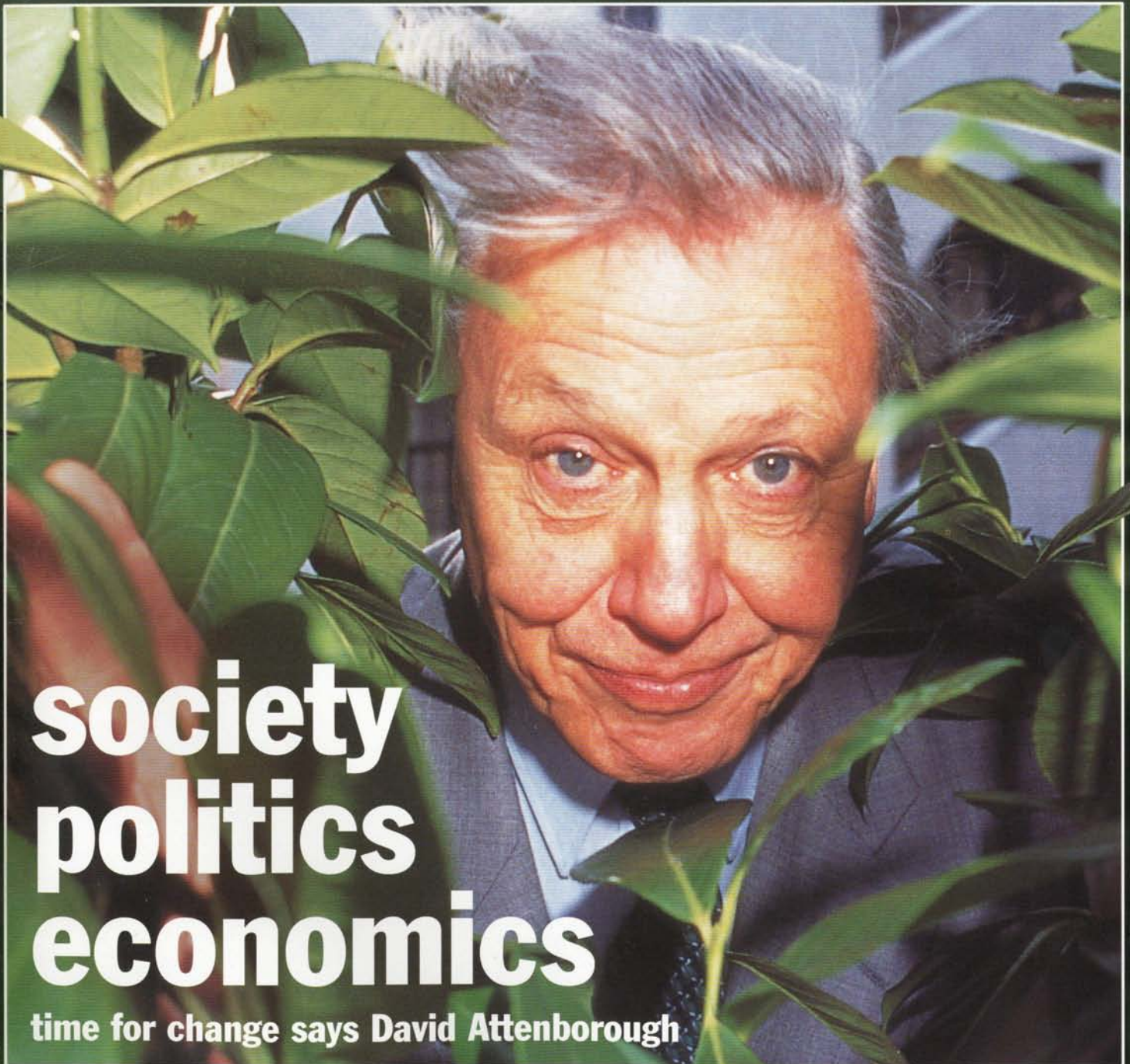


THE Ecologist

VOLUME 31 NO 3 £3.50

RETHINKING BASIC ASSUMPTIONS

APRIL 2001



**society
politics
economics**

time for change says David Attenborough

SECRET WAR
175 million nuclear
deaths and counting

KEEPING SCORE
Where is your nation
in our list of polluters?

ZAPATISTAS
Understanding the
Mexican marchers



RENATE KÜNAST · SATISH KUMAR · LYNNE McTAGGART · FRED PEARCE

- UNTOUCHABLE
- PROSTITUTE
- BEGGAR
- SERVANT
- ADDICT
- CORPSE



WHAT CHOICE DOES SHE HAVE IN CIVILISATION? This girl is one of the Jarawa. For thousands of years they have thrived on a tiny cluster of islands in the Indian Ocean. Now all that is changing. The government of India, to which these islands belong, laid out a Master Plan for resettling the Jarawa in one place. Precisely the type of scheme which history has repeatedly proven to be disastrous. According to one expert unless the government changes its policies, the Jarawa "will end up as beggars, servants and prostitutes." Survival is urging India to let the Jarawa decide their own future. The essential first step: that they be secure in their ancestral lands. Call Survival on 020 7242 1441 or visit www.survival-international.org

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WARNING: TERRORIST MATERIAL

You know a political system is under serious threat when it resorts to draconian, authoritarian laws designed to shield it from even the mildest criticism. If that is true, then we should take heart from New Labour's Terrorism Bill, which came into force in February. For contained within its statutes are laws so rigid that virtually every citizen of this country concerned about the path we are currently treading has at one point in their lives committed an act of terrorism.

The new Terrorism Act is an act of self-defence by a political system that understands the contempt in which it is held by its constituents. Recent events, like the protests against globalisation or against the government's attitude towards the countryside have pushed the government against a wall. In response it is building up its fortress, in the knowledge that with each concession made by our leaders to unelected corporations, the backlash will widen and more and more people not usually prone to such measures as civil disobedience will get involved.

The new Act effectively outlaws support for anything other than the status quo, and labels some of the greatest acts of defiance in history as 'terrorism'. For terrorism has become a club where Saddam may now hold hands with Lord Melchett.

How to join? Try wearing a T-shirt in support of the Free Tibet campaign. That might make you a 'terrorist' under section 13 forbidding the 'wearing of uniform or items of clothing supporting a "proscribed" organisation'. Though not technically 'proscribed', any form of direct action protest against the Chinese attempt to render Tibetans a minority in their own land neatly fits the bill. If that fails, you could organise a mass-fax protest directed at Number 10 calling for a fair referendum on the Euro. It's important to synchronise though, so that 'serious disruption of an electronic system' is achieved. Do that and you're in the club, possibly earning 10 years in the process.

Baking cakes for the fuel blockaders could pass as 'support' for a terrorist group. They were hopelessly criminal, according to the new definition of 'terrorism' which includes 'a threat of action where the use or threat is designed to influence the government'. Providing blankets for road protesters would similarly fit the bill, their campaigns designed, as they were, to 'advance a political, religious or ideological cause', and caused 'serious damage to property'.

Which brings me back to Lord Melchett, another known terrorist. Despite being acquitted following his arrest for uprooting genetically modified crops, he was in clear breach of great chunks of the Act. And because we applauded his action, and that of his colleagues in other anti-GM direct action groups, we would have been nearly as guilty as he. Why? Because merely supporting such an action is deemed 'terrorist'.

Government actions, like the recent bombing of Iraq, do not fall within the jurisdiction

of the Act. But what of otherwise legal organisations making use of government-released information? If we were to advise our readers, for instance, that a swift visit to www.environment.detr.gov.uk, (a government website), would reveal names and addresses of areas destined to host trials of herbicide-resistant crops, would that be illegal? It would certainly enable our more active readers to engage in terrorist wrongdoing. And what if we advised our readers local to those areas that the decent thing to do would be decontamination? Would that be a direct abuse of this law?

Yet perhaps the most extraordinary aspect of the new Act lies in the fact that Labour, by passing it, have effectively classed their own heritage as terrorism. Back in 1887 workers in Britain washed their hands of the Tories and Liberals, both of which were seen to have failed them in their efforts to achieve representation at government level. Mounting agitation led to a ban on riots and disorderly conduct which in turn led more than 100,000 workers to gather in Trafalgar Square where they were set upon by police. Three died, 160 were imprisoned, and the Labour Party was effectively born.

The government tells us that the new law will only be used as a defence against extremes. But who is to judge what constitutes extremism? Surely the Act depends entirely on the neutrality of the government of the day? If that is so then why should we believe that any government is truly 'objective'. The very basis of government after all, is subjective views on how things ought to be.

More likely, the new Act will be deployed after the dust has settled, and the people become accustomed to living beneath its shadow. This was the tactic employed on news of Dolly the sheep's 'birth'. Human cloning, we were assured, will never be allowed.

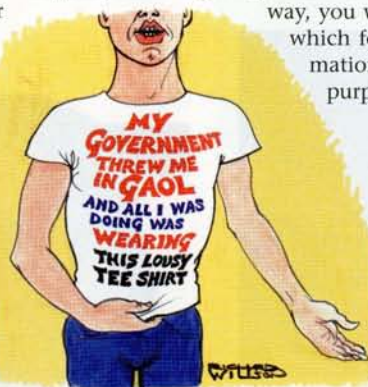
Just months later, the tune has changed dramatically. In the case of 'terrorist' organisations like Greenpeace, the biotech saboteurs and the perilous fuel protesters, it is unlikely the law will be used to its maximum for fear of public outcry. But other less prominent organisations may not be so lucky. For merely a suspicion of wrongdoing gives the powers of lengthy investigation directly to the police.

There is, though, safety in numbers. And the sheer breadth of the new Act ensures that those in breach of it are in big company.

Still feeling left out? Not a problem. Simply pop a copy of this edition of *The Ecologist* into your pocket and show it around to others. That way, you will be in breach of section 58 which forbids 'the collection of information that may be useful for the purposes of terrorism'.

ZAC GOLDSMITH

[Note: To put this new Act into context, the above text includes, according to in-house calculations, eight potentially 'terrorist' offences. Meanwhile, for further information on the Terrorism Act, turn to page 64.]



THE Ecologist contents

VOLUME 31 NO 3, APRIL 2001



COVER FEATURE

David Attenborough must be Britain's most famous naturalist. Over the last 50 years he has come to define 'wildlife' in the public mind, with his pioneering natural history TV programmes. More recently, he has produced a series for the BBC which warns of a global environmental crisis, and suggests that radical action will be needed to tackle it. But what does Attenborough himself think about the state of the planet, and what should be done about it? What are his views on globalisation, political systems, climate change, Europe or the root causes of the global threat to wildlife and habitats? In an exclusive interview, deputy editor Paul Kingsnorth seeks out the opinions behind the public face. Page 34.

Cover photograph: Capital Pictures



FEATURES

28 The secret nuclear war **cover story**

The nuclear industry is a killer. But just how many people have died as a result of it? In a shocking report, Eduardo Goncalves counts the cost.

34 Strife on Earth **cover story**

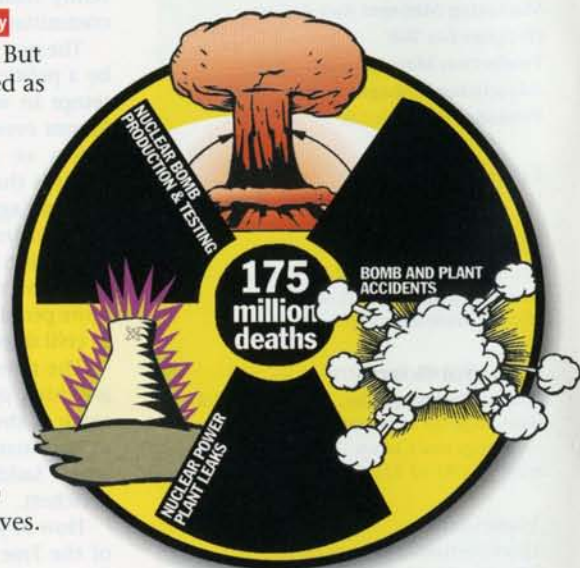
The internationally famous naturalist reveals his fears for our future to Paul Kingsnorth.

40 Many nappy returns

They may be quick and easy, but disposable nappies are an environmental nightmare. Rob Edwards seeks out the alternatives.

