEN VINE



ROSE QUARTZ CRYSTAL



SWEET 100



YELLOW PEAR



ITALIAN GOLD



GOLDEN PANDORA



GREEN ZEBRA



RED BRANDYWINE



CHIOGGIA



MARVEL STRIPE



CARO RICH

countries fighting for the same markets, producers are forced to drop their prices in order to compete. The result is not more money for farmers, but less. This can be vividly seen in the coffee trade. Coffee is, after oil, the world's most valuable export.

Between 1995 and 2000, Vietnam used World Bank loans to triple its coffee output. This made Vietnam the world's second largest producer of coffee after Brazil. All well and good for the Vietnamese economy, one might think, but what about the farmers in the other 49 Third World countries that produce coffee? Well, world coffee prices have collapsed and 20 million farmers worldwide now see their livelihoods at risk.

A similar story is unfolding in the case of tea. China already provides 80 per cent of the green tea traded on the international market. With growing Western interest in green and organic teas' health-giving properties, China is now gearing up to meet an upsurge in demand. This is even if it means flooding the market with tea at rock bottom prices so as to ward off competitors like Sri Lanka and India.

But it is not as if India doesn't have any other problems to worry about. Following a complaint by the US, the WTO decided in 2000 that India would have to remove trade barriers that previously protected its own, local producers. Ever since, Indian farmers have found it harder and harder to survive. Products that they once produced for the home market are now undercut by cheaper imported alternatives. The country now ships in Indonesian coconuts. The prices of coconuts in India have fallen by 80 per cent as a result. Likewise coffee prices have collapsed by over 60 per cent, and the price of pepper has plummeted by 45 per cent.

But this is nothing in comparison with the market for edible oil: the Indian industry has effectively been wiped out. Low import duties have led to highly subsidised US soya and palm oil from Malaysia flooding the market. Imports now account for 70 per cent of India's domestic consumption of edible oil.

In response, activists from all over India have been at the forefront of demands regarded by most of the world's economists as the ultimate heresy: the reintroduction of protective trade barriers.

In their own country at least, these voices are slowly beginning to be heard. In September 2001, two former Indian prime ministers – Shri VP Singh and Deve Gowda – joined with political parties, peoples' movements, trade unions and farmers' organisations to launch the Indian People's Movement Against the WTO. The aim of the movement is to push for more protective controls on imports.

While these demands for a return of tariffs are currently being made mainly in poorer countries, it is unlikely they will stop there. For just as in India, the livelihoods of smaller farmers in the US and Europe are also at risk.

EU plans to reform the Common Agricultural Policy (CAP) may contain a welcome shift away from subsidising overproduction and towards supporting greener farming methods. But on its own this fails to address the central flaw of the CAP – an issue which is never adequately discussed, let alone addressed, in official circles. Namely, that enforced global competitiveness is a curse. European farmers are being asked to perform two mutually exclusive tasks at the same time. First, they have to achieve ever greater levels of international competitiveness by increasing efficiency through larger scale, more intensive farming. But at the same time, they are being asked to maintain higher standards of social, environmental and animal welfare. The two objectives simply cannot go together.

Furthermore, this model of competitive, predominantly intensive agriculture is also being promoted in the eastern

'Local food, global solution' policies will require:

- Import controls to be gradually re-introduced to protect those goods which can be produced domestically from imports which could otherwise threaten the rediversification of national agricultural systems;
- Mechanisms to ensure that the real costs of environmental damage, unsustainable production methods and long-distance trade are included in the cost of food;
- Greater support for farmers to enable them to prosper and produce healthy food using environmentally sustainable farming methods;
- The ending of long-distance transport and live exports of animals;
- Restriction of the concentration and market power of the major food corporations and retailers through new competition laws, a fair pricing system for farmers and consumers alike (rather than the current system of low prices for farmers and high prices for consumers), and the encouragement of rural regeneration and jobs;
- Residual long-distance trade in foods which cannot be produced domestically (eg, coffee, tea and bananas in the UK) to follow the principle of 'fair trade miles'; this would combine the requirements of FairTrade with 'food miles', with a guaranteed quantity of goods to be purchased by each buying country within a guaranteed range of prices.
- A reorientation of the end goals of international trade and aid rules, so that they contribute to the rebuilding of more sustainable local and national economies.

European countries which are currently seeking to join the EU. Polish farmers, for example, are being forced into competition with the more 'efficient', large-scale farmers of western Europe. The result is that Poland will probably see the collapse of up to two million agricultural livelihoods.

Stop global, shop local

As more consumers, farmers and workers world-wide are experiencing the downside of rampant globalisation, the time has come to consider replacing this failing system with a sustainable localised alternative. A 'local food, global solution' policy (see the box on this page) would aim to keep production much closer to the point of consumption. This would help protect small farmers and rebuild local economies around the world.

It is this approach that will be at the heart of a report the authors will be taking to the UN's Rome conference. To see a copy of the report, visit Caroline Lucas' website at: www.carolinelucasmep.org.uk. The point of the report is to help start a debate about the need for a radically different 'localist' agricultural model. Such a model should ensure that small farmers from the UK to Poland and Vietnam to India, will have a secure future providing healthy, predominantly local food in a way that protects the environment. Imports will be controlled by governments, and exports should consist only of genuine surpluses once food security needs have been met by domestic production. Our response to the omnipresent free traders will be: 'Let the world food trade deal only in the leftovers.' ■



BEEFSTEAK

VARIETIES LOST FROM 1903 TO 1983: 80.6 PERCENT

Due to the decimation of their diversity, tomatoes have, for over a quarter century, been listed by international seed organisations as among the most genetically threatened of all the earth's crops. Extinction of tomato varieties has many causes, including industrial pollution and land clearing for agriculture and housing. But the most egregious culprits are governments and corporations who purposely replace traditional tomato varieties with commercial hybrids and then dispose of the traditional seeds, making those varieties extinct. This near-criminal process of replacement and extinction not only deprives us of the taste and beauty of the discarded varieties, but also threatens the survival of all commercially raised tomatoes. As noted by one plant expert: 'Tomatoes could not be grown commercially at all without the resistance they have developed from wild species.' For at least 19 disorders of tomatoes, wild tomato species are the principal source of resistance. They have supplied resistance to leaf mold, tobacco mosaic virus, nematodes, and numerous other diseases. So extinction of wild varieties of tomatoes could ultimately mean the disappearance of the entire plant species.



