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THE  
**ecologist**

MARCH 2003 • £3.50



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Disguise packaging?  Yes  No

Please send:  Adult pack  Under 14's pack

Adopter's Date of Birth

MY NAME (MR/MRS/MISS/MS)

ADDRESS

POSTCODE

TEL NO:

EMAIL:

RECIPIENT'S NAME (MR/MRS/MISS/MS)

ADDRESS

POSTCODE

TEL NO:

MESSAGE YOU WOULD LIKE TO INCLUDE (OPTIONAL)

**THANK YOU**

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AWAD0305ECO

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BANK/BUILDING SOCIETY

ADDRESS

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NAME OF ACCOUNT HOLDER(S)

BRANCH SORT CODE

ACCOUNT NUMBER

Instruction to your Bank or Building Society

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DATE

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### Midnight

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### Sparta

Sparta's mother is called Olympia. She is part of a large family with at least six brothers and sisters.

Return your completed form to: **WDCS, FREEPOST(SN863), MELKSHAM SN12 6GZ**

For more information about the Adopt a Dolphin project, please visit [www.adoptadolphin.com](http://www.adoptadolphin.com) or call 0870 870 5001

WDCS - the global voice for the protection of whales, dolphins and their environment

**WDCS**  
Whale and Dolphin Conservation Society

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## Distorted priorities

Michael Meacher is probably the UK's first environment minister to have earned the respect of the environmental movement. Depending on your own position, that can either be good or bad news. But even his opponents tend to credit him for his now well-documented willingness to tell the truth – something not normally associated with his profession.

Even so, our interview with him on pages 14-16 reveals truly striking differences between his position on some of today's most pressing issues and that of the government he serves.

On GM he believes there are no good reasons for rushing ahead, despite his government's barely concealed enthusiasm for the stuff. On nuclear power he believes we've created a problem for which there are no real solutions, despite his government's U-turn in favour of building more reactors. He is sceptical of the revolving door between big business and government, and displays none of the excitement for economic globalisation that, for many, characterises the current government.

Our talk with Meacher was refreshingly honest yet alarming. His arguments against the nuclear industry, for instance, match the most compelling we've ever published. If he – the minister for the environment – can't stop the nuclear juggernaut, despite the fact that his brief includes looking after the country's nuclear waste, who can?

And his admission that the government's approach to regulating the bio-tech industry involves merely accepting the assurances of that industry is still more alarming. When your regulatory procedures depend fundamentally on the honesty of the regulated, and when the 'regulated' include some of the world's biggest and

most powerful corporations, you know you're in trouble.

Judging by his facial expression during our interview, Meacher knows we're in trouble, and the implications overwhelm him. How on earth do you police what amounts to a continuous avalanche of new and potentially very dangerous products? Where, he asks, are the resources?

The scale of the problem is vast, and will only ever be properly manageable if the precautionary principle becomes the very backbone of government policy. But it's not enough to blame lack of resources, as Meacher implies. The resources do exist. They're merely deployed elsewhere.

No one, after all, could accuse this government of being shy when it comes to imposing regulations. Ask any small business or farmer, and they'll tell you things have become more, not less, bureaucratic in recent years. Much, but not all, of the new red tape derives from the European Union, and while other EU countries have been very good at minimising its impact, or even ignoring

new regulations, British governments have traditionally achieved the opposite. Nowhere is this clearer than in the so-called hygiene regulations. They very rarely have anything to do with hygiene, and if not actually designed to crush small businesses that has certainly been their effect, which no doubt explains why they are so

often welcomed by the big operators.

You could say the government loves regulations. But only of a certain type. If you want to lend your neighbour a ram for a couple of weeks you need a doctorate in form-filling. Doing anything, for that matter, on a human scale – whether organising a protest or setting up a small business – usually involves navigating a torrent of bureaucracy.

But if you're a giant chemical firm and



you want to release a new pesticide, you need only inform the authorities that it's safe. If you want to unleash a new genetically modified organism designed, say, to resist a certain type of pest, you need only prove that it works. Impacts on health or the environment are of little concern to those otherwise trigger-happy regulators.

The implications are obvious: small businesses are untrustworthy and will do anything to make a quick buck, even if that means poisoning their direct neighbours; the integrity of big firms like Monsanto, on the other hand, is beyond question.

Like most governments, ours believes the interests of the multi-nationals are one and the same as the interests of ordinary people. To that end it engages in acrobatics to make sure the multi-nationals are happy working in Britain. That means lowering every conceivable standard and not obstructing them with regulatory obstacles.

So while local operators, like small cheese-makers in Devon, can't keep pace with additions to the law, multi-nationals are having a field day, every day. Local regulation of local businesses is out of control. Global regulation of global corporations is out of the window.

That, in real terms, is what the WTO is all about: forcing nations to abandon any form of tariff or regulatory mechanism that might in any way jeopardise the profitability of the multi-nationals. Clean air acts, conservation laws, bans on dangerous chemicals, protections for domestic businesses are all 'barriers to trade' and, therefore, potentially illegal. Already, the mere threat of WTO action has forced a number of countries to dispose of regulatory barriers to GM products, despite suspicion and often deep hostility to the stuff from their own people.

It is not a matter of lack of resources. It's a case of fundamentally distorted priorities. Today, you can force a country to accept your toxin, even if that country's scientists have ruled against it. But woe-betide you if you sell hand-bottled organic milk to your neighbour.

## TO AID OR NOT TO AID

I recently saw a news item about famine on *Euronews*. I watched sacks of meal bearing the stamp 'US Corn' being unloaded. Is the money we subscribe to the likes of Oxfam, Gorta, Concern and others subsidising US farmers while our own small farmers are being driven off the land?

Will you be doing an investigation into aid (should we or shouldn't we)? And how can we refuse when presented with pictures of starving children?

**Siohán ní Ghabhann, Ireland**

## FROM 'I' TO 'WE'

It is not just an ecological world that we should be aiming for, but one which is self-governed.

This more advanced society (in which there would be no more wars) would still be run on the ecological principles of respect for nature, sustainability and diversity. These ideas would be combined with the anarchist principles of mutual aid, voluntary association and self-management, and the socialist ethic of common ownership, democratic control and production for need. But essentially, this society would be founded upon the spiritual understanding that there is only one of us here – there is 'one self' – and that self-government must be the next logical step in the cultural and political evolution of the human race.

For is it not true that the social revolution is more likely to be achieved not by force of argument and/or fear of the alternative but when the notion of unity – that we are all one and everything is connected – has entered the collective consciousness?

**Colin Millen, Norfolk, UK**

## ARCHBISHOP OF MEDIOCRITY

I doubt if there is any ecologist of note with a good word for the archbishop of mediocrity (Blair), who seems to combine the ethics of big business and big government in one mantra: 'I believe.' As it happens I'm a right-winger: pro-US-style democracy for and by the people, anti-EU monopolistic agendas. This is where it gets complicated, as the US is the biggest perpetrator of the global economy. In your very magazine, the politics must be more anti- than pro-US. This is why I feel printed matter is only one side of the equation. Alongside it should be ongoing political debate. Blair is a total washout. What I like about IDS is that no one ever parrots what he says.

In short I feel that the political arena should be filled. How can it be allowed to happen that in a democracy people are so distrustful of politicians. In the US, as is known, politicians are supposed to be held accountable. Let's get democratic here before the big EU take-over.

**Neil McEwan, Kent, UK**

**While we were all able to turn the television off and turn the page so as to avoid the atrocities of the Foot and Mouth crisis, Janet Hughes could not do so. She took legal action, which she could not afford, to stop the mass slaughter of some 20,000 local healthy sheep... and succeeded.**

**To our disgust the Department of the Environment Food and Rural Affairs has demanded expenses of £17,000 from Janet. Bailiffs have already appeared at her home, listed all her personal belongings and threatened to impound them if the money is not paid.**

**Read about Janet at [www.blaikiewell.com/saveoursheep](http://www.blaikiewell.com/saveoursheep). The contiguous cull was a disaster. When the epidemiological data is made public, it will be seen that Janet's attempt to save the Brecon Beacons sheep and her subsequent court actions for justice were wholly justified.**

**If you would like to help Janet, please send a cheque, made payable to 'Janet Hughes', to Unit 18 Chelsea Wharf, 15 Lots Road, London SW10 0QJ.**

**ADVERTS ON ROUTE 7**

I recently wrote a letter of complaint to London Buses about the TV screen showing advertisements in the number seven bus. Is there anything else I can do to stop this pernicious activity from multiplying?

**S Peattie, London**

*(Answers on a postcard, please)*

**THREE TEXAN SURGEONS BOASTING**

The first began: 'Three years ago, I re-attached seven fingers on a pianist. He went on to give a recital for the Queen of England.'

The second replied: 'That's nothing. I attended a man in a car accident. All his arms and legs were severed from his body. Two years after I re-attached them, he won three gold medals for field events in the Olympics.'

The third said: 'A few years back, I attended to a cowboy. He was high on cocaine and alcohol when he rode his horse head-on into a Santa Fé freight train travelling at 100 miles per hour. All I had to work with was the horse's ass and a 10-gallon hat. And two years ago, he became president of the US.'

**J. Southcott, Leeds, UK.**



**CORRECTION:**

*The Ecologist*, February 2003. On page 14 we referred to a report titled *Paybacks, Policies, Patrons and Personnel*, and incorrectly attributed it to the National Resource Defence Council and the Centre for Responsive Politics. The report was actually compiled by Earthjustice and Public Campaign.

**SUNG TO THE TUNE OF:  
IF YOU'RE HAPPY AND YOU KNOW IT, CLAP YOUR HANDS!**

<p><b>If you cannot find Osama, bomb Iraq.</b>  <b>If the markets are a drama, bomb Iraq.</b>  <b>If the terrorists are frisky,</b>  <b>Pakistan is looking shifty,</b>  <b>North Korea is too risky,</b>  <b>Bomb Iraq.</b></p> <p><b>If we have no allies with us, bomb Iraq.</b>  <b>If we think someone has dissed us, bomb Iraq.</b>  <b>So to hell with the inspections,</b>  <b>Let's look tough for the elections,</b>  <b>Close your mind and take directions,</b>  <b>Bomb Iraq.</b></p> <p><b>It's 'pre-emptive non-aggression', bomb Iraq.</b>  <b>Let's prevent this mass destruction, bomb Iraq.</b>  <b>They've got weapons we can't see,</b>  <b>And that's good enough for me</b>  <b>'Cos it's all the proof I need,</b>  <b>Bomb Iraq.</b></p>	<p><b>If you never were elected, bomb Iraq.</b>  <b>If your mood is quite dejected, bomb Iraq.</b>  <b>If you think Saddam's gone mad,</b>  <b>With the weapons that he had,</b>  <b>(And he tried to kill your dad),</b>  <b>Bomb Iraq.</b></p> <p><b>If your corporate fraud is growin', bomb Iraq.</b>  <b>If your ties to it are showin', bomb Iraq.</b>  <b>If your politics are sleazy,</b>  <b>And hiding that ain't easy,</b>  <b>And your manhood's getting queasy,</b>  <b>Bomb Iraq.</b></p> <p><b>Fall in line and follow orders, bomb Iraq.</b>  <b>For our might knows not our borders, bomb Iraq.</b>  <b>Disagree? We'll call it treason,</b>  <b>Let's make war not love this season,</b>  <b>Even if we have no reason,</b>  <b>Bomb Iraq.</b></p>
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**Received from R Cecil, London**

**UNDERSTANDING ENRON**

Feudalism:

You have two cows. Your lord takes some of the milk.

Fascism:

You have two cows. The government takes both, hires you to take care of them and sells you the milk.

Pure communism:

You have two cows. Your neighbours help take care of them and you all share the milk.

Applied communism:

You have two cows. You must take care of them, but the government takes the milk.

Totalitarianism:

You have two cows. The government takes them both and denies they ever existed. Milk is banned.

Mexican democracy:

You have two cows. The government takes both and drafts you into the army.

European democracy:

You have two cows. The European Commission decides which regulations for feeding and milking apply. If there aren't any, they invent some. They pay

you not to milk the cows. They take both cows, shoot one, milk the other and pour the milk down the drain. They then require you to fill out forms accounting for the missing cows.

Capitalism:

You have two cows. You sell one and buy a bull. Your herd multiplies and the economy grows. You sell them and retire on the income.

Enron venture capitalism:

You have two cows. You sell three of them to your publicly listed company, using letters of credit opened by your brother-in-law at the bank, then execute a debt-equity swap with an associated-general offer so you get all four cows back, with a tax exemption for five cows. The milk rights of the six cows are transferred via an intermediary to a Cayman Island company secretly owned by the majority shareholders who sell the rights to all seven cows back to your listed company. The annual report says the company owns eight cows, with an option on one more.

**M Jackson, Cumbria, UK.**

**GM BEES**

A *Financial Times* article titled 'Ministry denies burying report on GM crops' stated: 'Significant levels of "gene flow" into non-GM rape were found up to 200 metres from the GM crop.'

Do the writers of these reports not realise that bee-keepers, terrified by the prospect of GM-contaminated bees, are deliberately keeping their hives at least half a mile from GM crops in an effort to avoid their bees being contaminated? As it is, even half a mile may not be enough.

Bees are highly attracted by rape and will fly long distances (two or three miles) to work on it for its abundant source of honey. If planting of GM rape became widespread what chance would the bees have.

**K Brooks, East Yorkshire, UK.**

Please send all correspondence to Letters, *The Ecologist*, Unit 18, Chelsea Wharf, London SW10 0QJ, UK; or email: [editorial@theecologist.org](mailto:editorial@theecologist.org)  
 The best letter each month will receive a year's free subscription to *The Ecologist*. We reserve the right to edit or shorten letters where necessary.



**US** The recent Columbia Shuttle disaster emphasises why Nasa should not expand its programme to use nuclear power in space. In what it calls Project Prometheus, Nasa seeks to broaden the \$1 billion Nuclear Systems Initiative it began last year and develop a nuclear-propelled rocket. (Prometheus, it should be remembered, stole fire from the gods and was severely punished for his hubris.)

In May and June Nasa intends to launch from Florida two rockets carrying rovers to explore the surface of Mars. The rovers are to be equipped with plutonium-powered heaters.

Bruce Gagnon, coordinator of Global Network Against Weapons and Nuclear power in Space, points out that Nasa's own Environmental Impact Statement (EIS) states that 'the overall chance of an accident occurring' during either of the rover-rocket launches 'is about one in 30' and that 'the overall chance of any accident [releasing] radioactive materials to the environment is about one in 230. 'People offsite in the downwind direction... could inhale small quantities of radio nuclides,' the Nasa EIS says. Small quantities, however, are all it takes to kill.

In recent years the US Congress has cut funding for the space programme (in particular funding for shuttle maintenance), and Nasa has turned to the Pentagon for financing for many of its missions. Upon taking the helm of the agency, Nasa's current director Sean O'Keefe said that with the military now in control of the space programme all future Nasa missions would be dual-purpose.

*Global Network Against Weapons and Nuclear Power in Space +1 (352) 337-9274; <http://www.space4peace.org>; [globalnet@mindspring.com](mailto:globalnet@mindspring.com)*

**UK** Clothing company Kookai has pledged to stop making clothes in Burma following a complaint by just one customer.

Polly Morgan emailed the complaint to the firm's London office after she noticed the 'Made in Myanmar' labels in a Kookai store.

Morgan received a reply from Kookai's London buying director, who stated: 'I agree with you that it is not ethical for us to produce our goods from Burma, I have stressed to Paris

your concern and they have promised to eliminate the production in Burma.'

Last issue (February 2002), *The Ecologist* ran an article on the companies that still trade with Burma and the reasons they should be made to stop. They are all waiting for your call.

*For more on Burma, or to campaign against continued trade with its military junta, contact the Burma Campaign at [www.burmacampaign.org.uk](http://www.burmacampaign.org.uk) or call 020 7281 7377*

**EUROPE** The European Commission (EC) has until March 31 to draft the list of services it intends to offer for liberalisation (foreign competition) under the Global Agreement on Trade in Services (GATS).

There has been no democratic debate whatsoever of what services should be offered for liberalisation, let alone whether we should be liberalising international trade in services anyway. Despite increasing pressure from civil society, what the commissioners are negotiating in 'Committee 133' remains secret. Nor have the EU's request lists of what it wants other WTO members to liberalise been made public, except in a form so summarised as to be meaningless.

Now the EC has gone one step further. On January 28, European trade commissioner Pascal Lamy announced that the EC's national governments would receive a first draft of the list of offers on February 6, but they would not be allowed to distribute copies to their national parliaments or the European Parliament.

The EC, which is not directly democratically accountable to European citizens, has thus forbid any parliamentary and public debate on what services should be opened up to foreign multinationals. Among the services up for grabs are healthcare, water, energy, postal services, transport, education, culture and media.

*To learn more about GATS, or to join the campaign to stop it, contact the World Development Movement on [www.wdm.org.uk](http://www.wdm.org.uk)*

**RUSSIA** Euratom, the European Union's nuclear energy funding agency, is considering providing Russia with a loan for the completion of a Chernobyl-type nuclear reactor. The Kursk-5 reactor is of the same RBMK design as the one at Chernobyl that caused the worst nuclear disaster in history.

The revelation surprised many observers, since the European Commission had previously stated that Euratom loans would be used for bringing eastern European reactors up to western safety standards. In fact, the commission had previously called RBMK reactors 'non-upgradable'.

'This shows Euratom's real objective: the expansion of nuclear power in Eastern Europe,' says Petr Hlobil of CEE Bankwatch Network – a coalition of environmental groups in central and eastern Europe. 'The nuclear industry is declining in western Europe, so now it is looking to expand eastward. The agency seems to be considering commercial and political interests over the environment and public safety.'

*A briefing on the European Commission proposals can be read at <http://www.eu-energy.com/pdfs/comments-cionjan-euratomloans.doc>*

**US** A recent survey found that a third of Nuclear Regulatory Commission (NRC) staff questioned the US agency's commitment to public safety, and nearly half said they would not be comfortable raising safety concerns with it.

As alarming as these figures may be, they are – as NRC chair Richard Meserve was quick to point out – actually improvements on the results of a 1998 survey.

*Read the survey at [www.nrc.gov/reading-rm/doc-collections/insp-gen/2003/](http://www.nrc.gov/reading-rm/doc-collections/insp-gen/2003/)*

**US** Six Republican senators have announced their opposition to an amendment to a massive spending bill that would allow drilling in the Arctic National Wildlife Refuge (ANWR). The senators said they opposed the insertion of language in spring's must-pass budget bill that would give oil firms access to the refuge.

The ANWR, which is home to polar bears, caribou and other wildlife, covers 19 million acres of Alaska's north-east corner.



“ What I am condemning is that one power, with a president who has no foresight – who cannot think properly, is now wanting to plunge the world into a holocaust. ”

**Nelson Mandela, January 30**

“ He is the foreign minister of the US. He is no longer prime minister of Britain. ”

**Mandela on Blair, January 30**

“ Forty per cent of children in Iraq feel like life is not worth living anymore. ”

**Dr Samantha Nutt, January 30, founder War Child Canada**

“ To call Blair a mere ‘poodle’ is to allow him distance from the killing of innocent Iraqi men, women and children for which he will share responsibility. ”

**John Pilger, January 29**

“ I was not elected by the financial markets, and I was not elected by the powerful economic interests. . . I was elected through the high level of consciousness of Brazilian society. ”

**President of Brazil Luiz Inácio da Silva (Lula), speaking at the World Social Forum (WSF) in Porto Alegre.**

“ Give it up, Davos: Lula is one of us. ”

**Banner at WSF**

“ The deal would be this: if the US would stop lying about us, we would stop telling the truth about them. ”

**EU development commissioner Poul Nielson on the EU/US GM war**

“ Globalisation is a fact today, and it is also a fact that it is indiscriminately eating into the lives of people. It is a mindless imposition of policies irrespective of the conditions obtained in each country. The whole world is caught in a debt trap, and no country can escape. ”

**Former Indian president KR Narayanan**



**UGANDA** There has been a 40 per cent increase in outpatient use of Uganda’s health service since the country defied World Bank guidelines and abolished user fees a year ago. After his country joined Tanzania and other countries in unilaterally dropping the much-maligned user fees, Ugandan president Yoweri Museveni criticised the World Bank for ‘imposing’ the system at the recent Commonwealth health ministers’ meeting in Entebbe.

However, Uganda is still reeling from the effects of unsustainable debt. Figures published by the Ugandan government in December 2002 show that Uganda’s foreign debt has been growing annually by an average of \$108m during the past four years. The country’s earnings from exports, mainly coffee, have at the same time been declining.

**AUSTRALIA** 100,000 mammals, 9 million birds and 100 million reptiles are being killed each year in Australia, according to a new WWF report compiled by leading Australian scientists. Furthermore, many woodland birds are in major decline and one in five bird species are threatened with extinction.

The *Commonwealth State of the Environment Report* states that more than 600,000 hectares of native bushland is cleared each year in Australia, mostly for agriculture or urban development.

Australia clears more bushland than any other developed country, has the world’s fifth highest land clearing rate – one that is exceeded only by Brazil, Indonesia, Congo and Bolivia.

For the full report go to [www.wwf.org.au](http://www.wwf.org.au)

**US** The US Department of Energy has suspended without explanation a senior safety manager at Los Alamos National Laboratory (LANL) after he criticised the lab for the unsafe storage of plutonium-contaminated waste.

Officials deny a link between Christopher Steele’s comments on safety and his sacking, but critics say whistleblowers have faced recriminations ever since LANL developed the first atomic bomb.

In an August 2001 memo, Mr Steele claimed that the lab had conducted unauthorised and unsafe storage of nuclear waste. Independent watchdog Project on Government Oversight said: ‘LANL was

unhappy with him because he wasn’t signing off fast enough on safety requirements.’

Steele had been investigating the storage of radioactive waste – mostly contaminated items such as clothing and tools – that was being stored temporarily in a steel shed. The Department of Energy fined the lab \$220,000 in late December for a serious breach of safety.

In a separate incident in November, two lab investigators were fired after issuing a report that charged LANL with extensive corruption and mismanagement. Following the report, former LANL director John Browne and other top managers resigned in December.

The tropopause has risen by a global average of 650 feet in the last 22 years – primarily because of human-induced global warming and ozone depletion, according to a study published in the *Journal of Geophysical Research*.

The tropopause is the atmospheric layer above the troposphere and below the stratosphere. The scientists say the height of the tropopause could be a useful ‘fingerprint’ for the human impact on climate, but that it’s too early to know what effects the changing height will have on the earth’s weather patterns.

**ITALY** A year and a half after Genoa’s G8 summit, the Italian police have admitted provoking the violence in which 23-year-old protester Carlo Giuliani was killed and several others were assaulted.

Deputy superintendent Pietro Troiani admitted ordering the planting of two Molotov cocktails in the school building used by the Genoa Social Forum to coordinate its peaceful protests. In the violent assault that followed, 93 people were arrested. All were eventually released without charge, but not before 72 of them were injured and some threatened with rape or death.

**US** A major new study shows that expensive drugs used to treat hypertension were no better than a diuretic, *The British Medical Journal* reports. In some instances the drugs were less safe – even though they were substantially more expensive – than the diuretic.

Pfizer, the drug’s manufacturer, was aware of the results in advance and launched a sophisticated damage-control campaign ahead of publication. Internal documents show that Pfizer employed an outside research agency to study doctors’ awareness of the results.

When the agency found that ‘knowledge of the trial’s preliminary results [was] minimal for all specialties’, Pfizer decided not to issue a public statement about the results because doing so ‘would draw more media attention to the situation’. It instructed its drug reps to provide information ‘only when asked’. Finally, two Pfizer employees were praised as ‘quite brilliant’ for ‘sending their key doctors to sightsee’ during a presentation at the annual American College of Cardiology conference in California in 2000. Pfizer paid for the two doctors to travel to California from Italy. The tour, according to the Pfizer email lauding the reps, kept the doctors from attending the presentation that revealed the truth about the hypertension drug results.

Read the original article at: <http://bmj.com/cgi/content/full/326/7381/170/DC1>

Global water use has more than tripled since 1950 and one person in six has no regular access to safe drinking water, according to a new report by the UN Environment Programme. The *Vital Water* report also found that:

- in 2000 agricultural and domestic use each wasted 800 cubic kilometres of water, and industry wasted 400 cubic kilometres;
- by 2025, those figures will have risen to 1,000, 1,100 and 500 cubic kilometres, respectively;
- by then, an estimated 300 cubic kilometres of water will also be lost through evaporation from reservoirs – up 50 per cent from 2000;
- almost 50 per cent of the world's coasts are threatened by development;
- agriculture uses about 75 per cent of global water consumption and industry 20 per cent;
- the number of children who die every day because of unsafe water is estimated at 41,000, but drinking water supplies for poor people would be doubled with just a 10 per cent improvement in the efficiency of irrigation; and (there is some good news)
- the number of people with some form of improved water supply rose from 4.1 billion (79 per cent of the world's population) to 4.9 billion (82 per cent) in 2000.

The report is available at [www.waterday2003.org/vital-water-graphics.htm](http://www.waterday2003.org/vital-water-graphics.htm)

**INDONESIA** 'Police and company security forces are responsible for persistent human rights abuses against indigenous communities involved in Sumatra's massive pulp and paper industry,' Human Rights Watch announced in a report released on January 7, 2003.

Abuses include land seizures without compensation and brutal attacks on local demonstrators.

The 90-page *Without Remedy: human rights abuse and Indonesia's pulp and paper industry* extensively documents the underlying links between disregard for human rights and unsound forestry practices.

Indonesia's pulp and paper industry has rapidly expanded

since the late 1980s to become one of the world's top 10 producers. But the industry has accumulated debts of more than US\$20 billion, and expanding demand consumes wide swathes of Sumatra's lowland tropical forests. This land is claimed by indigenous communities, which depend on it for rice farming and rubber tapping.

The loss of access to forests, together with companies' hiring labour from outside the province, has been devastating to local livelihoods and has led to violent conflicts.

Read the full report at: <http://www.hrw.org/reports/2003/indon0103/>

**CAMBODIA** The Cambodian government has decided to fire a British group contracted to monitor its forestry industry, accusing the watchdog of being hostile and unfair in its reports about illegal logging.

Explaining his decision to relieve Global Witness of its duties, prime minister Hun Sen said that international donors, which cover more than 60 per cent of the Cambodian government's annual expenses, should not force it 'to continue living with a partner it does not love and has lost faith in'.



**US** Drug firms Roche Holding AG, Aventis SA, BASF AG and more than a dozen other participants in a global cartel to fix vitamin prices face claims that may amount to billions of dollars.

A US court revived lawsuits by Australian, Ukrainian and South American customers that had been previously dismissed because the purchasers hadn't bought the vitamins in the US. The court said US anti-trust law allows damage claims by foreign customers so as to deter price fixing by global conspiracies that could damage US commerce.

Roche, the world's largest vitamin producer, Aventis and three other drug makers agreed in 1999 to pay \$1.17 billion to settle claims they fixed prices in the \$20 billion US pharmaceuticals market.

For more got to <http://forums.transnationale.org/viewtopic.php?t=1061>



**US** Worried about disease outbreaks from industrial food factories? Worry not – the PR industry has got it covered. In January *PR Week* magazine told how 'four seasoned crisis experts' believe industry should respond to a disease outbreak at a (this time) fictional seafood plant.

This was the experts' advice:

- 1 'Call all the families that have been affected to let them know that we care.'
- 2 'Devise... a constituent audience matrix.'
- 3 'Should we mention [a] previous outbreak in the statement we put out? Absolutely not.'
- 4 'On seeing the CEO preparing a statement for a press conference, say: 'It's not a press conference, it's a briefing. You're not there to answer questions. You're there to demonstrate your concern.'

## UK losing vital community outlets

Between 1995 and 2000 the UK lost 20 per cent of some of its most vital institutions – corner shops, grocers, high street banks, post offices and pubs – amounting to a cumulative loss of over 30,000 local economic outlets. The New Economics Foundation report *Ghost Town Britain* claims that the UK will have lost a further 28,000 outlets by 2005. For further information, visit: [www.neweconomics.org](http://www.neweconomics.org)

## Saris may save lives

Forcing water through a simple filter made from the cloth of old saris can reduce cholera cases by about half, according to a study of rural villages in Bangladesh, where cholera is a major health problem. The report, which appeared in *Proceedings of the National Academy of Sciences*, suggests the sari filters may also reduce other gastrointestinal illnesses. Read the report at [www.pnas.org](http://www.pnas.org)

## Indigenous education receives vital boost

Indigenous communities in Colombia have been granted access to state funds for education, enabling them to finance their own community schools. This landmark agreement increases the communities' ability to preserve and continue their traditional knowledge, based on the ecology of the Amazon, and supports their aim of self-governance.

## Bush's solar house

Solar panels were installed on the White House's roof in January. Two solar thermal systems, one to heat the White House swimming pool and spa and one to provide domestic hot water, were also installed. And they say George Bush is only interested in oil!

## Pasko Freed

Investigative Russian environmental journalist Grigory Pasko was paroled from prison last month after serving part of a sentence for treason. Pasko was convicted after taking notes during a 1997 meeting of Russian naval commanders. The court claimed Pasko had planned to pass the notes to Japanese reporters, but his supporters say the conviction was punishment for Pasko's coverage of national environmental abuses – including the navy's practice of dumping radioactive waste into the sea.

## Environmentalism elected to government

Mwai Kibaki, Kenya's new president, has named environmentalist Wangari Maathai as his assistant environment minister. Maathai is famous as the head of the Green Belt movement, a grassroots organisation that has worked with over 6,000 women's groups throughout Africa and planted tens of millions of trees across Kenya.