44 Keeping score **cover story**

Which countries are the true polluters of the world? We present a special Ecologist/Friends of the Earth analysis: state by state.



COMMENT

48 Renate Künast

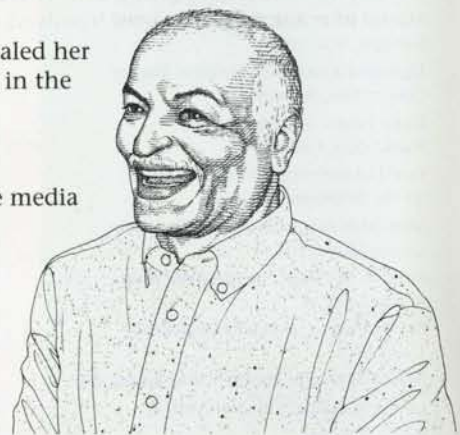
The German agriculture minister has revealed her ambitious plans for revolutionary change in the agricultural sector.

50 Jeremy Seabrook

The medium may be the message, but the media is most definitely not.

51 Satish Kumar

If bread is the staff of life, then the pap we have served up to us today is a powerful symbol of our declining spiritual standards.



PROFILE

24 The Good, the Bad and the Ugly

This month we profile two 'creators' of life, but with different values: while Wangari Maathai plants trees, Professor Severino Antinori clones babies.



REPORTS

52 Mexican wave **cover story**

Mexico's Zapatista rebels have just marched on Mexico City to demand indigenous rights and control of their lives. John Ross reports.



54 The blotting of Indian Inc

Matilda Lee profiles an Indian community's fight against World Bank-sponsored coal mining development.

56 Polluting the poor

Simon Bullock of Friends of the Earth unveils a statistical connection between UK poverty and pollution.

58 When forward is backward

Penelope Jacquacu reveals the full extent of Avança Brasil's devastating plans for the Amazon rainforest.

REGULARS

6 Letters

Readers have their say.

8 News

The latest events and stories from around the world.

14 Campaigns

Find out what's going on, where, when, and how to get involved. Plus, bone up on the latest, and best, Internet-based campaigns.



V



20 Debate

'Localisation' is a key aim of the green movement. But how far should it go? Editor Zac Goldsmith and deputy editor Paul Kingsnorth explore the limits.

27 Doctor's handwriting

Lynne McTaggart exposes the medical profession's shortcomings when dealing with candida.

60 Reviews

Books, exhibitions and more fall under the microscope. Plus: an overview of the Terrorism Act 2000.

65 References

66 The Crow

Religion is used as a tool to misrule.



NEXT MONTH

Join us for the results of the Great British Environmental Survey, and find out what the country really thinks about the main issues of the day.

Hazards at home: Martin J Walker reveals the dangers inherent in our everyday household objects.

Eduardo Goncalves draws back the curtain on an extraordinary grave-digging exercise by medical institutions of the world.

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Please attach your name and postal address, even when sending by email. The editor reserves the right to shorten or edit correspondence where necessary.

BRIDGING THE GAP

I am puzzled. I always thought I was on the left of politics because I was fighting against the abuses that the top are inflicting upon the bottom of society (including nature). As far as I can see, if Nader is fighting for the bottom against the top (*Mr Nader goes to Washington*, Vol 31, No 1) then he is a left-winger, no matter how much he pretends that 'politics has changed'. The divide between the bottom and the top continues to widen. How could this possibly mean that the left is somehow obsolete? The environmental crisis is above all one of distribution. It is mainly caused by the 'global top' consuming so much that the bottom has nothing, or only polluted air and soil, left to live on. I cannot see another way out, than by calling for environmental justice for all.

DANIEL MITTLER

Friends of the Earth, Germany

GET IT TOGETHER

Colin Hines's article (*The New Protectionism* Vol 31 No 2) indeed points the way to the regenerated local economies needed if the destructive effects of global trade are to be remedied.

However, whilst recognising that 'such a dramatic turnaround in the direction of the international economy could not just occur in one country', Hines then illogically concludes that '...the powerful international forces of international capital and big corporations would require these policies to be introduced, for example, EU-wide or across the whole of North America... and once one place had done it, an example would have been set'.

Surely the whole point about international competition is that even the EU or the whole of North America cannot 'go it alone' for fear of capital and corporate flight? For the Localisation policies Hines advocates would be seen by global financial markets and corporations as running counter to their interests, thus forcing them to escape that regulation. If, say, the EU intended to go it alone by re-regulating its capital markets and multinationals first, as Hines suggests, there would be a substantial capital and employment outflow from the EU which would become an inflow enjoyed by the US and other economies at the EU's expense. As such, not only would there be a negative effect on the EU, but also a positive effect on its

DEMOCRACY IN QUESTION

Peter Shore's article (*Hands up if you voted for Europe*, Vol 31 No 1) is a remarkable example of how people can deceive themselves into believing what is patently untrue. So, our democracy is threatened by the unelected Brussels commissioners? What is this wonderful democracy that we have at home? As has often been said, our prime minister runs an elective dictatorship. He is, as I write, negotiating with a foreign power over whether they shall be given further military facilities. Will he ask for parliamentary permission first? Will he hell. He goes to war and bombs other countries purely on his own initiative, seeking permission only, or at the orders of, the foreign power whose willing servant he is

happy to be.

Half of our parliament is composed of either hereditary peers or the dictator's placemen. The other half, with noble exceptions, is composed of spineless cannon fodder.

If Mr Shore is worried about undemocratic structures in Brussels, he might like to turn his eye nearer home where, arguably, far more potentially dangerous decisions are taken at the whim of one man holding unchecked power. Even worse are the facts that this dictator gained ascendancy on the basis of an unfair voting system, he rules with the support of a minority and attracted even fewer votes than his predecessor.

HOWARD CHENEY *Warwickshire, UK*

competitors. Self-inflicted harm is, I suggest, hardly an 'example' North America would wish to follow and hardly, therefore, an example the EU and its citizens are likely to set in the first place.

Furthermore, any political party advocating such a foolhardy move, (the Greens as Hines suggests), will only succeed in further marginalising itself.

So: right problem analysis, but wrong solution. Isn't it high time we stopped burying our heads in the sand and started recognising that global problems require global and simultaneous solutions?

JOHN BUNZL

International Simultaneous Policy Organisation, London, UK

MARKET FORCES

I followed with great interest the debate over small farms between Séan Rickard and Steven Gorelick. What is always most striking to me is how ideological fervour can obscure the most obvious observations – on both sides of the argument.

I would have loved to take Mr Rickard out with my childhood neighbour, a small farmer, and have him explain that BSE is not linked to farm size. Mr. Böhm, the farmer, would have laughed about the idea of buying sheep's brains to feed his cows; there is lots of free grass out there for his six cows. Obviously, BSE, pesticide overuse, RbGH and genetically modified crops go hand in hand with

agricultural industrialisation.

On the other hand, Mr. Gorelick's assertion that the notion of 'rational people choosing efficiency over inefficiency is Western bias' is inaccurate. It really reveals the bias of successful economies over unsuccessful ones – throughout the roughly 10,000 years of post-hunter-gatherer societies. Sure, not everybody subscribes to these principles of economic efficiency for reasons of tradition or because a local elite trying to maintain its privileges discourages innovative thinking. Throughout history, though, societies have faltered because they rejected efficiency increases, preferring 'the old ways'.

To me, it is evident that Western-style mono-cropping is a destructive system. Not destructive of jobs, as Mr. Gorelick would have it. The farm jobs that disappear emerge somewhere else. But environmental destruction, pollution, the introduction of unnatural toxins, hormones and genes into the food supply, paired with the depletion of nature's genetic plenty are indeed reasons for me to reject high-tech farming.

The answer, I believe, lies not in the size of the farms. Mr. Rickard is right that limiting farm size (and thus limiting farm efficiency) in an otherwise efficiency-driven economy would simply condemn the small farmer to poverty. The answer lies in the farming techniques employed, and speaking like a true economist for a



moment, the incentive system provided by society.

We allow large industrial farms to externalise their greatest costs. Chicken farmers in the eastern United States dump their excess manure on fields, destroying the local waters in the process. Hog farmers make entire areas unlivable with their lakes of smelling waste which routinely burst. Millionaire US ranchers get huge subsidies to graze their cattle on public land. Cleanup, of course, is paid by the taxpayer.

If we forced our farmers to pay for all the costs to society they create – indeed a true market would demand that all costs be paid in full by whoever caused them – we would soon find that the multi-cropped farm with its interplanted crops to reduce infestation, with its multitude of crops to avoid rapid soil depletion and with its mix of perennial and annual crops to reduce soil erosion beats any industrial mono-cropping farm in efficiency.

THOMAS JANDL
Bellona, Washington, DC, US

FINE ART

It was good to see you promoting the link between art and the environment by publishing Denys Trussell's piece, (*Unmoving Pictures* Vol 30 No 2). However, Mr Trussell was wrong to criticise the Dada/nihilist tendency of certain artists. What these artists are doing is reminding us of the essential futility of life and that in the great scheme of things we, and all life on this planet, are probably not as important as we like to think we are and that we take ourselves far too seriously.

Despite what Mr Trussell implies most of these artists are anti-consumerism and regard it as an uncontrollable force for destruction. Unlike environmentalists, though, they doubt our ability to do much about it and express this cynicism through their art. It is worth noting that this cynicism took an extreme form in many cases and led to the suicide of a number of Dadaists, and their Surrealist colleagues, when Dadaism was at its height in the 1920s.

Artists, from Marcel Duchamp in the 1920s to Francis Bacon in the 1990s held the view that we are born and we die and what happens in between doesn't matter very much. We have no control of our destructive tendencies and that our existence is essentially futile and without purpose.

Whilst this is not a view most would subscribe to and there are environmentalists, and others, working hard for a sustainable future it is right that artists should

think the unthinkable and test the motives of those who are busy saving the planet. At least some of them made the ultimate sacrifice and died for their beliefs. Mr Trussell shouldn't be too hard on them.

NICK REEVES *London, UK*

BE SHARP ON HAARP

Karl Grossman's otherwise timely and revealing article neglects to mention a specific space threat by the US military that is of great concern: a project known as HAARP (High-frequency Active Auroral Research Project).

Funded by the US Air Force Research Laboratory and the US Office of Naval Research, HAARP is a huge grid of, currently, 48 antennae, situated between Anchorage and Fairbanks, Alaska, designed to pump 3.6 million watts of radio-frequency electromagnetic energy at 3.39 Megahertz into the ionosphere to heat it up. By 2002 it will have 180 transmission towers covering some 30 acres.

One of its main aims is to be able to manipulate the electrojet, a huge stream of electromagnetic energy that flows down into the polar icecap, which the HAARP beam will try to direct and which could be used as a weapon by focusing on any point on Earth. When completed, HAARP will be able to warm specific areas of the ionosphere until they produce a curved-shape lens able to focus huge amounts of electromagnetic energy, making HAARP an integral part of any new 'Star Wars' programme.

Among HAARP's other stated aims are to:

- conduct geophysical probes to identify natural ionospheric processes to enable development of techniques to alter or control them (eg weather manipulation and earthquakes);
- generate extremely low frequency (ELF) waves to enable communication with submerged submarines;
- generate geomagnetic field aligned ionisation to control the reflection/scattering properties of radio waves (ie be able to intercept/disrupt communication systems). Information on HAARP was first brought to the public's awareness by Dr Nick Begich

and journalist Jeane Manning in their book *Angels Don't Play This HAARP* (Earthpulse Press, 1995, www.earthpulse.com), which reveals the extent of the secret preparation and misleading representation of HAARP's real intended functions and its potentially disastrous consequences. It is highly recommended.

Concerning the latter they quote an independent electronics researcher: 'HAARP will not burn holes in the ionosphere. That is a dangerous understatement of what HAARP's giant gigawatt beam will do. Earth is spinning relative to thin electric shells of the multi-layer membrane of ionospheres that absorb and shield Earth's surface from intense solar radiation, including charged particle storms in solar winds erupting from the Sun. Earth's axial spin means that HAARP – in a burst lasting more than a few minutes – will slice through the ionosphere like a microwave knife. This produces not a 'hole' but a long tear – an incision.'