Information adapted from *Fatal Harvest: The Tragedy of Industrial Agriculture* (Island Press \$75 hardback/\$45 paperback). Published in the US in May 2002, the book features chapters by several leading environmentalists, including Vandana Shiva, Wendell Berry and Helena Norberg-Hodge

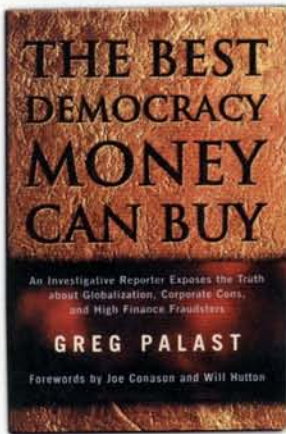
Reviews

Send your suggestions for *Ecologist* reviews to
Jeremy Smith at jeremy@theecologist.org

This month: **The Best Democracy Money Can Buy** Greg Palast • **The Love of Nature and the End of the World** Shierry Weber NicholSEN • **Food Politics** Marion Nestle • **The Chrysalis Economy** John Elkington • **The Clash of Fundamentalisms** Tariq Ali • **The Invention of Clouds** Richard Hamblyn

THE BEST DEMOCRACY MONEY CAN BUY

by Greg Palast
PLUTO PRESS 2002/£18.99
ISBN: 0745318460



It's enough to turn you into a cynic. US elections are manipulated, British parliamentarians are bribed, scientific research is financed by companies that are interested parties, energy crises are rigged – the list of modern-day sleaze goes on and on.

What's that? You say you're already cynical? Well, unless you are so cynical that you wouldn't even utter a word in the hope of changing things, Greg Palast's new book could be a handy tool.

The Best Democracy Money Can Buy consists of dozens of essays (many of which are summaries of Palast's investigative journalism escapades) on the myriad ways those of power and wealth have stolen and/or perverted cherished US and British ideas and institutions.

Palast, an American who writes for London's *The Guardian* and *The Observer*, has the uncanny knack of turning up at the wrong place at the right time. His showcase essay has to do with the 2000 US presidential election in Florida, and how Florida Governor

Jeb Bush and his team shamelessly contrived the removal of thousands of voters' names from the election rolls. These voters were, in large measure, black and therefore far more likely to vote Democrat than Republican. The result was nothing less than the placing in the White House of Jeb's brother George. Thanks to Palast, this is now a well-known story, but he adds a lot of extra details here.

What I found most disturbing, but not terribly surprising, is that when Palast approached the US mainstream media to give the story the play it deserved, its reaction was to call Jeb Bush's office for confirmation. The latter rejected the Palast version of events. And that was good enough for the mainstream media. It's not easy for loyal, unquestioning Americans to embrace the idea that their country is a banana republic.

Other Palast targets include the IMF and the rest of the international financial mafia. Palast details the onerous conditions imposed upon poor countries by the IMF. Some of the details are attributed to confidential IMF documents which Palast managed to obtain. I'm sure many readers, like me, would love to see the exact wording used by the IMF – to see just how it rationalises its oppressive policies and what kind of euphemisms it resorts to, or whether it pushes its policies unabashedly. Unfortunately, Palast only paraphrases the details. There are no quotes and no examples of any of the secret pages in the book. Inexplicably, the one page Palast does show is just the cover page of a World Bank report. Documentation is not Palast's strong point – there are scarcely any notes.

Of particular significance is the essay 'The Economic Miracle of Chile'. It analyses conservative claims of the supposed marvellous benefits of the Pinochet regime's laissez-faire, supply-side economic policies. Palast describes Pinochet's approach as a case of

'deregulation gone berserk', adding that it eventually drove the country into bankruptcy and depression.

Because of his breezy, personalised, iconoclastic style, Palast is generally adept at making economic and other issues readable. There are occasions, however, when more unadorned language, a slower pace and a 'books-for-dummies' approach might have served the reader better. And that is part of the problem with the essay on the California 'energy crisis' of the late 1990s and 2000. I've read several accounts of the episode, and not one came even close to making it understandable. Palast improves on the previous efforts, but his account still leaves me with more questions than answers. In fairness to him, his essay was not designed to be a primer per se on the California energy crisis, but rather a discussion of the dangers of electricity deregulation. But it refers so much to California that a fuller deconstruction of what took place there would seem to be in order.

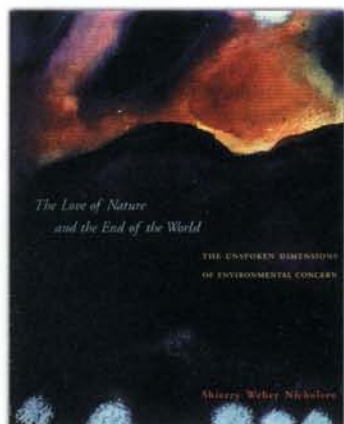
Overall, the multitude of subjects covered here, and the frequent flights from one to the next, can be a bit jarring and disorienting. There is often a want of continuity. But Palast's humour can make up for the odd shortcoming. An example: 'The Kyoto Protocol aimed to slash emissions of "greenhouse gases" which would otherwise fry the planet, melt the polar caps and put Blackpool and Los Angeles under several feet of water. It will also have negative effects.'

Palast, it should be noted, is a native of Los Angeles.