## Chavez's indigenous holiday

Venezuela's president Hugo Chavez has changed the name of Columbus Day (a Venezuelan public holiday) to the Day of Indigenous Resistance in honour of the nation's indigenous groups.

## Patriotic cover-up for Bush

When president Bush announced his new tax plan at a St Louis warehouse in January, there was a stack of cardboard boxes behind him bearing 'made in USA' labels. It now transpires that Bush's advance team had covered over the boxes' 'made in China' stamps with pieces of more appropriately patriotic paper.

## Wind power landmark

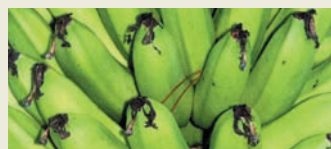
The UK wind industry reached a symbolic landmark in January as its 1,000th turbine was commissioned. Although a modest achievement compared to Germany's almost 14,000 machines and Denmark's 6,500 wind mills, the UK's breakthrough is expected to be swiftly followed by the 2,000th turbine.

## Wild horses facing extinction

The world's seven wild horse species are all at risk of extinction, according to the World Conservation Union. The main reasons are human exploitation of the horses' customary desert or savannah habitats.

## Banana workers win case

A Nicaraguan Judge has ordered Dow Chemical, Shell Oil and Standard Fruit to pay \$490 in compensation to 583 banana workers injured by Nemagon, an extremely toxic soil fumigant that has sterilised thousands of Central American Banana workers. The companies produced roughly 11 million kilogrammes of Nemagon each year in the 1960s and early 1970s.



**UK** Have you read in the papers about a new disease called 'female sexual dysfunction'? According to an article by Ray Moynihan in the *British Medical Journal*, industry-funded doctors are circulating a bogus statistic claiming that 43 per cent of women suffer from this condition so they can then be prescribed with drugs to 'treat' it. In reality, Moynihan says: 'Inhibition of sexual desire is in many situations a healthy and functional response for women faced with stress, tiredness or threatening patterns of behaviour from their partners'.

Read the original article, 'The making of a disease: female sexual dysfunction' at [www.bmj.com](http://www.bmj.com)

**NETHERLANDS** The Netherlands is leading the world in innovative use of wind power by adding turbines to the roofs of buildings in metropolitan areas. Amsterdam, the Hague, Tilburg and Twente all plan to install urban windmills this year, at a cost of \$5,000 to \$12,000 each. One windmill already installed on the roof of a school is capable of generating about 5,000 kilowatt-hours of energy per year – enough for an average Dutch family's needs (although only about half of what an average US household uses).

**UK** The Devon and Cornwall police force has put plans for the controversial Tetra digital radio system on hold for two years following continued pressure from protesters. Mast Sanity, the national campaign group against mobile phone mast danger, is now urging local communities across the UK to campaign for similar decisions. It is also urging that this untried, unsafe system is admitted to be a white elephant and totally rejected.

Mast Sanity director Lisa Oldham said: 'This is very good news and yet again demonstrates that when local residents band together they can make a real difference. This system has never been demonstrated as being safe, yet the government committed £3 billion to its implementation. [This] money could have been spent on putting more police on the beat, or improving our hospitals, schools and other hard-pressed institutions that are under-funded'.

Help for local communities and a free information pack are readily available from Mast Sanity at its website ([www.mastsanity.org](http://www.mastsanity.org)), or by calling the campaign on 0161 959 0999.

The largest ever UK protest against phone masts takes place in Hyde Park at 12pm on March 8.

For more information on Tetra, go to our Tetra Forum [www.mastsanity.org/Tetra/TETRA1.htm](http://www.mastsanity.org/Tetra/TETRA1.htm)

**UK** The government announced in January legislation allowing nuclear power firm British Energy to transfer to the British taxpayer its costs incurred in dealing with nuclear waste.

British Energy has already received a £650m emergency loan from the government. The new bill will mean the taxpayer is effectively providing a £3 billion bail-out for the firm. Some time this spring the government is due to publish another bill to load the taxpayer with almost £4 billion of liabilities from British Nuclear Fuels – Britain's other nuclear generator. All in all, the nuclear industry will be getting £7 billion of subsidies.

Friends of the Earth nuclear campaigner Roger Higman said: 'The new bill paves the way for British Energy to fob the costs of dealing with its nuclear waste onto the tax-payer. It is a £3 billion back-door payment to nuclear power. It shows yet again that nuclear power is a financial as well as an environmental disaster. The sooner we join Germany, Spain, Holland, Belgium and Sweden in phasing out nuclear power the better.'

To register your opposition to nuclear power with your MP fill in the free online form on the FaxYourMP.com website ([www.faxyourmp.com](http://www.faxyourmp.com)).

The Electricity (Miscellaneous Provisions) Bill is available from [www.publications.parliament.uk/pa/pabills.htm](http://www.publications.parliament.uk/pa/pabills.htm)

**US** Congratulations to Wal-Mart, for winning the Maquila Solidarity Network's Sweatshop Retailer of the Year 2002 award with a staggering 56 per cent of the popular vote. Disney came in second, garnering 22 per cent.

Wal-Mart was cited for its bad treatment of its North American employees, as well as its contribution to the global sweatshop problem. Wal-Mart employees charge that the company required them to work unpaid overtime. The company has even stooped to profiting from employee deaths – by

taking out life insurance policies on its employees payable to the company. Wal-Mart owns Asda in the UK and is currently bidding to buy Safeway.

Learn more about sweatshops at [www.maquilasolidarity.org](http://www.maquilasolidarity.org)



**US** 'Don't let your commercial interest over-run your patriotic interest,' says Andrew Gilman, president of CommCore Consulting Group in New York. 'Put the country first and your company second.'

And recommending that PR companies hold back from promoting their products in the opening stages of any war, *PR Week* magazine author Sherri Deatherage Green advises: 'Few activities could be more futile than pitching stories when war reports fill every second of network time.'

Thankfully, such a difficult situation should not last long, however. For as public interest in war fades, Green says that 'companies should find tasteful and appropriate ways of reviving their marketing'.

**Biotechnology epitomises the issues and struggles defining today's world. Corporate corruption, weak science, false claims to help the poor – GM links them all. *The Ecologist*, in association with industry watchdog the Norfolk Genetic Engineering Network, reports the key GM events and trends.**

## **GM** Politics & Propaganda

### **Royal Society blames media for fall in public trust**

**UK** The Royal Society is establishing a group to analyse the effect of media coverage of scientific issues. It says it hopes to minimise the 'harm' that can occur from 'inaccurate and misleading communication of the results of scientific research, particularly when they have implications for human health'.

*The Independent* reported: 'Among other issues, the group will examine the furore that erupted over research into GM potatoes by Professor Arpad Pusztai... It will also look at the effect on public confidence of... studies by scientists in Mexico showing genes from GM crops had crossed into traditional corn plants, which were published in *Nature* magazine in November 2001.'

However, the accompanying information in the article about Pusztai's research and the Mexican maize research is itself filled with 'inaccurate and misleading' information. No wonder. Its source is the Royal

Society, which as scientist Tom Wakeford has written, is 'an organisation that actively promotes the interests of multinational biotech corporations under the guise of independent science.'

### **Fresh scandal over government's GM 'debate'**

**UK** The government was planning to publish the results of GM field trials in the *Journal of Applied Ecology*. Publication has now shifted to the Royal Society. As Paul Brown wrote in the *Guardian*: 'As befits a reputable journal, the editors reserved the right to have the papers peer reviewed – in other words, if bits were not scientifically rigorous they would not be published. So now publication has shifted to the Proceedings of the Royal Society of London, where, apparently, such stringent peer review will not be necessary.'

### **BMA denies GM U-turn**

**UK** The British Medical Association rejected a BBC report that it was backing away from its concerns over GMOs. The report appears to

have stemmed from Peter Lachmann, a leading fellow of the Royal Society. In 1999 Lachmann was identified by the editor of *The Lancet* as the source of threats against him over his magazine's publication of Dr Pusztai's peer-reviewed GM research.

### **Indian government lied over GM cotton failure**

**INDIA** Greenpeace has demanded a probe into claims that GM cotton offered better yield, accusing the Indian government of 'lying'. At Monsanto's behest, allege Greenpeace, farmers growing the crop had boosted yield figures.

### **Actors protest Bové arrest**

**FRANCE** Actors, scientists and politicians destroyed a field of GM rapeseed in support of anti-globalisation guru Jose Bové, in prison for a similar action.

### **Mass Monsanto uprooting**

**PHILIPPINES** A thousand protesters uprooted Monsanto's test Bt corn after it was approved by the government and subsequently contaminated other crops.

exist in Belgium, the Philippines and Thailand.

### **US farmers say government put bad corn into feed chain**

**US** Environmentalists and Iowa farmers have charged the US government with selling a harmful supply of GM corn to a feed company, despite complaints that the corn had caused hormonal problems in pigs.

### **Cloned meat planned for humans**

**CANADA** A livestock company has asked Health Canada whether it can sell meat from cloned animals for human consumption. In the US two companies are already working on producing cloned pigs and cattle. No products of cloned animals are currently for sale in Canada or the US.

### **Bayer shares plummet**

**GERMANY** Shares in German chemicals and pharmaceuticals group Bayer fell to their lowest level since 1993 after news of a threatened wave of compensation claims over Bayer drug Lipobay.

Earlier this month a US lawyer announced that the number of claims for compensation for Lipobay might rise to 15,000. Bayer withdrew Lipobay in the summer of 2001 after several patients died after taking the drug.

### **Bayer poisoned students in pesticide tests**

**GERMANY** Bayer CropScience faces an inquiry after it was found to have used students in tests of a 'highly hazardous' pesticide linked to serious disorders. According to *The Times*, the company paid students, who mostly came from Heriot-Watt University in Edinburgh, to consume fruit juice laced with the pesticide.

The project, much of which is secret, has been condemned in the US as unscientific and unethical. Lawyers pointed out that the Nuremberg Code, formulated after the Nazis' wartime experiments, bans the use of humans for testing poisonous substances that have no medical application.

Meanwhile, Bayer has been using the results of the study, which was conducted between 1998 and 2000, to support its argument that restrictions on pesticide use should be eased, because no immediate adverse effects were suffered by the students.

'There are real problems with this kind of research,' said the editor of *Bulletin of Medical Ethics*, Richard Nicholson. 'You would have thought we knew enough about pesticides from Agent Orange and DDT onwards.'

### **Italy's largest miller rejects GM wheat**

**ITALY** Grandi Molini Italiani, Italy's largest miller, has declared that it will not import any GM wheat from the US, and that it may stop importing the crop from other countries where GM wheat is grown.

Monsanto would be affected by the decision as its Roundup Ready wheat is close to regulatory approval in the US. RoundUp Ready wheat would be the world's first bio-engineered wheat.

## **GM** Food & Safety

### **UN food agency denies banana extinction scare**

**WORLD** The UN Food and Agriculture Organisation (FAO) has denied reports (put into circulation by GM-supporting scientists) that commercial bananas are on the verge of extinction. The FAO called instead for growers to promote greater genetic diversity to protect the fruit. Eric Kueneman, head of the

FAO's Crop and Grassland service, was quoted as saying: 'What is happening is the inevitable consequence of growing one genotype on a large scale.'

Thai scientist Benchamas Silayoi, from Kasetsart University's Faculty of Agriculture, also took issue with the contention that GM bananas were the only way to conserve the banana species. Huge collections of banana germ-plasm

## **GM** Science & Technology

### **'Dream rice' bred traditionally**

**THE PHILIPPINES** Using traditional methods, Filipino scientists have developed a 'dream rice' containing vitamin A, zinc and more than twice the normal amount of iron. A trial of the rice carried out on 30 anaemic Filipino women showed their health improved within three months.

### **Washington not up to GM fish test**

**US** A study by the independent Pew Initiative on Food and Biotechnology says the US government is ill-equipped to judge the risks GM fish pose. The study maintains that FDA rules are inadequate as they do not fully consider the environmental risks posed.

For more on these and other stories, and for background information and exposés of all GM issues, go to [www.ngin.org.uk](http://www.ngin.org.uk)

**PLAN COLOMBIA • As the US threatens to attack Iraq for supposedly harbouring biological weapons, news emerges of a US plan to conduct a biological war of its own**

*'People in a position of responsibility who are indifferent to the health risks of eradication with Fusarium are engaged in the modern-day equivalent of the 16th century European conquerors' debate over whether native people are human beings and, if so, whether they have souls.'*

Dr Oswaldo Jave, head of the Asthma, Environment and Tobacco Unit, Hospital Dos de Mayo, Lima, Peru

**US MOVES TOWARDS BIOLOGICAL WARFARE IN COLOMBIA**

A plan to use an untested pathogenic fungus – *Fusarium oxysporum* – in Colombia's US-funded 'war on drugs' resurfaced in the US House of Representatives in December 2002. Critics say the plan proposes illegal acts of biological warfare, poses major ecological risks to one of the world's most bio-diverse countries, and will increase the human damage of a failed eradication policy.

The new fungal agent was dubbed 'Agent Green' by the Sunshine Project – an international NGO opposed to the use of biological weapons –, and were developed by the US Department of Agriculture and two other facilities using US government funding: a private company in Montana, and a former Soviet biological weapons facility in Tashkent, Uzbekistan.

In June 1999 the US Senate approved a \$1.3 billion aid package in support of Colombia's 'war on drugs'. The money depended on *Fusarium* being tested as another weapon (alongside conventional pesticides) in Colombia's campaign to eradicate illicit drugs.

The plan was opposed by civil society worldwide – from South America to Europe. On February 1, 2001, the European Parliament approved resolution 474-1, which called on the EU to 'take the necessary steps to prevent the introduction [in Colombia] of biological agents such as *Fusarium*, given the dangers of their use to human health and the environment alike'. Poul Nielson, the European commissioner for Development and Humanitarian Assistance, declared that he was 'completely in agreement' with the resolution's sponsor. President Clinton eventually waived the *Fusarium*-testing requirement, citing concerns for the proliferation of biological weapons. Colombia also rejected proposals to test the pathogen due to environmental risks. George Bush, however, is less concerned than his predecessor about how he is viewed internationally.



**WHAT IS 'AGENT GREEN'?**

*Fusarium oxysporum* is a well-known plant pathogen that causes damage and large losses in food and industrial crops worldwide. There are many associated health risks. Human *Fusarium* infection (*fusariosis*) is an emerging, life-threatening disease with a mortality rate as high as 70 per cent. Concentrated aerosols of fungal spores are known to cause dermal and respiratory difficulties in humans. These problems have been reported by UNDCP scientists working with the *Pleospora* variant of the herbicide. As early as 1989 even the 'inventor' of EN-4 and other strains to be used on coca and cannabis admitted in a letter to the US Drug Enforcement Agency that *Fusarium* poses 'a problem in immuno-compromised patients'.

**PLAN COLOMBIA – THE ECONOMICS**

<b>6 million</b>	Children living in Colombia in 'absolute' poverty according to Unicef
<b>65</b>	Percentage of Colombians living in conditions of extreme poverty
<b>\$150m</b>	Annual military aid from US to Colombia before Plan Colombia
<b>\$1.3 billion</b>	Additional sum given under plan Colombia
<b>2</b>	Countries receiving more US aid than Colombia (Israel and Egypt)
<b>0</b>	Countries receiving more US military aid than Colombia
<b>20</b>	Corporations with executives who accompanied Clinton to Colombia in 2000
<b>100</b>	Percentage of Colombia's public utilities the IMF demanded be sold to private owners under a 1999 loan agreement

**ANOTHER TREATY TO VIOLATE**

The global outrage at the spraying of Agent Orange and other environmentally malign potions across South-east Asia during the Vietnam war led to ENMOD – the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques. Adopted by the UN in 1976 and ratified by the US, ENMOD prohibits any signatory nation from using the environment as a weapon of war – which the spraying of Colombia constitutes by definition. The US *Fusarium* bio-bomblets can't even be made to stay in Colombia, but, like the more conventional pesticides and fumigants already dropped, will inevitably stray across the Colombian border into Ecuador and Peru. Both Peru and Ecuador vehemently oppose the US bio-war plan and charge that it violates international law. Specifically, they cite a non-proliferation section of the Biological Warfare Convention that prohibits the transfer of germ weapons and technology from one nation to another.

**1** Colombia's forests account for 10 per cent of global bio-diversity, making it the second most bio-diverse country in the world. Drug-war induced deforestation in Colombia has led experts to theorise that Colombia could become another Somalia or Ethiopia within 50 years – with a fast-growing population that is larger than what the food production can support due to poor agricultural soils or techniques.

**2** Between 1985 and 1997 nearly half a million acres of coca were eradicated in Latin America, but coca cultivation increased by 87 per cent.

**3** More than 128,000 acres of coca were fumigated in Colombia in 2000, but the net area under cultivation increased.

**4** Crop fumigation has increased every year from 1995 to 1999 while coca yield has increased nearly threefold, according to US government statistics.

**5** Aerial spraying of a marijuana field near a Rarámuri village in the north of Colombia left 300 sick and injured and may have killed a two-year-old girl, according to the Chihuahua State Human Rights Office.

**6** When aerially sprayed, the Monsanto-produced herbicide glyphosate (commonly referred to by its brand name 'Roundup') can drift for up to half a mile. Children have lost hair and suffered diarrhoea as a result.

**7** Between 1992 and 1998, fumigation with around 660,000 gallons of glyphosate was used to spray more than 147,000 acres of opium and coca fields. It had little effect, as it is estimated that there are around 303,000 acres of coca still being cultivated.

**8** Crop fumigation generated \$24m for Monsanto between 1992 and 1998;

**GEORGE W. BUSH PRESENTS AN ALL NEW VERSION OF HIS  
INTERNATIONAL GROUNDBREAKING MASTERPIECE**

GEORGE W.  
**BUSH**

THE BIOTECH  
**INDUSTRY**

THE GOVERNMENT OF  
**COLOMBIA**

*and introducing*

FUSARIUM OXYSPORUM AS  
**'AGENT GREEN'**

# Apocalypse No!

**Adapted from** an original idea for 'War on Drugs' by Bill Clinton

**Produced by** bioweapons labs in the US and Russia

**Designed without** concern for the damage to innocent people or the environment

Another (mis)**directed** policy

Opinionated and outspoken, the UK's environment minister Michael Meacher is, by his own reckoning, a lone voice in the wilderness. He talked to *The Ecologist* about GM, nuclear power and why no one dares question the path we are on.

# sink or SWIM

**M**ichael Meacher is in something of a ministerial hurry. As we bustle down the steps of the Department of the Environment, Food and Rural Affairs a car pulls up to whisk us away. Five hundred metres down the road it stops in front of the House of Commons and we all pile out again. Before we can suggest that the minister is 'doing a Prescott' he turns to us with a smile. 'Not a very good start, eh? I should have walked.'

## Playing politics

It is this willingness to admit that problems exist that made us want to talk to Meacher in the first place. Last year he was asked his opinion of the US policy of dumping GM food on starving African countries and calling it aid. Candidly, he replied: 'It's wicked when there is such an excess of non-GM food available. We have the means to assist, but we are playing politics over GM.'

So, with the US accusing NGOs of leaving Africa to starve, Tony Blair calling those environmentalists who are concerned about safety 'anti-science' and the public seemingly keen to keep its food GM-free, we start by asking Meacher what he feels

about the risks GM might pose.

'The real problem is not whether people are going to develop terrible diseases in six months' time – which is not going to happen,' he replies. 'The real problem is whether 10, 20, 30 years down the track serious and worrying things happen that none of us ever predicted. It's these sorts of totally unpredicted problems that make me very, very cautious. The human race has

existed on this planet for about a quarter of a million years. We have been feeding ourselves perfectly adequately, since overcoming problems of hunger in our early existence. GM is not necessary.'

So, leaving aside the small fact that the UK minister for the environment feels that we neither need GM nor can be sure if it will be safe, what does Meacher feel about the current trials' system? As the current trials are only testing what effects GM crops might have on the environment, he says, and as the government has neither the money nor the manpower to do anything else, we have to rely upon the bio-tech companies themselves to tell us if they discover any other problems, such as, for example, health risks. 'So the question is,' he continues, 'can we trust the companies and be sure that they are telling us all they know? When asked if the system is adequate, it is difficult to give the answer 'yes', for the reasons I have just given. The system is very trusting, and that is worrying.'

The issues of trust and corporate science have risen on the agenda in recent years. No more so than when Lord Sainsbury was appointed as the

## THE FOOD STANDARDS AGENCY

## THE EARTH SUMMIT



government's science minister. For the record, Sainsbury is a member of the cabinet bio-technology committee responsible for national policy on GM crops and foods, and as such a key adviser to Blair on GM technology. He is also a multi-million-pound donor to the Labour Party, having given Labour its biggest single donation in September 1997 and over £9m in all. He was made a life peer by Blair on October 3 1997.

Sainsbury is also a major personal investor in GM agricultural bio-technology, and has long-established links to two bio-tech companies – Innotech and Diatech. Gatsby, a charity established by Sainsbury, has invested over £2m a year into the new Sainsbury Laboratory, which carries out research into GM crops. In case this isn't enough, the laboratory also receives over £800,000 a year from the Biotechnology and Biological Science Research Council, for which Sainsbury is responsible in his ministerial role.

Blair once said: 'There is no conflict of interest in David Sainsbury's position. He has nothing to do with the licensing of GM foods.'

We ask Meacher whether he agrees with

Blair's assessment. The government line, he explains, is that whenever the relevant cabinet sub-committee – known as Sci-Bio – meets to discuss policy or make decisions then Lord Sainsbury withdraws. But this, we say, does not prevent Sainsbury from influencing proceedings before the meeting. 'Sci-Bio meets pretty rarely,' Meacher replies. 'But as far as I know the only way [Sainsbury] seeks to avoid this conflict of interest is by absenting himself

## SUBSIDIES

when decisions are taken by these inter-departmental committees. And as far as I know that is all he does.'

Satisfied? We ask the minister how he thinks this arrangement must seem to people in the outside world.

Meacher smiles but declines to answer.

Turning away from GM, we enquire how he feels about Jonathon Porritt's comment that this government is in adulation of big business.

Again he smiles and says: 'No comment.' Then, after a second's thought, he adds: 'When I first came into politics Labour was a party which was at best sceptical and at worst openly hostile to business. It has now gone right the other way.' He feels that what matters most is being seen to be independent, that the government should not get too close to any vested interest – whether it is industry or the trade unions. 'As Tony Blair keeps on saying,' he adds, 'we govern for all the people. And that is right, and we shouldn't be in the pocket of anyone. Now, I'm sure [Blair] would say that he isn't.'

But if Blair is not in the pocket of anyone, we wonder, how does Meacher explain recent events surrounding the ►

nuclear industry, which despite years of corrupt practices was last year bailed out by the government to the tune of £650m. It would seem clear that the government is doing everything it can to protect this lethal industry. But is it really worth protecting?

'We have had a nuclear industry for 50 years and still no one is quite sure what to do with nuclear waste,' replies the minister. 'You've got 77,000 cubic metres of intermediate and high-level waste growing rapidly. There are 10,000 tonnes – which is one hell of a lot – at Sellafield alone. If we do not build a single other nuclear power station it will be half a million tonnes by the end of the century.'

As we sit back to take in the scale of the problem, Meacher explains what he sees as the main difficulties with nuclear power.

Problem one – waste: 'Do you build more nuclear plants when you don't know what to do with the waste, and on such an enormous scale, and at such great cost?'

Problem two – liability: 'Do you know how much the Liabilities Management Authority is taking over with the restructuring of BNFL? £85 billion.' Problem three – security: 'After September 11, if you want to do damage to any country in the world, just go for the biggest nuclear installation.' Problem four – cost: 'This is the killer in market terms. It's not competitive in price.'

In four straight points the UK's environment minister makes it clear what is wrong with nuclear energy and exposes what is wrong with the government's policy, which rather than looking to end the nuclear age is looking to expand it.

But he hasn't finished. 'Now the argument of the nuclear industry has always been, "OK, OK, OK, but for supply to meet demand there is no alternative". But I don't think that's true. The big alternative is renewables. There is tremendous opportunity to make a clean sweep and have a very big increase in renewables.'

Heck, we're on a bit of a roll. GM, big business, nuclear power. So what about globalisation, growth and sustainable development?

Famously, the government tried to avoid sending Meacher to the Earth Summit in Johannesburg last year. In the end, with a group of NGOs offering to pay his ticket, it recanted and off he went. So what did he make of the world's biggest conference?

'The buzz word at Jo'burg – and, my

## NEW LABOUR AND BUSINESS

## THE ENVIRONMENT

God, there's enough of them at these things – was "to make globalisation work for the poorest". It's a fundamental issue of judgement as to whether that is possible or whether it simply cannot be made to work. It is unquestionably true that we are trying to solve a lot of the problems by following the same courses that caused them in the first place. If you talk about what the model should be, of course, it is absolutely true (there is a *realpolitik* about this), no one in the industrialised countries challenges that model. It's just about making it work a bit better, being a bit fairer.'



This is the mantra of sustainable development, and those who chant it relentlessly as they patrol the corridors of power are wont to offer up the same golden lambs as proof of their rectitude. Asked to show that globalisation works, and they point to countries such as Ghana. And when they point, they point very precisely, very specifically, at its GDP. They tell you how under the IMF's imposed structural adjustment plans Ghana's GDP rose 2 per cent a year between 1987 and 1992. What they do not tell you is that Ghana has also seen its forests give way to deserts and that it now boasts an unrepayable £7.2 billion debt.

But does the UK's environment minister share these beliefs, beliefs espoused by his own prime minister and, since her conversion, Clare Short – the overseas development minister?

Far from it. 'This model,' he declares. 'puts developing countries in a position where they are a valuable but basically ancillary part of the capitalist trading network. The effect on many countries has been more poverty, not less.'

So does Meacher oppose the policies of sustainable development? 'Ever since Reagan and Thatcher the market philosophy has gone totally unchallenged,' he explains.

'The real problem is that every government in the EU – the UK included – says, "of course we want growth". And growth does solve some problems, but we need growth of a very different kind – one that respects the environment and is generally sustainable. But it is dishonest to say that it is a long-term answer that can go on for ever.' No wonder they didn't want him at the Earth Summit.

We ask him how bad he believes the environmental situation to be. 'The story I like most of all is from James Lovelock,' he replies. We are somewhat startled. To hear a minister question sustainable development is one thing, but to quote James Lovelock and his Gaia theory? Meacher continues: 'If the human body becomes ill it goes into a fever. The purpose of going into a fever is to concentrate all activities in destroying the alien virus that is [threatening] the integrity of the whole human frame. Either, as happens in the majority of cases, it succeeds and the virus is expelled, or it doesn't and the person dies. If we carry on with activities that destroy the environment, then we are the virus' ■

# Monsters Inc.

**It sounds like the plot of an Arnold Schwarzenegger film. Chris Floyd reveals that the Pentagon is developing a breed of 'super-soldiers', artificially altered into ruthless killing machines.**

Pentagon dark lord Donald Rumsfeld is shovelling billions of tax dollars into the research furnaces of federal laboratories and private universities across the US in a wide-ranging bid to spawn 'super soldiers'. Fired by drugs and electromagnetic 'brain zaps', the super soldiers will fight without ceasing for days on end. The work is being directed by the Defense Advanced Research Projects Agency (DARPA) – yes, the same outfit now labouring under convicted terrorist-conspirator John Poindexter to build the 'Total Information Awareness' network that will allow Washington to monitor the electronic records and communications of every US citizen.

The DARPA 'war fighter enhancement' programme – an acceleration of bi-partisan bio-tinkering that's been going on for years – will involve injecting young men and women with hormonal, neurological and genetic concoctions; implanting microchips and electrodes in their bodies to control their internal organs and brain functions; and plying them with drugs that deaden some of their normal human tendencies – the need for sleep, the fear of death, the reluctance to kill their fellow human beings.

The research is 'very aggressive and wide open', says Admiral Stephen Baker of the Center for Defense Information. Indeed, the US Special Operations Command envisions the creation of 'iron-bodied and iron-willed personnel', who can 'resist the mental and physiological effects of sleep deprivation' while relying on 'ergogenic substances' to 'manage' the 'environmental and mentally induced stress' of the battlefield. Their bodies juiced, their brains swaddled in a Prozacian haze, the enhanced fighters can churn relentlessly, remorselessly towards dominion.

And the term 'creation' is not just fanciful rhetoric. Some of the research now underway involves actually altering the

genetic code of soldiers, modifying bits of DNA to fashion a new type of human specimen – one that functions like a machine, killing tirelessly for days and nights on end. These mutations will 'revolutionise the contemporary order of battle' and guarantee 'operational dominance across the whole range of potential US military employments', the DARPA wizards enthuse.

Of course, the Pentagon is not waiting on sci-fi technology to enhance the



physical abilities of its soldiers. Old-fashioned off-the-shelf 'additives' have long been shoved down soldiers' throats. For example, the use of amphetamines for pilots has been widespread for decades: during the first Bush-Saddam War, whole squadrons were cranked up on the stuff. Not only is the gobbling of speed officially sanctioned, it's actively encouraged, even implicitly mandated – careers can be derailed for pilots who refuse to drug themselves.

The results of this dope-peddling were clearly seen on the new imperial frontier of Afghanistan last spring, when two US pilots – hopped up on speed – killed four of their Canadian allies in a 'friendly fire' bombing raid. The pilots, now facing legal charges, say US Air Force brass pressured them into taking the mind-altering drug before the fatal flight.

But such glitches are inevitable in any grand scientific undertaking, and DARPA remains undeterred in its bold quest to

'push the limits of human input/ output', advance the 'symbiotic relationship between man and machine', and customise 'pharmaceutical technology' to 'embolden the war-fighter and his superiors', as military scientists declared at a Pentagon-sponsored conference on 'future warfare'.