In her recent book *Planet Earth: The Latest Weapon of War* (The Women's Press, London, 2000; reviewed Vol 31 No 1), Dr Rosalie Bertell expands on HAARP's potential role in a 'Star Wars' scenario, while warning that the US military has so far deflected any serious independent investigation of HAARP.

On 17 February the HAARP signal abruptly increased its output to full power, as recorded by a regular observer in California, producing an extremely powerful, direct, ground wave.

The time has come to inform yourself – and demand investigation – of one of the greatest threats to the planet's ecosystem, never mind survival. It requires a special kind of arrogance and irresponsibility to mess with one of the Earth's most important protective shields, ironically in the name of defence.

SIMON BEST
Editor, Electromagnetic Hazard & Therapy
(www.em-hazard-therapy.com), *W Sussex UK*.

CORRECTION: The quote in last month's debate attributed to Andrew Tyler (p 23) was by Roger Scruton. Apologies to all.

JUST A QUICK WORD...

GET BACK AT GATS

Thank you for the article about GATS (*The Last Frontier*, Vol 31 No 1). Could you tell me when the next GATS meeting is scheduled and in what country?

I KINZLEY *Essex, UK*

Editor's reply: The World Development Movement has launched a 'Stop the GATSastrophe' campaign, with information on what's coming up and what you can do. You can find out more at www.wdm.org.uk, or by calling +44 (0)20 7737 6215.

WASTING RUSSIA

Nuclear waste has given rise to Russia's biggest grassroots protest movement

In exchange for what the Russian government estimates could be a \$21bn windfall, the country intends to open its doors to more than 200,000 tons of spent fuel from foreign nuclear reactors for storage and possible reprocessing (see

home) and whilst roughly 70 per cent of the world's spent fuel originated in US-designed reactors, sitting in power plants from Europe to Asia, contracts give the US the final say over where it ends up. And Russia just might be the place. The

US Energy Department, for example is looking favourably upon Russia's import scheme but the State Department insists that it is 'crazy to take more nuclear matter into a country still unable to deal with the nuclear waste



it already has'. Whilst the Russian Atomic Energy Ministry has talked about reprocessing the spent fuel and not storing it, critics say that the ministry will use the foreign funds to finance new reactors; 10 of which have already been announced. According to Alexei Yablokov, a founder of Russia's environmental movement, the Atomic Ministry 'lacks money... to get the money, they will have to store this nuclear waste. Of course, it's very difficult for them to explain to people that we are taking for storage everybody's waste. So they pretend they will be reprocessing it and gaining valuable resources.' More? See www.bellona.org.

However, in light of the increasingly authoritarian Putin regime, no one is sure if or how public pressure can influence the politicians deciding the matter. A recent petition for a national referendum to block the waste that gathered an unprecedented 2.5 million signatures was thrown off the ballot by the Central Election Commission when it 'invalidated' enough signatures. Whilst the US is strongly opposed to reprocessing spent fuel (at

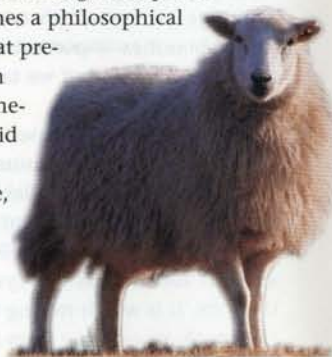
the *Ecologist*, Vol 30 No 6). According to the *International Herald Tribune* the proposal has given rise to the largest grassroots opposition movement in Russia's 10 years of democracy.

SHEEP OR GOATS

Could BSE spread beyond cows?

'Theoretically', according to an EU Scientific Committee report, some of Europe's sheep and goats could be as mad as some of its cows. Although the report is quick to add that so far no sheep or goat outside of a laboratory has ever contracted BSE ('mad cow disease'), tracking the disease in real life is difficult. BSE is almost impossible to distinguish from scrapie, a disease attacking the brain of sheep. The symptoms, and even the effect on the brain cells, are almost identical. The only difference is that meat infected with scrapie is harmless to humans, whilst BSE kills. According to the *Wall Street Journal*, the EU scientific report asks, but does not answer, the question of whether sheep and goats diagnosed with scrapie could actually be infected with BSE. The only way of telling one from the other is by taking brain samples from an infected sheep, inserting them into mice and seeing if they develop BSE. Tests carried out in Britain and France are extremely slow and costly, and so far none have turned up a BSE-infected sheep.

EU officials are now considering an increase in testing for scrapie, and reports suggest that it may be necessary to extend the list of 'high risk' body parts removed at abattoirs because of differences in the way infections spread through sheep and cattle. 'It becomes a philosophical question of what precautions we can take against a theoretical risk,' said a spokesperson for David Byrne, the EU Health Commissioner. How very reassuring.



ECODEFENSE

BBC WILD



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

'I say things because I believe them'

D'OHBYA!

'I have said that the sanction regime is like Swiss cheese—that meant that they weren't very effective.'

White House press conference, February 22

'We're concerned about AIDS inside our White House—make no mistake about it.'

Washington, DC, February 7

'There's no such thing as legacies. At least, there is a legacy, but I'll never see it.'

To Catholic leaders at the White House, January 31

'I am mindful not only of preserving executive powers for myself, but for predecessors as well.'

Washington, DC, January 29



BP'S SUNNY SIDE...

BP is taking its greenwash into our schools

'Together we can make a difference – At BP we're committed to making a positive contribution to a cleaner and safer environment for our children. As part of our commitment, we're educating today's children so that they understand more about environmental hazards and how they can contribute to a greener and safer future. Every year we visit 800 primary schools to teach road safety... which helps to embed the safety message into the curriculum. Today... over 4 million children have benefited through this programme. By educating today's children, we are all the more likely to have a greener future. Our BP Educational Service provides schools, nationwide, with literature and resources... In partnership with teachers, our employees design classroom and site activities for young people. Today, over 230 schools are involved in the scheme that continues to breathe a new spirit into the curriculum... All you have to do is call us on 01202 244041... and we'll help you to make a difference.' Isn't it great to see a caring, sharing oil company doing its bit for the planet? Sadly, though, *The Ecologist's* many attempts to learn how to make a difference ourselves were in vain. We called and called that company hotline – but no reply.

Never mind: we know of at least one person who must have got through. 'We will offer three new specialisms: engineering, science, business & enterprise. They will encourage many more pupils into business and industry.' One of Tony Blair's 'radical' new ideas on education.

...HIDES ITS VAST PROFITS

Don't blame them if your petrol's expensive. It's all someone else's fault

When BP announced – yet again – record profits, of nearly £3bn in the last three months of 2000, its boss Sir John Browne was quick to say that government taxes were to blame for the high price of petrol in Britain. BP, he said, was earning 'almost nothing' from its 1,500 garages. In fact, he said, UK petrol prices were the cheapest in Europe before tax. BP's outstanding profits should instead be attributed to cost reduction from mergers with Arco and Amoco... and to 'improved profitability'.

All true, but beside the point. Rising energy prices are forecast to increase North Sea oil and gas investments by 30 per cent to £4bn, and this is where some of BP's main profits lie. North Sea oil is tax-free, and thus dead cheap. More investment, of course, is excellent news for any government, and Gordon Brown would be foolish to embark on a fight with the oil companies over the North Sea tax regime. BP is also the UK's largest gas producer and, over the past year, the price of wholesale gas has more than doubled. According



to the *Sunday Times*, the EU is currently investigating BP and other gas producers over allegations that, by exporting excessive amounts of gas to Europe, they artificially restrict supply in Britain through a pipe known as the 'interconnector', of which BP is the largest shareholder.

In the UK, wholesale gas is traded on the open market and, by restricting supply, BP and others can increase the price. Faced with low supplies, gas companies like British Gas that supply homes, must augment their bids on the open market before producers will guarantee supplies. Companies using the interconnector vote on a daily basis on whether the gas flow is switched towards Britain or towards Europe. 'We have made very high production revenues from our gas business because of the higher prices,' says a BP spokesman. Come to think of it, increasing tax-free thus dead cheap North Sea oil exports to Europe must be lucrative too.

NOTES & QUOTES

£11.3bn: is the amount of money pet owners spend on pet food a year.

£6.5m: the amount of money raised by the Disasters Emergency Committee for the earthquake in India's Gujarat region, the worst to hit the country for at least 50 years.

\$25m: the Shell Foundation's annual programme fund to strengthen the Group's contribution to sustainable development.

\$1m: Shell's current profit per hour.

Each American car requires, on average, 0.18 acres of paved land for roads and parking lots. For each five cars added to this fleet, an area the size of a football field is covered with asphalt. According to the Worldwatch Institute, the US, with its 214 million vehicles (3 vehicles for every 4 people), has paved 3.9 million miles of roads; enough to circle the Earth at the equator 157 times.

If China were to achieve an ownership rate of one car for every two people, it would have a fleet of 640 million. Assuming 0.02 hectares of paved land per vehicle in China, a fleet of 640 million cars would require paving nearly 13 million hectares of land; a figure over half of China's 23 million hectares of rice land.

According to UNEP, there were 13 known varieties of asparagus in 1903. By 1983, there was just one. There were 287 varieties of carrot in 1903; this has fallen to just 21. Over 460 varieties of radish were known in 1903; this has dropped to 27. Nearly 500 varieties of lettuce were catalogued at the turn of the century; this has fallen to 36. Consumer choice...?

Every year, about 600,000 babies are born HIV-positive, 90 per cent of them in Africa. UN figures estimate that 12 million children were orphaned by AIDS in Africa in 1999 alone.

According to *The Guardian*, in 1950, Africa's urban population stood at 15 per cent and Asia's at 17 per cent. In 2000, it was 38 per cent and 37 per cent respectively, and by 2030 it will be 53 per cent and 55 per cent. By 2007, more people will live in cities and towns than in the countryside.

continued on page 10

THE CLIMATE DOMINO

Climate change is feeding on itself – and may spin out of control

United Nations Environment Programme (UNEP) scientists have confirmed indications that climate change is feeding on itself. According to Dr Tveitdal, the managing director of a UNEP information and monitoring centre in Norway, there is emerging evidence that the Arctic permafrost, the soil that usually stays frozen all year round, is melting and releasing carbon. The Arctic contains about 14 per cent of the carbon stored in the world's soils, and a release of the entire Arctic carbon store would add hugely to climate change. According to Dr Tveitdal, 'permafrost has acted as a carbon sink, locking away carbon and other greenhouse gases for thousands of years. But there is now evidence that this is no longer the case, and the permafrost in some areas is starting to give back its carbon.'

According to the study, the higher temperatures are allowing bacteria to break down the previously frozen organic material. The most imminent victims of the Arctic's melting permafrost are an estimated 200,000 indigenous people living in the Arctic region whose very existence now is under threat. In addition, studies at the University of Alaska suggest that a warming of the permafrost by only 3°C decreases its load-bearing capacity by up to 70 per cent. Damage caused by the melting of permafrost to buildings, roads and pipelines is occurring in Alaska and Siberia. While the Intergovernmental Panel on Climate Change's (IPCC) latest estimates suggest that by 2100 temperatures might increase by as much as 5.8°C, in high latitudes the temperature increases even faster. 'In some areas like the Arctic you might have an increase of up to 10°C this century,' Dr Tveitdal said. Meanwhile, at the request of the US the next climate talks have been postponed to mid-July. What's the hurry, after all?

OH FENRIS

In Nordic myths, the wolf was the challenge any man aiming for a heroic status had to confront. Fenris, the giant wolf, embodied the forces of Chaos. Not even the great Odin, nor the sun or moon, were safe from Fenris's appetite. Nowadays, with the sun and the moon safely in place, Norway has licensed the culling of two wolf packs. The cull follows pressure from farmers claiming to have lost 612 sheep to wolves last year. Norway is home to 2.2 million sheep and 133,000 are lost every year; so the threat from wolves seems comparatively minor. Currently there are about 80 wolves in Norway and environmental groups opposing the hunt, together with the Swedish government, consider a wolf population of 200 as sustainable. The first victim of the hunt, a female pup, was shot from a distance of about 100 metres by a team of 11 hunters, four trackers equipped with snowmobiles, and using heavy-gauge shotguns usually forbidden – hardly heroic.



BBC WILD

EU OPENS THE GM FLOODGATE

More GM foods are legally coming your way

The EU has approved 'strict' safeguards that will set out procedures for the licensing of GM crops and foods. After two years of lobbying, the directive was approved in a 338-52 vote.