Reviewer William Blum is the author of 'Rogue State: a guide to the world's only superpower' and 'Killing Hope: US military and CIA interventions since WWII', which Noam Chomsky called 'far and away the best book on the topic'. His latest book, 'West-Bloc Dissident: a Cold War political memoir', was published in March.

THE LOVE OF NATURE AND THE END OF THE WORLD

by Shierry Weber Nicholzen
MIT PRESS 2002/£19.50
ISBN: 0262140764



Why is it that so many people think the environment is best left to environmentalists, and is not the responsibility of each and everyone of us? What kind of denial is going on here? These are the concerns at the root of Shierry Weber Nicholzen's heartfelt and well-informed book.

Nicholzen attempts to understand environmentalism through the eyes of a psychologist. She weaves together the thoughts of such disparate figures as Susan Griffin, Kathleen Raine, Maurice Merleau-Ponty, Ortega y Gasset, Joanna Macy and Christopher Alexander.

'A young person,' Nicholzen writes, 'once told me that because she could not decide what the best thing to do to save the environment was, she did not do anything.' But, as Nicholzen explains, there will never be any one best thing.

What we do need to do is nurture a personal connection to the natural world analogous to that intimacy nurtured between mother and child, family and person.

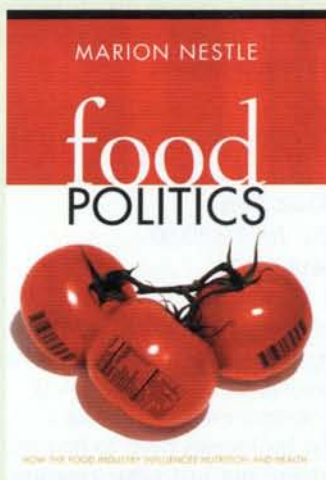
The steps in human development which are so essential to psychology are replicated in the way we find our place in the natural world. 'If our relationship to the natural world is one of kinship,' Nicholzen argues, 'reciprocity is what binds kindred beings to one another.' In other words, we need other species and they need us.

'The ultimate result of this intimate reciprocity is the growth of consciousness. Such growth means that one becomes more at home both in life and in oneself: the inside and the outside mirror one another, each becoming

FOOD POLITICS

HOW THE FOOD INDUSTRY INFLUENCES NUTRITION AND HEALTH

by Marion Nestle
U-CAL PRESS 2002/£49.95
ISBN: 0520224655



A nutritionist by profession, Marion Nestle chairs the Department of Food Studies at New York University. She has laboured in the halls of academia for more than a quarter of a century, except, that is, for a spell editing *The Surgeon General's Report on Nutrition and Health*. The report is published by the US's Public Health Service. On her first day at the government agency Nestle was told that, no matter what the research indicated, she must not recommend that people 'eat less meat'. Nor should she suggest restrictions on any other food group. If she did so, 'the food producers would complain to their beneficiaries in Congress, and the report would never be published'.

This revelation will hardly come as a surprise to anyone familiar with the inner workings of US politics. But it does explain the author's seemingly far-fetched comparisons between the food and tobacco industries. Both industries spend tens of millions of dollars each year lobbying for fewer restrictions on their respective efforts to persuade the US public to smoke and eat more.

The US food industry produces twice as much food as is needed to satisfy domestic consumers' appetites. A measure of the industry's success is that half the US population is now overweight, with 6 million people being 'morbidly obese'. The latter represents a 50 per cent increase in just the last decade. The medical costs for diet-related diseases in the US now exceed \$70 billion a year. A mere 1 per cent reduction in the intake of saturated fats would prevent more than 30,000 cases of heart disease in the US annually.

Perhaps even more disturbing from an ecological point of view is the fact that the family farm has been replaced by a globalised conglomerate of highly integrated food companies. Each year the food corporations spend more than \$33 billion advertising their products. The bulk of the money goes on promoting junk foods and soft drinks, neither of which has any nutritional value. This sum equals roughly \$100 a month for every American man, woman and child. That is more than what two thirds of the world's population spends on *buying* food, and more than what some two billion people *earn* each month. All told, there are now over 320,000 packaged food and beverage products competing for shelf space in US supermarkets. More than a third of them have been introduced on the market since 1990.

One chapter of Nestle's book is devoted to what might be called 'the pyramid scheme'. Twelve years ago two federal agencies, the Department of Health and Human Services and the Department of Agriculture, decided to pool their resources and publish a *Daily Food Guide*. The guide would help hapless consumers choose a healthy diet. After just two years and having spent just under \$1,000,000 the departments came up with a picture of a 'pyramid' (actually a triangle, as one spoil-sport was quick to point out). Grains formed the dietary base, and fruits, vegetables, meat and dairy products made up the super-structure. The pyramid was topped by sweets, which were accompanied by the admonition 'eat sparingly'. Not surprisingly, lobbyists for the different food groups have been jockeying for a more favoured position on the food chart ever since.

Though the title of her book does not refer to beverages, Nestle could not resist the temptation to describe what might be called 'the battle of the bottles'. When a California winery quoted the Bible on its labels and referred to wines as being 'sacred', all Hell predictably broke loose. The feud between imbibers and holy-molies was eventually settled by the Bureau of Alcohol, Tobacco and Firearms (sic). The bureau ordered the wine maker to substitute 'recommended in the Bible' for 'sacred'. A Pyrrhic victory for the true believers, but an all-mighty endorsement for the wine – sacred or not.

Under the heading 'Deconstructing Dietary Advice', the author succinctly summarises the problems inherent in all food policies. 'Science that favours consumption of some foods over others is hard to disentangle from the commercial implications of such advice.'

This book goes some way towards beginning that unappetising task.

Reviewer **Gard Binney** is a columnist for *The Ecologist*.

Magazine Rack

Worthwhile reads you won't find in the shops

SCIENCE IN SOCIETY challenges the bedrock of many of the scientific assumptions inherent in today's world – especially those pedalled by the biotech industry. The most recent issue features an article rubbishing the value of the UK's current Biobank project, and a critical analysis of the UK government's policy on the MMR vaccine.