What happens to the burnt-out husks of these 'iron' soldiers after their minds and bodies have been eaten away by relentless modification and ceaseless toil is, of course, of no concern to the Bush

regime. Even now, the White House is cutting back on health benefits to military veterans – even going so far as to order veterans' hospitals not to advertise their services, lest broken soldiers actually seek to claim the promise of support their government once gave them. For men like Bush – protected scions of privilege who sit out wars in safety in booze-addled luxury – such promises are just cynical sucker ploys, aimed at coaxing decent soldiers into acting as the hitmen of empire before they're discarded when they're no longer needed.

How very strange it is. Those who want to turn US soldiers into mindless, drug-addled mutants and send them off to kill and die in far-flung wars of imperial conquest are seen as patriots, noble leaders, doing the will of God. Those who would rather see these good men and women called home, treated with honour and respect – their talents and dedication applied solely to the defence of their own great country, not pressed into the service of a greedy, rapacious elite – are denounced as 'traitors', 'anti-American agitators', 'allies of terrorism'.

But such is the inversion of values – the wisdom gone astray and turned to fell practice – that now permeates Bush's Washington and the Pentagon's fiery crucibles of war.

*Chris Floyd writes a column for The Moscow Times.*

**PHTHALATES • They're used to soften plastic toys, and found in the majority of cosmetics, perfumes and deodorants. What can we do to stop chemical companies polluting us?**

Phthalates, a family of synthetic chemicals hazardous to human health and fertility, are present in four out of five top-selling cosmetics, according to a recent study by the Women's Environmental Network (WEN). The findings of the study are especially worrying, as these chemicals are readily absorbed through the skin and have been linked to birth defects, organ damage, infertility and cancer.

All of the cosmetics of major brands such as Boots, Dior, L'Oreal, Procter & Gamble, Fabergé and Wella did not have the phthalates used in them listed on their labels. But, as the law stands, manufacturers have no obligation to list phthalates on product labels. This makes it virtually impossible for consumers to avoid them.

WEN tested 34 leading cosmetic products in its study, which was carried out in association with the Swedish Society for Nature Conservation and the international organisation Health Care Without Harm. Forty per cent of the samples contained one or both of the highly toxic di-ethylhexyl (DEHP) and di-butyl (DBP) phthalates. DEHP and DBP were banned by the EU in November 2002, although the ban has yet to take effect.



**PHTHALATES IN NUMBERS**

- 1** Million tons of phthalates are produced in western Europe each year
- 3** Million women of child-bearing age have seven times the average levels of DBP in their bodies (figure from the Centre for Disease Control [CDC])
- 1953** The year of a study on which the US Environmental Protection Agency bases its assessment of 'safe' doses of DBP; this is despite recent peer-reviewed studies showing birth defects at doses that are much lower
- 5,676,935** The US patent application in which L'Oreal noted that it is 'nowadays preferable to use plasticisers other than phthalates in varnishes for reasons of allergy'
- 289** The number of people tested for traces of DBP in their bodies (figure from CDC)
- 289** The number of people found to have traces of DBP in their bodies (figure from CDC)
- 100** Percentage of the 15 brands of baby milk formulae tested that were found to contain phthalates (figure from the UK's Ministry of Agriculture, Food and Fisheries, 1996)

**WHY DO CONSUMERS HAVE TO CAMPAIGN?**

Conveniently ignoring the effects of cumulative exposure and interactions between different chemicals, the chemicals and plastics industries deal with safety concerns and regulatory pressure as PR problems. For the past 50 years these industries have lobbied vociferously against pre-market safety testing. When challenged over the health and safety of their products they demand a full risk assessment before any regulatory action is taken. This results in a situation where there is no legal or practical means to remove products from commercial use short of a public health disaster or consumer uproar.

**WOMEN'S ENVIRONMENTAL NETWORK CAMPAIGN OBJECTIVES**

- 1** Manufacturers to pledge to remove all phthalates from their products, and to clearly label products in the interim
- 2** The European Union to ban unconditionally all phthalates from cosmetics
- 3** Consumers to press retailers, manufacturers and politicians to make sure phthalates are no longer used in cosmetics

To contact the Women's Environmental Network and to find full information on its campaign, phone: (0)20 7481 9004; write to: PO Box 30626, London E1 1TZ; or visit: [www.wen.org.uk](http://www.wen.org.uk)

**WHAT ARE PHTHALATES?**

Phthalates, pronounced 'thar-lates', are colourless, odourless liquids that are primarily used to soften PVC and plastic. Approximately 10 per cent of phthalates are used in personal care products to provide flexibility, impart an oily moisturising film and help dissolve and fix other cosmetic ingredients.

Phthalates can be absorbed through the skin, inhaled as fumes and ingested when they contaminate food or when children bite or suck on toys. In concentrated form, phthalates are considered hazardous waste and are regulated air and water pollutants. However, they remain largely unregulated in food and cosmetics.

**AS SMOOTH AS...**

DBP is listed as a humectant (skin moisturiser) or emollient (skin softener) in patents from Procter & Gamble, Lever Brothers, Colgate-Palmolive, Kraft General Foods and Anheuser-Busch. When added to skin care products DBP's oily texture gives the impression that skin is soft and moisturised. The emphasis here is on the word 'impression', as it is only the DBP residue that is soft and not the skin targeted.

**Industry spin**

The chemicals sector claims that phthalates are some of the most studied and best understood compounds in the world from a health and environmental perspective.

**Facts**

Extensively studied does not equal safe...

- Phthalates can damage the liver, the kidneys, the lungs and the reproductive system – especially the developing testes of children.
- Several studies have suggested phthalates may affect human sperm quality. One found phthalates in college students' semen (*Biological and Environmental Mass Spectrometry*, 1987).
- Phthalates were linked with birth defects, anaemia and other pregnancy complications in a study published in *Toxicology and Applied Pharmacology* in 2001.
- DBP can cause severe allergic reactions, including the most severe form of reaction (and sometimes fatal) anaphylactic shock.
- Puerto Rican girls with premature breast development were found to have elevated levels of phthalates in their blood, according to a study published in *Environmental Health Perspectives*.

- According to lab animal studies, DBP can harm nearly every physical structure in the developing male reproductive system. The effects



include testicular atrophy, absent testes and reduced sperm count.

To equip yourselves with full information on Phthalates, have a look at the following websites: [www.wen.org.uk](http://www.wen.org.uk); [www.notsopretty.org](http://www.notsopretty.org); [www.comeclean.org](http://www.comeclean.org); [www.ewg.org](http://www.ewg.org); [www.noharm.org](http://www.noharm.org)



POISON

IN DIOR'S WORDS:

*Daring and provocative, enigmatic and mysterious  
Poison is a perfume with much to say.  
Dazzling with its spicy heart notes, Poison's message  
Is seductive and perhaps even troubling.*

IN OUR WORDS:

*This product contains phthalates.*

How sharp is your mind? How balanced is your mood? How consistent are your energy levels? How happy are you? And what, if anything, does all this have to do with what you eat? Patrick Holford thinks he has the answers.

food for

# thought

Last year at the Institute of Optimum Nutrition we surveyed 22,000 UK citizens. Most were urban dwellers aged between 20 and 30. We found that:

- 76 per cent of people are often tired
- 58 per cent suffer from mood swings
- 52 per cent feel apathetic and unmotivated
- 50 per cent suffer from anxiety
- 47 per cent have difficulty sleeping
- 43 per cent have poor memories or struggle to concentrate
- 42 per cent suffer from depression.

Welcome to the 21st century. Despite immense improvements in standards of living modern man is not so much a naked ape, but a knackered ape.

#### WHAT'S GOING WRONG?

The answer to these problems is clearly not a lack of pharmaceutical drugs, although this is often touted as

the solution. In the US anti-depressants are now the top selling drug, and in Britain we consume a staggering 823 million of them per year.

Two of the most frequently prescribed anti-depressants are the selective serotonin re-uptake inhibitors (SSRIs) Prozac and Seroxat. A number of clinical trials have found clear evidence that these two drugs cause agitation leading to potential aggressive and suicidal behaviour in as many as a quarter of patients.

In the US there have been 90 legal actions concerning the two drugs, with one recent successful plaintiff being awarded \$6.4 million.

Dr David Healy, of the North Wales Department of Psychological Medicine in Bangor, says: 'I estimate that about one person a day has committed suicide as a direct result of taking Prozac since it was introduced.' For years now Dr Healy has been petitioning the UK

government's Medicine Control Agency to take action to warn users about Seroxat's potential adverse reactions. To date, these reactions translate in the UK to about 1,000 suicides and 10,000 suicide attempts.<sup>1</sup>

SSRI anti-depressants are also hard to kick. There is now considerable evidence that some 50 per cent of those who try to quit get alarming withdrawal effects. One study testing withdrawal showed that as many as 85 per cent of the volunteers – people with no previous hint of depression – suffered agitation, abnormal dreams, insomnia and other adverse effects.<sup>2</sup>

Even worse are the 532 million tranquillisers and 463 million sleeping pills popped each year. They are as addictive as heroin, and dependence on them can occur within two weeks of use.<sup>3</sup> Doctors are specifically instructed not to prescribe more than a four-week supply of tranquillisers and sleeping pills. Yet a 1980s Mori poll found that 35 per cent of people prescribed benzodiazepines (minor tranquillisers) had been on them, not for four weeks, but for over four months. The poll estimated that 1.5 million people in Britain are addicted to tranquillisers.

### KID-LIFE CRISIS

What about our children, who seem to be facing their own 'kid-life' crisis? In the US there are now 10 million children on the hyperactivity drug Ritalin. We are heading that way in the UK, with close to 300,000 prescriptions last year. Structurally and pharmacologically close to cocaine, Ritalin has a similar dependency profile and may be even more potent. Researchers have found that it is chosen over cocaine in self-administered preference studies involving non-human primates. Using brain imaging, Dr Nora Volkow of the Brookhaven National Laboratory in Upton, New York, has shown that Ritalin occupies more of the neural transporters responsible for the high experienced by addicts than smoked or injected cocaine. The only reason Ritalin has not produced an army of addicted schoolchildren, Volkow concludes, is because it takes about an hour for its pill form to raise dopamine levels in the brain. Smoked or injected cocaine does this in seconds.<sup>4</sup> There are now growing reports of teenagers (and others) abusing Ritalin by snorting or injecting it to get a faster rush.

But it doesn't end there. Dr Joan Baizer, professor of physiology and biophysics at the University of Buffalo in New York, has shown how Ritalin (which physicians considered to have only short-term effects) may initiate changes in brain structure and function that remain long after the drug's therapeutic effects have dissipated.<sup>5</sup> This can, in turn, lead to a greater susceptibility to drug dependence in later life.

### THE OFF-LICENCE AS PHARMACY

Tired? Then help yourself to some caffeine, sugar or a cigarette. We drink 1.5 billion caffeinated drinks a

week in Britain, including tea, coffee and cola. We eat 6 million kilograms of sugar and 2 million kilograms of chocolate every week. In the same time we also smoke 1.5 billion cigarettes. Anxious or depressed? Then have a drink. We consume 120 million alcoholic drinks a week, and smoke 10 million cannabis joints.

Little do we realise the extent to which these substances deplete the brain. Caffeine, for example, depresses melatonin (the brain's sleep chemical) for up to 12 hours. Anything more than a cup of coffee a day is likely to increase stress and worsen performance. And alcohol leaches every known nutrient out of the body.

### EVOLUTIONARY GROWING PAINS

These are exceptionally challenging times for homo sapiens. Our minds and bodies have been shaped over millions of years of evolution. It takes time to adapt.

Not only have we invented some 10 million new chemicals (thousands of which are added to our food, are found in common household products, are in the water we drink and the air we breathe), but our psychological environment has changed even faster. Concepts of who we are, who we're with and what we do. Memories of times and places. Thoughts and feelings. All these make up the fabric of our psychological world. You can't see it or touch it, but it is no less real. You want to speak to a friend? Pick up your cell phone. You want to send a letter? Write an email and get a reply in 10 minutes. You want to go somewhere? Jump on a plane. We no longer live in towns and cities; we live in the world. Every culture is exposed to every other culture. This 'cross-culturalisation' is placing untold strains on us. Putting the squeeze on time and space isn't making us happy.

### AN EPIDEMIC OF MENTAL ILLNESS

Some of us are rising to this challenge, but most of us are struggling to keep up and are living with tiredness, anxiety, stress and sleeping problems. Too many people are suffering from mental health problems that range from attention deficit disorder to Alzheimer's, and depression to schizophrenia.

In fact, the world over, there's been a massive rise in the incidence of mental health problems – especially among young people. Suicide, violence and depression are all on the increase. According to the World Health Organisation, mental health problems are fast becoming the number one health issue of the 21st century, with one in 10 people suffering at any point in time and one in four suffering at some point in their lives.<sup>6</sup>

Any intelligent person can recognise that, along with our environment, our diets have also changed radically in the last 100 years. When you consider that the body



CORBIS

and brain are entirely made from molecules derived from food, air and water, and that simple molecules like alcohol can fundamentally affect the brain, isn't it likely that changes in diet and the environment will have had some effect on our mental health? The evidence is there if you look for it. You *can* change how you think and feel by changing what you put into your mouth. With mental health problems rising at such a pace, we need a new way of thinking about the state of our minds.

As Marcel Proust said: 'The real act of discovery consists, not in finding new lands, but in seeing with new eyes.' We need to wake up to the fact that changes in nutrition and chemical imbalances probably underlie the majority of mental health problems.

You can't just psychoanalyse away deficiencies in essential fats, vitamins, minerals and other key brain nutrients. We must wake up to the fact that the body's chemistry – and that means what we eat – affects your mind and that it can transform how you think and feel.

### OPTIMUM NUTRITION FOR THE MIND

Most people who complain of being always tired eat sugar and refined carbohydrates and are addicted to stimulants like tea, coffee, caffeinated drinks or cigarettes. This is a recipe for disaster. Such diets are also usually low in energy-giving substances such as vitamins B and C and the mineral chromium.

The statement, often parroted today 'you get all the vitamins you need in a well balanced diet' was true 50 years ago. Today, unless you eat organically grown /

reared food, you will be eating food derived from nutrient poor soils, artificially brought alive by fertiliser. So most of us are falling a long way short of the basic recommended daily allowance (RDA) levels of vitamins and minerals. Moreover, RDA levels never took into account what you actually need to stay happy and alert in the stress of the 21st century.

Many depressed people, for example, are deficient in the amino acid tryptophan, from which the body makes the mood-controlling brain chemical serotonin. Women are especially prone to this. Researchers at Oxford University's Department of Psychiatry have found that when they take recovered depressed patients and deprive them of tryptophan, their depression returns.<sup>7</sup> Women with a history of depression were divided into two groups and given a diet excluding or including tryptophan under double-blind conditions (that is, neither the subjects nor the researchers knew who received which diet). At the end of the experiment, 10 out of 15 women on the tryptophan-free diet were significantly depressed; none of the women on the tryptophan diet had any problem at all. When the women in the deprived group were given diets containing tryptophan, their depression lifted.

Giving patients 200 milligram supplements of 5-HTP (5-hydroxytryptophan is the amino acid from which the brain can directly make sufficient serotonin) is even more effective. It has been shown, in five controlled trials, to out-perform SSRI anti-depressant drugs – and that with a fraction of the side-effects.<sup>16</sup>

The 5-HTP supplement is often very helpful for those who have difficulty getting to sleep or who wake up too early. Many such people are also deficient in magnesium, which calms the mind and relaxes the body. Eating more greens (especially dark green leafy vegetables) and all fruit, nuts and seeds provides magnesium. And in the evening, if you have difficulty unwinding try supplementing 300 milligrams of magnesium.

### UN-METHYLATED SPIRITS

Of tremendous importance, especially in those with severe depression and schizophrenia, are the 'methyl movers'. The brain turns one chemical (such as adrenalin) into another (such as noradrenalin) by adding on and taking away chemical compounds called 'methyl groups'. This process is known as methylation.

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There is now overwhelming evidence that many people with severe mental health problems have methylation problems. The solution is a cocktail of vitamins that controls all the methylating enzymes. This cocktail includes vitamins B3, B6, B12 and folic acid, plus the minerals zinc and magnesium. On their own these nutrients are effective in combating major depression and schizophrenia.<sup>9</sup> In combination they can, as I have seen for myself, make so-called schizophrenics become lucid within days.

Possibly most important of all to mental health, however, are the essential fats – especially the omega-3 fats. Supplementing fish oils, the richest source of the omega-3 fats EPA and DHA, has been proven to help dyslexia, hyperactivity, depression, schizophrenia, Alzheimer's and bipolar disorder. In fact, a recent study published in *The American Journal of Psychiatry* confirmed that patients already on anti-depressant medication who still have pronounced symptoms of depression experience major improvements in as little as three weeks when given daily supplements of omega-3 fats.<sup>10</sup> The fish oils were more effective than the drugs.

So why does the medical establishment ignore all this? First, despite all the advances in nutritional science, an average doctor training to be a GP gets a total of just six hours of nutrition tuition. This is barely enough to explore the basics, let alone learn how to identify and correct nutritional imbalances that affect mental health.

Of course, behind this atrocious lack of education there is a lack of profit. Nutrients, because they cannot be patented, are not profitable. Hence, no drug companies are interested in researching or promoting the benefits of nutrition.

Most of the large-scale studies into nutrition that are carried out compare nutrients with drugs, are funded by drug companies, are flawed in design and end up erroneously showing that drugs work better.

In reality, the combination of optimum nutrition (which means diet and dietary supplements together) and psychotherapy works wonders for a wide variety of mental health problems – from depression to schizophrenia. It works much better than drugs. Furthermore, most of the psychiatrists I work with find that while drugs can be life-saving in the short-term they become unnecessary with the right combination of nutrients and psychological support ■

Most of us are not achieving our full potential for mental health, happiness, alertness and clarity because we are not achieving optimum nutrition for the mind.

Consider the following experiments.

- The Institute for Optimum Nutrition's Gwilym Roberts measured the IQ scores of 90 schoolchildren and then gave 30 of them a high-dose multi-vitamin, 30 a dummy pill and 30 nothing. After eight months the children's IQ scores were re-evaluated. Uniquely, those on the vitamins had a staggering increase in non-verbal IQ of more than 10 points.<sup>11</sup> Since the study's publication over a decade ago, 15 other studies have confirmed supplements boost children's IQ.
- Thomas Crook from the Memory Assessment Clinic in Maryland in the US gave 149 people with age-related memory impairment a daily dose of 300 milligrams of a nutrient called phosphatidyl serine. The latter is found in eggs and is an essential building block of the brain's neurons. When they were tested after 12 weeks, the patients' memories had improved to a level appropriate for people 12 years their junior.<sup>12</sup>
- Californian researcher Bernard Rimland compared the results of 1,591 hyperactive children treated with drugs to those of 191 hyperactive children given nutritional supplements. The nutritional approach was 18 times more effective. Yet, drug prescriptions for children are almost doubling every year.
- Carl Birmingham from the Eating Disorders Clinic in Vancouver, Canada, gave people with anorexia either a zinc supplement or a placebo. Those taking zinc increased their body weight twice as rapidly as those given the dummy pills.<sup>13</sup>
- Also in Canada, Abram Hoffer has treated 5,000 people diagnosed with schizophrenia with high-dose multi-nutrients – especially large doses of vitamins B3 and C. His published 40-year follow-up reports reveal a 90 per cent cure rate – defined as free of symptoms, able to socialise with family and friends and paying income tax.<sup>14,15</sup> Despite this lifetime of research and results, Hoffer's approach to schizophrenia has been largely sidelined.
- Dr W Poldinger and colleagues at Basel University in Switzerland gave depressed patients either a state-of-the-art SSRI anti-depressant or the 5-HTP nutrient. The nutrient outperformed the drug on every measure, and resulted in greater improvements in the patients' depression, anxiety and insomnia with no side effects.<sup>16</sup> This is in sharp contrast to the estimated one suicide every day caused directly by adverse reactions to SSRI anti-depressants.
- Bernard Gesch, director of the charity Natural Justice, gave one group of prison inmates supplements of vitamins, minerals and essential fats, and another a placebo. A dramatic 35 per cent decrease in aggressive acts occurred, uniquely, among those taking the supplements.<sup>17</sup>



Patrick Holford's book, *Optimum Nutrition for the Mind*, was published in January (Piatkus, £16.99). He is doing a nationwide 18-city lecture tour in March. For details, see: [www.patrickholford.com](http://www.patrickholford.com). For details on the optimum nutrition approach for mental health, see: [www.mentalhealthproject.com](http://www.mentalhealthproject.com).

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**DEPLETED URANIUM • DU is a toxic, radioactive heavy metal, a designated weapon of mass destruction and will be extensively used in any future conflict regardless of the consequences.**

As both the US and British governments fix their sights on a new war with Iraq there is increasing concern that the unresolved tragedies of the 1991 Gulf War will be repeated on an even larger scale.

The US has made much of its new 'bunker-busting' bombs, but has refused to reveal the composition of the bombs' dense metal. It is more than likely that the metal is a uranium alloy. The only other suitably dense candidate would be tungsten, which would not have the incendiary capability of depleted uranium (DU).

It has also emerged that arms manufacturer Lockheed Martin has submitted US patent applications on a 'shrouded aerial bomb', which clearly refer to the penetrating body being 'formed of depleted uranium'. If uranium is used in large, explosive 'hard-target' warheads (up to 1,500 kilograms) there would be levels of radioactive contamination 100 times higher and more widespread than the DU anti-tank 'penetrators' used in 1991.



In the UK the Ministry of Defence (MoD) has announced: 'DU will remain part of our arsenal for the foreseeable future because we have a duty to provide our troops with the best available equipment with which to protect themselves and succeed in conflict.' The MoD also claimed that 'there is no scientific or medical evidence to link DU with ill health'.

**WHAT THEY DON'T WANT YOU TO KNOW**

- The MoD labels the risk from DU 'insignificant', but this is because the present exposure levels for all kinds of radiation are derived from considerations of the total-body external dose only – figures originally derived from studies on Hiroshima survivors.
- The primary risk from DU lies in dust inhalation and, therefore, internal radiation – particularly alpha radiation, which is recognised as by far the most damaging form of radioactive poisoning.
- In Bosnia-Kosovo, all 22 people (from a 1-year-old baby to a 67-year-old man) sampled for DU for a BBC Scotland report were found to be contaminated. Even a cameraman with the reporting team was excreting DU.
- A number of Gulf War veterans have reported a condition known as 'burning semen syndrome', in which they and their female partners experienced burning, pain and swelling in and around their genitals immediately after exposure to the veteran's semen.
- Traces of highly radioactive uranium 236 and plutonium 239/240 were found in anti-tank penetrators analysed in Kosovo by the UN Environment Programme.
- The biological half-life of these particles is not known with any accuracy but it is known that some Gulf veterans are excreting generally low levels of DU in their urine nearly 12 years after the war.

**DU NUMBERS**

<b>70</b>	Percentage of a DU penetrator rod that burns and oxidises into extremely small, easily inhaled particles during impact
<b>900-3,400</b>	Grams of uranium oxide particles created by the impact of one 120-millimetre DU penetrator fired from a US Abrams tank
<b>67</b>	Percentage of children in a Gulf War veterans community in Mississippi born either without eyes, ears or brain, or with thyroid or other organ malformations
<b>700,000</b>	Gulf War veterans estimated to be suffering from illnesses related to the conflict
<b>0</b>	£/\$ paid to veterans in compensation
<b>10</b>	Factor by which cancer cases have increased in Iraq since the Gulf War
<b>0</b>	Days the US and UK military spent decontaminating the war zone in the aftermath of the Gulf War

**WHAT IS DEPLETED URANIUM ANYWAY?**

- The misnamed 'depleted' uranium is the waste by-product left over after the enrichment process of the nuclear weapons and civilian nuclear programme. For every eight tons of unenriched uranium, one ton of enriched uranium and seven tons of DU are produced.
- The remaining uranium, which is 99.8 per cent uranium 238, is misleadingly called 'depleted uranium'. While the term 'depleted' implies it isn't particularly dangerous, DU is both a toxic heavy metal (like lead) and a radiological poison.

**MILITARY WELL AWARE OF THE DANGERS**

*The quotes below are taken from an unpublished document by MoD medical experts dated March 1997.*

- 1 - 'Inhalation of insoluble uranium dioxide dust will lead to accumulation in the lungs with very slow clearance – if any.'
- 2 - 'Although chemical toxicity is low, there may be localised radiation damage of the lung leading to cancer.'
- 3 - 'First and foremost, the risk of occupational exposure by inhalation must be reduced.'
- 4 - 'All personnel... should be aware that uranium dust inhalation carries a long-term risk... [The dust] has been shown to increase the risks of developing lung, lymph and brain cancers.'

A sub-commission of the UN Human Rights Commission resolved in 1996 that DU is a weapon of mass destruction that should be banned.

**Four reasons why using DU rounds violates the UN Convention on Human Rights**

**1 Rule: The effects of using a weapon must be limited in territory to the actual field of combat.**

Using a DU round generates minute particles that can migrate beyond the battleground to cause harm in neighbouring areas or even in non-combatant countries.

**2 Rule: Weapons must not continue to harm or kill after the war has ended.**

The health damage that results from DU continues for some years after the war has ended and can even affect coming generations through congenital defects, etc.

**3 Rule: Weapons must not be unduly inhumane.**

Many non-combatants in the southern part of Iraq, especially innocent children, are suffering from leukaemia and other illnesses. Radiation and toxic chemicals are affecting the next generation as well.

**4 Rule: Weapons must not cause long-lasting, widespread environmental damage.**

The use of DU rounds contaminates the ground, the atmosphere and water, as well as negatively impacting the ecology of plants, etc.





Mark Lynas on the rise and fall of Bjorn Lomborg – the septic environmentalist. He's half man, half T-shirt, and (according to his own maths) half a statistic short of the truth.

# Natural Bjorn killer



HUGH WARWICK

'You really fucking pasted me man,' gasped Bjorn Lomborg, wiping the cream from his face with paper towels hastily provided by the staff of Borders bookshop, where the hitherto little-known Danish statistician was promoting his new book.

I had indeed. A basic sponge cake topped with two inches of spray-can cream had met its target with a satisfying splat.

I won't go into the history of pieing. Suffice to say that it's intended as a relatively light-hearted way to bring pompous and powerful people down a peg. Previous recipients have included Milton Friedman (founder of neo-liberal economics), Renato Ruggiero (former WTO head), Anne Widdecombe and Bill Gates.

So, how had a boring old statistics academic come to join this illustrious group? Not through any lack of hard work, that's for sure. The book he was promoting at the time of his pieing (*The Skeptical Environmentalist: measuring the real state of the world*) is a weighty, scientific-looking tome, full of graphs and tables, with 2,900 references and published by Cambridge University Press.

Lomborg's thesis is that, in general, 'things are getting better'. To quote him directly: 'We are not running out of energy or natural resources. There will be more and more food per head of the world's population. Fewer and fewer people are starving. Global warming... is probably taking place, but the typical cure of early and radical fossil fuel cutbacks is way worse

than the original affliction... Moreover, global warming's total impact will not pose a devastating problem for our future. Nor will we lose 25-50 per cent of all species in our lifetime... We are losing probably 0.7 per cent. Acid rain does not kill the forests, and the air and water around us are becoming less and less polluted.' In fact, he assures us, 'mankind's lot has actually improved in terms of practically every measurable indicator'.

**A NEW BREED**

Most of us had heard this sort of stuff before. But Lomborg was a new breed of contrarian. For a start, he was anything but pompous. With his casual clothes, relatively youthful looks and informal delivery, his opponents were the ones who looked outdated and stuffy. Lomborg even claimed to have started out as an 'old left-wing Greenpeace member', who had accidentally switched sides when he was unable to refute an article by the late green-baiter Julian Simon.

This convenient little fairy story should have rung some bells. But it didn't. 'Strange to say, the author of this happy thesis is not a steely-eyed economist at a conservative Washington think-tank, but a vegetarian, backpack-toting academic who was a member of Greenpeace for four years,' gushed *The New York Times*. Even *The Guardian* was taken in, devoting a series of front pages to Lomborg in its G2 supplement. And BBC2 later donated a whole hour to him during its coverage of the Johannesburg Earth Summit.

Meanwhile, the real steely-eyed economists were having a ball. *The Wall Street Journal* loved Lomborg's book. And *The Economist*, always on the lookout for someone to supply an empirical underlay for the particular perspective it peddles, pronounced: 'Dr Lomborg's critics protest too much. They are rattled not because, as they endlessly insist, Dr Lomborg lacks credentials as an environmental scientist and is of no account, but because his book is such a powerful and persuasive assault on the central tenets of the modern environmental movement.'

Lomborg was already winning. In a bizarre inversion of reality, he was able to pose as a plucky rebel fighting impossible odds – a heroic outsider exposing green dogma to new scientific scrutiny – while actually promoting an agenda not ►

**1 Make unsubstantiated accusations about scientists with whose work you disagree**

Lomborg asserts that Harvard biologist EO Wilson and Stanford biologist Paul Ehrlich are 'enthusiastic supporters of an ambitious plan, the Wildlands Project, to move the entire population of the US so as to recreate a natural wilderness in most of the North American continent'. (*The Skeptical Environmentalist: measuring the real state of the world*; p 257; Cambridge University Press; 2001 [referred to hereafter as page numbers only]).

**FACT:** Wilson and Ehrlich do indeed support the Wildlands Project ([www.twp.org](http://www.twp.org)), but the project's intention is rather less ambitious than Lomborg claims. It merely aims to work with landowners to protect wildlife habitat.

**2 Select only the studies which support your pre-formed conclusion; ignore all other scientific work**

Lomborg asserts that global warming will benefit plants by increasing CO<sub>2</sub> fertilisation, thereby greening the earth (p 299). He bases this on just one study, which to a large extent he misunderstands ('Global response of terrestrial ecosystem structure and function to CO<sub>2</sub> and climate change: results from six dynamic global vegetation models'; W Cramer et al; *Global Change Biology*, 7: 357-373; 2001).