A group of six countries – France, Italy, Greece, Austria, Luxembourg and Denmark – said that it was too early to lift the moratorium on new GM products and that more legislation was needed. 'We now have the toughest GM legislation in the world,' said David Bowe, the UK Labour MEP who pushed the legislation through. EuropaBio the biotechnology industry group said that 'the directive – at last – leads the way to establish a more rigorous and coherent framework for the regulation and market supervision of biotechnology in Europe,' and that 'the amended directive will further strengthen the already stringent safety assessment process, help to establish consumer confidence in the regulatory process and convince investors that there is a future for agro-food biotechnology in Europe.'

Roughly a dozen GM crops were approved for use in the EU prior to 1998. Since 1999, a *de facto* moratorium on approval of new GM crops varieties has been in place. There are at least 12 GM products approved by EU scientists currently caught up by the moratorium; which the new directive aims to replace. They include glufosinate-tolerant rape made by Aventis, various maize lines from Monsanto and Aventis and insect-resistant maize from Monsanto...Yum!

NOTES & QUOTES

'Were it not for a patent system that rewards companies for risking millions on research, anti-AIDS drugs would not exist. That is why the TRIPS agreement tries to strike a healthy balance between the short term need to make vital drugs available to those who need them, and the long-term, equally vital, need to encourage research into new drugs.'
Mike Moore, director-general of WTO

'The public interest in a regulatory system that is science-based is significantly compromised when that openness is negotiated away by regulators in exchange for cordial and supportive relationships with the industries being regulated.'
From the Canadian Royal Society report on biotechnology

'Tax is like sex; you cannot talk about it.'
Romano Prodi, president, EU Commission

'The amount of oil used in the 10 next years will exceed all the oil consumed in the first five decades of the last century.'
Sir John Browne, head of BP

'The freeing up of markets around the world... must not happen at the expense of the thousands of indigenous cultures and their traditions. Indigenous peoples not only have a right to preserve their way of life, they also hold vital knowledge on the animals and plants with which they live. Enshrined in their cultures and customs are also secrets of how to manage habitats and the land in environmentally friendly, sustainable ways.'
Klaus Toepfer, Executive Director of UNEP



DAVID JONES

International Development Secretary Clare Short experiences the trickle-down effect on 5 March as she harangues Bangor University students on the wonders of globalisation. Welsh flan cell 'Diamond Cwstard' presented her with a pie whose contents reflected how 'bananas' her policies were for the world's poor.

GERMANY BANS GM RESEARCH

BSE has led to a radical switch in German farm policy

Citing the need to reassure customers already worried by BSE, the German government has shelved plans for research on GM crops. In an article published in the *Berliner Zeitung*, Chancellor Schröder's spokesman confirmed that the planned trials of GM corn had been indefinitely postponed. The programme 'has not been cancelled but interrupted, so as not to undermine consumer security with yet another topic. We'll take it up again when and if it becomes clear how this area can be included in a consumer programme,' said the Chancellor's

spokesman. An official letter informing the biotech industry of the Chancellor's decision argued that 'triggered by the BSE problem, a process of reflection on the principles and conditions of food production has begun in our society...! Germany's mad cow crisis had led to the appointment of Green Party member Renate Künast as the new agriculture minister. Backed by Schröder, the new minister plans to radically reform the farming industry. Agribusiness groups have been told that their powers will be greatly diminished; instead the government aims to 'massively increase' organic farming in Germany. (See page 48 for Künast's speech)

UP IN SMOKE

GM tobacco will make smoking 'safer' ... say the tobacco companies

According to *The Wall Street Journal*, there is hope for all those smokers worried about their health. The Liggett Group, Philip Morris, British American Tobacco and RJ Reynolds Tobacco Holdings have all intensified their search for a 'less harmful' smoke.

How? Well, the Liggett Group, for example, is using a combination of chemicals to block the formation of a range of carcinogens called PAHs in tobacco that has been genetically modified to be almost free of nicotine and nitrosamines. Phillip Morris aims to reduce a range of dangerous chemicals and plans to introduce a supposedly 'less hazardous' cigarette in 2002. Whilst the quest to produce a 'healthy' cigarette has shed light on the horrific additives in today's fags, this is also an argument about GM tobacco. The big player in this field is Vector Group, Liggett's parent company, who plan to market GM tobacco by 2002.

NOTES & QUOTES

'You cannot define the function of genes without defining the influence of the environment. The notion that one gene equals one disease, or that one gene produces one key protein, is flying out of the window.'

And...

'...if you view genes as commodities, then you do probably want to have a lot of them.'
Dr Venter, president and chief scientist of Celera, the private effort to read and analyse the human genome

'I wouldn't be surprised if, in another 30 years, some people will begin to argue that we ought to take charge of our own evolution and should not be satisfied with our current biological status.'

Professor Francis Collins, a leading light in the human genome project

'Sometimes doing the right thing is almost too simple. Requiring publicly funded construction projects to produce no net increase in greenhouse gas emissions is one example: it's hard to find the down side.'

David Morris, Institute for Local Self-Reliance, US.

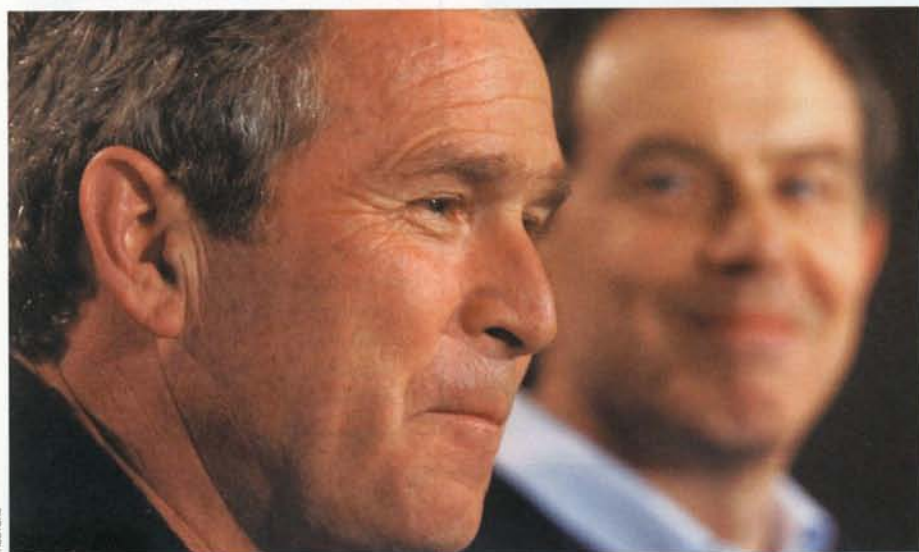
www.theecologist  org

'TRUST ME', SAID TONY

GM field trials are going ahead – with no segregation

Not so long ago, Tony Blair wrote in *The Independent*: 'There is no doubt that there is potential for harm, both in terms of human safety and in the diversity of our environment, from GM foods and crops. It's why the protection of the public and the environment is, and will remain, the Government's overriding priority.' In response, his government has decided to double the number of new trials of GM crops this spring and – worst of all – will not segregate these trials from conventional crops. By simply ignoring protests, ministers simply accepted that trials will contaminate conventional crops nearby, simply leaving themselves open to damage claims from farmers whose crops might be unusable as a result. Pleas by organic and environmental lobbies for safe exclusion zones around GM crops were simply rejected, and Baroness Hayman, the agriculture minister, agreeing that the trials would contaminate conventional crops, came up with the cunning argument that they would do so by 'only 1 per cent'. The Scottish Crop Research Institute said this figure could easily reach 5 per cent.

At any rate, busy bees and wind are likely to carry contaminated pollen beyond the estimates made by any of these so-called 'risk assessments'. In that case, a glossy re-assessment of the 'risk assessment' is likely to follow. Despite bees and wind, though, 96 field trials are going ahead. This, apparently, is the precautionary principle.



REUTERS

'TRUST US', SAY TONY AND GEORGE

It was only a matter of time before President Bush would find a scapegoat. Who better than evil Saddam Hussein? Britain, meanwhile, was the 'natural' partner, as both countries have spearheaded the sanctions and upheld the no-fly zones in the north and south of Iraq. Of the strikes authorised by Bush, the first was 'a routine mission conducted to enforce the no-fly zone.' International condemnation of this attack, which killed two people and wounded 20, led Britain and the US to mount a public relations offensive, including claims that Britain had made 'honest' moves to boost UN/Iraqi relations and an all-new product called 'smart sanctions'. Advancing the 'no-fly' zone argument for attacking Iraq, though, was neither 'smart' nor 'honest'. Reports on Iraq smuggling and trading in oil seem more plausible reasons for the raids. Whilst it is estimated that Iraq is earning around \$2bn a year from smuggling oil through Iran, Turkey, Syria and Jordan, evidence is mounting that companies buying Iraqi oil are paying a 'surcharge' directly to the Iraqi government. OPEC's recent production cut has left Iraq as the last resort – which is why the companies are keen on trading with Iraq.

According to a US energy consultant, 'the cheating is the worst kept secret in the oil business. The oil-consuming countries have a keen but concealed interest in keeping Iraqi crude flowing.' A pipeline between Syria and Iraq has been reopened, and while 'testing the pipeline', an estimated 100,000 barrels per day of Iraqi oil is flowing into Syria. Iran is doing little to stop Iraqi tankers in the Gulf and Iraqi oil trucks stream across Jordan's border. Then there's Turkey, but the US doesn't want to scrutinise Turkey's dealings with Iraq because Turkey allows the US to use its bases for patrolling Iraqi airspace. Experts and diplomats say that the UN is unable to punish those who break sanctions, so Iraq remains the target of more than just 'smart sanctions'... but it takes two to tango doesn't it?

in brief

BOSNIA REJECTS US CORN

The US has withdrawn a \$4m donation of GM corn for animal feed after Bosnian officials hesitated to accept it over fears of health risks. In a statement, the US embassy in Paris said it was 'disappointed' that governments of both entities – Republika Srpska and the Muslim-Croat Federation – 'could not decide in a timely fashion to accept its donation of 40,000 tonnes of corn for animal feed.' 'The inclusion of genetically modified corn is not unusual,' the US embassy statement said, adding that 'such corn was routinely exported all over the world for human and animal consumption.'



PA PHOTOS

THE IMAGE OF GOD

What was it that made the Buddha reach enlightenment under that banyan tree? What does a whirling Dervish think whilst in trance? 'Neuro-Theologians' at the University of Pennsylvania claim to have found the answer. Scanning meditating Buddhists and ecstatic Franciscan nuns, Professor Andrew Newberg and Eugene d'Aquili found that, when in trance, the activity of that part of the brain that differentiates and links between the outer world ('orientation area') and the self is significantly reduced. In return, repetitive rhythms of drums or during praying influence the hypothalamus. According to Newberg 'our brain is so interconnected that it tricks us into the image of god'.

GENETIC TESTS ARRIVE

Norwich Union (NU), the insurance company, is using genetic test results to load customers' premiums. Although at present only one test – for Huntington's disease – has been officially ratified by the government's genetic and insurance committee, NU admitted to a parliamentary committee that it had used genetic test information on 30 occasions. In a report, the Royal Journal of Medicine expressed fears that

this might lead to the creation of an 'uninsurable underclass'. The Association of British Insurers, the professional body, allows companies to insist on seeing the results of a genetic test for one of seven illnesses but is currently applying for Alzheimer's Disease and hereditary breast cancer to be added to the list.

BANANA SPLIT

According to Paul Meade, a food industry analyst with NCB Stockbrokers, 'the EU is the only profitable banana market in the world, because it's protected'. Protection, in the form of quotas, is a thorn in the side of companies such as Chiquita Brands International, (see *The Ecologist* Vol 31 No 2) which has been ruthless in trying to crush as many competitors as possible. According to the *International Herald Tribune*, however, a closer look at the European market reveals a differently 'protected' market. Chiquita still sells more bananas in Europe than any other company, and three of the top four companies in the market are American. According to Goodbody Stockbrokers, out of the total of 4.3 million banana imports into Europe for 2000, Chiquita's share accounted for 23 per cent, Fyffes for 21 per cent, Dole for 15 per cent and Del Monte for 13 per cent.