Science and Society, The Institute of Science and Society, PO Box 32097,

London NW1 0XR, UK; tel: +44 (0)20 7383 3376; email: sam@i-sis.org.uk

LIVING LIGHTLY is the magazine that accompanies 'Positive News', and both publications embody the ethos of their titles. Each issue of 'Living Lightly' has a specific focus – from organic agriculture to local food or Gaia. The most recent issue covers environmentally aware architecture.

Positive News, 5 Bicton Enterprise Centre, Clun, Shropshire, SY7 8NF, UK; tel: +44

(0) 1588 640 022; email: livinglightly@positivenews.org.uk

MULTINATIONAL MONITOR

Founded by Ralph Nader, 'Multinational Monitor' consistently exposes the full extent of corporate crime. It often focuses on a single company, industry or issue – thus ensuring no stone is left unturned. The April issue has the cover strap 'Citigroup: bankrupting democracy'.

Multinational Monitor, PO Box 19405, Washington DC 20036, US; email: monitor@essential.org

ECO NEWS is the newsletter of the Ecological Design Association.

Published six times a year, it works to bring back principles of sustainability and ecological awareness to an often neglectful industry. The latest issue features a range of imaginative recycling initiatives, as well as a host of excellent

resources, event listings and further links.

Econews, The Ecological Design Association, The British School, Slad Road, Stroud, Glos GL5 1QW, UK; +44 (0) 1453 765575

increasingly complex and ordered as they are increasingly discovered.'

This is close to deep ecology, and there have been several works in the field of ecopsychology before this one. But Nicholsons's book stands out in its rejection of ideology, in its open, searching tone, and in the scores of beautiful psychological archetypes and case studies that explain how genuinely understanding the person means seeking greater peace of the self within the world – not in isolation from it.

As she writes: 'If the natural world gives to us through its ungraspable wildness, and our perceptual capacities develop as a result of what we receive from it, then there will always be more wildness... That is the sense in which nature's bounty is genuinely inexhaustible.'

Reviewer **David Rothenberg** is the author of several books on the environment, including 'Sudden Music: improvisation, sound, nature', which has just been published by the University of Georgia Press.

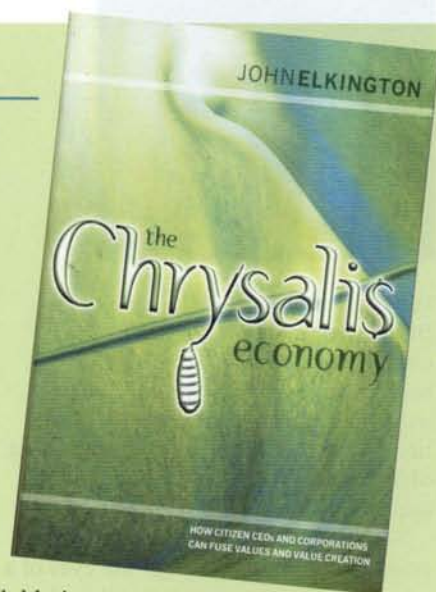
THE CHRYSALIS ECONOMY

by John Elkington
CAPSTONE 2001/£20.00
ISBN: 1841121428

A plausible alternative title for this book might have been *Zen and the Art of Managing Businesses*. The book is about economic metamorphosis – about how businesses need to become values-led and not just value-creation-led. As chairman of SustainAbility, the author has a good vantage point from which to examine the progress being made by some of the world's largest firms. SustainAbility provides corporate social responsibility consultancy to the likes of Nike, Aventis, Ford and Shell.

The book's big idea is that sustainability nirvana can only arise when businesses progress from simple legal compliance with environmental, health and safety and social regulations, through voluntary standard setting and observance to a values-led approach. In the latter scenario triple bottom-line thinking would permeate the business's strategic thinking. This is an aspiration that many environmentalists would have no quarrel with. But like the Buddha's four noble truths, which once grasped lead to salvation, the million-dollar question is not so much what are the stages (any self-respecting guru would already have a list of them up his sleeve), but how do we get people to run with them.

Elkington confidently pronounces: 'The next logical step will be calls from the business community for new legislation and for changes in pricing and tax signals and other incentives.' This will strike many as extraordinary. The UK's environmental department, which negotiated reduced Climate Change Levy rates in exchange for improvements in energy efficiency, was hardly overwhelmed by firms



lobbying

for high rates of the tax to beggar their less energy-efficient competitors.

The book's target market (if you believe the blurb) is in the boardroom. This means that, in addition to interesting case studies ranging from BP to Monsanto, there is an excess of management waffle. This includes an arbitrary taxonomy of businesses as caterpillars (bad), locusts (very bad), maggots (off-the-scale bad), butterflies (good, but minnows) and honeybees (the paragon). This gobbledegook demands a serious degree of tolerance. The second paragraph of the 'Executive Summary', for instance, is a 66-word epic full of such stultifying twaddle/ insightful concepts (delete according to taste) as 'sustainable business value model', 'ten forms of value added', 'MetaMatrix' and 'the learning flywheel'.

But the book is well worth persevering with if you are at all interested in reading a well-informed and well-connected account of how business boardrooms are responding to the sustainable development agenda.

Reviewer **Prashant Vaze** is a freelance journalist.

THE CLASH OF FUNDAMENTALISMS

CRUSADES, JIHADS AND MODERNITY

By Tariq Ali
VERSO 2002/£15
ISBN: 1859846793

Following 11 September, bookshops across the world reported dramatic rises in the sale of Korans, biographies of Osama Bin Laden and all things Islamic. Whether this reflected a genuine desire to understand one of the world's most maligned and misrepresented religions, or whether it was just a macabre example of our pavlovian thirst for today's big story today, is a moot point.