**FACT:** One of the biggest worries about global warming is that climate change will be so rapid that many plant and animal species will be unable to adapt in time. Lomborg completely ignores this. (See 'Ecosystems and Their Goods and Services'; *IPCC 2001: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change*; Cambridge University Press; 2001). This is already thought to be a major factor in the decline of coral reefs, for example (See: 'Climate Change, Coral Bleaching and the Future of the World's Coral Reefs', O Hoegh-Guldberg; *Marine and Freshwater Research*; 50: 839-66; 1999.)

**3 Distort the conclusions and intentions of scientific studies in order to support a different conclusion to the one intended by the authors**

Lomborg tries to show that changes in solar radiation might partly explain global warming, thereby letting fossil fuels off the hook (p 278). But one of the authors of the study he cites ('Solar cycle length hypothesis appears to support the IPCC on global warming'; P Laut and J Gundermann; *Journal of Atmospheric*

*and Solar-Terrestrial Physics*; 60/18: 719-728; 1998) has since responded, saying: 'This can no way be deduced from our analysis, which we made explicit in the paper.' (See: 'Climate Changes: discourse in the greenhouse'; J Gundermann; in *Sceptical Questions and Sustainable Answers*; C Ege and J Christiansen (eds); Danish Ecological Council; 2002.)

**FACT:** The Intergovernmental Panel on Climate Change (IPCC) points out that 'natural forcings alone...' (ie – variability in solar radiation and volcanoes) '...do not explain the the warming in the second half of the 20th century'. Only the increases in greenhouse gases can do so. (See 'Summary for Policymakers'; *IPCC 2001: Climate Change 2001 – the Scientific Basis; Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change*; Cambridge University Press; 2001.)

**4 Set up 'straw men' by using old figures to misrepresent what scientists are currently saying**

To show how exaggerated claims of mass species extinctions are, Lomborg begins his biodiversity chapter by repeating Norman Myers' 1979 estimate that 40,000 species are being lost every year (p 249). But as Myers himself asks: 'Why doesn't he refer to the 80-plus papers I have published on biodiversity and mass extinction during the 20-year interim?' ('Specious: on Lomborg and species diversity'; N Myers; in *Grist Magazine* [[www.gristmagazine.com/grist/books/myers121201.asp](http://www.gristmagazine.com/grist/books/myers121201.asp)]; 2002.)

**FACT:** Recent United Nations Environment Programme (UNEP) estimates indicate that 25 per cent of the world's mammals and 12 per cent of birds are at significant risk of global extinction (*Global Environment Outlook 3*; p 121; UNEP; 2002).

**5 Where science doesn't support your preconceived conclusions, refer to non-scientific work in non-peer-reviewed publications**

Lomborg claims that 'acid rain does not kill the forests' (p 4). This conclusion is based on a single graph, one which was not published in a peer-reviewed journal but in a book by the late anti-green contrarian Julian Simon (*The State of Humanity*; J Simon; 1995).

**FACT:** Scientists agree strongly that acid rain damages both plant and aquatic ecosystems. (There is an enormous literature on this. See [for example]: *The 1997 Canadian Acid Rain Assessment*; Environment Canada.)

(continued on next page)

**6 Use statistical tricks to come to biased conclusions.**

Lomborg claims that forests are not disappearing. 'Globally, the overall area covered by forests has not changed much since 1950.' (p 110.) However, he can only justify this extraordinary statement by cobbling together some old FAO statistics that were never meant to be used in this way because they include plantations and even clearcuts.

**FACT:** During the 1990s the net loss in global forest area was an estimated 94 million hectares – about 2.4 per cent of total forests. (See: *Global Environment Outlook 3*, p 92; UNEP; 2002.)

**7 Use misleading arguments to undermine global environmental agreements**

Lomborg reproduces a graph showing that the Kyoto Protocol will lead to temperatures in 2100 being only marginally lower (by about 0.15° centigrade) than would be the case if nothing was done about global warming. Kyoto is, therefore, pointless and expensive (p 302).

**FACT:** Kyoto was only ever intended as a first step, one intended to run until 2012. An analysis of its effect in 2100 is therefore irrelevant. (See: *A Guide to the Climate Change Convention and its Kyoto Protocol*; UNFCCC; 2002 [unfccc.int/resource/guideconvkp-p.pdf].) Negotiations for tougher cuts after 2012 are due to start by 2005.

**8 Ask (and answer) the wrong questions, so you can ignore the real issues**

Lomborg devotes a whole chapter to debunking the supposed claims of environmentalists that we are running out of fossil fuel energy. 'We have more and more oil left, not less and less,' he states (p125), pointing out that scarcity will increase price and the incentive to find more oil in new ways and places.

**FACT:** What concerns environmental scientists is not that we are running out of oil, but that we are running out of the necessary ecological space to absorb the consequences of our extraction, transportation and combustion of oil. (See: 'Energy: asking the wrong question?'; P Holden; in 'Misleading Math about the Earth'; *Scientific American*; pp 65-67; January 2002.)

**9 Make convenient mistakes and muddle different data types to suit your ends**

In considering access to drinking water, Lomborg switches back and forth between absolute numbers and percentages to make it appear as if fewer people now lack access to clean water than in the past (p 21). He also asserts that global warming will only change water availability by '1-5 per cent' (p 152).

**FACT:** The percentages have indeed changed. But because of population rise the absolute number of people lacking water supplies stayed static between 1990 and 2000 at about 1.1 billion. (See table 2.2; *Global Water Supply and Sanitation Assessment 2000 Report*; [http://www.who.int/water\_sanitation\_health/Globassessment/Global2.1.htm]; World Health Organisation; 2000). Lomborg's figure on global warming is simply incorrect. The uncertainties and potential impacts are much higher than he states. (See chapter four; *Hydrology and Water Resources in IPCC 2001: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change*; Cambridge University Press; 2001.)

**10 Consider only the financial costs of environmental problems**

Lomborg relies heavily on cost-benefit analyses to show that it is more expensive to cut CO<sub>2</sub> emissions than it is simply to adapt to global warming. He claims that 'the total global warming cost of \$5 trillion' is only 'the equivalent of total world output for about two months', while 'global stabilisation of CO<sub>2</sub> emissions' is 'far more costly' at 'about \$8.5 trillion' (p 310). Not only are these kinds of figures highly controversial within the climate economics community, but they also assume that only human beings (and only market transactions within human societies) matter when assessing the costs of climate change. No other life forms or non-monetarised aspects of the human experience can enter this chilly equation.

**FACT:** The cost of global warming is simply incalculable, but if the temperature rise is in the upper region of the IPCC's 1.4-5.8° centigrade projection, it will have a catastrophic effect on both natural ecosystems and human society. (The projected impacts of climate change, and the costs of mitigating it, are discussed exhaustively in *IPCC 2001: Climate Change 2001: Synthesis Report of the Third Assessment Report of the Intergovernmental Panel on Climate Change*.)



dissimilar to that of Exxon and George Bush. As *The Economist* purred disingenuously: 'He uses the findings of scientists to press his case. How can using science to criticise the Kyoto agreement, to show that the world's forests are not disappearing, to demonstrate that the planet's supplies of energy and food will suffice indefinitely, and the rest, constitute an attack on science? If that is so, the scholars whose work supports these positions are presumably attacking science too, and had better stand in line for a pie in the face.'

**ROSE-TINTED SPECTACLES**

According to expert reviewers, however, Lomborg's work consistently misrepresented or misinterpreted the scientific studies it purported to rely on. In many cases, Lomborg simply ignored an established scientific consensus on the issue in question, and quoted selectively instead from the few studies that supported his fixed point of view. Right from the start, many of the scientists and researchers whose work Lomborg's book was supposed to be based on were furious.

John Rennie, the editor of *Scientific American* magazine, said: '[Many scientists] spoke to us about their frustration at what they described as Lomborg's misrepresentation of their fields. His seemingly dispassionate outsider's view, they told us, is often marred by an incomplete use of the data or a misunderstanding of the underlying science. Even where his statistical analyses are valid, his interpretations are frequently off the mark.'

Reviewers in the journal *Nature* complained that Lomborg's book 'reads like a compilation of term papers from one of those classes from hell where one has to fail all the students'. 'It is,' *Nature* said, 'a mass of poorly digested material, deeply flawed in its selection of examples and analysis... Lomborg's text relies heavily on secondary sources. Out of around 2,000 references, about 5 per cent come from news sources and about 30 per cent from web downloads... [these sources are] readily accessible... but frequently not peer reviewed.'

Back in Denmark, a group of Lomborg's own colleagues were so aghast at all the attention he was receiving that they established a website dedicated to refuting his claims. The site is based on the server of

Lomborg's own university – Aarhus.

To the popular media all this whining about peer review and Lomborg's lack of specialist training just sounded like so much scientific snobbery; turf wars between bearded men in lab coats. But Lomborg's abuse of the scientific process was always crucially important, and it was that – rather than the shrill cries of environmentalists – that would ultimately lead to his downfall. As one of the *Nature* reviewers, Dr Jeffrey Harvey, explained to me in an email: 'If an accountant wrote a paper arguing that the sun circles the earth, and *Nature* published it without sending it out to any astronomers to review, I am sure that astrophysicists everywhere would come down on both *Nature* and the accountant's credibility like a ton of bricks.'

It was all very well for the media to hype Lomborg as the new Galileo, but, as Dr Harvey said, 'for every Copernicus, Galileo, Newton and Darwin who shakes the foundations of science by changing the course of mainstream thought, there are thousands of pretenders with perpetual motion machines, flat-earth theories and creationist beliefs who fall by the wayside, and whose ideas end up on the garbage heap'.

Tough, but true. Hence the recent judgement by the Danish Committee on Scientific Dishonesty, which concluded – after a full year of consideration – that *The Skeptical Environmentalist* is 'clearly contrary to the standards of good scientific practice'. Although the committee members (all independent scientists; the committee's parent body is the Danish equivalent of Britain's Royal Society or the American National Academy of Sciences) did not feel able to convict Lomborg of deliberately misleading his readers, this was only because they couldn't rule out the possibility that he simply hasn't understood what he was looking at. Ouch. In reality, the the

committee's judgement was about as damning as it gets: 'Objectively speaking,' it concluded, 'the publication of the work under consideration is deemed to fall within the concept of scientific dishonesty.'

**HERE ENDETH THE LESSON**

So justice was done, if a little belatedly. And not before incalculable damage may have been done to the public's understanding of environmental science (damage which the press and corporate interests will try to perpetuate for as long as possible). Lomborg is far from unique. Many other contrarians have emerged over the last two decades, generally with a single aim: to prevent the formation of a

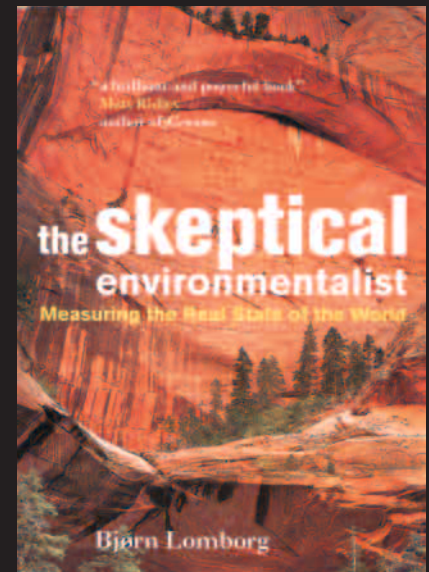
societal consensus on tackling our planet's ecological crisis. Partly because we all underestimated him at the start, however, Bjorn Lomborg may turn out to have been the most damaging.

Now, two years after the publication of *The Skeptical Environmentalist*, the world's problems are just as bad as ever (in fact, they're probably slightly worse because of Lomborg's little dose of denial). There are lessons to be learned from this sorry saga – not least that environmentalists can't defeat contrarians on their own. Ultimately, professional scientists too will have to engage more with the public and the media if their work is not

to be misrepresented by clever manipulators like Lomborg. So, in illustrating the widening gap between science and the rest of society, Lomborg may even have done us all a favour. But just remember: it took two years for the general public to find out what the scientists knew immediately – that Lomborg's 'real state of the world' was nothing more than an illusion ■

Mark Lynas lives and works in Oxford. His book on the human impacts of climate change will be published by Flamingo later this year. Contact: marklynas@zetnet.co.uk

**WHAT THE EXPERTS SAY**



'His seemingly dispassionate outsider's view is often marred by an incomplete use of the data or a misunderstanding of the underlying science. Even where his statistical analyses are valid, his interpretations are frequently off the mark' **John Rennie, editor of *Scientific American* magazine, summing up the views of his many readers**

'The book reads like a compilation of term papers from one of those classes from hell where one has to fail all the students. It is a mass of poorly digested material, deeply flawed in its selection of examples and analysis' ***Nature journal***

'Lomborg's text relies heavily on secondary sources. Out of around 2,000 references, about 5 per cent come from news sources and about 30 per cent from web downloads; [these sources are] readily accessible... but frequently not peer-reviewed' ***Nature***

'We do not feel able to convict Lomborg of deliberately misleading his readers... only because we cannot rule out the possibility that he simply hasn't understood what he was looking at' **The Danish Committee on Scientific Dishonesty**

'Objectively speaking, the publication of this work under consideration is deemed to fall within the concept of scientific dishonesty' **The Danish Committee on Scientific Dishonesty**

# Ensuring That Timber Comes From Truly Sustainable Sources

Over the past decade there has been much debate over what constitutes sustainable forestry. In order to establish an international industry benchmark the Forest Stewardship Council (FSC) was established in the mid-nineties. The FSC are a non-profit making organisation, funded by charitable foundations, government donors, membership subscriptions and accreditation fees. **QUADRIS Environmental Investments Limited** uses this benchmark as the baseline for its investment in commercial sustainable forestry projects. No plantation receives investment unless it achieves FSC accreditation.



*Panflora Plantation, Cuiabá, BRAZIL*

The criteria and guidelines of the **FSC** are based on 10 principles. You will see that these are not only concerned with the forestry operations themselves, but on the impact that they have on the local community, its people, environment and economy:

#### **PRINCIPLE 1: COMPLIANCE WITH LAWS AND FSC PRINCIPLES**

Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.

#### **PRINCIPLE 2: TENURE AND USE RIGHTS AND RESPONSIBILITIES**

Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.

#### **PRINCIPLE 3: INDIGENOUS PEOPLES' RIGHTS**

The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognised and respected.

#### **PRINCIPLE 4: COMMUNITY RELATIONS AND WORKER'S RIGHTS**

Forest management operations shall maintain or enhance the long-term social and economic well being of forest workers and local communities.

#### **PRINCIPLE 5: BENEFITS FROM THE FOREST**

Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.

#### **PRINCIPLE 6: ENVIRONMENTAL IMPACT**

Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.

#### **PRINCIPLE 7: MANAGEMENT PLAN**

A management plan—appropriate to the scale and intensity of the operations—shall be written, implemented, and kept up to date. The long-term objectives of management, and the means of achieving them, shall be clearly stated.

#### **PRINCIPLE 8: MONITORING AND ASSESSMENT**

Monitoring shall be conducted—appropriate to the scale and intensity of forest management—to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.

#### **PRINCIPLE 9: MAINTENANCE OF HIGH CONSERVATION VALUE FORESTS**

Management activities in high conservation value forests shall maintain or enhance the attributes, which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.

#### **PRINCIPLE 10: PLANTATIONS**

Plantations shall be planned and managed in accordance with Principles and Criteria 1 - 9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests.

**QUADRIS** have so far invested in 17 plantations that meet these strict criteria and guidelines.

These plantations are managed on behalf of **QUADRIS** investors by Floresteca Agoflorestal Ltda., a company with a wealth of experience and expertise in the development of sustainable plantations. To ensure that these plantations are managed in accordance with **FSC** principles and **QUALIFOR** (Quality Forest Management) standards, regular independent assessments are carried out. The organisation that carries out these assessments is the specialist forestry division of the world's largest independent research and testing agency, which operates in 140 countries.



**For more information on this positively ethical investment, please contact:**

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www.quadrisc.co.uk

**Please note the value of shares can fall as well as rise and you may not get back the full amount invested**

# Eat your greens

**Why do so many of us love sceptical environmentalists?**

**Paul Kingsnorth on the hugely popular green nay-sayers.**

Farewell then, Bjorn Lomborg. The Danish Committee on Scientific Dishonesty's damning verdict on the sceptical environmentalist's competence and honesty will surely mean that we never hear from him again. It can only be a matter of time before he loses his job with the Danish government and sinks back into the obscurity from whence he came, with only his hair bleach and tight T-shirt collection for company.

Or can it? I would rather put my money on a swift recovery. For Lomborg is a sceptic, and sceptics survive. Being a green nay-sayer is a good career choice for the ambitious; the ranks grow all the time. And yet the really interesting question is not who they are, but why we listen. The really interesting figures in all this are not the sceptics, but their audience.

The nay-sayers themselves fall into several camps. There are corporate-funded scientists and politicians, individuals who are easy to refute and are rarely trusted. There are numerous loony-right think-tanks, replete with corporate funding and well-connected board members: the likes of the Cato Institute, the Ayn Rand Institute, the Adam Smith Institute, the Heritage Foundation or the Competitive Enterprise Institute. The last of these proudly boasts 'the largest free market environmental policy programme in Washington' (in Washington, this is actually quite a claim), and has published titles that include *The True (sic) State of the Planet* and *Global Warming and Other Eco-Myths*. You get the picture.

This bunch wear their funding and their fanaticism on their sleeves, and are thus fairly easy to ignore. Harder to escape are the self-employed sceptics. Their back-story is usually remarkably similar: 'I was once an idealistic greenie myself, but then I began to ask forbidden questions and – well, whaddya know – I realised it was all bunkum!' Into this camp fall former

Greenpeace director Patrick Moore (environmentalists 'are just plain anti-civilisation') Mussolini-lookalike Richard D North ('don't worry about the pollution; it's all been sorted'), who trousers cheques from oil companies to write newspaper articles about how ethical they are and young, smart, loveable Bjorn.

These are the dangerous ones. The corporate media, the politicians, the business world – everyone who feels



threatened by the rise of dissent, everyone with something to lose – clasps them to their collective chest. Their arrival must feel like a reprieve for Business As Usual – or at least a stay of execution.

And yet it's too easy to dismiss the nay-sayers quite so glibly. For it's not just nasty fat cats and politicians who want to believe their message; we all do. Deep down, we all want to believe that everything will be fine – because deep down, we know it won't. We can see our streets gridlocking, our fields disappearing under waves of Barratt Homes, fish stocks collapsing, farmers haemorrhaging from the land, politicians giving up, markets taking over. We know it's going wrong, but we have no idea what to do. We all want something to be done, but we don't want to have to do it ourselves. And we hate, with a secret passion, anyone who tells us what we quietly know already: that one day soon we are all going to have take responsibility for our actions.

This is the psychology of denial. We know the roads are clogging up but we keep driving, one-to-a-car, down the fuming motorways because our journey is essential. It's always someone else's fault. We know about climate change – can see the floods from our windows – but we still snap up the cheap flights. We still buy the battery eggs, use the chlorine bleach, landfill our empty wine bottles. We know that we, in the rich world, consume most of the world's resources and emit most of its pollution. We know all this, but don't want to think about the implications.

Enter the nay-sayers. They puncture balloons, kick against the pricks, bring their wits and their bogus statistics to bear on the humourless vegan freaks who persist in telling us that we can't buy this, we shouldn't do that, the planet's dying and it's all our fault. Would you let these po-faced eco-weirdos baby-sit your kids? Of course not – so why listen to them? Better to let the warm reassurances of Lomborg and co wash over you: 'It will all be fine. Trust me. I know what I'm talking about. I have the figures to prove it.' And well, you never know, maybe they're right...

Dream on. You know they're wrong. We all do. But we listen to them anyway. We listen because we're only human. I don't like facing up to painful truths any more than you do, especially if it's my lifestyle at stake. How much would you pay to know – to know for certain – that everything will be all right? How much would you pay to prove those snivelling, self-righteous environmentalists wrong, once and for all? How much would you pay for absolution?

Ask yourself that. Then ask Bjorn Lomborg. He knows the answer, and this time he has more chance of getting his figures right.

Paul Kingsnorth's book on the global resistance movement, *One No, Many Yeses*, will be published by Simon and Schuster in April.

CLOUD THE ISSUE...

In 1916 the New Orleans Refinery Company (Norco) bought a plant in a town called Sellers in Louisiana. The plant, located in the town's predominantly black Diamond community, grew so large that Sellers adopted Norco as its name. Shell bought the plant in the 1920s, and expanded it to within 20 feet of people's homes and the playground it had previously built for the community. Today over 5,000 Norco residents breathe chemical-laden air carrying intense smells and are plagued by 24-hour lights and noise from Shell. Explosions at the plant have resulted in property damage and death.<sup>1</sup>

Last September (after four decades of struggle) more than 100 predominantly black property owners in Norco succeeded in compelling Shell to buy their homes – some of which are as close as 15 feet to the refinery. Led by Concerned Citizens of Norco, a grassroots group representing the neighbourhood of Old Diamond, the residents won a concession from Shell of \$120,000 for each home (\$50,000 for trailer homes), plus moving and legal expenses.<sup>2</sup> (Coincidentally, earlier in 2002, the Shell Foundation had announced a \$3m campaign to raise awareness about the loss of Louisiana's wetlands and to gain support for efforts to save coastal Louisiana.<sup>3</sup>)

Also in Louisiana last year, Shell was ordered to pay \$135,000 to settle allegations by the Occupational Safety and Health Administration (OSHA) that the firm had failed to implement standards to protect workers against hazardous chemicals in one of its processors in the town of Geismar. OSHA opened its investigation after a catalyst technician died in a February 12 accident at the facility.<sup>4</sup> Finally, in October the Norco refinery again spewed an oily substance over the neighbouring residential area.<sup>5</sup>

Interestingly enough, Shell won an award in the US last year – top honours in the 2002 Keep America Beautiful competition for its 'nationwide beautification and community improvement efforts'. Accepting the award, Roxanne Decyk, Shell's senior vice-president for corporate affairs and human resources, said: 'Each of us has a role to play in improving the neighbourhoods in which we live and work.'<sup>6</sup>

**'The issue of global warming has given rise to heated debate...'**

Shell acknowledged several years ago that global warming was a reality when in 1998 it pulled out of the Global Climate Coalition – an industry pressure group that spent over \$60m in the mid-1990s denying the science of climate change.<sup>11</sup> Since then, Shell has held itself up as a responsible oil company – a claim that makes the tone of this question all the more galling. By suggesting that there still is any debate about climate change's existence, Shell implies it is one of the good guys for siding with those who believe in its dangers. Having done that, however, it proceeds to belittle the 'debate' by adding the words 'or just a lot of hot air'.

**'Shell believes that action needs to be taken now...'**

Only one action matters – stopping the extraction of oil. At no point does Shell suggest it is going to do that. Shell has committed to spending up to \$1 billion on renewables over the next five years. But at \$200 million a year, that is roughly equal to 1.7 per cent of Shell's annual capital expenditure of \$12bn. At the same time, Shell is still spending around \$8 billion a year on fossil-fuel exploration and production.<sup>12</sup>

**'...We are delivering on our commitment to reduce greenhouse gas emissions from our operations...'**

Like the other fossil fuel giants, Shell's impact on climate stems not primarily from its use of oil and gas, but from its production. Oil produced by Shell alone accounts for more CO<sub>2</sub> than most countries in the world.

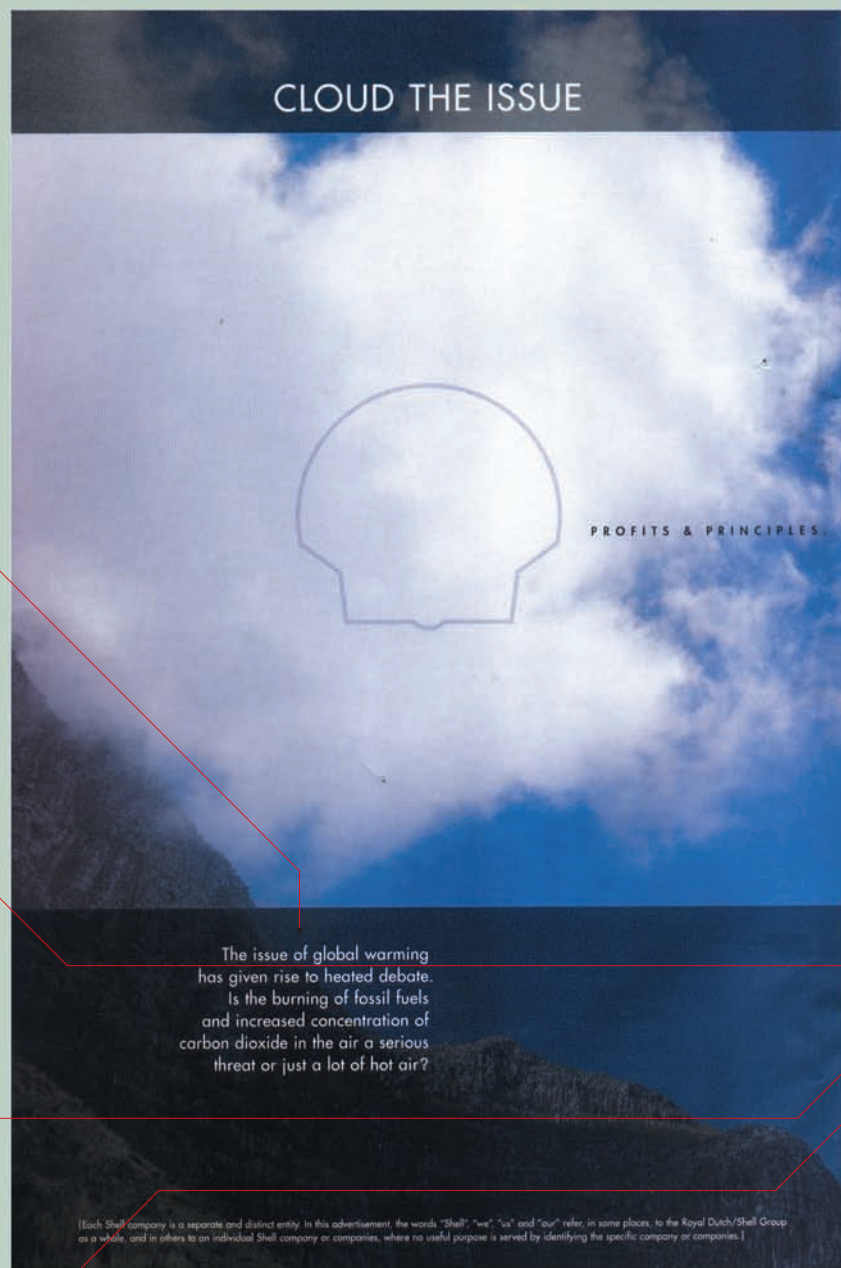
In 2001 Shell's greenhouse gas emissions actually rose by 2 per cent – up to the equivalent of 103 million tonnes of CO<sub>2</sub>.<sup>13</sup> Likewise, a 21 per cent fall in methane emissions (which occurred mainly because Shell sold its coal business and implemented some reductions in gas venting) was offset by increased oil-refining activity and an 11 per cent increase in flaring.<sup>14</sup>

**'...We're working to increase the provision of cleaner burning natural gas...'**

On a molecule-per-molecule basis, methane is a more potent warming agent (about 25 times more effective in trapping heat) than CO<sub>2</sub>. This is particularly important for Shell, which has made a major shift towards extracting more natural gas, liquid natural gas and gas-derived liquids. Natural gas drilling, flaring, venting and transmission losses, for example, are among the major sources of methane emissions globally.<sup>15</sup>

# Behind the

The adverts tell you the company's gr

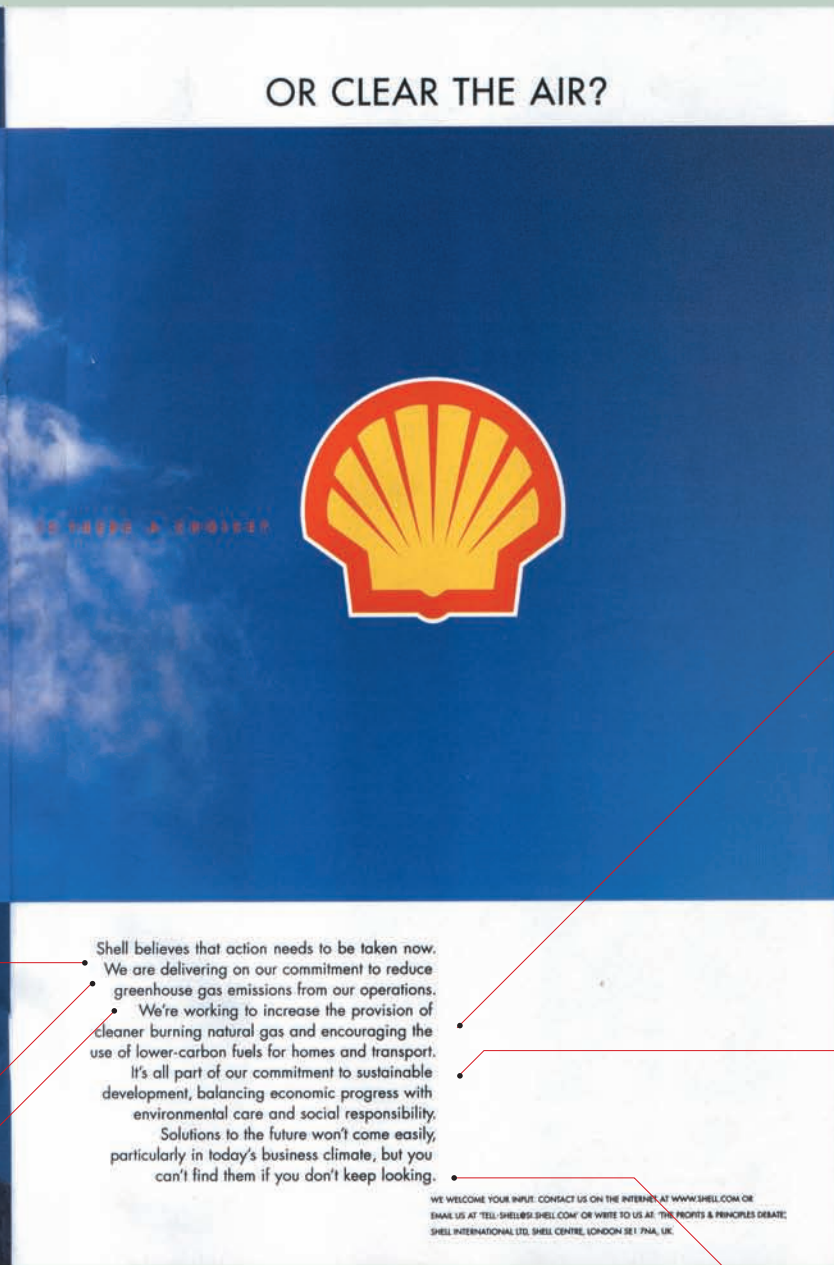


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# lies: Shell

een. *The Ecologist* tells you the truth.