BLOWING A GALE

US Interior Secretary Gale Norton has signalled that the Bush administration is bracing itself for a lengthy fight over its proposal to allow oil and gas exploration in Alaska's Arctic National Wildlife Refuge. Meanwhile, Arctic Power, a lobbying coalition backed by the Alaska Oil & Gas Association, which includes ExxonMobil, Shell Western, Chevron and BP is going for the kill. 'I perceive that if the proponents of drilling don't succeed this year then you can forget it,' said Roger Herrera, a lobbyist for Arctic Power. Drilling is blocked unless Congress approves it, and it is likely that it will vote

within the next few months. In her speech, Norton stressed that with all the new technology available, drilling could be done in an 'environmentally responsible way' that would minimise damage to the tundra. But 'the one thing you can't get away from is that in the end, even with all this technology, you've got a massive industrial complex', said Pamela Miller, an environmental consultant in Anchorage, Alaska. Email your Senators and Congressmen to get them to oppose the oil drilling on www.DontDrill.org and send Bush a strong message on www.savearcticrefuge.org

ANTIBIOTIC ABUSE

Regional changes in wealth, social behaviour, land use and demographics combined with abuse of antibiotics are transforming Asia into a potential cluster for the emergence of powerful new diseases. According to the *International Herald Tribune*, flu has become one of the world's fastest mutating diseases, travelling faster than hitherto known, and each year new strains find their way from Asia to Europe and beyond. Because of the growing abuse of antibiotics, some scientists fear a scenario whereby an antibiotic-resistant bacterium bred in Asia infects patients weakened by fighting off a virulent new strain of Asian flu. As an example, 10 per cent of kindergarten children in Hong Kong tested for one study were found carrying strains of streptococcus pneumonia that were resistant to four of the most commonly used antibiotics.

WASTED AGAIN

British Nuclear Fuels (BNFL) is engaged in talks with Electricité de France (EdF) aiming at winning contracts from Cogema, its French competitor. According to BNFL, EdF is considering opening up all its nuclear contracts to competition; including reprocessing of spent fuel, reactor maintenance and atomic fuel supply. So far, Cogema has been the only supplier of reprocessing services to EdF and the award of contracts could mean an important source of revenue for BNFL, which is hoping to secure a reprocessing contract for the post-2005 period. According to Greenpeace, French nuclear waste was likely to stay in Britain for years if reprocessing contracts were signed.

GRANTED

From the weekly 'Foundation Center' newsletter: 'The National 4-H Council Youth Grants Program offers grants... for young

people and adults to take action on issues critical to their lives... The grants program is currently accepting applications for the 2001 Biotechnology and the Future Work Force Preparation Grants... With funding provided by Cargill Inc, the program is designed to help young people understand the role that biotechnology plays in today's global economy while exploring career possibilities in this emerging industry. Action grants in the amount of \$300 to \$10,000 will be awarded... in communities where Cargill has a presence. Complete guidelines and application instructions are available at... www.fourthcouncil.edu/ycc/grantinfo.htm



MINED YOUR BACK

...and from 'Information Systems for Biotechnology' News Report: 'It is possible that in the near-future... GM plants could be used as biosensors to monitor radioisotope levels around nuclear power plants or detect jet fuel contaminants at military bases... They would also disclose the presence of... buried explosive devices... The application we want to consider here is the detection of... landmines. A plant-based detection system has the advantage of utilising a macroscopic, and trackable organism; trinitrotoluene [TNT- the explosive] would be absorbed by plant roots and then transported to leaves where the fluorescence could be readily observed... The first step would be sowing detector plant seed over a minefield... A homogenous stand of plants would need to be established so the roots could cover the mine-leachate soil volume... We believe the wholesale environmental objection to GM plants will be moderated by landmine-detecting GM plants. 'A GM plant that detects the location of landmines,' the report continues, 'seems like a biotechnological advance that even Prince Charles could love.'

Please send information on your local, national or international campaigns to Stephanie Roth at: The Ecologist Unit 18, Chelsea Wharf, 15 Lots Road, London SW10 0QJ, UK. Tel: +44 (0)20 7351 3578. Fax: +44 (0)20 7351 3617. Email: campaigns@theecologist.org

EU IN VINO VERITAS

Although the EU keeps promising that its laws and guidelines concerning food safety, GMOs etc are 'safe', events keep proving them wrong. Carrying on regardless, the EU has now formulated a proposal to amend directive 68/193/EEC on the commercialisation of materials for 'the vegetative multiplication of non-grafted and grafted rooted vines and parts thereof'. What this means, in English, is that if the EU passes the amendment, all obstacles to the production and commercialisation of genetically modified vines will be eliminated. According to the Slow Food Movement, this would mean that genetically modified grape varieties could flood the market, whilst it would not be compulsory to label wines produced from these varieties as transgenic. So – GM wine may



be coming your way. What makes things worse is that by not making it compulsory to label GM wine, consumer choice is no longer an option. Wine-making is an ancient tradition, where each small producer knows his soil and vines, and cultivates according to customs passed down through his family for generations. Large wine producers have already contributed to a significant reduction of the quality and craft of wine-making; GM wine could make this much, much worse.

MAKE A DIFFERENCE

Write to the President of the European Commission, asking him to reframe the debate on European agriculture within the context of the principles – quality, diversity and safety – set out at the Biarritz summit, where 'diversity' referred to the conservation and protection of the existing heritage and not to the creation of new transgenic varieties. Romano Prodi, President of the Commission, Rue de la Loi 200/Wetstraat 200, B-1049 Bruxelles, Tel: +32 2 29 91559. For updates visit www.slowfood.com or call +39 0172419611.



UK 1066 AND ALL THAT

The second battle of Hastings could be on its way, as a struggle to save a truly beautiful spot from being paved over by two bypasses begins.

Back in January, the Regional Planning Committee of the South East England Regional Assembly (SEERA) voted to support a £150 million road project which will severely damage three of Britain's finest wildlife sites and pass through an Area of Outstanding Natural Beauty. The affected area is home to rare species of plants and wildlife, and the streams provide vital breeding ground for trout. If construction goes ahead, these streams will be encased in concrete. The valley will be changed forever by plans which include a 12-metre concrete viaduct, running through Combe Haven, a wildlife reserve.

Campaigners point out that the bypass will not lift heavy traffic from entering Hastings, and that some of the sites for roads lie on flood plains, which would create serious problems in an area that has recently suffered some of the worst floods in its history. The road scheme also contradicts the government's 'farm stewardship' environmental policy, created to encourage wildlife to breed. The final decision ultimately rests with Deputy Prime Minister John Prescott, who, being a keen proponent of the regional assembly, is unlikely to overturn one of SEERA's first big decisions.

MAKE A DIFFERENCE

Write to the Rt Hon John Prescott MP, Department of the Environment, Transport & the Regions, Eland House, Bressenden Place, London SW1E 5DU asking him to reject the Hastings bypasses. Please copy your letter to FOE South East and South Central Regions, 38 Queens Rd, Brighton, BN1 3XB. Visit www.foe.co.uk for more information and updates.

GLOBAL NUKES – NO THANKS!

From 16-27 April, the UN Commission on Sustainable Development (CSD) will hold its ninth Session in New York. The Commission was established to ensure effective follow-up to the Rio Earth Summit of 1992. Energy will be one of the important issues on the agenda, and 'the challenge is how to meet the growing demand for energy while mitigating the impact of energy supply and use on the environment and thus guarantee the long term quality of our habitat'.

There have been various indicators implying that the Commission is of the opinion that nuclear energy could be part of a 'sustainable' future. However, nuclear energy involves enormous pollution from uranium mining and enrichment, through the operation of nuclear power plants, to the disposal of radioac-

tive waste. Nuclear energy is not sustainable but dangerous, and any indications of support for nuclear technologies by the CSD will be used by the nuclear industry to create an image of itself being a clean, safe, and legitimate tool to combat climate change.

MAKE A DIFFERENCE

WISE Amsterdam urges all organisations to whom this is of concern to sign a petition demanding that the Commission ensures that any indications of support for nuclear energy are excluded from CSD debates and related activities. Sign the petition online at www.antenna.nl/wise/csd or call on +31 20 612 6368



international campaigns and events in April

1 April 2001

Global

All Fools Day

Join the 'Confederacy of Fools' turning the world upside down. Visit www.adbusters.org

3-5 April 2001

Almaty, Kazakhstan

Central Asia Water Exhibition

World Expo Congress & Fair
Visit www.tagri-fair.com.pl or call +48 52 325 3030

4 April 2001

London, UK

Architecture and Art as a means of maintaining the Cosmos

A lecture presented by Edward Goldsmith at the Prince's Foundation. To reserve your free ticket call +44 (0)1233 813 663

4-7 April 2001

Bremen, Germany

Creating Better Cities

A contribution to the forthcoming UN review conferences Habitat+5 & Rio+10. International leaders, including Klaus Toepfer of UNEP are expected to take part, together with city and business leaders. Visit www.bremeninitiative.de/2001/conf_reg.html

5-8 April 2001

Leavenworth, Washington, USA

Hazel Wolf Environmental Film Festival

Films, videos and presentations by leading environmental filmmakers and activists; together with workshops on funding and partnerships.

Speakers include Adam Werbach and Julia Butterfly Hill. Visit

www.hazel.film.org or call +1 206 443 7239

8-11 April 2001

Cambridge, UK

12th Global Warming International Conference & Expo – Kyoto Compliance

Contact GWI Centre on +1 630 910 1561 or visit www.GlobalWarming.net

17-18 April 2001

Washington DC, USA

International Conference on Equity and Global Climate Change

An interesting meeting – organised by the Pew Centre on Global Climate Change. Visit <http://pew-climate.org> or call Christie Jorge Santelises on +1 703 516 4146

17-22 April 2001

Quebec City, Canada

(Counter-) Summit of the Americas

See www.quebec2001.net, www.a2o.org, www.trade-watch.org, and the official site on www.americascanada.org

18-20 April 2001

Norwich, UK

Global Architecture 2020: which way forward?

International Conference organised by the John Innes Centre 'to evaluate current and projected demands on global agriculture'.

Visit www.jic.bbsrc.ac.uk/events/agric2020 or call +44 (0) 1603 450 641

18-19 April 2001

Honolulu, Hawaii

BIO (Biotechnology Industry Organisation) Asia Pacific investor & Partnering Conference

Visit www.investinbio.com or call +1 212 292 5500

19 April 2001

Global

Car-free Day – leave your car at home

For more information on events etc visit www.earthday.net or call +1 206 876 2000

21 April 2001

Cambridgeshire, UK

World Day for Lab Animals at Huntingdon Life Sciences

A day of action against all forms of animal abuse
Call +44 (0) 121 632 640.

22 April 2001

Global

Earthday 2001

For more information on events around 'your' corner, visit www.earthday.net or call +1 206 876 2000

22-28 April 2001

Global

TV turn-off week

Why don't you turn off your TV and do something less boring instead. www.adbusters.org has great ideas

22-23 April 2001

Olympia, London, UK

The Natural Marketplace

One of Britain's premier trade

shows for the natural and organic products sector. Visit www.natural-products.co.uk or +44 1903 817 301

22-24 April 2001

Hilton London Metropole, London, UK

EBRD Annual Meeting of the Board of Governors and Business Forum

See www.ebrd.com

24-26 April 2001

Jaarbeurs Fairgrounds, Utrecht, The Netherlands

Victam Europe 2001 – Feed Industry Exhibition & Conference

Contact +31 33 246 4404 or visit www.victam.com

26-27 April 2001

London, UK

The Management of Waste by Incineration!!!!

All 'hot' topics; EU/UK regulation
Visit www.ibc-uk.com/KB120 or call +44 (0) 1932 893 893

28 April 2001

University of Manchester, Manchester, UK

Trade Teach-In

Event organised by WDM, People and Planet & Friends of the Earth.

Contact Daniela Reale at WDM on +44 (0)207 737 6215

29-30 April 2001

Washington DC, USA

IMF/ World Bank Spring Meeting

Visit www.worldbank.org or call +1 212 477 1234

five top websites

www.guestchoice.com

This is what we're up against – a dangerously misleading site, full of statements like 'irradiation will make food safer, GM will feed the Third World, children eating fatty food were fat before'... and much more.



www.onlinejournal.com/Special_Reports/Dowbenko020201/dowbenko020201.html

How to create a phoney power crisis: The Bush-Enron connection.

www.TomPaine.com/opad/

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UK IN DEEP WATER

What does a government institution do when it can no longer effectively deal with its duties? It sells them off.