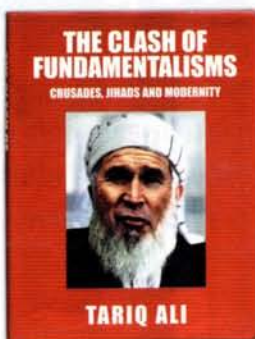
Whatever the reasons, Tariq Ali's new book offers a reasoned and beautifully written explanation of the history and growth of Islam, its current manifestations, and why it is so at odds with the other fundamentalism of the title – namely, US-led market globalisation.

Ali writes that 'it is perfectly possible to be part of a culture without being a

believer'. It is this balance, as both atheist and member of the Muslim community, that makes the book so persuasive.

Furthermore, a lifetime of political activism and a family background in the upper echelons of Pakistani society mean that the book is littered with accounts of first-hand meetings and correspondences between the author and many of the past half century's leading Islamic figures. These reminiscences, coupled with Ali's talents as a novelist, make this an eye-opening and important book.

Reviewer **Jeremy Smith** is assistant editor of *The Ecologist*.



THE INVENTION OF CLOUDS

By Richard Hamblyn
PICADOR 2001/£14.99
ISBN: 0330391941

Why were the clouds nameless for so long? Surrounded by vengeful gods, myths and mysteries, the clouds occupied the heavens, untouched by empiricism. That is, until an amateur cloud watcher called Luke Howard pulled the ethereal world into focus and named them.

In this fascinating study Richard Hamblyn manages to evoke the enthusiastic and excited world of 19th century science in which Howard operated. Hamblyn offers a touching and curious account of Howard's life. The latter first became preoccupied with the movements of the skies as a dreamy Quaker schoolboy.

The Great Dry Fog of 1783 – the result of volcanic explosions in Iceland – caused a hot, opalescent veil of dust and gas to envelope the UK. This brought with it a summer of 'reeking air and a sickly sun', but also the delights of the *aurora borealis* or northern lights.

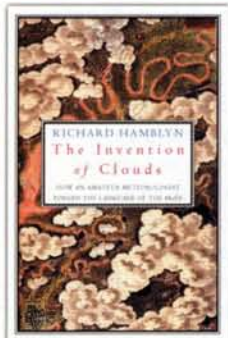
The perturbing weather phenomena of the year exposed the absence of meteorological knowledge at the time, and left a deep impression on Howard.

Howard's main premise, and the Latin nomenclature, he introduced still underpin modern meteorology. He observed that the clouds have many individual shapes but few basic forms.

While this approach is taken as self-evident today, it had huge ramifications for the intellectual community of the age. By allowing transiency and modification of clouds, Howard allowed 'ariel nature to retain the whole of its ancient and sensual appeal in the face of an empirical taxonomy'. This appealed to the Romantic spirit of the time, to visual categorists such as Wordsworth and Coleridge and to Europe's greatest intellectual icon – Goethe.

The Invention of Clouds is accessible, almost poetic in parts. But it does not skimp on meteorological explanation. With this book, Hamblyn has provided a stimulating portrait of Howard – the man who forged the 'language of the skies'.

Reviewer **Rebecca Whitford** is a freelance journalist and yoga teacher.



Web Rack

What's pushing our buttons this month...

If the net quest for the ultimate organic box supplier leaves you wilting, this month's Web Rack is for you. These sites cover a range of food issues.

www.sustainweb.org
Sustain: the Alliance for Better Food and Farming advocates food and agriculture policies and practices that enhance the health and welfare of people and animals, improve the working and living environment, promote equity and enrich society and culture. The website covers current campaigns that the alliance is staging, as well as the latest news on food policy. It also includes a host of links to various pertinent sites.

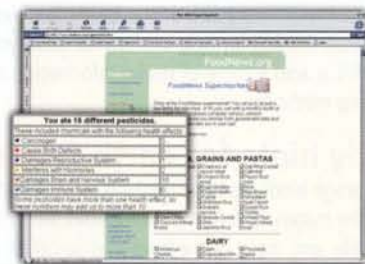


www.slowfood.com
The Italian-based Slow Food Movement promotes the pleasures of taking the time to enjoy every aspect of food. The site covers a feast of food festivals and celebrations, the Slow Food Awards, and charitable work which encourages food pleasure where it is otherwise hard to find.



www.bigbarn.co.uk
A simple service which locates local farmers' markets and organic suppliers, Big Barn includes an 'in-season' section that details each month's seasonal vegetables and delicious recipe ideas.

www.organicfood.co.uk
An online organic lifestyle magazine, with a great section on herbs and their culinary and medicinal uses. Plus absurdist supporters' petitions on such unlikely issues as bombing Afghanistan with butter.



www.foodnews.org
Amid all the information on food, pesticides and organics is the intriguing 'pesticide calculator'. Pick out your weekly groceries, and find out the shocking number of harmful chemicals and hormones your non-organic produce contains.

Compiled by Caroline Driver

In this era of globalisation and giant multinational corporations, our individual actions can often seem little more than futile gestures. But in a consumerist world, it is often only when we change our habits that those who depend on our purchases for their profits respond.

Gardening

START SAVING THE WORLD IN YOUR OWN BACKYARD!

Worried about the size of your ecological footprint? Almost one third of it (that's roughly from your toes to your instep) comes from food consumption. Growing your own produce is, therefore, an easy way to tread much more lightly. A square metre is all the space you need to be self-sufficient. And whether you have a garden, balcony or window box, everyone can grow some of their own.

Get planting. Herbs will happily thrive in window boxes or in pots on the rooftop or patio. Alternatively, sprinkle sprouting seeds like cress and alfalfa on wet tissue, leave them in a light place and they'll be ready to eat in two to five days.

How about an allotment? They provide a vital breathing space in city areas, and give people with no access to gardens a chance to develop green fingers. If you do not have a garden, why not club together with friends or family and share out the work on an allotment. Then you will all reap the rewards (organic, of course) of the best tasting produce available. Contact the Wavendon Allotment and Garden Society. It has a database of allotment sites around the UK. Visit www.btinternet.com/~cbownes/wags or call 01908 586095.