## ...OR CLEAR THE AIR?

Since 1958 Shell has extracted \$30 billion worth of oil and natural gas in Nigeria.<sup>7</sup> At the Earth Summit in 1992, Shell contributed to a World Business Council book on sustainable development called *Changing Course: a global business perspective on development and the environment*. Though 2,976 Shell oil spills blackened the Niger delta between 1976 and 1991 – an average of four a week –, Shell gave guarantees in *Changing Course* that ‘quality and safety standards would not be compromised, and good environmental management would be enhanced’ during its Nigerian activities.

In 1995 the Nigerian government executed Ken Saro-Wiwa and eight other members of the Ogoni people. Evidence later emerged that Shell, the target of Saro-Wiwa's criticism, was complicit in his death. As Naemeka Achebe, general manager for Shell Nigeria, revealingly commented: ‘For a commercial company trying to make investments, you need a stable environment. Dictatorships can give you that.’<sup>8</sup>

Corporate Watch later wrote: ‘In response to the massive public criticism around its role in Nigeria, Shell moved beyond greenwash in an attempt to whitewash its human rights image. Conveniently forgetting the years of complicity with apartheid in South Africa, Shell began pointing to its support for political prisoners. Seeking to recast itself as a protector of civil liberties, it posted the Universal Declaration of Human Rights on its website, and had the gall to point to Nigeria as a positive example of its human rights advocacy. Using the technique of blatantly co-opting the message of one's critics, Shell featured a photo of a pro-Ogoni rally on its website.’<sup>9</sup>

Little changes. Reporting on an incident on October 20, 2002, Environmental Rights Action said: ‘Diebiri-Batan, an Ijaw community located along the Batan river in Delta State, Nigeria, suffered from a “massive” oil spill by Shell resulting from slack in two bolts used on a tie-in manifold located under the water at a deliver line. The river is the only source of drinking water for the local people. The adjoining creeks, in which the local people carry out their fishing activities, were also severely polluted.’

Though the report blamed Shell's equipment failure, Shell is now claiming no responsibility. Chief JG Orubu, the *ebenanawei* (paramount ruler) of the Diebiri-Batan community said: ‘Since this spill occurred, neither Shell nor the Delta State government has deemed it necessary to send us relief materials. Instead, Shell came to our community with armed troops to harass us and repair its equipment.’<sup>10</sup>

## ‘...and encouraging the use of lower-carbon fuels for homes and transport...’

Like methyl tertiary-butyl ether (MTBE)? In 1990 Shell began promoting SU 2000e – an unleaded petrol that (by adding the oxygenate MTBE) was claimed to be better for both the air and the car. It was later discovered that underground storage tanks at petrol stations were leaking petrol, and that the MTBE contained in the mixture was spreading into nearby wells.<sup>15</sup> In 1998, the water authority for Lake Tahoe, Nevada, sued 31 oil firms, including Shell, on the grounds that MTBE was a defective product. By 2001, 26 of the companies (but not Shell) had agreed a \$33m settlement. An internal Shell memo revealed that the firm had known of the dangers of MTBE since 1992, yet continued to market it for eight more years. The jury found that Shell ‘acted with malice, since the company withheld information about the dangers of MTBE’. In August 2001 Shell agreed to pay the South Tahoe Public Utility District \$28m.<sup>17</sup>

## ‘...It's all part of our commitment to sustainable development...’

Shell's commitment goes further than most. Former CEO Mark Moody-Stuart (who still sits on Shell's board) is the chair of the Business Association for Sustainable Development (BASD). Shell's chairman, Phillip Watts, is also chairman of the World Business Council for Sustainable Development (WBCSD). Moody-Stuart said: ‘Our message going into the Earth Summit in 2002 is that business is part of the solution.’<sup>18</sup> However, an open letter sent to Kofi Annan at the most recent Earth Summit from environmental groups including Friends of the Earth, Christian Aid and the Sierra Club, stated: ‘We believe that such support is a litmus test for corporate lobby groups like the International Chamber of Commerce, the WBCSD and their new offspring the BASD. As long as these groups continue to campaign against effective international mechanisms to ensure corporate accountability, they cannot be said to have embraced sustainable development in anything but words.’<sup>19</sup>

## ‘...Solutions to the future won't come easily, particularly in today's business climate, but you can't find them if you don't keep looking...’

At last we agree. Today's ‘business climate’ is one where, rather than allowing weapons inspectors to ‘keep looking’ in Iraq, we are about to go to war to protect the oil interests of the few.

### In Shell's own words:

**‘We welcome your input. Contact us on the internet at: [www.shell.com](http://www.shell.com) Or email us at: [tell-shell@si.shell.com](mailto:tell-shell@si.shell.com) Or write to us at: ‘The profit and principles debate’, Shell International Ltd, Shell Centre, London SE1 7NA, UK.’**

**Don't keep them waiting!**

<sup>15</sup> Ibid, Doyle, p264

<sup>16</sup> Jim Doyle and Susan Sward, ‘MTBE leaks a ticking time bomb; gas additive taints water nationwide’, *San Francisco Chronicle*, December 14, 1998

<sup>17</sup> Chris Bowman, ‘S Tahoe utility settles lawsuit’, *Sacramento Bee*, August 6, 2002

<sup>18</sup> <http://www.minesandcommunities.org/Charter/rio+10.htm>

<sup>19</sup> Kenny Bruno and Joshua Karliner, *Earthsummit.biz*, Food First Books, 2002

## Nature & Resources

This month a construction consortium will start pouring m... Venice Lagoon – one of the Mediterranean's most important dam project will 'save' the city from flooding. But the project assessment, threatens the ecology of the lagoon and – with may not even protect Venice anyway. Tony Zamparutti reports

# Death of

# Veni



FOTOTECA MUSEO CORRER, VENICE

Billions of tons of rock and cement into the  
wetlands. The consortium claims the  
project failed its environmental impact  
study. Global warming and rising sea-levels –  
the threat from Italy



Photo by kind permission of  
Impact photos, and taken from  
Yann Arthus-Bertrand's book  
*The Earth from the Air*.

## Nature & Resources Venice

Venice was built on low islands and sandbanks in the middle of a rich coastal lagoon. For over 1,000 years storm surges have washed exceptional high tides into Venice's squares and alleys. Venetians call them *acque alte* – high waters – and, typically, they last two to three hours at a time. In November 1966, however, pounding rain and an exceptional wind-swept tide flooded nearly all the city streets for 24 hours. The storm focused world attention on Venice.

The reason? Venice is sinking. Since the early 1920s mainland factories have tapped underground freshwater, depressing the land under Venice in the process. By the time pumping was finally stopped in the 1970s Venice had sunk by about 12 centimetres (almost five inches) – a small but important altitude change for a sea-level city.

In addition, deep shipping channels were dredged through the lagoon's three inlets to transport raw materials – including crude oil for a neighbouring petrochemical complex. The deeper channels brought stronger currents, speeding the Adriatic's high tides towards Venice, exacerbating flooding and eroding the lagoon's salt marshes. And, the final nail, the northern Adriatic has risen by about 10 centimetres over the past century.

Today waters wash across St Mark's Square – Venice's best-known landmark and lowest point – 50 or more times a year. Heavier storm surges now flood higher sections of Venice, too, forcing residents to don waterproof boots to reach their offices and schools.

### The proposed solution

To stop the flooding, *Consorzio Venezia Nuovo* (the New Venice Consortium) has proposed a gigantic dam system: a line of 78 huge metal containers – each at least 20 by 20 metres in size – nestled in underwater foundations stretching across the three inlets between the Adriatic and the lagoon (each inlet is up to half a kilometre wide). For most of the time the hollow

containers would be filled with water. To stop a storm surge from the Adriatic, air would be pumped into the containers – causing them to rise like enormous teeth across the inlets.

At the consortium's public information centre in Venice's Campo Santo Stefano visiting school groups are shown video animations (accompanied by light music) of the blocks rising silently to the surface. As they do so, gulls circle overhead. A dream solution?

### What the videos fail to tell you...

The video fails to mention a number of important facts.

1 The proposed dams failed their official environmental impact review in 1998.

2 The consortium wants to dredge about five million cubic metres of the lagoon's bed and dump almost eight million tons of rock and 700,000 tons of concrete in its place. At the Lido inlet, the consortium wants to build a new, artificial island. Over 50,000 tons of sheet metal would be submerged in the form of the containers.

3 During long closures the dams could bottle up industrial and agricultural pollution in the lagoon, which is now flushed by the regular tides. The city also lacks modern sewage treatment. The 1998 review noted that predicting exceptional high tides is an uncertain business. The dams would need to be raised following many false alarms, thus increasing pollution risks.

4 Anodes to protect the metal gates from sea-water corrosion would release over 10 tons of zinc into the lagoon a year. The toxic metal could accumulate in the food chain.

5 The consortium's project ignores a fundamental cause of flooding in Venice – the deep shipping channels through the lagoon's inlets. The consortium wants to open them even further, replacing their current V shapes with straight cuts across the full width of each inlet. This, warns Paolo Perlasca of WWF/Italy's Venice office, risks accelerating erosion in the lagoon and endangering its remaining salt

ce?

marshes and mud flats, which are protected (at least on paper) by the European Union's Habitats Directive.

6 The dams would be expensive to build. The consortium estimates total costs at 3.4 billion. But, as Professor Andreina Zitelli (co-author of the 1998 impact assessment) says, the system has never been tried at full scale. Any cost estimate is highly uncertain. Zitelli says the 'estimates have changed so many times, they seem to be invented' to suit the political moment.

7 If the dams are built, the consortium could then reap millions of dollars a year for their operation and maintenance. These costs are also extremely difficult to estimate, as the underwater structure would face ongoing corrosion and encrustation and would require extensive maintenance.

8 The dams may not even protect Venice from flooding. Global warming and sea-level rise could make them obsolete within a few decades. Renowned Venetian climate change scientist Paolo Antonio Pirazzoli writes that the dams 'could hardly cope with a relative sea-level rise much greater than about 0.3 metres'. In its 2001 report, the UN's Intergovernmental Panel on Climate Change gives as its most likely estimate for 2100 a 0.48-metre sea rise. The UN's worst-case scenario forecasts this rise occurring within a few decades. Pirazzoli also predicts that water would pass between the dams' containers, which would be an important factor during long closures. Also, in

Venice's worst flooding (as in 1966) torrential rains and swollen rivers add to the rising tides.

Overall, warns former Green Party senator for Venice Giorgio Sarto, the consortium proposes risky surgery rather than addressing the underlying illness affecting Venice and its lagoon. Moreover, Sarto notes, the project completely ignores a key prescription of Italy's 1984 special law for Venice. In language that presages the precautionary principle, the law calls for all interventions to be 'experimental, gradual and reversible'.

So why is Italy's government investing so much attention – and potentially billions of euros – in what Pirazzoli describes as 'an obsolete project to save Venice'?

### Power behind the consortium

The New Venice Consortium was set up by the Italian government almost 20 years ago as an 'exclusive concessionaire' with a mandate to safeguard Venice, and unite private and state-owned companies vying for what promised to be fat public works contracts to protect the city.

As exclusive concessionaire, Sarto explains, the consortium holds a monopoly on state-funded work to 'save' Venice and protect its lagoon. This covers everything from strategic planning to research, project design and construction. And since 1984 the Italian government has provided the consortium with £1.6 billion to study the lagoon's ecology and hydrology, rebuild sea walls along the lagoon's barrier islands, restore salt marshes and much more besides. All without any competitive bidding.

Behind the consortium (holding 40 per cent of its shares), is Impregilo spa – a Milan-based construction giant that builds dams, highways and power plants in over 40 countries.

The consortium's strength is further enhanced by powerful political allies. These include Veneto Region president Giancarlo Galan (also a member of Italian prime minister Silvio Berlusconi's right-wing Forza Italia Party) and Venice's centre-left mayor Paolo Costa.

The supervision of the concessionaire provided by the national government's office in Venice (the *Magistrato alle Acque*), has been weak at best. The consortium rather than the *magistrato* holds nearly all the technical capacity and knowledge, explains Sarto. The *magistrato* has hardly ever made a proposal that differs from the consortium's position. After almost 20 years, Sarto says, that's 'a bit curious'. Another critic of the scheme is more colourful: as in a science fiction movie where aliens take over the minds and bodies of humans, 'if you cut the *magistrato*'s fingers, instead of blood the consortium will ooze out'.

But prominent critics are few. In Venice itself, many experts are co-opted. Stefano Boato of local green think-tank Ecoistituto del Veneto notes that the consortium hires specialists in fields from architecture to ecological science to hydraulic engineering. Some contracts go to university labs and departments, others go directly to consultants and professors. For example, in 1999 local newspaper *La Nuova Venezia* revealed that the consortium had paid Marino Folin, rector of IUAV (one of Venice's two universities) over 480 million lira (about £170,000) for a feasibility study. It's all legal, Boato says, but there's always an element of self-censorship – especially for those who would like their contracts renewed.

The consortium and its allies are masters at PR. In January 1999, a month after Italy's national Environmental Impact Assessment Commission failed the project, four professors from the Massachusetts Institute of Technology (MIT) flew to Rome and held a press conference criticising the decision. The dams, they said, were the best solution for Venice. They spoke, the Italian press reported, for MIT and for the 'international scientific community'. Few papers noted that they were paid consultants to the consortium.

With its powerful, legally sanctioned role and its combination of PR savvy, technical expertise and



FILIPPO EDITORE, VENICE

political connections, the consortium has pushed its dam project steadily – like a steamroller.

Attempts to reform the state's curious institutional structure in Venice have come to naught. For example, a 1995 law ended the system of exclusive concessionaire. Sarto recounts that the following year, the senate passed his resolution calling on the government to carry out this law immediately. Nothing happened. Nor has Italy's government created an independent strategic planning office for Venice and its lagoon, despite official decisions to do so.

Even European law has been interpreted in unexpected ways. Responding to the Green Party and Italy's leading environmental agency Italia Nostra in 1999, the European Commission opened an investigation into whether EU directives requiring competitive bidding for government contracts had been violated. Brussels initially took a hard line, Sarto says. But two years later the commission closed the case, accepting a proposal from the Italian government: components of the dam project (perhaps worth half its total value) would be open for bidding, but the bidding would be organised not by the government but the consortium. Thus, Sarto says, the concessionaire was given even more power.

### Stage right... Berlusconi

Since the re-election of Berlusconi in April 2001, business and politics in Italy have become two faces of the same coin. The prime minister is the country's richest man and owner of a sprawling media empire that includes three national TV networks. Berlusconi's government has shown little interest in the environment: last October, his environment minister sacked 23 of the 40 members of the national environmental impact commission, including Professor Zitelli. The government appears to have wiped Zitelli's negative impact assessment ruling from its memory.

Last year the new government allocated £300 million for the first

tranche of the dam project: a series of 'complementary works', including shipping locks to appease the Port of Venice (the only major economic interest with reservations about the scheme). Berlusconi has cut all other national money for Venice: all its funds for architectural restoration, for the city's unique maintenance needs, and more.

Flooding is not Venice's only environmental crisis. The nearby petrochemical complex is a highly polluting time bomb. In November, a toxic fire there nearly engulfed storage tanks containing deadly phosgene gas. In addition, mechanical clam-fishing techniques are destroying the ecology of the lagoon's shallows. And motorboats bringing tourists and cargo through the city erode the canal walls – the foundations of Venice's palaces.

In Venice opposition continues. In September both the city and the provincial councils voted against the 'complementary works'. In December an environmental alliance called *Salvare Venezia con la Laguna* (Save Venice with its Lagoon [SVL]) presented its strategy to restore the lagoon's equilibrium. Unlike the consortium's risky surgery, SVL targeted Venice's underlying illness (see **Sidebar, right**). And in January political parties in the city sponsored public debates on the dams.

What Venice needs, wrote US scientists Albert Ammerman and Charles McClennan in the journal *Science* two years ago, is 'fresh thinking in the search for new, alternative solutions'. In Rome's halls of power, however, there's only one official project. And time is running out: Italy's national government is threatening to give a final go-ahead to the dams, and Berlusconi himself has promised to go to Venice soon after to inaugurate construction.

Tony Zamparutti is a former official of the Organisation for Economic Cooperation and Development's environment directorate, and a member of *Salvare Venezia con la Laguna* – the environmental alliance opposing the New Venice Consortium and its dams ■

In its strategic action plan, the environmental alliance *Salvare Venezia con la Laguna* (SVL) proposes a long-term strategy that focuses first on restoring the natural equilibrium of the lagoon.

#### 1 Reduce the depth of the inlets between the Venice Lagoon and the Adriatic

These three 'mouths' are now dredged open wide to the sea, allowing into the lagoon strong currents that speed high tides to the city and erode the lagoon's rich salt marshes. In particular, an oil tanker channel dug in the late 1960s cuts a deep wound across the shallow lagoon. SVL wants to reduce the depth of the Lido inlet from 10 metres back to six metres, that of the central Malamocco inlet from 15 to 12 metres (sea-going ferries and cargo ships could still enter), and that of the southern Chioggia inlet from nine to eight metres.

#### 2 Increase the three inlets' 'dissipative capacity' (their ability to slow tide surges)

Protective jetties would block storm winds from the south (the sirocco winds) and so protect the lagoon. And large, removable baffles called *pennelli* would reduce the width of each inlet in the autumn and winter, thus further slowing tides during Venice's high-water season.

#### 3 Re-open the lagoon's fishing valleys – the *valli da pesa*

Like all open waters, the *valli da pesa* should be state property. However, wealthy families have taken them over for personal profit and private hunting (birds are attracted by the wealth of fish), thus closing the valleys to the tides. Re-opening these 8,500 hectares of lagoon would allow exceptional tides to expand further, rather than flooding Venice.

#### 4 In parallel, Venice needs to be raised

This work is already underway. As the city renovates water, gas and power lines under its streets, its contractors bring new fill. This raises the alleys and squares by (usually) just 20–30 centimetres, which is enough to keep away frequent flooding. US archaeologist Albert Ammerman explains that Venetians regularly raised their city in this way over the centuries. The renewal of the practice follows a 200-year hiatus. However, no work of this sort has yet been done on the lowest part of the city – St Mark's Square. Curiously, the consortium is responsible here. Many environmentalists in Venice ask whether the long delay is a stratagem, for the square's frequent floods – shown in newspapers around the world – seem an integral part of the consortium's PR campaign for the dams.

**The action plan, together with ongoing work to raise the streets of Venice, would drastically cut the number of floods in the city – possibly to one or two a year. This would return Venice to the situation of a century ago. Moreover (as SVL tells exasperated Venetian businesses), it will take the consortium at least eight years to complete its dams. The action plan, on the other hand, could start working in months. The 'green' proposals are innovative, relatively inexpensive and environmentally sensitive.**



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# As free as a bird?

## What drives us to record, shoot, spot and own wild birds?

### Malcolm Tait contemplates mankind's obsession with bird life.

It was the middle of a summer night in 1984, and a cool breeze was dragging small drops of rain from the Channel and dropping them onto the Kentish coast. With only the gloomy towers of the nearby nuclear power station for company, a man and his son stood at the edge of a lake – looking out across the still waters to a small island where roosting gulls and terns were waking sporadically yet unwarily from their roost. Treading carefully, the man slid gingerly into the water. At first all seemed well, but halfway across the man began to struggle, then to splash, then to panic. Gulls started to screech. The noise the man's son made was not dissimilar, as he watched his father's frantic thrashings disappear beneath the dark waters.

One week later I arrived cheerily at Dungeness bird reserve with my hand-me-down binoculars and sturdy wellies for a few weeks' voluntary work. Those who were already there were full of the story: 'He was after the eggs of our only pair of Mediterranean gulls...' '...Dragged down by his jeans he was...' '...Senseless way to die...' '...Right in front of his son...' And everyone was asking the same question: 'To die for some eggs. Just for some eggs. Why?'

The answer, in an eggshell, lies in the timeless obsession that mankind has, and will always have, with birds. We love birds for their beauty and their voices in the way that we love lions for their majesty and dogs for their loyalty. But principally, we love them because they can fly. Restricted by nothing save the strength of their own wings, they can escape. No country can hold them, no boundary constrain them. We love them for this. And we hate them for it too.

These are the two conflicting urges that polarise man's relationship with

birds. On the creative side we worship them for their freedom and praise them for it through verse, art and the simple pleasure of observation. On the destructive side we conspire jealously to deny them that freedom, to bring them down to our level and, ultimately, to own them.

Many collectors of bird eggs are bird-lovers who have allowed the destructive aspect of their character to



dominate. There are those, too, who love to shoot birds as they fly over the Pyrenees, for example, or who enjoy stuffing them for their mantelpiece. And caged-bird owners and falconers may not be killers, but they have also let their balance slip – deriving pleasure from the ownership of creatures.

Even birders, armed with nothing more harmful than telescopes and notepads, are drawn by this innate desire for ownership. Yet, over the years, the birding community has developed ways of finding a precarious balance between the simultaneous needs to admire and possess.

Twitchees, enabled by pagers and fast cars, can track their rarities wherever they occur – ticking them off, perhaps photographing them, and adding them to their lists. It is, effectively, another form of possession. 'Did you get the Weybourne rosefinch?' 'Who didn't?

Got him early in the morning, and picked up the Cley phalarope late in the afternoon.' This is just possession without interference.

But what happens when interference is necessary, as is often the case with conservation? Can it be conducted without having to possess?

In 2001, a pair of choughs – coastal crows with long, curved, tomato-red beaks – were about to be released from captivity in an attempt to get the species breeding again in Cornwall. The chough is the Cornish emblem, but had not bred in the county for nearly 50 years. A prime site had been picked, but because of foot and mouth the programme had to be delayed. In the meantime, some wild choughs flew in, nested in a different site that had not been deemed worthy, and raised four chicks.

When investigating the story, leading conservationist Peter Marren was told that the wild choughs were responding to 'appropriate management'. It was as if mankind *had* to demonstrate some overall control, even though the birds had drawn up their own breeding programme. 'Could it be,' Marren pondered in *British Wildlife* magazine, 'that the satisfaction of bringing back a lost animal by dint of careful planning and preparation is greater than that of merely witnessing a natural event?'

It could indeed. Bird populations may ebb and flow, but the creatures en masse will always be beyond our grasp. Acknowledging that fact, and accommodating it within our natural desire to dominate and control, is essential – not to them, but to us. Over-reach for the birds, and we may well end up plummeting to the depths.

Malcolm Tait is a freelance journalist.

## ADHD • Attention Deficit Hyperactivity Disorder – is this another syndrome to be saved from by the drug cartel, or a complex set of problems better treated by changes in diet and lifestyle?



With pressure mounting on the food industry to take greater responsibility for health problems caused by the produce it sells, Tory MP and shadow minister for young people Charles Hendry has introduced a bill that would require clearer labelling of food additives and colourings that affect children's behaviour.

Last year a government-sponsored report connected colourings and preservatives with hyperactivity in children. The study, by the Asthma and Allergy Research Centre on the Isle of Wight, found that many parents noticed 'significant changes' in their children's behaviour after they had consumed a drink with four colourings and one preservative.

'There is growing evidence of a link between food colourings and additives and the behaviour of children, and potential links with Attention Deficit Hyperactivity Disorder (ADHD).

The Food Commission, a watchdog campaigning for safer and healthier foods, would like to see a raft of new legislation – including a ban on adverts for junk food during children's TV programmes. Food Commission research officer Kath Dalmeny said: 'There is a great deal the government could do. It could limit free toys with food products and the amount of sugar used. We favour legislation because children are not in a position to make informed nutrition decisions.'

### WHAT IS ADD/ ADHD ?

Attention Deficit Disorder (ADD) is one of the most common clinically referred psychological disorders among children. It can occur with or without hyperactivity (ADHD), and has a higher incidence in male children.

Despite decades of research, no reliable evidence of neurological dysfunction has been found to indicate an organic explanation for ADHD. Nonetheless, drugs are the most popular form of treatment for this disorder. The most frequently prescribed drug (used in up to 90 per cent of diagnosed cases) is methylphenidate, which until the patent expired in 1996 was only available under the brand name Ritalin.

### ADD/ ADHD NUMBERS

<b>1</b>	Estimated percentage of children affected by ADD/ ADHD in the U.K
<b>80</b>	Percentage of UK children diagnosed with ADHD and prescribed Ritalin
<b>2,000</b>	Prescriptions for Ritalin in the UK in 1991
<b>157,000</b>	Prescriptions for Ritalin in the UK in 1998, costing the NHS £1.6m
<b>2001</b>	Annual number of US prescriptions for Ritalin reaches 11 million
<b>1,326</b>	Estimated increase in dollars in the stock market value of Ritalin's manufacturer Novartis each time a child is prescribed Ritalin ( <i>Insight</i> )
<b>30</b>	Years since the World Health Organisation concluded Ritalin was pharmacologically similar to cocaine in the pattern of abuse it fostered
<b>47</b>	Percentage fall in incidence of anti-social behaviour when Stephen Schoenthaler reduced the amount of sugars, fats and additives in the diets of 8,000 delinquents in remand homes in New York 20 years ago

### COMPULSORY DRUG TAKING

Parents who refuse to drug children diagnosed with ADHD will face jail under new legislation, a psychiatrist has warned.

Dr Bob Johnson, who is at the forefront of a campaign against the increasing reliance on drugs to treat hyperactive children, said the wide-ranging powers of the new Mental Health Bill would overrule the wishes of parents.

'The Bill is so punitive it dispenses with all civil and human rights,' Dr Johnson said. 'Parents who have reservations about pumping their children full of drugs to control them would be classed as denying their children treatment. It's only a matter of time before parents find themselves in breach of such orders – which are fully backed by the courts.'

The Department of Health dismissed claims that new legislation would lead to parents being jailed, but admitted the proposals would extend compulsory treatment orders. (**Charles Begley, *The Independent***)

### ADD/ ADHD SYMPTOMS...

- Failure to give close attention to details
- Difficulty with organisation and sustaining attention
- Child is easily distracted
- Child dislikes sitting still
- Child runs about excessively
- Difficulty engaging in quiet activities
- Child acts as if driven by a motor
- Child talks excessively
- Child blurts out answers before questions are completed
- Difficulty waiting or taking turns
- Child interrupts or intrudes upon others



### ADHD NUTRITIONAL CURE?

Scientific evidence suggests that ADHD is fundamentally due to a disorder of Essential Fatty Acid metabolism, which deprives the brain and body of the Highly Unsaturated Fatty Acids (HUFAs) required for optimum function.

The remedy is to give these HUFAs (generally both omega-3 and omega-6) in ready-made form. The nutritional cure for ADHD (HUFAs and other supplements, plus a junk-free nutrient-rich diet) also has the enormous side benefit of clearing up or preventing the many accompanying physical ailments and chronic illnesses, like obesity, that usually go along with nutritional deficiencies.

'In the absence of further studies as to [Ritalin's] effects, we're doing these experiments more or less with our own children.'

#### Dr Leckman

- Ritalin and amphetamine frequently cause the very same problems they are supposed to treat – inattention, hyperactivity and impulsive behaviour.
- A large percentage of children become robotic, lethargic, depressed or withdrawn on Ritalin.
- Ritalin can retard growth in children by disrupting the cycles of growth hormones released by the pituitary gland.

• Ritalin routinely causes gross malfunctions in the brains of children. There is research evidence from controlled scientific studies that Ritalin can cause shrinkage (atrophy) or other permanent physical abnormalities in the brain.

• Withdrawal from Ritalin can cause emotional suffering, including depression, exhaustion and even suicide. Any such emotional symptoms can lead to children being mistakenly prescribed increased doses of medication.

• Ritalin is addictive and can lead to other addictions. It is a common drug of abuse among children and adults.