In 1985, the management of Plymouth's naval dockyard was passed from the MoD to Devonport Management (DML), a subsidiary of Halliburton, a big Texan corporation. For a while, the 'management' of shifting and dumping the navy's waste went well – but once there was no more room to dump or shift it to, the company had to find space.

In May last year, DML applied to the Environment Agency for a licence to increase emissions of radioactive tritium into Plymouth's river Tamar. The increase applied for is no less than 700 per cent! Tritium is like water in that it evaporates, condenses as rain and falls – but where? Once inside the body, via mouth or skin, it repeatedly bombards cells and enzymes, predisposing them to cancerous changes. Meanwhile, DML has

sampled the air and water, and concluded that all is 'safe'. No study into the effects of such a tritium increase seems to have been conducted; or if it has, the results have not been revealed. There has been no shortage of glossy DML brochures bristling with information on minimising risk, nuclear emergency arrangements, earthquake resistance, decontamination and so on.

Meanwhile, in Plymouth, the navy is also facing a storage problem, what to do with all those redundant nuclear submarines due for decommissioning and a graveyard expected to burst by 2012? The navy has decided that nuclear reactor chambers from redundant subs should be stored on land. Once this process starts, roughly 26 nuclear reactor units will be stored in Plymouth itself for up to 100 years. It has examined four locations, two close to residential areas and one just by Barne Barton, a local school.



Jean Lemierre,
President of the EBRD

EUROPE THE RIGHT TO UNDERSTAND

The European Bank for Reconstruction and Development (EBRD) was established by Western nations to support the development of market economies in Central and Eastern Europe following the collapse of communist regimes. Today, the EBRD is the largest foreign investor in the region. Financing is provided for projects from nuclear power stations to cheese manufacturing. All EBRD-financed projects have, in some way, a significant environmental and/or social impact.

In July last year, the Board of Directors of EBRD approved a Public Information Policy defining what information EBRD will make publicly available, and how. EBRD claims that the Policy places 'particular emphasis on public accountability'. In effect, there is little evidence that this is the case. Most EBRD documents tend to be prepared in English. Very few are translated into the languages of the 26 countries where the projects have an impact. Concerned citizens are often not even able to access information about projects and policies affecting them.

EBRD claims that the cost of translating documents is prohibitive, and will therefore not commit to making all documents available in local languages. But it is vital that at least some documents are made available in the language of that country.

MAKE A DIFFERENCE

Whilst the Environment Agency will decide on the fate of the river Tamar, the MoD is responsible for where the nuclear reactor units are going to be stored. Please write to both! DML Consultation, c/o Environmental Agency, Freepost SWB30329, Exminster House, Miller Way, Exminster, EX6 8ZZ, email: dml@environment-agency.gov.uk. The Rt Hon Geoffrey Hoon MP, Secretary of State for Defence, The Ministerial Correspondence Unit, Room 6140, Main Building, London, SW1A 2HB, email: public@ministers.mod.uk Copy your letters to 'Campaign against Nuclear Storage and Radiation' (CANSAR), 60 Royal Navy Ave, Keyham, PL22AQ and visit www.westcountrylinks.co.uk/cansar

STAN AT EASE by Stan Eales

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MAKE A DIFFERENCE

EBRD's Annual Meeting of the Board of Governors will be in London from 22–24 April. A timely letter to the President might help. Write to Jean Lemierre, President, EBRD, 1 Exchange Square, London EC2A2JN. Ask for immediate changes to section 3 (ii) of the policy that relates the public release of Environmental Impact Assessments (EIAs). For more information and a sample letter see www.bankwatch.org

PORTUGAL MISSING LYNX

One of the largest deforestation programmes ever is about to take place in Portugal. A £1m dam project, funded by EU money, has been approved despite warnings by the EU's own environmental impact assessment. The Alqueva project in the Vale do Guadiana region will consist of 10 dams, 3,000 miles of irrigation canals and dozens of new roads, bridges and pumping stations.

In late February, teams of men began the felling of all trees over the 160 square mile area that will be occupied by the new reservoir. Many of them are old-growth oaks; and overall, a million trees will fall victim to the project.

The Vale do Guadiana is home to some of the world's rarest wildlife, including the Iberian Lynx; of which there are about 40-53 left. The nesting trees and hunting grounds of Portugal's only pair of Golden Eagles will be destroyed, as will that of the threatened Bonelli's Eagle. Roughly 10 per cent of the country's rare black storks will be made homeless.

The stated purpose of the dam is irrigation for intensive agriculture. However, many believe that the region's thin and poor soils are unsuited to such cultivation, and that the real purpose will be to water some of the 48 new golf courses planned for the neighbouring Algarve. What's more, the existing irrigation network in the region is already used at less than 50 per cent capacity.

It is not only a unique natural heritage that is at risk. Researchers have uncovered tools from the Bronze Age, and an entire



REUTERS

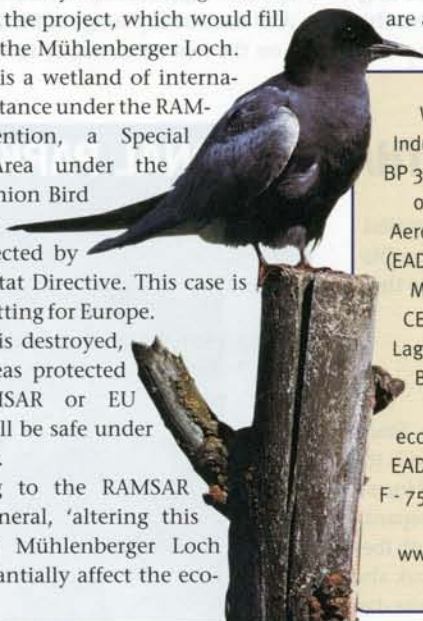
GERMANY SAVE THE WETLANDS

Airbus Industrie, the European aircraft manufacturing consortium, wants to destroy parts of the largest freshwater tidal mudflat in Europe in order to extend its Hamburg factory, which manufactures the world's largest jumbo jets. In a move intended to encourage Airbus to carry out part of the production of the A380, the city of Hamburg has been encouraging the project, which would fill 420 acres of the Mühlenberger Loch.

The loch is a wetland of international importance under the RAMSAR Convention, a Special Protected Area under the European Union Bird Directive and is protected by the EU Habitat Directive. This case is precedent setting for Europe. If the Loch is destroyed, very few areas protected under RAMSAR or EU directives will be safe under national law.

According to the RAMSAR secretary general, 'altering this part of the Mühlenberger Loch would substantially affect the eco-

logical character of the ecosystem.' NABU and BUND, two German NGOs, have filed suit in Hamburg's Administrative Court to stop the filling of the Loch. Although the NGOs obtained a temporary injunction to halt the immediate filling of the loch, the court recently ruled that the NGOs did not have the standing to sue. NABU and BUND are appealing the court decision.



MAKE A DIFFERENCE

Write to Noël Forgeard CEO, Airbus Industrie, 1 Rond Point Maurice Bellonte, BP 33, F- 31707 Blagnac. Since 80 per cent of Airbus is owned by the European Aeronautic Defence and Space Company (EADS NV) with headquarters in Paris and Munich; write to: Philippe Camus Co-CEO, Rainer Hertrich Co-CEO, Jean Luc Lagardère Co-Chairman and Dr. Manfred Bischoff Co-Chairman and tell them to cancel plans to destroy this fragile ecosystem. All of them can be reached via EADS NV 37, boulevard de Montmorency, F- 75781 Paris, Cedex 16. For email contacts and more information visit www.AirbusThinkTwice.com or call +44 (0)207 5876700

ROPER IMAGES

Roman castle. Next summer, hundreds of people from the Aldeia da Luz village will be moved into a new settlement when their homes are flooded by the dam. Local inhabitants, however, say they have been given little choice but to abandon their homes.

The EU's environmental impact assessment warns that 'animals will lose their habitats by flooding the area of the reservoir and by alteration of the living conditions in the irrigation zone'.

It adds that wildlife habitats 'will be fragmented by the reservoir, the irrigation channels and new roads', concluding that 'this project will bring some species closer to extinction within Portugal'.

Meanwhile, calls by various Portuguese environmental groups to reduce the scale of the project have been flatly ignored by the government.

MAKE A DIFFERENCE

Write to Portugal's Prime Minister and ask for an immediate moratorium on the clearances until a meeting of EU experts at the Mediterranean Geographic Seminar in May have reassessed the dam's impact. Engo Antonio Guterres, Primeiro Ministro, Rua da Imprensa a Estrela, 4 1200-888 Lisbon, Portugal. Fax: +351 21 395 1616, email: pm@pm.gov.pt For more information visit www.despodata.pt/geota/ingles/alqueva.htm or send an email to sos.lynx@clix.pt

UK TERMINAL DISEASE

Associated British Ports (ABP), the company which runs many of Britain's ports, intends to build a huge container terminal at Dibden Bay, on the edge of the New Forest. The area that ABP intends to use is an ecologically important area of marsh and mudflats on the western shore of Southampton Water, and is an internationally recognised bird reserve. If ABP get their way, the terminal will cover an area a third of the size of Heathrow Airport.

A local campaign group called Residents Against Dibden Bay Port (RADBP) argues that the development is not needed because nationally there is no shortage of container-handling capacity, and that Southampton's existing dock space is significantly underused. Whilst a public inquiry has been set for autumn this year, ABP has already sought official consent to make it a criminal offence to disrupt construction on the new terminal, in the event that it is given approval.

MAKE A DIFFERENCE

Add your voice to the public inquiry: write to Tony Springthorpe, DETR Ports Division, Zone 2/29, Great Minster House, 76 Marsham Street, LONDON SW1P 4DR, email: anthony_springthorpe@detr.gsi.gov.uk, fax: 020 7944 2188. Copy your letter to RADBP, PO Box 386, Totton, Hants SO40 3ZG and visit <http://members.aol.com/dibden-bay/> for more argument ammunition.

PAKISTAN SAVE KIRTHAR NATIONAL PARK

'My colleagues and I are totally committed to a business strategy that generates profits while contributing to the wellbeing of the planet and its people. We see no alternative.'

Mark Moody-Stewart, Shell chairman.

Kirthar National Park, in Pakistan's Sindh province, was established in 1974, and is the country's largest. The rolling hills and forests are a haven for desert wolves, leopards, striped hyena, wild sheep, the rare Sindh ibex and the imperial eagle. Within the park also lies Rannikot Fort, an archaeological site dating back to 3500 BC. Stretching over 740,000 acres, the park also provides essential water supplies for the people of Karachi.

Even though, according to Sindh law, oil and gas development are illegal within Kirthar National Park, the Directorate General of Petroleum Concessions granted a concession for oil and gas development to Premier Oil Group in 1997, which later formed a joint-venture company with Shell, now known as Shell-Premier. The Shell-Premier concession for the Dumbar Block covers more than 90 per cent of Kirthar National Park.

In January last year, the government and Shell-Premier agreed to an environmental group's request for an impartial Environmental Impact Assessment prior to



any further consideration of oil and gas development. So far, the citizen participation mechanisms built into the agreement have been ignored, campaigning groups have been systematically excluded from meetings and Shell-Premier is conducting its own Environmental Impact Assessment, which will reflect and defend the companies interest in drilling in the Park. Consequently, all of Kirthar's precious natural and historical resources now stand threatened by an illegal contract for oil and gas development.