Start a compost heap. Almost a third of our domestic waste could go straight onto the compost heap. Instead, 27 million tonnes of organic waste goes to landfill, where it is deprived of oxygen and is unable to biodegrade. It's easy to turn your organic waste into compost, and return the nutrients and energy from your leftover food to the soil. Buy a compost bin, or make your own from materials such as old tyres. Contact Waste Watch on 0870 243 0136 (www.wastewatch.org.uk), or the Henry Doubleday Research Association (HDRA) for help on how to make your own compost. The HDRA is also a mine of useful information on other sustainable gardening methods.

Handy hints for earth-friendly gardeners

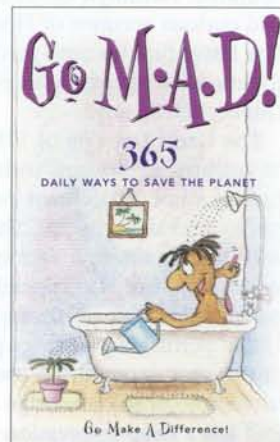
- Encourage biodiversity by thinking about what species you plant and the materials you use. Your garden ecosystem is teeming with life, and many of the bugs and so-called weeds are useful. Contact the Wildlife Trust for a leaflet on wildlife gardening by calling 01636 677 711, or go to www.wildlifetrusts.org.uk.
- Practise environmentally friendly bug control. Leave out saucers or shallow bowls of old beer for slugs – they will get drunk and topple in and drown. This is a preferable death experience to the infamous pellets that can also harm garden friends like ladybirds. Once again, contact the HDRA.



- Don't use a fuel-powered lawnmower. One fuel mower produces as much pollution in one hour as 40 cars. Use an electric one instead, preferably powered off a green electricity supplier. Leave the grass clippings on the lawn to replenish and nourish the soil. Even better, replace some of that expanse of lawn with other types of habitat such as a sustainable rockery (see below), flowerbeds, a wildlife patch or vegetable bed.
- Save our peat bogs. Lowland raised peat bogs are one of the rarest and most ancient wildlife habitats in the UK. They are a haven for unique flora and fauna. But their rich valuable peat is also a prime target for gardeners. The area of lowland raised bog in the UK has diminished by an astonishing 94 per cent, from an original 95,000 hectares to approximately 6,000 hectares today. Use peat-free or homemade composts. Find out more at www.plantlife.org.uk/html/campaigns_peat.htm
- Protect our remaining water-worn limestone pavements. The British Isles hold the world's most significant areas of water-worn limestone (also known as Irish limestone, Cumbrian stone or weathered limestone). But only 3 per cent has escaped damage caused by man, as it is pillaged for use mainly in rockeries. This rare treasure, sculpted by glaciers and weathered for over 10,000 years, has resulted in a unique splintered appearance. Its fissures are home to rare plants, snails and butterflies. There are several alternatives. These include sandstone, granite deep quarried-limestone and York stone, as well as reconstituted and artificial substitutes made from fibreglass or cement.

And finally, if you wish to take your involvement in organic production further, you can join a Community Supported Agriculture (CSA) scheme. CSA supports organic farmers through providing financial and human support. Members buy into the scheme, work a few shifts either on the land or perhaps in the office, receive free produce and become part of an empowered ruddy-cheeked community taking control of supplying some of the local area. See www.permaculture.co.uk for more details.

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See also: <http://www.iesd.dmu.ac.uk/msc/>

Land&Liberty

The magazine of the Henry George Foundation

A quarterly news
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APPEALS

Greenham Common 20th anniversary in December. Sponsors (large or small) sought to back publication of an activist-writer's witty, moving and readable memoirs. 'Captures spirit of Greenham,' says one long-time camper. Contact 07764 303762, or Greenham Book, c/o Enfield Womens Centre, 31a Derby Road, Enfield EN3 4AJ.

CALL FOR PAPERS

River Basin Management 2003, Water Resources 2003, Water Pollution 2003, Coastal Engineering 2003. All courses organised by Wessex Institute of Technology. For details, visit: www.wessex.ac.uk/conferences/2003

Charities @ Work raises funds for UK charities through the Payroll Giving scheme. Payroll Giving is a tax-effective way of donating money to charity through your monthly salary. www.charitiesatwork.org.uk/

CAMPAIGNS

STILL WAITING FOR THE JUBILEE. Only 15 per cent of Third World debt has been cancelled. If you don't think this is enough, support **Jubilee Debt Campaign**, the UK's campaigning successor to Jubilee 2000. Call 020 792 1111, or email info@jubileedebtcampaign.org.uk.

The International Sunflower Project

The sunflower is a Green symbol – a natural beacon toward peace and the environment. Plant a seed, sign a petition, and help spread the word by forwarding to all on your lists. Visit: www.sunflowerproject.org or email: peaceseeds@yahoo.com

What women want, new campaign organised by The National Federation of Women's Institutes, giving women chance to send a message to world leaders at World Summit on Sustainable Development (26 August). To fill out the postcard on the NFWI website, visit www.womens-institute.org.uk/camp-summit1.shtml

The London Cycling Campaign is offering free cycle maps. Visit the LCC website at: www.lcc.org.uk/benefits/cycle_route_maps_for_london.htm

FREEDOM SUMMER, 24 June–7 July. Come join with Palestinians in non-violent direct action to challenge the occupation of Palestine and support the Palestinian struggle for freedom. For more on the International Solidarity Movement, see www.palsolidarity.org. For information about a UK training

weekend for the summer actions, email: uksolidarity@yahoo.co.uk

COURSES

7-9 June, Buckinghamshire, UK.
Solar Hot Water. This course offers participants the theoretical knowledge and practical experience required to construct and instal their own solar water heating systems. Waged £150, unwaged £100. Discounts for 'Friends of LIL'. All meals and accommodation included. Contact: Low-Impact Living Initiative (LILI), Redfield Community, Buckingham Road, Winslow, Bucks MK18 3LZ; tel/fax: (01296) 714184; or visit the website at: www.lowimpact.org

Learn the delights of composting at community workshops at Women's Environmental Network (WEN) workshops from May to July. The free workshops will cover the basics of home and community composting (including a practical session). To book a place or find out more, contact Caroline Fernandez on 020 7481 9004, or e-mail her at food@wen.org.uk

Workshop dates are:
23 May, 10.30am-12 noon, Bromley by Bow Centre, London E1.
3 July, 11am-3pm, First Step, Newcastle.
10 July, Growing Places, Bradford.