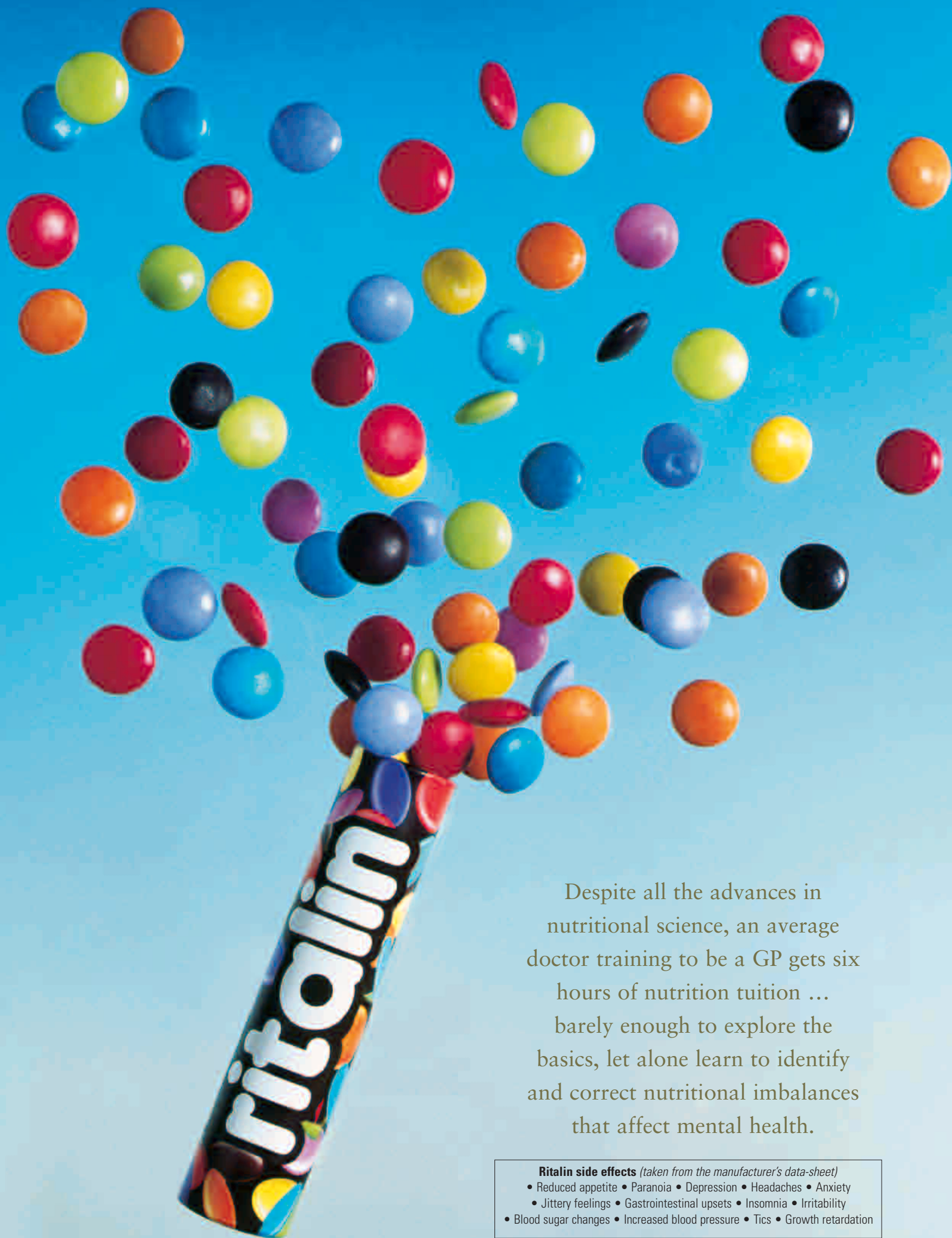
• Ritalin suppresses creative, spontaneous and autonomous activity in children – making them more docile and obedient and more willing to comply with rote, boring tasks, such as classroom and homework activities.

#### Useful contacts for more information:

• Hyperactive Children's Support Group (HACSG), 71 Whyke Lane, Chichester, Sussex PO19 7PD; [www.hacsg.org.uk](http://www.hacsg.org.uk)

• The Food Commission (UK) Ltd, 94 White Lion Street, London N1 9PF; Tel: (+44) 020 7837 2250; [www.foodcomm.org.uk](http://www.foodcomm.org.uk)

• Cross-Party Parliamentary Food Justice Campaign (c/o Alan Simpson MP, House of Commons, London SW1)



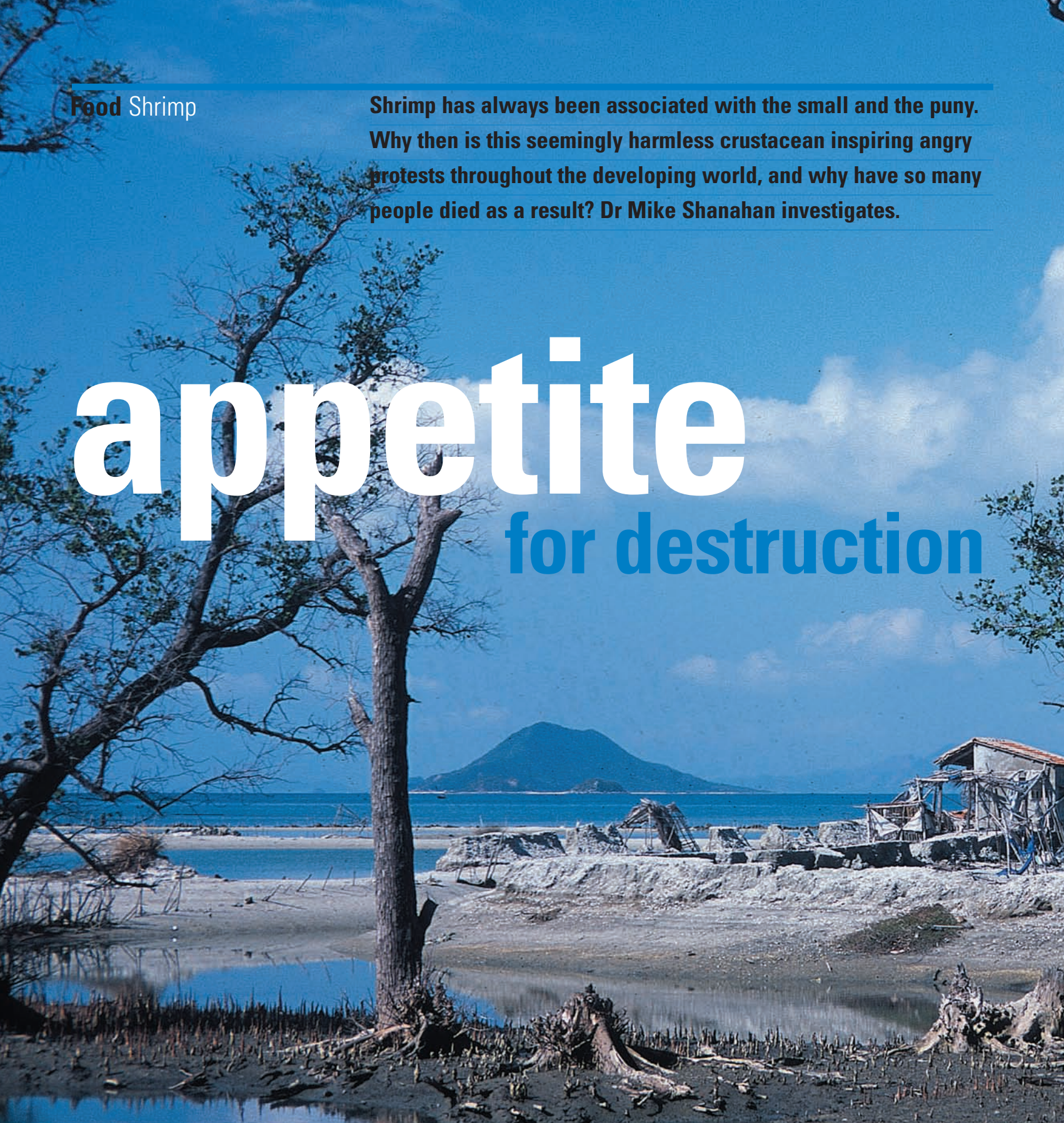
Despite all the advances in nutritional science, an average doctor training to be a GP gets six hours of nutrition tuition ... barely enough to explore the basics, let alone learn to identify and correct nutritional imbalances that affect mental health.

**Ritalin side effects** *(taken from the manufacturer's data-sheet)*

- Reduced appetite • Paranoia • Depression • Headaches • Anxiety
- Jittery feelings • Gastrointestinal upsets • Insomnia • Irritability
- Blood sugar changes • Increased blood pressure • Tics • Growth retardation

Shrimp has always been associated with the small and the puny. Why then is this seemingly harmless crustacean inspiring angry protests throughout the developing world, and why have so many people died as a result? Dr Mike Shanahan investigates.

# appetite for destruction



ALL PHOTOGRAPHS COURTESY OF ENVIRONMENTAL JUSTICE FOUNDATION

Susan, a middle-aged cashier in a London high street bank, has developed a penchant for prawns. Ten years ago tiger prawns (also called shrimp) were beyond her budget – a rare treat reserved for birthdays and other celebrations. Nowadays, she finds them more affordable and consumes them with gusto at every given opportunity. In contrast, Sri Lankan fisherman Anil caught enough fish to sell and feed his family a decade ago. Today, he struggles to fill his nets and often goes to bed hungry. His eight-year-old son regularly misses school to help his mother find drinking water or his father catch fish. Although the lives of Susan and Anil could hardly be more different they are, of course, closely linked.

**SHRIMP: CRUSTACEAN OF DEVASTATION**

Last year diners in the industrialised nations of Europe, North America and Japan peeled, chewed and dribbled their way through over a million tonnes of farmed shrimps worth over \$7 billion. Shrimp, it would seem, is manna from heaven. It's abundant, protein-rich, eminently tasty and readily adaptable to the full range of the world's cuisines. But, as new research by the Environmental Justice Foundation reveals, the true costs of consuming shrimp are dangerously high.

Shrimp has traditionally been trawled from the ocean in arguably the most inefficient fisheries practice on the planet. The effect of trawl nets on ecological communities on the ocean floor is the underwater equivalent of clear-cutting forests. Although shrimp trawlers provide only 2 per cent of the world's seafood, they haul in a third of all the global fishing industry's 'by-catch'. In that by-catch over 400 marine species have been identified. Nonetheless it is all discarded – most of it dead – because of its low economic value relative to that of shrimp. In some shrimp fisheries, by-catch levels of up to 20kg for every 1kg of shrimp have been recorded. The species affected include rare turtles, 150,000 of which are estimated to be caught as by-catch annually.

To the uninitiated, the concept of farming shrimp might be quite idyllic – perhaps conjuring images of rosy-cheeked, straw-sucking pastoralists leaning over fences to watch their shell-bound charges grow until sufficiently sized to take to market. The reality is less bucolic. In fact, shrimp farming is more of an industrial than an agricultural phenomenon. Having been responsible for widespread clearance of productive

**MAIN PHOTO:** an abandoned smallholding in Ecuador, where a single hectare of mangrove has traditionally supported up to 10 families. Typically, a modern shrimp farm of 110 hectares employs just six people during the preparation of shrimp and another five during harvest.

**BELOW (FROM LEFT):** shrimp farm additives – Vietnam; the mother of Sirajul Islam Liton, an 18-year old student killed in February 2002 in conflict over shrimp farming in Bangladesh; an expanse of shrimp farms; Abdur Rob Howladar who, along with his 16-year old son, were attacked with machetes by a group who had previously demanded money and 2/3 of his small shrimp farm in Bangladesh; traditional livelihoods for coastal communities, such as this fisherman in Bangladesh, have been severely impacted upon by the expansion of shrimp farming



Shrimp farms constructed in mangrove swamps, Bahía de Caraquez, Ecuador



land and mangrove forests, shrimp farming is also heavily reliant upon the use of water pumps, aerators and chemical inputs of pesticides, disinfectants, steroid hormones and antibiotics – including chemicals banned for use in food production by the EU and US. Many of these chemicals are hazardous to human health. The wider environment is also threatened by the release of effluent from shrimp farms into surrounding waters.

The effects of shrimp farming can be swift and devastating for coastal communities. Livelihoods that have sustained communities for generations have been disrupted, and human rights abuses widespread. As a result, a brutal struggle is being waged on the coasts of some of the world's poorest countries, with grassroots campaigners lining up against the giant shrimp-farming industry.

### DYING FOR OUR DINNER?

In April 2002, father of four Sebastião Marques de Souza became the latest casualty in this struggle. Sebastião was a community activist protesting the expansion of shrimp farms into the mangrove forests of Brazil. One night, two men – alleged by local campaigners to be connected to the country's burgeoning shrimp-farming industry – approached him under the pretence of needing to buy some petrol. They shot him dead.

Worldwide, opponents of the industry claim that shrimp farming destroys lives and livelihoods of coastal communities and that it causes significant environmental damage. Worldwide, those who have voiced opposition to the industry have been threatened, intimidated, beaten or silenced for good by bullets, bombs and machete blades. People have been murdered in at least 11 countries.

In Honduras, murders in the mangroves are no longer a cause of surprise – 12 small-scale fishermen have been killed in as many years. Jorge Varela, director of a local human rights and environmentalist group who has

himself received death threats on numerous occasions, has said: 'With the complicity of our government, we have given away our people's patrimony to a few national and foreign individuals, and we have deprived thousands of persons of their livelihoods. We have turned the blood of our people into an appetiser.'

These sentiments are common to poor, vulnerable and often landless communities that have risen up in protest at the way shrimp farms have blocked access to the coast, reduced local fish catches, and destroyed mangrove forests that for generations have supplied food, medicines, fuel and building materials.

It is not only fishing communities that have an axe to grind about the impacts of shrimp farming. Rice and cattle farmers have found their land rendered infertile and their livestock prone to disease because of the infiltration of salt water pumped in and out of shrimp ponds. In Bangladesh farmland has been seized by force or deliberately polluted to ensure its cheap sale to shrimp-farm owners. The country's coast has become a hot spot of violence and intimidation. Local advocacy group Nijera Kori estimates that over 150 people have died in incidents directly related to the industry's expansion. Frequently implicated in these murders are Bangladesh's 'musclemen' – hired enforcers paid by shrimp farmers to protect their interests and further their ambitions. At demonstrations clashes have occurred between landless protestors and police or these musclemen. Shrimp-farm guards have caught and beaten to death innocent people wrongly suspected of coming to steal shrimp. Witnesses in legal cases linked to the industry have been murdered.

Profits for shrimp-farm owners can be spectacular, and such is the avarice associated with the industry that the practice of intimidating or eliminating opponents has become widespread. A culture of impunity is typical of the major shrimp-farming countries, which are characterised by corruption, cronyism and gross inequity. The widespread lack of organisational and economic equality between the industry and the communities opposing it means that while the latter often have no recourse to the law, the former often has little to fear from it.

In many countries, politicians and military figures either have vested interests in, or own, shrimp farms. It is less surprising, then, that army or police personnel have been used to violently suppress protests or to seize land on which to build shrimp ponds. A peaceful protest against illegal land seizures by shrimp farmers in Bangladesh was brutally quelled when police personnel opened fire. Four people were killed – including Peasant Women's Association leader Zaheda Begum – and 250 were wounded.

### PROFIT AND LOSS IN A CULTURE OF CORRUPTION

The farming of marine species was initially promoted as a 'blue revolution', supposedly capable of producing large volumes of food without impacting marine stocks, and

thereby increasing availability of food for the hungry. International finance institutions like the World Bank and the Asian Development Bank have actively endorsed shrimp farming as a means of speeding development and alleviating poverty in the developing countries where most shrimp farming occurs. However, while some players in the industry have made vast profits, the external costs are not borne by those who reap the benefits. Rather, these costs are displaced onto some of the poorest and most vulnerable communities. Furthermore, the financial benefits of shrimp production often fail to trickle down to these communities.

As land has been seized or rendered unusable, hundreds of thousands of rural poor have been displaced – often to cities or to other countries. ‘If the mangroves disappear, we shall eat garbage in the outskirts of the city; we shall become prostitutes,’ said one traditional shellfish collector in Ecuador, where a single hectare of mangrove forest can provide food and livelihoods for 10 families. By contrast, an Ecuadorian shrimp farm of 110 hectares employs just six people during the preparation of shrimp and a further five during the harvest. Likewise, in Sri Lanka’s Puttalam district nearly 20,000 lagoon fishers have been obliged to move to the city in search of work as shrimp farming has wiped out their traditional livelihoods. Civil society groups have reported Sri Lankan refugees citing the spread of shrimp farming as a factor contributing to their flight to the UK. Anil the fisherman and Susan the bank clerk may yet meet.

For those who do not migrate to cities or overseas, employment must be sought in the very industry that deprived them of their livelihoods in the first place. Shrimp fry are needed to stock the ponds and are harvested directly from the sea. In Bangladesh, women work in the water for eight to 10 hours each day. Illness is common. Some collect shrimp fry near to the farms, where polluted water causes internal damage and skin diseases. Gloves are not provided and hands begin to rot.

Conditions in processing plants also leave much to be desired. Many female workers in Indian shrimp-peeling factories are reportedly held virtual captives by the owners. They may sleep above the processing units, where the inhalation of odours and ammonia refrigerants is unavoidable. Common complaints include skin problems and backache from standing for prolonged periods. Urinary tract infections are linked to inadequate toilet facilities. Handling ice-cold food for long hours has also been linked to arthritis. In 2000, there were widespread reports of processing plant workers having half their \$30 monthly salary deducted to pay for a daily meal of thin watery soup.

In a number of countries the salinisation of water supplies and the reduced availability of food resources associated with shrimp farming forces children to miss school to help find food and water for their families. Children also risk their health by working in the same unsanitary shrimp farm and factory conditions as their

elders. Shrimp industry child labour has been reported in Sri Lanka, India, Bangladesh, Thailand, Cambodia, Indonesia, Peru, Ecuador and Burma.

## THE FUTURE

Industrial shrimp farming has experienced massive growth since its advent in the 1970s. Shrimp is now farmed in over 50 largely tropical and sub-tropical countries. Today nearly a third of shrimp eaten comes from these farms. Shrimp recently overtook tuna as the top seafood in the US, where an average of 1.9 kg of shrimp is consumed per person per year. The industry’s expansion is relentless, and new areas of Africa’s coastline are currently being targeted by investors.

Like so many activities that result in resource-use conflict, shrimp farming is destined to continue causing serious social problems. The roll call of martyrs will keep growing unless the industry undergoes radical change. Just as logging and oil exploration have become the focus of international attention following exposure of their human rights and environmental consequences, so there is an urgent need for scrutiny of shrimp farming.

Whether stir-fried, barbecued or curried, our passion for this tender crustacean is undeniable. However, to sate our appetites, communities worldwide are becoming hungrier, thirstier and less empowered to determine their own lives. This is not a model of development of which to be proud.

The late Shri Banke Behary Das was a prominent Indian environmental campaigner. His words, which resonate with passion and poignancy, neatly encapsulate the essence of shrimp farming’s negative effects and identify the players most capable of forcing a change – us, the consumers. ‘I say to those who eat shrimp – and only the rich people from industrialised countries eat shrimp – I say they are eating the blood, sweat and livelihoods of the poor people of the Third World’ ■

Environmental Justice Foundation was established by Juliette Wilson and Steve Trent in 1999.

**As a consumer, you have considerable power and responsibility. With your help, unsustainable methods of shrimp production can be eradicated.**

- 1 Read more about the problems of shrimp production at [www.ejfoundation.org/shrimp](http://www.ejfoundation.org/shrimp)**
- 2 Spread the word**
- 3 Cut down on eating shrimp – or cut it out altogether**
- 4 Tell your supermarket/ favourite restaurant/ fishmonger that you only want to buy shrimp that is produced in a way that does not involve human rights abuses or environmental devastation**
- 5 Sign the Environmental Justice Foundation petition online at [www.ejfoundation.org/shrimp/prawn\\_stop\\_it.html](http://www.ejfoundation.org/shrimp/prawn_stop_it.html). The petition will be delivered to leading shrimp importers, distributors and retailers in Europe and North America**

**GM FOOD AID • Question: If the millions starving in Africa won't accept GM food aid what can you do?****Answer: Blame Europe. Welcome to the unbelievable Robert Zoellick.**

On January 9 the US's most senior trade official Robert Zoellick announced his willingness to launch a WTO challenge against the EU over the latter's refusal to lift a de facto moratorium on the approval of new GM crops.

Zoellick said: 'I personally am of the view that we now need to bring a case.' He called the moratorium 'a total violation of the WTO'. A challenge to European restrictions on GM products would be among the most contentious issues yet to confront the WTO's dispute settlement process.

Mr Zoellick's comments come after years of indecision. Two US administrations had weighed carefully whether a WTO case would help to open global markets for bio-engineered foods or whether it would instead hurt US farmers by triggering a broader consumer backlash against GM.

The US now looks likely to end that indecision, primarily because of fears that opposition to bio-engineered foods is spreading to Africa and Asia. Several African countries have rejected US food aid shipments containing GM crops, and Mr Zoellick charged that some European countries had pressed Africa to reject the US aid.

'I find it immoral that people are not being able to be supplied food to live in Africa because people have invented dangers about bio-technology,' Zoellick said in a meeting with reporters. 'For Europeans who like to pay attention to morals and ethics, I wish they would start with this.'

**NUMBER CRUNCHING**

<b>14</b>	Million people starving in southern Africa
<b>0</b>	Percentage of US grain that USAid claims is separable into GM and non-GM
<b>50</b>	Percentage of available grain that the American Corn Growers Association says is non-GM
<b>2,000,000</b>	Tonnes of grain the UN World Food programme says is needed for world aid
<b>1,160,000</b>	Tonnes of non-GM maize available for export from other African countries
<b>0</b>	Number of dollars offered as aid by US to purchase this maize
<b>50,000,000</b>	Number of dollars offered as credit by US to Zambia if it commits to buying GM commodities
<b>100,000,000</b>	Number of dollars USAid budgets for its programme aiming to bring bio-technology to developing countries.

**'INVENTED' DANGERS**

- 1 *The New England Journal Of Medicine* found that one genetically engineered bacteria used in the production of food supplement tryptophan produced toxins that killed 37 people and permanently disabled 1,500 others.
- 2 Professor Katz of Jena University in Germany discovered GM genes had transferred via pollen to the bacteria and yeast found in the gut of bee larvae, thus proving that GM genes can jump between unrelated species. Almost all GM crop projects conducted in the UK have resulted in cross-pollination and crop pollution.
- 3 The UK Food Standards Agency and the now defunct Ministry of Agriculture, Fisheries and Food confirmed that bacteria in the human gut can take up antibiotic-resistant DNA from GM food.
- 4 Twelve GM crop test sites in England and two in Scotland have been found to be contaminated with antibiotic-resistant genes. The government admits antibiotic-resistant genes represent a 'serious breach' of GM regulations.
- 5 An experiment by Dr Arpad Pusztai of the Rowett Research Institute in Aberdeen showed that rats feeding on GM potatoes suffered stomach and intestine damage.
- 6 The University of Nebraska found that GM soya yielded up to 11 per cent less than normal soya and needed five times more herbicide. Such an increase in herbicide use will kill whole species of wildlife while creating super-resistant weeds.
- 7 Researchers at the York Nutritional Laboratory found that allergies to soya, a now widely consumed GM foodstuff, had risen by 5 per cent over the last year.

**ALTERNATIVE SUPPLIES**

The figures given below show that there are more than enough untapped food supplies available in developing countries.

If food aid organisations in Africa were to be given monetary donations rather than food, then they could buy the surpluses off these countries.

This would both cure the problem of starvation and give a boost to the economies of African countries such as Tanzania and Uganda.

**Grain required for aid by March 2003:****1-2 million tonnes****Non-GM maize available for export:**

Country	Exportable tonnes
<b>Kenya</b>	<b>10,000</b>
<b>Tanzania</b>	<b>50,000</b>
<b>South Africa</b>	<b>1,020,000</b>
<b>Uganda</b>	<b>80,000</b>
<b>India</b>	<b>65,000,000+</b>
<b>Total</b>	<b>66,160,000+</b>

'The US should [untie its aid] and stop putting a GM gun to the head of hungry Zambians.'

**Alex Wijeratna**  
*ActionAid*

'The principal beneficiary of the US's foreign assistance programmes has always been the US. Close to 80 per cent of the US Agency for International Development's (USAID's) contracts and grants go directly to US firms. Foreign assistance programmes have helped create major markets for agricultural goods, created new markets for US industrial exports and meant hundreds of thousands of jobs for Americans.'

**USAID website**

[http://www.usaid.gov/procurement\\_b\\_us\\_opp/osdbu/book-information.htm](http://www.usaid.gov/procurement_b_us_opp/osdbu/book-information.htm)

'The hope is that over time the market is so flooded [with GM products] that there's nothing you can do about it. You just sort of surrender.'

**Don Westfall**

*Vice-president of leading US food and pharmaceuticals consultancy Promar International*

'Our leaders could take that conventional corn [the 50 per cent of US corn that is non-GM] and donate it to African people facing hunger.'

**Robert Schubert**

*Editor of CropChoice, a news source aimed at US farmers*

'The US wants to see its corporations control life's most basic resources, including seeds, food crops and water. Unfortunately for southern Africa, the drought plays right into this unprincipled strategy.'

**Dr Lawrence J Goodwin**

*of US-based NGO Africa Faith and Justice Network*

'It's wicked when there is such an excess of non-GM food aid available, for GM to be forced on countries for reasons of GM politics... If there is an area where anger needs to be harnessed it is here. We have the means to assist, but we are playing politics over GM.'

**Michael Meacher**

*UK Environment Minister speaking at a briefing of British parliamentarians in November 2002*

'The deal would be this: if the US would stop lying about us, we would stop telling the truth about them.'

**Poul Nielson**

*European development commissioner*



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**Economics**

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'Immortal' and created solely to amass ever larger amounts of wealth, limited-liability corporations institutionalise dissatisfaction. They are, Derrick Jensen writes, the economic manifestation of the Buddhist notion of 'hungry ghosts' – spirits that roam the earth, always eating, never sated.

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# hungry ghosts

I teach creative writing at a super maximum security prison in northern California. The men I teach are called by the corporate press 'the worst of the worst': they are robbers, thieves, murderers. But I now understand that these men are amateurs. If they really want to succeed at their chosen professions, they are going about it all wrong.

They need to get themselves special 'limited-liability get-out-of-jail-free' cards. Because the truth is that all of the men in the prison where I teach have killed far fewer people, destroyed far fewer lives, stolen far less money than the average CEO of the average limited-liability corporation.

### No one's laughing

Here are two jokes, neither of which are very funny:

Question: *What do you get when you cross a long drug habit, a quick temper and a gun?*

Answer: *Two life terms for murder, earliest release date 2026.*

Question: *What do you get when you cross two nation states, a large limited-liability corporation, 40 tons of poison and at least 8,000 dead human beings?*

Answer: *Retirement with full pay and benefits.*

If my students had robbed or killed in the service of economic production, with the protection of the legal fiction of a limited-liability corporation, they could now be joining Warren Anderson, ex-Union Carbide CEO, on the back nine instead of spending the rest of their lives in tiny cells.

So I think Nicholas Murray Butler, past president of New York's Columbia University, might have been wrong when he said: 'The limited-liability corporation is the greatest single invention of modern times.' In many ways there's nothing original about limited liability at all. Instead it wraps new language around a concept as old as civilisation – that of enriching rulers at the expense of the majority

of humans and their human and non-human communities.

### Rogue states

The US anthropologist Stanley Diamond noted: 'Civilisation originates in conquest abroad and repression at home.' He is not the only one to remark that the central goal and function of government has been, from the beginning, that of robbing from the poor to give to the rich.

Founding Father James Madison said as much when he insisted during the US constitutional convention in the 18th century that the main goal of the political system should be 'to protect the minority of the opulent against the majority'.

Adam Smith, the godfather of modern economics, would have agreed. For he wrote: 'Civil government... is instituted for the defence of the rich against the poor, or of those who have some property against those who have none at all.'

But I'd say that both of these people, as well as the philosopher John Locke, who stated that 'government has no other end but the preservation of property', were being modest. The real function of government goes further: it's not just to protect, but, most especially, to acquire property – and ever more property – for the opulent.

From the beginning the goal has been (to use some two-dollar words) the privatisation of profits and the externalisation of costs. And from the beginning, the question has been: how best to do this?

Force is certainly one way. If you don't believe me, ask the Africans – perhaps 100 million of whom died in the slave trade. Or the American Indians, decimated probably nine times over in the conquest of their continents. Or the indigenous the world over, who continue to be dispossessed and exterminated as rapidly as those who came before them. Or ask a modern slave: it shouldn't be hard to find one, because there are more slaves (using a rigorous definition of slavery) in the world today than were shipped

to the US on the Middle Passage.

But force is expensive, and an inefficient way to steal. It's much better if you can convince victims to cooperate in their own victimisation. Thus, early in history those in power articulated the divine right of kings – trying to convince not only themselves but those from whom they stole, too, that their power originated not in force and social convention but came directly from God. If anyone opposed this power they faced eternal damnation as well as execution.

That may have worked in a religious era, but in our secularised world it would sound pretty stupid if those in power said Warren Anderson should not be executed (or in any way punished) for killing thousands of Indians because Union Carbide exists through divine mandate, and that timber company Weyerhaeuser can deforest the planet because God Says So.

### Damages limitation

So the powerful had to come up with a different way to keep injured citizens from injuring them back. And somehow they've got us to buy into the extraordinarily odd notion that they can somehow limit their accountability for the damage they do by uttering the magic words 'limited-liability corporation'.

What's worse is that they've got us to buy into the notion that limited-liability corporations are a good idea. And what's even worse than that is they've got us to buy into the notion that limited-liability corporations actually exist.

For not only are limited-liability corporations not a good invention, they aren't an invention at all. They are a conjuration: a fiction, a legal fiction – that is, a fiction made law by, you guessed it, those in power.

Corporations are 'entities' we pretend are real, and which have been granted (and institutionally grant themselves) person status on the basis that they are living bodies ('incorporate' comes from the Latin *corporare* meaning 'to form' ►

into a body', from *corpus* 'body').