MAKE A DIFFERENCE

Write a letter to Shell-Premier and to Pakistan's federal minister for Petroleum and Natural Resources and ask them to cancel all plans for oil and gas exploration and development in Kirthar. Usman Aminuddin, Federal Minister, Ministry of Petroleum & Natural Resources, Room 305, Pak Secretariat, A Block, Islamabad, Pakistan.
Peter Cockroft, General Manager & CEO, Premier & Shell Pakistan BV 4th Floor, West Half, Jang Building, Fazal-e-Haq Road, Blue Area, Islamabad, Pakistan.
Visit www.savekirthar.org for more information and email contacts.

five top campaigns

www.foe.co.uk/safer_chemicals

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www.earthisland.org/take_action

Support Indigenous Mobilisation in Ecuador.

www.citizen.org

Send an online fax to the CEOs of Philip Morris (which owns Kraft Foods), Del Monte and Wal-Mart, telling them that you won't buy irradiated food.

www.murderking.com

Take a look at the horrible factory conditions in which animals destined for Burger King are brought up and slaughtered – and take action now!

www.vote-environment.org.uk

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How local

THE EFFECTS OF GLOBALISATION ARE INCREASINGLY COMING UNDER HOW FAR THE ALTERNATIVE, LOCALISATION, CAN GO. TO MIRROR THIS

Dear Paul

The role of the State, and its relationship with people and their communities is a key political issue. What legitimacy does the State have? What should be its relationship with its people? Is it necessary at all? These questions have been asked for centuries. My view is that the State as it exists today is a largely illegitimate structure – inherently corrupt and/or corruptible, unrepresentative and with no moral or social right to act on behalf of the people and communities it has progressively disempowered.

Compare, briefly, two obvious polar opposites from recent history: the former Soviet Union, which actively deconstructed communities and villages in order to render individuals dependent on a mega-state, and Switzerland, a system that places emphasis on regional decision-making and popular referenda. Which model best satisfies the needs of ordinary people and the environment? The latter, and the reason can be found in one word: size.

The bigger a political institution gets, the more unrepresentative and unwieldy it becomes. A state will always be characterised by a clear (im)moral code, a distinct view on how an economy should be run, how and what teachers should teach, how people should live, and so on. Generally speaking, the State, regardless of its rhetoric, will tend towards self-promotion and growth. Rarely has there been a long-established state that has not become authoritarian, and therefore harder to remove with time.

In the Third World, where state-based Western forms of governance have been embraced (or more often, imposed), honest states can be counted on one hand. That is the result of a great many factors, not least the fact that most modern Third World states are in effect mini empires that were created by the West with total disregard for the cultural, ethnic or ecological boundaries that already existed. Today, the effects of these modern dictatorships are made clearer each time agricultural markets are opened up for the benefits of Western corporations (but to the detriment of Southern farmers); each time hundreds of thousands of people are pushed aside to make way for a useless dam and each time a minority tribe is quashed brutally for trying to protect its identity.

Here in the West, things are different but not much better. The US, the only remaining superpower, is now run by a man whose election bid was funded almost entirely by vast corporations. It goes without saying that he will devote much of his term repaying those debts. Here in the UK we are much the same. As *The Ecologist* has shown time and time again, big business runs government;

from pushing through the WTO agreements to opening the doors to GM crops, or getting cosy with the supermarkets: the interests of industry come before the interests of the people, because a big state deals with, and understands, big business better than it understands scattered and diverse communities of ordinary folk.

Unfortunately, this crucial issue has become confined within the narrow margin of traditional left vs right politics – which has, in turn, created a bogus debate. For while the left is traditionally keen to see an ever-greater barrage of regulations, and the right is keen to see a roll-back of the State, both, through their acceptance of the process of economic globalisation, are in effect calling for the same thing. Globalisation is characterised by a massive project of global deregulation, paving the way for the growth of already powerful corporations, but also by a massive re-regulation of people's lives and traditional pursuits.

So while borders are being opened to indiscriminate trade, small producers are being regulated out of existence. While corporate misdeeds go unchecked and are everywhere apparent, individual governments are busying themselves clamping down on the only means available to ordinary, angry people to effect change – see our new Terrorism Bill for details.

What conclusion do I draw from this? That it's highly unlikely that a nation state can truly represent the interests of the people, as opposed to multinational corporations eager to purchase this or that right, this or that chunk. And that the only answer is to devolve political and economic power to the local level, where the people themselves can decide how to use it.

I don't believe that national government can or should be abolished, but I do believe that everything which can be localised, should be. This is, of course, a long-term aim and involves a two-part strategy. First is a recognition of the need to empower – in the short term only – the nation state so that it need not be bullied into submission by the likes of Monsanto et al. Second is the need to recognise that alongside that process, and in the long-term, decision-making and indeed economics should be decentralised so that the State is kept at arm's length when dealing with issues with which it has no legitimate concern.

Local people know best what is good for them and their communities. They can, and should, decide what is bought, what is sold, what is taught to their children and how they want to run their lives. Hand the power back to the people, and we will see a rebirth of local character and genuine democracy – rather than the sham we now have.

Zac Goldsmith



ZAC GOLDSMITH

Zac Goldsmith worked with the NGO *Redefining Progress* for two years, and *The International Society for Ecology and Culture* for three. He has been editor of *The Ecologist* since 1997.



can we go?

THE MEDIA SPOTLIGHT. MEANWHILE, GREENS CONTINUE TO DISCUSS DEBATE, *THE ECOLOGIST* CONDUCTS ITS OWN INTERNAL DISCUSSION.

Dear Zac

Where to start? In a way this is a slightly odd debate, because we're both starting from more or less the same position. We both agree that some form of localisation, both political and economic, is a fundamental step towards the sort of society that we need. But, the fact that we agree on the fundamentals makes it all the more important that we debate the details. Because this, it seems to me, is where some problems lie.

Let's start by kicking economic localisation into touch. There are people better qualified to talk about this, and it can, in any case, be separated from the political issue of how power is distributed. Let's, instead, talk about the State.

At heart, I suppose I'm an anarchist (the word, from the Greek, means literally 'without government' not 'chaos' in the sense that it's always misused). If you were to ask me to create a political system from scratch, it would probably be based on a curious mixture of the ideas of Kirk Sale, GK Chesterton and Prince Kropotkin. Possibly I'd be the only one who'd want to live in it, but in my view, that kind of local, decentralised, mutually-supportive, bioregional society, with fairly distributed small property and no vast, formal governmental structures, is as representative and sensitive to human needs as you're going to get.

At heart, that is. But in my head, things are different. Because we're not starting from scratch, we're starting from here. A very global, very technological, very militarised, very polluted, very overpopulated planet, stalked by a voracious economic machine unlike anything ever seen in history. And a planet which, thanks largely to accidents of history, is made up of something called 'nation states', based on arbitrary geographical, cultural or simply cartographical boundaries.

And that, even now – despite the EU, despite the WTO, despite NATO – is where the political power lies. You say that those states are 'largely illegitimate and unrepresentative'. I agree. You say that 'the bigger a political institution gets, the more unrepresentative and unwieldy it becomes'. I agree. You say that we should 'hand the power back to the people'. This is where it gets tricky.

You use the USSR and Switzerland as examples of good and bad government. But it seems to me that your Swiss example actually demonstrates not that a nation state will always 'tend towards self-promotion and growth' but rather the opposite; that power can be devolved by a responsible state. Doesn't your approval of it show that states, when bounded about by laws and limitations devised by their people, can work well? It must be a witness for the defence.

But I'm not going to get myself into the posi-

tion of defending the nation state. What I want to do is to take a hard look at some of the thornier questions that localisers must address, so that our mutual case can be strengthened.

Firstly, how local do we want that power to go? Two more extremes for you: New Labour supporters (apparently there are some around) could conceivably defend this government's record on devolving power. For the first time in 200 years, the Scots have their own parliament, with a wide range of real powers. The Welsh have a national assembly, and England has regional assemblies (one of which, the South East England Regional Assembly, has just exercised its right to local democracy by deciding to build a disastrous bypass around Hastings). The other extreme is that proposed by the magazine *Alternative Green*, which suggests abolishing taxes and the political unit, and devolving all power to a network of autonomous, armed villages which run their own affairs. I suspect that both of us would pitch up somewhere in between. But where?

And anyway, who decides? That's the crucial question. 'Local people' you say, 'know best what is good for them and their communities.' Do you believe, then, as a matter of principle, that a community has the absolute right to run its affairs in its own way, with no interference from outside? If you do, there are consequences you need to live with. One of them will probably be the end of the concept of universal human rights – that Enlightenment legacy that millions have died for, and which liberal types like us take for granted. After all, if local communities have total autonomy, who are we to tell them not to eject everyone with the 'wrong' skin colour, bring back hanging, establish feudalism or, come to that, start growing GM crops and building bypasses everywhere? If they don't, who decides what standards should apply – and at what level?

It all seems to come back to that question of degrees. What I'd like to know now, is what you think those degrees are. What powers should the State have? What powers should local communities have? Who defines a 'community' anyway? Who should tax, run public transport, control the military (if you want one)? When, if at all, can national government interfere in local life? What role do international institutions play, if any? Big questions. Shame we've only got four pages!

Paul Kingsnorth

Dear Paul

As you point out, we do not live in a straightforward world. Communities are utterly dominated by the central government. That government is increasingly dominated by an unaccountable



PAUL KINGSNORTH

Paul Kingsnorth has been involved in environmental activism since 1993. Before joining *The Ecologist* as deputy editor in 1999, he worked as a journalist on *The Independent*, as campaigner for the international NGO EarthAction, and as a freelance journalist.

'Communities cannot survive without absorbing change and influence. But nor can they survive if they are denied the ability to regulate those influences.'
Zac Goldsmith



government in Brussels, and both are effectively bought by big business. Simply disempowering the nation state would create a vacuum that would most likely be filled by one or both of the other dominant forces mentioned above.

So in a sense there are three questions here. First, what should we expect of the State? What appears to have been forgotten is that taxation itself is a form of delegation of responsibilities, or employment by the people. The State is employed to uphold common law, represent us abroad, spend public money on public services, and defend the interests of its employers against any threats they may encounter. These may be military threats, for which we have an army, or economic/cultural threats in the form of multinational corporations that increasingly behave like citizen/territory-free nations in their own right. That, very loosely speaking, is what I would expect from a state.

Second, what should we expect of the so-called 'international community'? I do not believe in globalisation, but there are certain problems common to all regions of the planet. An obvious example is climate change. Such issues do not respect human borders, and the effects of one country's bad conduct usually impact on another. Take Ladakh, a country that could not be more community-oriented. There, glaciers that deliver fresh water are melting, through no fault of the Ladakhi people. Another example is the effectiveness with which big business can now undermine national laws, not least through such bodies as the WTO. In both these examples, international co-operation is essential.

Third, what powers or rights should communities have? Here is where we no doubt differ. You ask whether I believe a community 'has the absolute right to run its affairs in its own way', and to involve itself in activities that *The Ecologist* has traditionally condemned, like building endless bypasses, experimenting with biotechnology and so on. My initial response is that in a local economy, governed by local community, these issues would be irrelevant, not least because in organic communities members tend to want to improve, not destroy their own back yards. In the case of mega-technologies like GM, the same applies, since much of these 'advances' have evolved as means of propagating the global economy, or of patching up the disasters that are inevitably caused by it, and are therefore of no interest to a real community.

But more important than that, should they be allowed to? If a community engages in an activity that will undermine and encroach upon the freedom of other communities, like building a nuclear power plant for instance, then some form of intervention is obviously justified. But on most issues, there is no clear right or wrong, particularly where moral issues are concerned. Which means that whoever takes it upon themselves to pass judgment, or make moral decisions will do so subjectively, for no matter how hard one tries, objectivity

is not possible. If this is so, then the question is, who is best placed to make a moral decision? Who for instance should decide on the values imbued through teachers into a communities' children? A central, anonymous state that represents the moral code of a particular political worldview? Or the local communities themselves who will seek to pass on to the young that information most suited to life in their locality? I favour the latter, and believe that a community should be allowed to determine its own form. And yes, I concede, a possible extension of that is the formation in some cases of rigidly 'exclusive' communities.

ZG

Dear Zac

As we write, the Zapatista National Liberation Army is marching peacefully on Mexico City; an event which one observer says could be 'the equivalent of Martin Luther King's march on Washington'. The Zapatistas, as you know, are a peasant 'army' formed to defend the people of Chiapas, Mexico, against an overweening State, and against global, neo-liberal economics. Their aim is not revolution, but simply to be left alone to live their lives as their community wishes.