A video and CD, *WEN's Guide to Building a Community Compost Bin*, is available for £7, inc. postage and packing. Send cheques payable to Women's Environmental Network, to PO Box 30626, London E1 1TZ.

MA in Culture, Science and Technology. Goldsmiths College, University of London. Unique, interdisciplinary programme will look at the new sciences and technologies, examining the full range of issues from ethics to economics, politics to the environment. For further information, contact the Admissions Office on 020 7919 7060; email admissions@gold.ac.uk or visit www.goldsmiths.ac.uk

Bendall's Farm, Somerset, UK. **Short environmental education courses** which aim to build skills for greater self-reliance, help incubate small ecological businesses and provide therapeutic opportunities for people with learning difficulties. Telephone 01761 241015, or visit www.bendallsfarm.com

7-19 July, Malpas, Cheshire
Training for Transformation. Two-week residential workshop. For more information, visit www.che.ac.uk/Events/malpas2002.htm

Oxford University Department for Continuing Education **Environmental Conservation.** Join the part-time diploma or advanced diploma course for people interested in landscape and wildlife conservation. Two Saturdays in July, then starts September 2002.

Visit: www.conted.ox.ac.uk or telephone 01865 270 369 for details.

15-30 August 2002.
Earth Activist Training with Starhawk and Penny Livingston-Stark, Ragmans Lane Farm, Gloucestershire. A permaculture design course for visionary activists. Learn the skills to transform a piece of land, a community and our political and economic systems. Full bursary places available, or £100-£400 according to income. For more info, contact: Earth Activist Training, c/o 3 Yew Tree Cottages, Pitt Court, North Nibley, Glos G11 6EB, or email: earthtactuk@yahoo.com

6-25 October, Devon UK
EVERYDAY MAGIC: BRINGING THE LANDSCAPE ALIVE – taught by Roger Deakin, writer, film-maker, founder of *Common Ground* and author of *Waterlog: A Swimmer's Journey Through Britain*, and Freya Mathews, eco-philosophy teacher at La Trobe University, Australia, and author of *The Ecological Self*. A south-west scholarship to a UK resident is available on this course. For more information, please contact: The Administrator, Schumacher College, Dartington, Devon TQ9 6EA; Tel: 01803 865934; Fax: 01803 866899; email: schumcoll@gn.apc.org
www.gn.apc.org/schumachercollege/

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EAST SUSSEX B&B. Double room in family home. Quiet rural location. Convenient for High Weald, South Downs, Rye, Battle and south coast. Vegan, vegetarian or full English options. Single £26, couple £40. Telephone: 01435 863099 or 07811 764238.

PUBLICATIONS

The Otter – by Gordon Woodroffe. The booklet contains the latest information on the status of the otter in Britain, and is extensively illustrated with colour photographs. *The Otter* costs £3.50 (including p&p) and is available from the Mammal Society, 15 Cloisters House, 8 Battersea Park Road, London SW8 4BG;



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To work as interns at
The Ecologist, please email:
sally@theecologist.org

telephone 020 7498 4358; or email enquiries@mammal.org.uk

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RESOURCES

If you need someone to translate material on social, political, labour and environmental issues from Portuguese, Spanish or French into English contact me. Chris Whitehouse, 47 Hackford Road, London SW9 0RE; telephone: 020 7735 3237; email: chris.whitehouse1@virgin.net

Translator. Environmental issues, ecology, wildlife conservation. French and German

into English. Please contact Janet Clayton at jlclayton@wanadoo.fr or telephone +33 4 66 25 6416

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Keen and enthusiastic graduate in Human Geography seeks advice on possible careers in development. Any advice on how to get an opportunity in an industry that requires experience would be welcome and greatly appreciated. Please email: kansara.family@paradise.net.nz

VISIT

Chopwell Woodland Park, High Spenn, Tyne and Wear. The management of the park prioritises conservation and recreation, ensuring that commercial forestry is practised sympathetically. For more information on the park (and special events), telephone 01207 542 231, 01207 542 495 or 01207 542 818.

The Pelican Organic Pub, 45 All Saints Road, London W11 for delicious, eco-friendly food and drink. Visit www.singhoulton.co.uk for details of our sourcing policy, opening hours, menu

VOLUNTEERS

Paraguay. Volunteers required to set up day nursery for disadvantaged 2-7-year-olds in beautiful Naranjo valley. Six-12 months stay. Full board/accommodation/basic essentials and local excursions provided in return for small contribution towards living costs Full training given. Male applicants are especially welcome. To apply. Send a stamped, addressed envelope to: Journey's End (ECO), PO Box 93, Dereham NR19 1WE.

The Ecologist has a stand in the Green Field at Glastonbury 2002. Businesses/organisations interested in co-promotions/selling opportunities, please contact Sally. Email sally@theecologist.org or telephone 020 7351 3578.

Ecologist DIARY DATES

JUNE

8-9 JUNE, LONDON, UK

World Development Movement conference: Whose Rules Rule? Trade, debt and corporate power. Speakers include Supachai Panitchpakdi, Director General Designate, WTO; Martin Khor of Third World Network; and journalist John Pilger. Visit www.wdm.org.uk or freephone 0800 328 2153.