Corporations are the 'embodiment', the reification, of a single idea – that of amassing wealth. To that end, according to my dusty old economics textbook, they have been 'granted perpetual life and diversified ownership... [and] each part has limited liability for the debts and other liabilities of the firm'.

This limited liability means that owners are not liable for the actions of their corporations. Investors can only lose the amount of money invested, and are not held in any way accountable if the company commits genocide, ecocide, murder or any other crime.

Limited liability means more than profits, however, and it means

did. Thus, a limit was placed on the investors' liability, on the amount of damage for which they could be held liable.

Limited liability has allowed several generations of corporation owners to economically, psychologically and legally ignore the limits of toxics, fisheries depletion, debt, and so on.

To expect corporations to function any differently is to engage in make-believe. We may as well expect a clock to cook, a car to give birth or a gun to plant flowers. The specific and explicit function of for-profit corporations is to amass wealth. The function is not to guarantee that children are raised in environments free of toxic chemicals, nor to respect the

To the degree that we desire to live in a human and humane world – and, really, to the degree that we wish to survive – limited-liability corporations need to be eliminated.

### Icons of greed

It would be easy to blame corporations for most of the world's ills, but not very helpful. To provide a clarifying example: although the world's forests might receive a brief reprieve were Weyerhaeuser's corporate charter revoked, we must remember that our culture was deforesting the world long before Weyerhaeuser – either the corporation or its founder Frederick Weyerhaeuser – was conceived.

Corporations don't cause destruction. They are tools to



more than poison clouds 'in the colonies'. It is more than the mere institutionalisation of irresponsibility. It is an explicit acknowledgement that it's impossible to amass great wealth without externalising costs. If costs were not being externalised there would be no need to limit liability.

### Born to be bad

Limited-liability corporations first came into use during the 18th and 19th centuries. They were designed to deal with the myriad of limits exceeded by our culture's social and economic system.

The railroads and other early corporations were simply too big and too technological to be built or insured by the incorporators' investments alone. When corporations failed or caused gross public damage, as they often did, the incorporators did not have the wealth to cover the damage. No one

autonomy or existence of indigenous peoples, nor to protect the vocational or personal integrity of workers, nor to design safe modes of transportation, nor to support life on this planet. Nor is the function to serve communities. It never has been and never will be.

To expect corporations to do anything other than amass wealth is to ignore our culture's entire history, current practices, current power structure and its system of rewards. It is to ignore everything we know about behaviour modification: we reward those investing in or running corporations for what they do, and can therefore expect them to do it again. To expect those who hide behind corporate shields to do otherwise is delusional.

Limited-liability corporations are institutions created explicitly to separate humans from the effects of their actions – making them, by definition, inhuman and inhumane.

facilitate, legalise and rationalise destruction. They make destruction respectable. Another word for 'the externalisation of costs', for 'limited liability', is 'theft'. But corporations practise a special variation of theft, where even the victim is left feeling that a legitimate and just transaction has taken place: the victim may be frustrated, but is more likely to be jealous than outraged.

As we have seen repeatedly in US elections, the victim will defend the thief's property rights, and will also spend the rest of his or her life trying to earn back the stolen goods.

In the 18th century the British statesman Edmund Burke laid out (presumably with a straight face) the mental and emotional states in which the poor must be maintained if they are to keep themselves at labour and not rebel against the rich. 'They must respect that property of which they cannot

partake,' Burke pronounced. 'They must labour to obtain what by labour can be obtained; and when they find, as they commonly do, the success disproportioned to the endeavour, they must be taught their consolation in the final proportions of eternal justice.'

But perhaps this is going too far. Perhaps by changing the language, by moving away from the academic – 'the privatisation of profits and the externalisation of costs' – to the vulgar – 'theft' – I run the risk of offending, I imperil my credibility.

That is precisely the point, and precisely the strength of the corporation as a tool for privatising profits and externalising costs – for theft, for murder. The transaction is legitimate. The crime complete.

amass wealth, they become the institutionalisation of dissatisfaction: the economic manifestation of the Buddhist notion of 'hungry ghosts' – spirits that roam the earth, always eating, never sated.

US forest activist Jim Britell made this point in relation to timber industry executives, but his thinking could apply to the whole of corporate culture. 'In the writings and speeches of clear-cutters and deforesters, you can see and hear an intense hunger to find forests to cut,' Britell wrote. 'At the same time, the last few years have broken all records in the amount of forests cut down. What we are seeing is a simultaneity of poverty and richness, a special kind of insatiable hunger where the more you possess

the rich, tools that are as absurd and self-serving as was the divine right of kings. Of course I mean self-serving only in its most superficial sense, because it is suicidal for the rich, as well as the poor, to destroy their land base – even if the rich are more insulated from the effects of their destructive behaviours (which I guess is one of the main points of the whole system).

Then we must dismantle corporations functionally and physically, by stopping corporate activities and taking apart the political, military, physical and infrastructural constructs that support them. This dismantling of corporations is and will continue to be extremely dangerous, bringing down upon those of us who



It is acceptable. It is legal. And, of course, it is still theft. And it is still murder.

But labels aren't so important. No matter what language we use, poison is still poison, death still death, and industrial civilisation is still causing the greatest mass extinction in the planet's history.

No matter how scary and stupid it may be to limit liability, the truth is that our situation is even more scary and stupid than this would imply. A corporation is a 'creature of the law', as US Supreme Court chief justice John Marshall observed in 1819. It is a creation of the state. When a government charters a corporation, it sets in motion, according to Marshall, 'a perpetual succession of individuals [who] are capable of acting for the promotion of the particular object, like one immortal being'.

Since corporations are 'immortal', and since they are created solely to

the more deprived you feel. This is the emotion that dominates and pervades the realm of the hungry ghosts. The physical representation of this state is the image of a being with a gigantic belly, a very thin neck and a tiny mouth. No matter how much the hungry ghost eats, its stomach can never be filled.'

What this means is that corporations and those who run them cannot stop exploiting resources and amassing wealth until they have... I cannot finish this sentence, because the truth is that they can never stop. Like cancer they can only continue to expand until they kill their host.

**Resist and survive**

If we wish to survive, we must begin by dismantling corporations.

We must do this first psychologically – by recognising that corporations are tools for the transfer of wealth from the public to

participate in it the full power of the state – that is, the full power of the rich. Those who have not scrupled at killing to amass their wealth will not scruple at killing to maintain it, or to maintain the fiction that that wealth is legitimate. Or, as US radical Lucy Parsons so famously put it (long after the state had killed her husband because he spoke and acted in favour of the poor), 'never be deceived that the rich will allow you to vote away their wealth'.

Dangerous as it is, I'm going to persevere. The only thing I can imagine more dangerous than dismantling limited-liability corporations – and, of course, the structures that allow them to destroy with relative impunity – is allowing them to continue ■

Derrick Jensen is an activist and author. His most recent book is *The Culture of Make Believe* (Context, 2002).

WWW.SAMMELFAKTEN-ONLINE.DE

**DISINHERITED** • Driven from their lands, the Guarani tribes in Brazil face extinction. Suicide is common, beatings frequent, and for those brave enough to fight there is death.

Gunmen have killed one of the most important leaders of Brazil's endangered Guarani-Kaiowá tribe. Marcos Veron (pictured near right), who was roughly 70 years old when he died, is the third Brazilian Indian to be murdered since the New Year. He was the head of a community that has been struggling for 50 years to recover its land after it was seized by cattle ranchers.



In recent months the community had been living by the side of a highway, having tried to re-occupy some of their land and been forced out by armed police and soldiers. Last issue (February 2003) *The Ecologist* reported that a Brazilian court had finally recognised the Guarani's right to live on the land.

In 2000 Veron toured Europe to publicise *Disinherited*, a report by Survival International on the history of Brazilian Indians. He said then: 'The ranchers shoot at us, burn our houses and kill our children. They are trying to get rid of us... So now we have to come all the way here to look for our rights.' The loss of almost all their land to cattle ranchers has precipitated a once unimaginable crisis in Guarani-Kaiowá society. The Guarani have one of the highest suicide rates in the world.

During his brief re-occupation of his ancestral land, Veron said: 'This here is my life, my soul. If you take me away from this land, you take my life.'

**GUARANI CULTURE**

'Without land, the Indian becomes sad and begins to lose his language. He starts to speak with the borrowed language of the white man. He loses the memory of his people. Without land, the Indian has nowhere to plant, fish, look for natural foods and medicinal herbs, perform his celebrations, his religion. He begins to abandon all of this and starts to die.' Severino, president of Aty-Guasú – the traditional assembly of the Guarani.



**GUARANI – IN NUMBERS**

<b>5,000,000</b>	Number of indigenous Indians living in Brazil before colonisation
<b>200,000</b>	Current estimate of indigenous Indians living in Brazil
<b>1,000</b>	Number of tribes in Brazil 500 years ago
<b>215</b>	Number of tribes in Brazil today
<b>30,000</b>	The approximate number of years Indians have inhabited Brazil
<b>0</b>	Percentage of land owned by Indians
<b>30,000</b>	The number of Guarani tribes in Brazil
<b>26,000</b>	Approximate number of Guarani-Kaiowá Indians living in the Mato Grosso do Sul state of Brazil
<b>25,000</b>	Amount of land in square miles occupied by the Guarani of Mato Grosso do Sul in 1953
<b>172</b>	Amount of land in square miles occupied by the Guarani of Mato Grosso do Sul in 2003
<b>304</b>	Number of suicides committed by Guarani-Kaiowá between 1986 and 1999
<b>9</b>	The age of Luciane Ortiz, the youngest tribe member to commit suicide.

**CAMPAIGNS AND SUPPORT**

Survival is campaigning to have Guarani land rights recognised, and to have the land that has been taken from them by ranchers and others restored to Guarani communities. Although Brazil does not recognise Indian land ownership (despite its status in international law) its own constitution does still oblige it to map, mark out ('demarcate') and protect Indian land. Survival is calling on the Brazilian government to demarcate Guarani land as a matter of urgency.

*To support the Guarani and other Brazilian tribes, please contact Survival.*

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'These Indians are vagabonds, they are the pariahs of society.'

**Ezequiel dos Santos, owner of an alcohol distillery, referring to the Guarani in 1990.**

'Fortuna Escobar (10 years old) committed suicide because she had no food. Her father was working in an alcohol distillery and she was left on her own. She lost her mother, who committed suicide, and so had no food.'

**Silvio, captain of Carapaó**

'Today my people see their land invaded, their forests destroyed, their animals exterminated and their hearts lacerated by this brutal weapon that is civilisation. For the white and so-called civilised people, this may seem like romanticism. But not for our people – for us it is our life.'

**Kaingang woman, 1975**

'They faced dogs, chains, Winchesters, machine guns, napalm, arsenic, clothes contaminated with smallpox, false certificates, removal, deportations, highways, fences, fires, weeds, cattle, the decrees of law and the denial of facts.'

**Darcy Ribeiro, Brazilian anthropologist and senator, 1981**

'It is necessary to finish with Indians by the year 2000.'

**Hélio Jaguaribe, ex-minister, 1994**

'One day we saw a beetle flying over the top of our house. It was a very big beetle carrying a lot of people. But they were not like us, they were a different people. It was a very big beetle which had arrived to dominate us.'

**Orlando Makuxi, 1996**

'All our ancestors lived together, Nambiquara, Irantxe, Pareci. Then came another wanting to rob us... They came hidden to touch us. Our land has been sold, stolen. The government doesn't say anything. I remain sad. Whites come to take our land so that we become 'civilised' and work, like them, to live.'

**Tamrã, an Irantxe leader, 1976**

'The decimation of the native peoples in the Americas is like a haunting question that floats in the wind: "why did we allow this to happen?"'

**Nelson Mandela, 1996**



'The ranchers shoot at us, burn our houses and kill our children. They are trying to get rid of us...'

On 12th January 2003 Marcos Veron was killed by gunmen.



# The scarcity r

It's the spring of 1975. I'm sitting in a rural conference centre somewhere in Iowa surrounded by earnest Lutherans concerned about 'world hunger'. The last event of the evening is a film about the famine killing tens of thousands of Ethiopians. I see images of skeletal women holding babies that are trying in vain to suck milk from their mothers' shrivelled breasts. The explanation is drought.

My hosts at this church gathering, like most US religious activists at the time, were calling for more US food aid to Africa. The tragedy they saw was scarcity over there. So, our duty was to ship our abundance abroad.

Even by then I had learned that there is nothing natural about famine in today's world; that 'underdeveloped' is not an adjective but a verb, as Walter Rodney explained in his 1974 book *How Europe Underdeveloped Africa*.

Fast forward to 2003. A buried *New York Times* story announces that 38 million people are at risk of starvation in Africa. The UN World Food Programme reports that

demand for its aid is unprecedented. AIDS and government corruption are partly to blame, but the main culprit is drought.

After three decades the message seems eerily familiar: scarcity, caused by nature's vagaries and specific human frailties, is the culprit. Nothing appears to have changed.

But appearances deceive. Much is changing. While the inertia of the old mindset still has us in its vice, an emergent map is bursting through in surprising places with remarkable rapidity.

## Manufacturing hunger

The dominant mindset tells us we're in a perpetual battle to overcome scarcity. Without capitalism's relentless drive, we'd probably all be going hungry by now.

In reality, however, it is this mindset that is propelling us to create the very scarcity we say we so fear. It was precisely to ring this alarm that I wrote *Diet for a Small Planet* 32 years ago. My message was that we humans were creating scarcity in so many different ways, including by turning livestock –

ruminants whose genius is for manufacturing protein – into massive protein disposers.

For aeons ruminants had served humans by converting grass and other non-edibles into high-grade protein. Then, in just a blink of an eye, we'd come up with concentrated grain feeding – industrial-style feedlots that in the US take 16 pounds of grain and soya and reduce them to one pound of food (in this case a cancer- and heart-disease-promoting steak).

Today, while hunger stunts the lives of hundreds of millions (people who are too poor to make a 'market demand' for the food they need), between a third and a half of all the world's grain goes to feed livestock. In the last three decades meat consumption even in low-income countries has doubled. It is the better-off who are creating this demand. Thirty years ago almost no grain went to livestock in China and Thailand, for example. Now over a quarter of grain consumption in these countries occurs in the production of meat.

With feedlot-fed cattle we also



SEBASTIAO SALGADO/AMAZONAS/INPICTURES.COM

# myth

invented a superb system for squandering water: the production of just one US-style steer uses enough water to float a destroyer. This, in a world where millions go without clean water and groundwater tables are sinking on every continent.

In many ways, scarcity-creation has sped up. During WWII US government posters advised: 'Eat fish, they feed themselves.' Now, four pounds of 'junk fish' like sardines (long a staple food of the poor) are turned into feed to produce just one pound of salmon. The latter is then priced out of the reach of the poor.

Similarly, bottom-scraping dragnets used in shrimp harvesting capture (and largely destroy) 10 pounds of sea life for every pound that goes to nourish humans. Typically, nearly a quarter of the total global marine harvest is thrown back dead or dying. This, in a world where over-fishing has led to declining catches of virtually every type of commercially sold fish.

Every species but ours has figured out how to feed itself and its

offspring without destroying its life support. So, what's up with us? How could it be that we've created a system that destroys more than it creates? A system, what's more, that takes perfectly nutritious food and transforms it into a health hazard?

An epidemic of obesity – afflicting as many people as go hungry – is sweeping the planet. Food corporations, the world's biggest advertisers, have discovered that the highest profits are to be made through marketing 'food products' that are stripped of nutrients but laden with fat and sugar. It's now food (either too little, or too much of it) that is the culprit in more than half of all disease-related lost years on our planet.

### Abundant truth

The grip of primitive 'marketism' seems never to have been tighter. Everything – from drinking water to human genes – is being 'propertised' as we're told that deliberative devices for sharing the commons for common benefit have all flopped.

At the very same time, but unseen by most of us, a new and very different mindset is emerging. If you look, you can see it. But you have to really look. That's what my daughter Anna and I did when we wrote *Hope's Edge*. We travelled on five continents to nine countries. One was Kenya, where we talked with village women – members of Wangari Maathai's Green Belt Movement. These unschooled women are accomplishing what few would have considered possible. Confounding the scepticism of government foresters, they have created 6,000 cooperative tree nurseries throughout the country and planted 20 million trees.

Emboldened, Green Belters also began to question the impoverishing dependence on single exports like coffee (the producer prices of which have now hit an historic bottom). They began to re-learn the best of traditional farming practices and to reclaim lost crops. These activities yielded stronger community bonds, problem-solving groups, skills and

enhanced food security.

All this was threatening to the government of Kenya's former president Daniel Arap Moi. Under his rule, Maathai had been jailed and beaten more than once for her pro-democracy, pro-environment activities. Yet, in the recent elections she out-pollled her closest opponent by 50 to one. She was subsequently appointed deputy minister for the environment and natural resources. Women danced in Nairobi's streets.

### Brazil's landless movement

Before starting our journey, we read all the relevant texts, including Thomas Friedman's *The Lexus and the Olive Tree*. The four-time Pulitzer Prize-winner dismisses any alternative to corporate globalisation, stating: 'There is no more mint chocolate chip, there is no more strawberry swirl, there is no more lemon-lime... There is only [free-market] vanilla and North Korea.' Friedman uses Brazil to make his point, describing the only opposition to the global corporate march as disorganised street life bereft of ideology or even a manifesto.

Arriving in Brazil ourselves, we were astonished to see what Friedman's mental map had blinded him to: the largest social movement in the hemisphere, and one that embodies not only a sophisticated critique of corporate globalisation but an alternative coming to life in thousands of communities across Brazil.

That blind spot is the Landless Workers' Movement (MST), a 20- ▶



CORBIS



year-old undertaking that has settled a quarter of a million families on 15 million acres of land throughout Brazil. By taking advantage of a constitutional provision mandating the government to redistribute unused land, the MST has used civil disobedience to press its case.

Newly settled MST families told us that getting their own land was only a beginning. They had to consider all aspects of community-building, including the role of economic profit relative to other values. ('Capitalism doesn't care about the individual,' one young member told us. We chuckled at how discordant his comment would sound to a US ear.)

What they are coming up with is hardly 'anti-market'. Some MST farms, co-ops, and small businesses even sell internationally. But market exchange is counterbalanced by other values, with community solidarity and the health of the environment the most important. MSTers told us they were rejecting chemical agriculture not only because of the hazard to their own health (many had suffered pesticide poisoning as farm workers) but also out of concern that chemical residues might hurt the consumer.

A Brazilian research centre recently totalled the cost to the

government of land reform. The figure included compensation for landowners, legal expenses and credit for new farmers. It then compared this figure with the cost of the number of people affected by land reform migrating to urban shanty towns instead. It turned out that the latter – the market's solution – would exceed in just one month the expense of an entire year of settling new farmers.

### Food first

We also visited Brazil's fourth largest city – Belo Horizonte. In 1993, its government had declared food a right of citizenship. This shift of thinking triggered dozens of innovations that have begun to end hunger in the city.

Little patches of city-owned land were made available at low rent to local organic farmers as long as they would keep prices within the reach of poor, inner-city dwellers. The city redirected the 13 cents provided by the federal government for each school child's lunch away from the purchase of corporate processed foods to buying local organic food instead. The result is enhanced children's nutritional intake.

To keep the market honest, the city teamed up with university researchers who each week posted the lowest prices of 45 basic food commodities at bus stops and broadcast them over radio. This way, inner city dwellers had sound information to fight against price gouging by unscrupulous grocers.

With this new food-as-a-right-of-citizenship perspective, people began to perceive abundance where they had never seen it before: manioc leaves and egg shells previously tossed out as waste were processed into a nutritious additive for bread for school kids.

All of these efforts consume, we were told, only 1 per cent of the municipal budget. Hopefully Brazil's new president Luis Inazio 'Lula' da Silva will look to Belo Horizonte for clues as to how to implement his 'zero hunger' pledge in a country where at least 25 million

now go without.

At the end of our stay in Belo Horizonte, we met Adriana Aranha, whose job in city government is to coordinate all these efforts. 'When you began,' I asked her, 'did you realise how much difference your efforts might make? Did you know how out of step you were with the neo-liberal approach that says government can do no good and the market can do no harm?'

Aranha replied, animated and intense, in Portuguese. And we couldn't understand a word. We sat patiently, but then I saw her eyes start to tear up. Unable to wait any longer, I nudged our interpreter. 'Please, what is she saying?'

'I knew we were out of step,' Aranha said. 'We had so much hunger in the world, but what is so upsetting, what I didn't know when I started this, is it's so easy to end it.'

I've thought about that conversation many times since. Why was Aranha able to say 'it's easy'? I realise now that she is right if – only if – we can see with new eyes and free ourselves from the choking momentum of the inherited mental map. Then we can suddenly see new, more life-serving forms emerging.

These breakthroughs may be hard to detect – not only because the prevailing media doesn't cover them, but also because they do not constitute a new 'ism'. They don't add up to a new, packaged formula. They are – like Kenya's Green Belt Movement and the triumphs of Brazil's MST – about ordinary people trusting their deepest values as well as their common sense. In the process new mental maps emerge in which human beings are more than narrow consumers and democracy is more than a matter of pre-paid elections ■

Frances Moore Lappé is the author of 13 books and co-founder of Food First: The Institute for Food and Development Policy. Her most recent book, co-authored with her daughter Anna Lappé, is *Hope's Edge: the next diet for a small planet* (Tarcher/Putnam, 2002). Email: [smallplanet@attbi.com](mailto:smallplanet@attbi.com)

# Missing lynx

**When will the world wake up to the plight of the lynx?**

**Eduardo Gonsalves pins the tail on some political donkeys.**

The first extinction of a big cat since the sabre-tooth tiger disappeared 10,000 years ago looks as if it will inevitably take place by the end of the year. For the Iberian lynx, Europe's only endemic wild cat, is down to just 150 in number.

And during the course of 2003, around 30 of them will be killed in traps and snares, a dozen will be shot by poachers, and another dozen will be killed by hunting dogs or run over. Many more, including newly born cubs, will simply die of starvation.

Question: if there were just 150 cheetahs left in the world, and it was known that half of them would die over the next few months, what do you think the reaction would be? Precisely. Sirens would be screaming, emergency measures implemented, the international media transfixed, conservation groups raising havoc, etc.

## **So what IS happening to save the Iberian lynx?**

Amazingly, on an official level, next to nothing.

The Portuguese authorities claim the lynx is extinct in their country. This is blatantly untrue, as the government's own (unpublished) data show. But the Portuguese are using this claim to press ahead with new roads and dams, including the Odelouca reservoir now being built in the heart of the lynx's last breeding grounds in the Algarve mountains.

In Spain, where the authorities say there are just two isolated breeding populations (with 30 breeding females in all), the situation is no better. In 1992, when the lynx population had fallen to 'just' 1,200, the Spanish opened a captive breeding centre. Not one lynx has ever been bred there. It is not because lynxes don't breed in captivity – the Canadian lynx, the Eurasian lynx and the American bobcat have no difficulty doing so. It is

because of political indifference. The breeding centre is within a national park (run from Madrid) in a fiercely independent Spanish region (Andalucia). The national and regional governments are run by different political parties, and there are a number of personal enmities. The result? An 11-year stalemate.

When Morena, the only healthy female



the centre has ever had (she was a pet donated by her owner) went into season some years ago, a passing male heard her calls and jumped over the 20-foot fence into her enclosure. Amazingly, the centre was forced to release the male immediately. Not only that, but permission to extract sperm for artificial insemination was refused.

Nor has the European Commission been any more constructive. For a start, European environment commissioner Margot Wallström threw out legal moves to block the Alqueva dam in southern Portugal on the grounds that 'sufficient mitigation measures' had been taken. She cannot have been referring to measures detailed in the official documents. There weren't any. These documents admitted that the springtime felling of over a million oak trees around the dam could kill female lynxes rearing their young in hollows. It now appears that both the Vale do Guadiana and the western Sierra Morena lynx populations – on either side of the Alqueva dam – have gone extinct.

The commission now says it is stopping

subsidies for the Odelouca dam. It does not say that it is funding the water transfer station that will enable the dam to flood the lynx's breeding grounds.

The commission says that it has declared a new road around Spain's Donana national park is illegal. (Thirty Iberian lynxes currently live in the park, and another 30 have been killed on the area's roads in recent years). But it does nothing to stop the continuing spread of highways, dams and intensive agriculture (all funded with EU money) along Andalucia's Sierra Morena mountains – the last great lynx corridor.

## **What needs to be done?**

Saving the lynx is not difficult. It means putting rabbits back in the cork and holm oak *montados* and *dehesas* (rabbits form up to 90 per cent of the lynx diet, but have been wiped out by various diseases), and having a 'reserve' lynx population in captivity (preferably in conditions that simulate the wild) from which to breed in order to bolster isolated or genetically weakened lynx populations.

Add to that effective controls on hunting, stopping the EU-subsidised clearance of maquis and undergrowth in forests, and reconnecting old habitat corridors by allowing natural vegetation to regenerate along water courses, and that's pretty much it.

For once, the problem is not about money. It is the fact that there are too many politicians and officials who are more prepared to lose the lynx than lose face.



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## Home Grown: the case for local food in a global market

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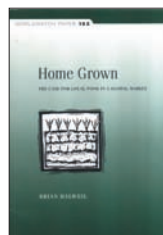
Brian Halweil

Worldwatch Institute 2002

ISBN 1878071661

Reviewed by James Epps

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The alarming trend of long-distance food travel keeps increasing. In the US food now travels 3,000 miles from farm to

plate – up 25 per cent since 1980. This trend is driven by the supermarkets' greed and financial muscle. Supermarkets can import food in bulk from all over the world at any time of the year. As well as detailing food travel's devastating effects on the environment, local cuisine and farming, this book details how to support local food movements, and how to help shape a future where food, farmers and the local community count, not supermarket profits.

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## Another World Is Possible: popular alternatives to globalization at the World Social Forum

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Edited by William F Fisher

and Thomas Ponniah

Zed Books; ISBN 1842773291,

Reviewed by James Epps

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A collection of the themes voiced by the many different citizens' groups participating at the World Social Forum in Porto Alegre. Reflecting the

diversity of opinions expressed, the book also emphasises the shared ideals of the alternatives to globalisation and produces a well-formed criticism of neo-liberalism.

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## We Are The Poors: community struggles in post-apartheid South Africa

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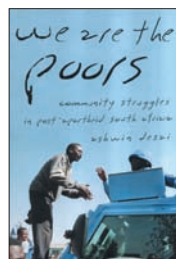
Ashwin Desai

Monthly Review Press 2002

ISBN 158367505

Reviewed by Melissa Collins

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Desai, one of South Africa's leading activist intellectuals, describes with moving clarity the desperate conditions that continue

for many South Africans even after the end of apartheid. He focuses on community movements in Durban and the coming together of activist groups from around the country at 2001's UN World Conference Against Racism, and leaves us with hope that a fight-back is, while difficult, still possible.

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## Cutting the Wire: the story of the landless movement in Brazil

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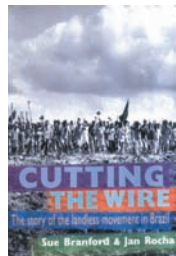
Sue Branford and Jan Rocha

Latin America Bureau 2002

ISBN 1899365516

Reviewed by Jeremy Smith

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This is the incredible story of Brazil's Landless Movement (MST). Tracing the MST from humble, clandestine origins in the

early 1980s to the national movement of today, the authors travel the vast expanse of Brazil to record the words and actions of hundreds of activists who have taken their lives into their own hands. The title refers to how the MST actually occupies land. An important work for those wishing to understand the biggest social movement in the world today.

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## The Little Food Book

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Craig Sams

Alastair Sawday Publishing 2002

ISBN 1901970329

Reviewed by Jon Napier

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As engrossing and provocative as the original *Little Earth Book*, *The Little Food Book* delves into

every aspect of the paradoxical nature of our relationship with food. Why is it, for example, that while we have the technology to make square bananas and tear-free onions, we are seemingly unable to provide everybody on the planet with decent, health-giving food? If you want to get reacquainted with the realities of the food you eat, this is an excellent place to start.

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## Palestine

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Joe Sacco

Jonathan Cape 2003

ISBN 0224069829

Reviewed by Olivia Whitford

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Sacco's moving account of his travels in the Occupied Territories during the first *intifada* combines the techniques of eyewitness

reportage with the medium of comic-book story-telling. Pioneering the use of an unusual journalistic form that manages to be both deeply informative and

entertaining, the story is structured around Sacco's own experiences throughout the Palestinian towns and refugee camps. *Palestine* contains more history, narrative drive, humour and humanity in a single chapter than a traditional news story ever could.

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## Alternatives to Economic Globalisation: a better world is possible

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Edited by Jerry Mander

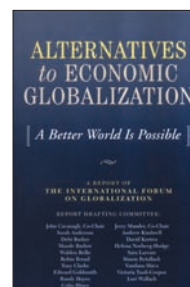
and John Cavanagh

Berrett-Koehler 2002

ISBN 1576752046

Reviewed by Jon Napier

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This book is the result of a three-year project by the International Forum on Globalisation to define viable alternatives

to corporate globalisation. The result is a coherent, comprehensively argued collection of specific recommendations for positive change.

Tracing the principles of genuine sustainability and the structure of corporate power, and defining the boundaries that should be set off-limits to globalisation, this work is designed as a key resource for policy makers, activists and anyone wishing to understand the fundamental mechanisms of the world we live in.