14-16 JUNE 2002, OXFORD, UK

Green Economics Conference, Limitations of the Market. A two-day conference on the role and nature of the 'market' within the wider social and ecological context. Speakers from the International Society for Ecology and Culture, Corporate Watch, New Economics Foundation, and others. Contact Molly, telephone 01970 639 315 or email molly@greenaudit.org

14-16 JUNE, HEREFORD, UK

SOIL SOUL SOCIETY 2002, a national conference on sustainability. Graftonbury Garden Hotel, Hereford. A stimulating programme of lectures and workshops, music, poetry, art displays. Residential, camping, non-residential. For further information and/or to book, please contact the hotel direct on freephone 0800 0138446; email: sales@graftonburygardenshotel.co.uk

16 JUNE, RICHMOND, UK

Four-mile Jubilee Sponsored Walk, a wonderful route with staging posts explaining projects by the BTCV and Thames Landscape Strategy. Also children's entertainments and attractions, folk and jazz bands, country crafts. Start 12 noon at the White Cross pub. Telephone 020 8891 5455, or email etrut@netscapeonline.co.uk

17-18 JUNE, OXFORDSHIRE, UK

People and Planet Summer Festival. A Festival for action to end world poverty, defend human rights and protect the environment.

Braziers Park, Oxon. £10/12. Excellent speakers, workshops, party. Visit www.peopleandplanet.org or email matthew@peopleandplanet.org

18 JUNE 2002, CORNWALL, UK

Food For Thought Sustainability Picnic at the Gaia Energy Centre. Focus on Cooking day for school groups, demonstrating all the ways food production and consumption are unsustainable, and how they could be sustainable. Includes the ISEC local food roadshow. For more information, contact Sue Errington, telephone 01626 821745; or email errington@patrol.i-way.co.uk

18-21 JUNE, PAIGNTON, UK

Our Sustainable Future? The largest waste management conference and exhibition in Europe. Contact Rebecca Penberthy; telephone 01604 620426; email events@iwm.co.uk; website www.iwm.co.uk/events.html

JUNE 21-25, CALGARY, CANADA

G8 Peoples, Summit. The grassroots alternative to the G8 Summit will expose the impact of neo-liberal globalisation on the people and the planet. Help shape a people's declaration for a just and equitable world. Visit: www.peaceandhumanrights.org, Email: isphr@alberta.com

21-22 JUNE, BANGOR, UK

It's Our Children's Future exhibition, Pritchard-Jones Hall. Promoting sustainable use of natural resources in daily life including renewable energy and many other topics. Please contact Jennie Jones on 01248 602819, or contact@svsi.org.uk to exhibit or for more details.

24-25 JUNE 2002, LEIPZIG,

Germany. Eurelectric annual convention: Worldwide Energy Liberalisation – Building on Lessons Learned. For further details and a conference programme, see www.eurelectric.org

JULY

8-14 JULY, EDINBURGH, UK

35th World Vegetarian Congress, Heriot Watt University, hosted by The UK Vegetarian Society. To find out more about the congress, visit www.vegsoc.org/congress. For a booking form, please email congress@vegsoc.org or telephone Belinda on 0161 925 2003.

We have two tickets (value £70 each) for two readers who would like to promote The Ecologist at the BIG GREEN GATHERING taking place in Somerset, 24-28 July. Telephone Sally for details on 020 7351 3578 or email sally@theecologist.org.

17-21 JULY, DEVON, UK

Buddhahfield. Free tickets are available to contributors. Total numbers are limited and advance booking strongly recommended. For more information, contact info@buddhahfield.com or visit www.buddhahfield.com

27-28 JULY, SOUTHPORT, UK

The Healing Arts: a Festival of

Complementary Natural and Alternative Health for Body Mind and Spirit. The Floral Hall, 10am–5pm. Admission £2. Telephone 01704 500036 for advance tickets.

28 JULY, LUDLOW, UK

Ludlow Green Fair, Castle Square, 10am–4.30 pm. A lively celebration of all things green, aiming to demonstrate practical green alternatives, ideas and lifestyle. For further details, contact Sally Ford, South Shropshire Green Party, 4 Vernolds Common, Craven Arms SY7 9LP; telephone 01584 856376; email: Savoir-Faire@freenet.co.uk

27 JULY, LAMPETER, UK

Nature and the Virgin Mary: Perspectives from Theology and Human Ecology. University of Wales, Lampeter. Fee for the day, including lunch: £20. To offer a paper or reserve a place, please contact: Dr Sarah Jane Boss, Centre for Marian Studies, 12 Grange Road, Cambridge, CB3 9DX; tel: 01223 741057; email: sjb@cam.ac.uk World Institute for Development Economics Research (WIDER) Conferences. For details, visit www.wider.unu.edu/conference/conferences.htm

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- Ethical Financial Investment • Composting Organic Waste
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The site offers serious commentaries on selected topics. There's space for news and contributor's articles and loads of photo backgrounds to download. You can send virtual cards and obtain help on buying reference texts. And there's still more.

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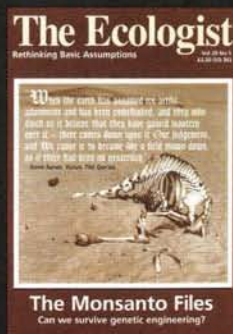
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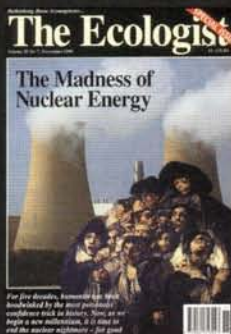


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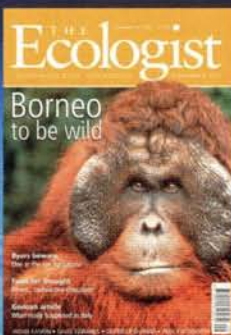
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