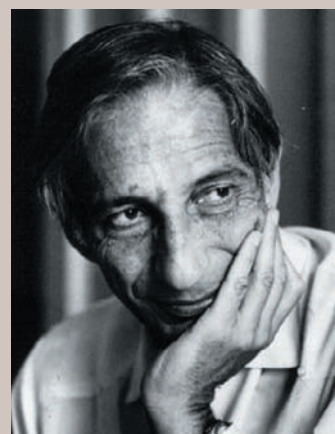
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**Ivan Illich, eminent writer and philosopher, died of cancer on December 2, 2002, in Bremen, Germany, aged 76.**

**In the 1970s he published the seminal *Deschooling Society*.**

**The book addressed the rigid top-down management of schools typical of the modern technological economy, and which prevents people from learning.**

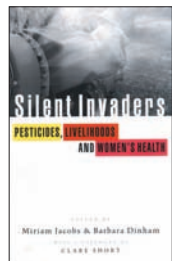
***Tools for Conviviality* made the same criticism of technology generally, and, with *Energy and Equity*, made Illich one of the most important theorists of the radical ecology movement. He was unique as an archaeologist of ideas, piercing through the fog of cherished concepts and ideology that so often obscures reality.**



## Silent Invaders: pesticides, livelihoods and women's health

Edited by Miriam Jacobs and Barbara Dinham  
Zed Books 2002  
ISBN 1856499960

Reviewed by James Epps



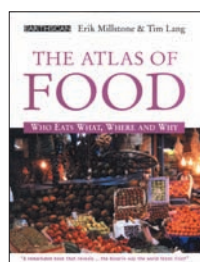
A thorough exposé of pesticides and the poisons they have spread throughout the world, the book is the natural heir to

Rachel Carson's seminal *Silent Spring*. Most of the world's food is grown by women, and it is, therefore, on them that the book focuses. It emphasises the need for a gender-sensitive approach to policy reform, and calls for legislation in favour of far safer farming practices. To further its case, the book features several appendices covering everything from which pesticides are most dangerous to resources for further research.

## The Atlas of Food: who eats what, where and why

Erik Millstone and Tim Lang  
Earthscan 2002  
ISBN 1853839655

Reviewed by Doug Bebb



Despite vast rises in the volume of global food production, hundreds of millions of people are going hungry. At

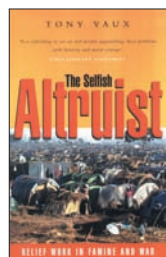
the same time, obesity is one of the fastest growing health problems in the West.

The maps in this atlas provide an extraordinarily clear basis for understanding the underlying issues. Exploring the effects trade, politics, technology and patterns of demand have on food, this is a vital study. It clearly shows how threatened the security of the food supply chain has become in a globally interconnected world, a world which is challenged by everything from bio-technology and climate change, to migration and urbanisation.

## The Selfish Altruist: relief work in famine and war

Tony Vaux  
Earthscan 2001  
ISBN 1853838799

Reviewed by Jon Napier



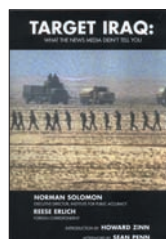
A trip behind the lines of the aid industry – down to the ground and inside the mind of the author. Self-consciously objective, Vaux describes and

analyses some of the most traumatic situations involving famine and war of the last two decades. Perhaps most original is the clarity of thought that helps us to understand what it takes to be an aid worker and just how important humanitarian action remains today. However, we are not restricted to events, and a recurring theme throughout the book is its search for a new understanding of the principles of altruism and the means of putting it into practice.

## Target Iraq: what the news media didn't tell you

Norman Solomon, Reese Erlich  
Context Books 2003  
ISBN 1893956393

Reviewed by Jeremy Smith



People know only too well how despotic Saddam Hussein is. But do they know how much suffering is sure to come if the US launches an attack on Iraq? Are the media really conveying the humanity of the people in the line of fire?

Solomon and Erlich explore the real issues behind the skewed media coverage and assess the arguments both for and against the war. All the major issues are covered – including oil, sanctions and depleted uranium. As Howard Zinn writes in the introduction: 'Should we not ask everyone to stop the high-blown talk for a moment and imagine what war will do to human beings whose faces will not be known to us, whose names will not appear except on some future war memorial?'

- Pesticides are toxic chemicals used to kill or control pests.
- They also kill an estimated 20,000 farm workers worldwide every year.
- In humans they cause cancer, hormonal and reproductive disruptions and increased chemical sensitivity and neurotoxicity. They also increase soil erosion and water contamination in the environment.
- Just seven companies control over 80 per cent of the world market. In 1980, worldwide sales were \$11.7 billion. By 1999 that figure had soared to \$30.2 billion.

## Silent Spring Rachel Carson

Penguin Books, 2000 ISBN 0141184949

The classic introduction to the topic, and, for many, the book that launched the modern environment movement. Now over 30 years old, its message remains as haunting as ever.

## Living Downstream Sandra Steingraber

Virago Press, 1999 ISBN 1860495354

A personal and informative account of the impact of pesticides and other pollutants on human health by one of the US's foremost environmentalists. As the title suggests, where pesticides are concerned we all live downstream.

## Our Stolen Future Theo Colborn et al

Abacus, 1997 ISBN 0349108781

For years scientists have noticed disruptions in animal breeding cycles, increases in birth defects, sexual abnormalities and reproductive failure. This book traces the cause.

## Our Children's Toxic Legacy: how science and law fail to protect us from pesticides John Wargo

Yale University Press 1998, ISBN 0300074468

Traces the history of pesticide law and science, and reminding us that we can't rely on those in power to solve the problems that pesticides cause.

### [www.pan-uk.org/](http://www.pan-uk.org/)

Pesticide Action is a network of over 600 NGOs, institutions and individuals in over 60 countries working to replace the use of hazardous pesticides with ecologically-sound alternatives.

### [www.panna.igc.org/resources/advisor.html](http://www.panna.igc.org/resources/advisor.html)

Pesticide Advisor points you towards information to help with specific pest and pesticide problems.

### [www.pesticideinfo.org](http://www.pesticideinfo.org)

Your one-stop location for current toxicity and regulatory information for pesticides.

### [www.beyondpesticides.org](http://www.beyondpesticides.org)

The US-based National Coalition Against the Misuse of Pesticides.

### [www.ourstolenfuture.org](http://www.ourstolenfuture.org)

Comprehensive information on endocrine-disrupting chemicals.

### [www.pesticides.gov.uk](http://www.pesticides.gov.uk)

The Pesticides Safety Directorate.

### [www.getipm.com](http://www.getipm.com)

For stories about pesticide poisoning.

### <http://psr.igc.org>

Includes *In Harm's Way* – an excellent report on the sources of toxins that can damage children from conception onwards.

### [www.foe.co.uk](http://www.foe.co.uk)

An excellent source of information and links on pesticides.

### [www.ace.orst.edu/info/extonet](http://www.ace.orst.edu/info/extonet)

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- 1 Thickly spread bread slices with butter and then cut into chunky fingers (or small squares if you are posh)
- 2 Put half of the bread into a 1litre buttered ovenproof dish and delicately sprinkle with all the fruit and half the sugar.
- 3 Arm yourself with a whisk and vigorously beat the eggs, milk & cream together. Then strain (the mix not yourself) into the dish over the milk.
- 4 Leave to stand for 40mins so that the bread has plenty of time to soak up the delicious dairy goo.
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1 Free Range egg – beaten  
25g. Butter (for cooking)



Open the chicken supreme without dislodging the under fillet completely. Melt the butter until soft, remove from heat and combine with cheese, tarragon, grind a few peppercorns and mix together. Divide this stuffing evenly into four and stuff each chicken supreme, secure the Supremes, using wooden cocktail sticks. Coat with beaten egg and dip into breadcrumbs, ensuring the coating is even. Heat the butter in a small frying pan and fry the chicken gently for 8 minutes per side until golden brown and cooked through.

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- 1 Wash and bake the potatoes for one and a half hours @ 160°C electric/ gas mark 3.
- 2 Heat a frying pan and dry fry the sesame seeds in the pan, constantly stirring for about 5 mins, cast aside the seeds on a side plate to cool (beware they will be very hot).
- 3 Heat the sesame oil in the frying pan, fry off the ginger, add the soy sauce, enough to make a sauce to drizzle over the baked potatoes.
- 4 Plate the baked potatoes, split down the middle with a sharp knife, season with salt, drizzle the sauce and garnish the dish with the toasted sesame seeds and coriander.
- 5 Serve immediately.

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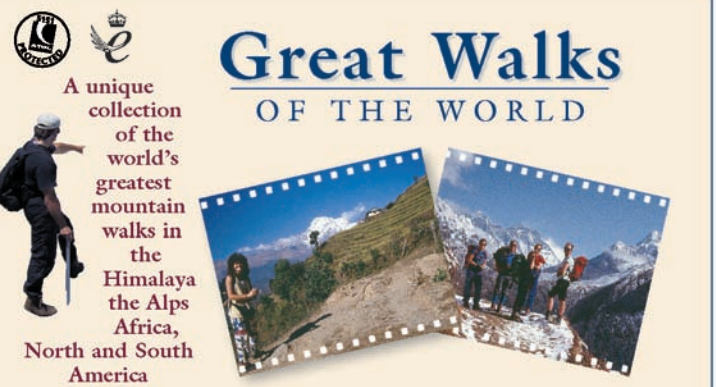
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Edited James D. La Fleur  
*João Rodrigues's Account of Sixteenth Century Japan*  
Edited by Michael Cooper  
In preparation  
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Edited by Glyndwr Williams, Carlos Novi, Felipe Fernández-Armesto & Andrew David

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Speakers: Janet Brown, WWF-UK; Richard Harrington, Marine Conservation Society; Dr Joe Pecorelli, London Aquarium; Dr Tony Rice, retired deep-sea biologist; Peter Richardson, Marine Conservation Society; Mark Simmonds, Whale and Dolphin Conservation Society; Dr Sharon Thompson, Royal Society for the Protection of Birds; Alex Wilson, Marine Connection.

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### ACT NOW

**Start your own community group** with the International Society for Ecology and Culture's Roots of Change programme of guided community study. ISEC helps to set up small local groups that meet once or twice a month to implement the writings of the world's leading ecological thinkers and activists. ISEC staff are available throughout the programme, both to provide logistical support and to suggest avenues for further study. Tel: (01803) 868650; email: [info@isec.org.uk](mailto:info@isec.org.uk); for more information, visit: [www.isec.org.uk](http://www.isec.org.uk)

**Challenge Dow Chemical** to clean up its act. Dow Chemical owns the former Union Carbide factory in Bhopal, India. Greenpeace is asking for support in challenging Dow Chemicals to take responsibility for the toxic contamination still leaking from the plant. Tel: +1-989-636-2544; for more information, visit: [www.greenpeace.org](http://www.greenpeace.org)

**Speak out against the war on Iraq.** Project Underground is encouraging you to write directly to George W Bush and voice your opposition to the planned attacks. For more information, visit: [www.moles.org](http://www.moles.org) Write to: George W Bush, US President, Washington Office, 1600 Pennsylvania Avenue, NW, Washington, DC 20500, USA; email: [president@whitehouse.gov](mailto:president@whitehouse.gov)

**Write an online letter concerning global warming** to your president or prime minister. A sample letter can be found at: [www.earthaction.org/en/letter.html](http://www.earthaction.org/en/letter.html)

**Let the Russian president know your views on the Kyoto treaty.** If Russia ratifies it, the climate change protocol will come into effect. Russia has vowed to ratify the treaty on several occasions and had been widely expected to do so this year. However, a recent report indicates that the Russian government is now wavering in its commitment. Follow the link below to send Vladimir Putin an e-mail.

<http://forests.org/emailaction/russia.htm>

### VOLUNTEER

Get first-hand experience of organic or other ecologically-sound growing on an organic farm.

WWOOF compiles an international list of organic farms that welcome volunteers. Join to receive a copy and contact the farms that interest you. Write to PO Box 2675, Lewes BN7 1RB U.K; or visit: [www.wwof.org](http://www.wwof.org)

**Take a short course in orientation, training and preparation for becoming a volunteer.** The Volunteer Service Programme (VSP) of the Institute of Cultural Affairs is a highly participatory programme for all those interested in volunteering overseas. It has trained and placed over 300 UK volunteers since 1981 with local development organisations worldwide, on projects that emphasise community participation and self-help initiative. Write to the VSP Co-ordinator, PO Box 171, Manchester M15 5BE; tel: 0845 450 0305; email: [vsp@ica-uk.org.uk](mailto:vsp@ica-uk.org.uk); visit: [www.ica-uk.org.uk](http://www.ica-uk.org.uk)

**Be a green volunteer.** Choose from projects and organisations across a wide range of species, habitats and locations. Visit: [www.greenvol.com](http://www.greenvol.com) for more details. Two selected projects are listed below.

**a. Orkney seal rescue centre, Scotland.** Volunteers help with the care, cleaning, food preparation and feeding of 50 abandoned seal pups. Participation may involve the rescue and release of seals. Project is year-round (except April and May). Minimum four weeks. Cost: £20/week for food. Tel: +44 (0) 1856 831 463; email: [selkiesave@aol.com](mailto:selkiesave@aol.com)

**b. Sea-turtle conservation programme, San José, Costa Rica.** Join a non-profit association dedicated to uniting biodiversity conservation and equitable socio-economic development. Working with the local community to protect the leatherback sea turtle nesting population by improving the beach habitat and protecting the turtle eggs from poaching and domestic predators. Volunteers mainly work to patrol the beaches and retrieve and relocate turtle eggs and nests. Project runs from March to July. Duration: one week to six months. Registration fee: US\$25. Full room and board costs US\$6-15/day. Online application form at: [www.anaicr.org](http://www.anaicr.org); tel: + (506) 224 3570/ 224 6090; fax: + (506) 253 7524; email: [volunteers@racsa.co.cr](mailto:volunteers@racsa.co.cr)

**Support indigenous peoples and join the volunteers needed for the Kan Tan Project.** The main aim of the volunteer project is to assist with the creation of a traditional Brunka house (*rancho*) within the Kan Tan Indigenous Territory in Costa Rica. Dates: March 24 to May 20, 2003. Contact Victoria. Email: [McNeil@workingabroad.com](mailto:McNeil@workingabroad.com). For this and many other opportunities abroad, visit: [www.workingabroad.com](http://www.workingabroad.com)

**Volunteer with Re-Cycle.** Re-Cycle collects second-hand bikes and parts in the UK and ships them to developing countries where, with the help of partner charities, local people are taught how to repair and maintain their bikes at community workshops, helping them to improve their own lives in a sustainable manner. Re-Cycle is looking for a volunteer to help support its efforts. Expenses covered. Essex. Tel: 01206 38 2207; email: [info@re-cycle.org](mailto:info@re-cycle.org). For more information, visit: [www.re-cycle.org](http://www.re-cycle.org)

**Be a part of a Thames river community project.** The Thames Explorer Trust (TET) is looking for part-time volunteers for a variety of tasks. TET is an innovative charity promoting the value of the Thames as a community and educational resource in the Greater London area. Volunteers are needed to work on on-going and one-off environmental projects along the Thames and London's waterways. A variety of opportunities exist – from biological survey work with local communities to event organising. Expenses and relevant training are covered. Tel: 020 8742 0057; email: [info@thames-explorer.org](mailto:info@thames-explorer.org); visit: [www.thames-explorer.org.uk](http://www.thames-explorer.org.uk)

**Help promote green energy.** The National Energy Foundation's Green Energy Options project is looking for volunteer support in its Milton Keynes office. The work includes research, office duties and visiting schools and venues to demonstrate renewable energy. Tel: 01908 665 555; email: [chris@greenenergy.org.uk](mailto:chris@greenenergy.org.uk); visit: [www.greenenergy.org.uk](http://www.greenenergy.org.uk)

**Be an environmental youth educator.** Envision UK has started a new programme called the Young Envisionaries Award (YEVA). YEVA is an innovative youth empowerment programme that helps to channel the creativity and passion of some remarkable 16-18-year-olds into making a difference in their schools and communities – thereby realising their capacity for positive change. Envision is seeking two volunteer environmental youth educators to support each YEVA team, meeting them for around an hour per week. London. Tel: 020 7431 5626; email: [nick@envision.org.uk](mailto:nick@envision.org.uk); visit: [www.envision.org.uk](http://www.envision.org.uk)

**Join the Pesticide Action Network UK (PAN UK).** Our main requirement is for additional support with administration and information management, but there is scope for supporting a volunteer who has an interest in developing research in the areas of our activities. Eurolink Centre, 49 Effra Road, London SW2 1BZ; tel: +44 20 7274 8895; email: [admin@pan-uk.org](mailto:admin@pan-uk.org) Details on: [www.pan-uk.org/Jobs\\_PAN\\_UK](http://www.pan-uk.org/Jobs_PAN_UK)

**Friends of the Earth needs your help** to carry out a variety of administrative support work – from helping with mail-outs and press cuttings to assisting with research and information

gathering. Opportunities at the head office in London, at any regional office, with local groups or overseas. Tel: +44 (0)20 7490 1555. [www.foe.co.uk/press\\_for\\_change/volunteer](http://www.foe.co.uk/press_for_change/volunteer)

**Expedition leaders, science staff and medical officers required** for voluntary work overseas on tropical reef and tropical forest survey projects. Email: [js@coralcaly.org](mailto:js@coralcaly.org)

**Sustain, the alliance for better food and farming, relies on the work of volunteers** and often has positions available. Their contribution is essential, especially to the administrative running of the organisation. The work is office-based and in Islington, central London. For more information, please contact Kate on 020 7837 1228, or email: [kate@sustainweb.org](mailto:kate@sustainweb.org)

**Conservation Volunteers Northern Ireland is looking for a part-time Community Projects Volunteer Officer** to work on the new 'Environments for All' initiative that aims to help disadvantaged minority groups. Belfast. Tel: 028 9064 5169; email: [d.holly@btv.org.uk](mailto:d.holly@btv.org.uk) For more information, visit: [www.btv.org.uk](http://www.btv.org.uk)

### FIND A CAREER

**Join Earthspirit.** Centre manager needed. Self-motivated person sought for hands-on domestic/administrative work. Lovely self-contained flat. Might suit couple. Near Glastonbury. Job description, etc, from: Bettina/David on 01458 274130/272161; email: [earth.spirit1@virgin.net](mailto:earth.spirit1@virgin.net)

**Find rewarding and challenging career options from this diverse range of vacancies.** Growing-careers.com provides a unique overview of vacancies available in the following sectors: fresh produce; nurseries and garden centres; landscapes; gardens and design; environment and conservation; horticultural and land-based engineering. [www.growing-careers.com](http://www.growing-careers.com)

**Find a vacancy or volunteering opportunity in the UK environmental sector.** Listings for opportunities in conservation, environmental campaigning, renewable energy, recycling, ecology, environmental education, organics and sustainable development. Visit: [www.environmentjob.co.uk](http://www.environmentjob.co.uk)

**New appointments and training opportunities on ENDS environmental job search.** Updated weekly. Including: contaminated land consultants; project development manager; and senior air quality consultants. Visit: [www.ends.co.uk/jobs](http://www.ends.co.uk/jobs)

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### HOLIDAYS

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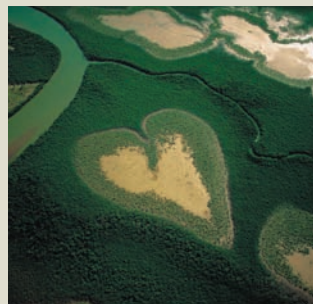
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## EARTH FROM THE AIR



Earth from the Air is a spectacular collection of large-scale photographs of astonishing natural landscapes. Created by world-famous photographer Yann Arthus-Bertrand, every stunning aerial photograph tells a story about our changing planet. A free open-air exhibition in the gardens of the National History Museum, Kensington, London, open from 10am–8pm daily. For more information, visit: [www.earthfromtheair.com](http://www.earthfromtheair.com)

## FEBRUARY

### SALE OF THE CENTURY

The last dates of the World Development Movement's GATS national tour. Come and hear excellent speakers from India and Trinidad. For more details and exact locations, call Helen on 020 7738 3311 or visit: [www.wdm.org.uk/action](http://www.wdm.org.uk/action)  
**26 FEBRUARY** – Bristol and Stroud  
**27 FEBRUARY** – Exeter and Newcastle  
**28 FEBRUARY** – Shrewsbury and Edinburgh  
**1 MARCH** – Coventry and Glasgow

## MARCH

### 4 MARCH, LONDON, UK

**The Decline and Recovery of Otters to English Rivers.** A lecture on the threats to the otter and the conservation measures being taken to protect its future. Zoological Society of London. Tel: 020 7449 6313; email: [tuesdaytalks@zsl.org](mailto:tuesdaytalks@zsl.org)

### 5 MARCH, SHREWSBURY, SHROPSHIRE, UK

**The use of homeopathy in organic systems.** One-day training event at The Farm in Lognor, Shrewsbury. Contact Angela Wescott at the Soil Association on 0117 929 0661 (ext 7587); email: [info@soilassociation.org](mailto:info@soilassociation.org)

### 6 MARCH, LONDON, UK

**Holding Corporations Accountable: The Civil Society Difference.** Noreena Hertz and Adele Simmons at 6.30pm at the London school of Economics. Event is free and open to all, but ticket is required. Tel: 020 7955 7583. E-mail: [events@lse.ac.uk](mailto:events@lse.ac.uk) For more information visit: [www.lse.ac.uk/events](http://www.lse.ac.uk/events)

### 6 MARCH, LONDON, UK

**Questioning security terrorism in a globalised world.** An evening with John Gray, Caroline Lucas and Satish Kumar. At Demos, The Mezzanine, Elizabeth House 39 York Road. Cost – £5.00, with wine 6pm. For enquiries and bookings – tel: 01237 441293; email: [peterlang@resurgence.org](mailto:peterlang@resurgence.org)

### 7 MARCH, ACCRINGTON, UK

**Lancashire Food Festival.** Features demonstrations, food stalls, free tastings and traditional Lancashire music. Accrington Town Hall. [www.lancashirefoodfestival.co.uk](http://www.lancashirefoodfestival.co.uk)

### 8 MARCH, LONDON, UK

**Free Tibet Campaign annual march** from the Chinese Embassy to Whitehall. Assemble from 11am opposite the Chinese Embassy, 49-51 Portland Place. March starts at 11.30am. Further details on 020 7833 9958; or email: [mail@freetibet.org](mailto:mail@freetibet.org) Visit: [www.freetibet.org](http://www.freetibet.org)

### 8 MARCH, LONDON, UK

**Phone Mast Rally.** Gather in Hyde Park at 12pm for a march to Trafalgar Square at 1.30pm, where there will be speeches. Leading activists and academics will be on hand. Contact: 0161 427 7977; or email: [info@planningsanity.co.uk](mailto:info@planningsanity.co.uk)

### 8 MARCH, LONDON, UK

**Earthwatch open day.** Learn about opportunities to conserve the environment all over the world. Tel 01865 318 856; e-mail: [info@earthwatch.org.uk](mailto:info@earthwatch.org.uk) Website: [www.earthwatch.org/europe](http://www.earthwatch.org/europe)

### 12 MARCH

**World Day of Action against Seal Hunting.** Called by the Coalition to Abolish the Fur Trade. Tel: 0845 330 7955/ 07939 264864; email: [caft@caft.demon.co.uk](mailto:caft@caft.demon.co.uk); visit: [www.caft.org.uk](http://www.caft.org.uk); [www.banfur.com](http://www.banfur.com)

### 13-14 MARCH, WASHINGTON DC

**The Sixth Annual World Research Institute Sustainable Enterprise Summit.** Will focus on actions that support new green markets and which train business leaders to manage for sustainability. Tel: +1 202 729 7635; email: [lydiav@wri.org](mailto:lydiav@wri.org); visit: [www.wri.org/wrisummit](http://www.wri.org/wrisummit)

### 13-16 MARCH

**Fairtrade Fortnight.** The challenge is to convince consumers that Fairtrade products not only guarantee a better deal for farmers in the South – but taste great too. To find out more, visit: [www.fairtrade.org.uk/fortnight2003](http://www.fairtrade.org.uk/fortnight2003)

### 13-16 MARCH

**GATS Action Days** Contact Friends of the Earth to see what creative public action is being planned for the UK. E-mail: [evem@foe.co.uk](mailto:evem@foe.co.uk) Visit: [www.s2bnetwork.org](http://www.s2bnetwork.org)

### 14 MARCH, STONELEIGH, UK

**Food for Thought.** A one-day conference on current international development, agricultural and environmental issues. Organised by Oxfam this will include high profile speakers and will be followed by workshops. Stoneleigh, near Coventry. Tickets cost £35/£75. Contact Austin on 0121 609 4102, or email: [aullloyd@oxfam.org.uk](mailto:aullloyd@oxfam.org.uk)

### 15 MARCH, LONDON, UK

**War on Want Annual Conference** Speakers include former Irish president and UN human rights activist Mary Robinson and Jeremy Hardy of *The Guardian*. University of Westminster, New Cavendish Street. For tickets, contact Nick Dearden at [ndearden@waronwant.org](mailto:ndearden@waronwant.org) or tel: 020 7620 1111.

### 16-17 MARCH, BRIGHTON, UK

**The Natural Trade Show** is a trade-only event dedicated to the future of independent and organic suppliers. At the Brighton Metropole. Contact Stuart on 01875 611554; email: [stuart@naturaltradeshow.com](mailto:stuart@naturaltradeshow.com); visit: [www.naturaltradeshow.com](http://www.naturaltradeshow.com)

### 17-21 MARCH, PRAGUE, CZECH REPUBLIC

**Towards car-free cities III 2003.** The conference will bring together people from across Europe and beyond who are promoting alternatives to car dependence and car culture. Hosted by Car Busters at the Toulucv Dvur Ecological Centre. Email: [info@carbusters.org](mailto:info@carbusters.org); visit: [www.carbusters.org/conference](http://www.carbusters.org/conference)

### 21 MARCH

**International Earth Day.** Set aside one day to look at the environment we live in. Promote ecology and bolster awareness of global air, water and soil pollution. Over 140 countries participate in Earth Day. Organise an event in your area. For more details, go to: [www.earthsite.org](http://www.earthsite.org)

### 22 MARCH

**World Water Day** The theme for this year's event is 'Water for the Future'; calling on one and all to observe sustainable approaches to water use for the benefit of future generations. [www.unep.org](http://www.unep.org)

### 24-25 MARCH, NOTTINGHAM, UK

**International Sustainable Development Research Conference** Jubilee Campus, University of Nottingham. For further information, contact: ERP Environment on 01274 530408; email: [elaine@erpenvironment.co.uk](mailto:elaine@erpenvironment.co.uk); visit: [www.erpenvironment.org](http://www.erpenvironment.org)

### 25-27 MARCH, LANCASTER, UK

**The British Ecology Society annual symposium.** University of Lancaster. This year's topic is soil biodiversity and function. For more details, visit: [www.britishecologicalsociety.org](http://www.britishecologicalsociety.org)

### 27 MARCH, CHILTON CANTELO, SOMERSET, UK

**Pest and disease control in organic glasshouse crops.** One-day training event at Cantelo Nurseries in Chilton Cantelo. For further information, contact: Angela Wescott on 0117 929 0661 (ext 7587); email: [info@soilassociation.org](mailto:info@soilassociation.org)

### 28 MARCH, LONDON UK

**Designed by Nature.** An evening with: Janine Benyus, Rupert Sheldrake and Satish Kumar; 6.15pm for 6.45pm. Venue: The Princes Foundation, 19-22 Charlotte Road, Old Street, EC2. Admission: £5.00 with wine. Enquires and bookings on: 01237 441293. Email: [peterlang@resurgence.org](mailto:peterlang@resurgence.org)

### 28-30 MARCH, TORONTO, CANADA

**A three-day Toronto Social Forum** of resistance and alternatives to corporate-led globalisation. [jconway@ryerson.ca](mailto:jconway@ryerson.ca)

### 29 MARCH, LONDON, UK

**Kyoto March.** Two years after Bush abandoned the Kyoto protocol we are having a 'March to the End of the World' from the ExxonMobil HQ in Leatherhead to the US embassy in London. A rally at the Imperial War Museum at 3.30pm begins the march's final leg to the US embassy, where an End of the World Party begins at 5.30pm. For more info, call 020 8855 3327 or email: [info@campaigncc.org](mailto:info@campaigncc.org)

### 5-26 MARCH, LONDON, UK

**Global Development Forum Lectures.** A series of debates to discuss the future of the planet. Held at St James's Church, Piccadilly; 7pm. Tickets cost £5/ concessions £3. For more details, contact: [enquiries@global-development-forum.org](mailto:enquiries@global-development-forum.org); or visit: [www.global-development-forum.org](http://www.global-development-forum.org)

### 5 MARCH

'Corruption is an Inevitable Part of Economic Development' (starts 7.30pm)

### 12 MARCH

'Will the Expansion of the EU be at the Expense of our Concern for the South?'

### 19 MARCH

'Are Voluntary Organisations from the North Agents of their Governments in the South?'

### 26 MARCH

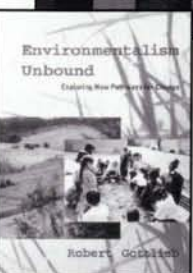
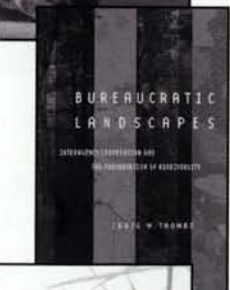
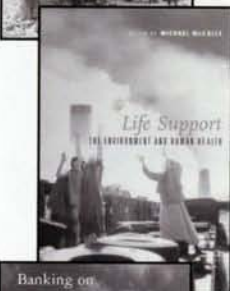
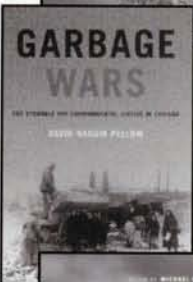
'Multinational Corporations: Engines of Growth or Global Monsters?'

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