But the Zapatista's spokesman, Subcomandante Marcos, is clear that theirs is also a local struggle for a global vision. 'Marcos,' he once said, 'is gay in San Francisco, black in South Africa, an Asian in Europe... a Palestinian in Israel... a Jew in Germany, a gypsy in Poland... and a Zapatista in the mountains.' In other words, a symbol for minorities everywhere – whose battle is not only with 'globalisation' but with the kind of oppression which has existed for centuries.

I worry that your world of 'rigidly exclusive communities' endangers this vision. Your phrase brings all sorts of images to my mind: the return of signs on pubs that say 'no Irish, no blacks, no gays'. Vanloads of British-born Indians driving around the country in search of 'communities' that will 'accept' them. The return of anti-Semitism – something which your family might be the first to suffer from. I'm bothered that, in your laudable desire to rejuvenate local life, you may be unwittingly laying out the red carpet for legitimised hatred.

This is why I believe in universal human rights, and why I believe that they should apply to all communities at all times. True, 'universal human rights' is a Western notion; but they have been embraced all over the world. The reason is that they are liberating rather than proscriptive. They do not seek to channel communities into a Western worldview, but they do guarantee minimum standards for all people. The right not to be tortured, killed, raped; the right not to have freedom of speech or expression curtailed by others.

You say we need global agreements for global problems, and you use climate change as an example. So, what if a local community – let's call it

'Dubyaville' – decides that climate change is bunkum and refuses to accede to regulations – energy conservation measures, say, or high taxes on car use – laid down by the State to combat it? Is that their right as a community, or can the State intervene, in the name of a wider interest?

If you accept intervention in this case, why not to enforce human rights? And if you don't accept the latter, would you be implicitly accepting the right of a community to pursue ethnic cleansing? An unpleasant question, but we have to face it. You say that 'if a community engages in an activity that will undermine and encroach upon the freedom of other communities... then some form of intervention is obviously justified'. I contend that 'rigidly exclusive communities' would encroach upon just that freedom.

Finally, you say that 'on most issues, there is no clear right or wrong, particularly where moral issues are concerned'. I know you too well, Zac, to imagine you believe that for a minute. If you did, you wouldn't be working at *The Ecologist*! If someone finds it morally acceptable to murder your wife, is their opinion on the matter really as valid as yours – or hers!? Human rights, if they represent anything, represent the freedom not to fall victim to just this sort of moral relativism. Without such universal standards, we could be opening the doors to barbarism. To keep those doors closed, I'm happy to sacrifice a certain degree of 'community' autonomy. Surely you are, too?

PK

Dear Paul

Briefly, where I have used the term community, I have done so to describe a people bound together not by a single common interest, but by a multitude of factors, including environment. I hope it is obvious that I do not regard 'rigid exclusivity' to be the ideal, but rather a reaction to threat, and that I do not advocate an end to common law. Finally, regardless of whether they are absolute, the fields of 'right' and 'wrong' have been negatively exploited for centuries.

The EU, for instance, defines anti-single-currency campaigners as 'monetary xenophobes'. The US Senate accuses opponents of the China-US free trade deal of being 'racists'. And an Essex publican was recently charged with racism for erecting a banner advising people to 'remember the war; say "no" to the Euro'. In all these cases, moral judgments were made by people who, like you, believe 'right' and 'wrong' are unquestionably defined. My point is that when a regime sets the standards, it will invariably do so to reinforce its grip.

For a community to act as a community, it must be allowed to determine its own form. Take recent moves to render Tibetans a minority in their own land by injecting 50,000 willing Chinese. The Tibetans are protesting. Are they racist, or are they seeking to protect their 'community'?

International human rights would not have protected Germany's Jews, and the majority of rape, torture and killing you refer to has been conducted by State against citizens. You cannot legislate against hatred. Ultimately, the greatest guard against excess is community itself. Like a human body, communities cannot survive without absorbing change and influence. But nor can they survive if they are denied the ability to regulate those influences. In other words, if a community is strong, it will make informed, organic choices. If it is threatened, it will become reactionary. I do not hold that human nature is inevitably 'barbaric'. Strengthening, not undermining, those communities is the answer.

ZG

Dear Zac

'You cannot legislate against hatred'? Tell that to the parents of Stephen Lawrence. 'International human rights would not have protected Germany's Jews'? They would if they'd been enforced – by the sort of empowered UN that could also have saved the Rwandans. 'If a community is strong, it will make informed organic choices'? I could give you hundreds of examples of local communities that have been just as oppressive and unjust as nation states.

Let's get back to basics. We both want a world in which a rich tapestry of cultures can survive and flourish; in which human diversity is as cherished as biological diversity. A world in which the people who understand their own landscapes, their own cultures and their own economies, can run them their own way. A world in which every nation, every region, every village is different, and in which the rights of ordinary people, communities and the environment take precedence over those of profiteers and powermongers.

But also, surely, an *international* world, in the true sense of that word. A world in which basic rights for all are guaranteed. A world in which an accountable UN can intervene to prevent genocide and war; in which a democratic trade body – not the corporate WTO – can set standards that protect the small. In short, a world in which diversity can flourish, within a global web of agreed minimum standards, safeguards and protections.

I believe it can be done. But it doesn't have to happen at the expense of human rights, racial equality, freedom of expression and lifestyle – some of the pearls which can be extracted from the dunghill of the 20th century. We must advance towards a co-operative fertilisation of autonomy and distinctiveness, not retreat into exclusion and rejection. And it's a fine line.

Human nature, as Walt Whitman put it, 'contains multitudes'. Multitudes of ideas, and multitudes of ways of living. Nurture the right ones, and we can get there united by our differences, not divided by them.

PK

'We must advance towards a co-operative fertilisation of autonomy and distinctiveness, not retreat into exclusion and rejection.'
Paul Kingsnorth



This month's heroes and villains: 'creators' of life Wangari Maathai and Professor Severino Antinori.

THE GOOD

One January day in 1999, Wangari Maathai set off for the forests of Nairobi with some women she worked with. They had a job to do. She knew it would be risky – nothing new in her line of business – but the rewards would be greater than the dangers, she hoped. With foresight, she had asked for police protection, and been promised it. Curiously, the police never showed up.

Once in the forest, the women worked carefully and calmly together. As they went about their business, figures began to move in the shadows around them. The women worked on. Then, in a matter of moments, it was over. Maathai was hit over the head, her colleagues beaten and kicked, then abandoned to drag themselves back into Nairobi. What dangerous mission had they been involved in? They had planted a tree.

Planting trees is what Wangari Maathai does, and has been doing for a quarter of a century. The only apparent surprise is that such a seemingly harmless and positive pastime should have turned her into one of Kenya's most controversial citizens.

Maathai was working as a field biologist in the mid-seventies when she first came to the conclusion that the lowering of animal resistance to parasites was linked to a degraded

environment. The cutting of indigenous forest in Kenya was not only affecting animal welfare, but resulting in the loss of species and the overall reduction of soil quality.

As a member of the National Council of Women of Kenya, she rallied her colleagues into a project of replanting and the Green Belt Movement was born. Over the years, the movement has been responsible for the

WANGARI MAATHAI

planting of tens of millions of trees in Kenya and around the world, working with no fewer than 6,000 women's groups to promote social transformation.

To Maathai, tree-planting is a symbol of mankind's relationship with nature and our past. The Movement uses tree-planting as the centralising theme in a programme of re-education: the economic and aesthetic benefits of environmental care and sustainable techniques of land management, including the use of indigenous crops, are essential elements of Maathai's vision of healthy rural life. 'I try to convince people they should see the forests as their forefathers did, and manage them on all our behalf,' she says.

It's difficult to plant so many trees and remain unnoticed, however, and people with varying interests have been taking increasing note of Maathai over the years. In the late 1980s, Kenyan President Daniel arap Moi was quick to label her and her movement 'subversive', following their protest at the planned building of a skyscraper bang in the middle of Nairobi's Uhuru park, a public space. She was forced to vacate her office and was vilified in parliament, but had managed to do enough to shake the confidence of foreign investors. The project was cancelled.

And Maathai kept at it. They arrested her, but she came back out of jail and planted more trees. They broke into her house and smacked her across the head. But she came out of hospital and planted more trees. 'When they see us coming back day after day, year after year,' she says, 'when they see a critical mass of people is behind us, it forces them to think. If they think long and hard, perhaps someday they will come

over to our side.'

There's no doubt that, beyond Kenya's halls of power, she has recruited many to 'her side'. She has been awarded the Right Livelihood Award, the UN's Africa Prize for Leadership, the Better World Society Award, and the Windstar Award for the Environment. She spoke at the World Conference on Women in Beijing in 1995 and helped found the Women's Environment and Development Organisation.

Global recognition yet governmental hostility at home has led many to abandon ship and move abroad. Not Maathai. In 1997, she put herself up as a candidate for presidential election. The venture was never likely to succeed under the best of circumstances, but a mysterious rumour circulated that she'd withdrawn from the presidential race, and in a nation that relies for its news on a largely state-supportive press, she received only a few votes.

Yet the tree-planting continued, bringing her to that Nairobi forest in 1999. The area had been designated for clearance to create a golf course. Maathai and her supporters entered the area with the aim of planting a single protesting tree – government-hired thugs stopped her in her tracks.

Yet Maathai, scarred and bandaged, emerged the winner. The event, unknown to the Kenyan government, had been filmed, provoking international outrage. In a vain effort to acquire some environmental credentials, Daniel arap Moi passed what he hoped was a fairly meaningless Environmental Management and Conservation Act, allowing citizens to file suit against corporate or governmental organisations that are defiling the environment. The Act seemed a safe bet as most Kenyan citizens would not have the means to raise the necessary legal support.

If not the last laugh, Maathai and her Green Belt Movement are at least having the latest laugh, and have begun a huge legal education programme helping villagers across the country find out how they can start a lawsuit, even on a shoestring. By swamping the government with small claims, she hopes once again to effect change on a larger level. 'I see myself moving to new areas all the time,' she says, 'being the peace-maker'.

Once again, Wangari Maathai is planting new seeds.



THE BAD

Professor Severino Antinori likes to help. He's that kind of man. The combative, moustachioed Italian is widely recognised as one of the world's leading experts on human fertility. He has made a lot of childless couples very happy; and that, he says, makes him happy too. His life's mission is to cure the world of the curse of infertility. 'To make an unhappy couple happy', he says, he is prepared to go a long way.

How far? Well, Antinori is widely-tipped to become the first person in history to clone a human being. Not for research, not for medicine, not even for science: for happiness. 'I think it is a human right to have babies,' he declared, simply, in a recent interview. And in pursuit of that right, Antinori is about to open the Pandora's box of human cloning, with all the potential nightmares it contains.

If ever there was a living example of the stark difference between knowledge and wisdom, it inhabits the skin of the 55-year-old Antinori. One of the world's leading fertility scientists, he also appears to be a man who recognises few, if any, moral or ethical dimensions to the work he does. As far as Antinori is concerned, the only limit to the advance of science is science itself. Everything else is just bunk. That, you may say, is what they told us about nuclear weapons. But if you're not a scientist, then you wouldn't understand, would you?

Antinori is director of the Rome-based International Associated Research Institute for Human Reproduction Infertility Unit (Rapruì). He sits on too many 'international advisory boards' to mention, and he has become a bit of a TV personality in Italy and elsewhere, with his forthright and uncomplicated views about children, ethics, fertility and the wonders of modern science. Now, with his cloning plan, he is fast gaining international notoriety.

Not that this is the first time Antinori has hit the headlines for pushing the boundaries of science. His name first came to public attention seven years ago, when he used the latest advances in fertility to give the 'gift' of preg-

nancy to a 64-year-old Italian woman, whose name entered the record books as the world's oldest mother. Then, last year, he announced, usefully, that he had successfully matured the sperm of infertile men in the testicles of rats.

Now, he is counting down to breaking what may be the last fertility taboo of all. He has announced that, along with a small team of fellow 'experts', he will be cloning the first human being later this year, hoping to provide a child to an infertile couple for whom all other means have failed. He has already collected 10 couples who are prepared to be a part of the experiment, and is looking for more. In a final twist, the operation will be carried out in an 'unnamed Mediterranean country', to avoid the controversy which would otherwise inevitably dog this leap into the scientific unknown.

Antinori's announcement caused horrified reactions across the board. The Vatican (just up the road from Antinori's Rome office) announced strong disapproval. 'A child', it believes, 'is not an object to which one has a right... an object of ownership.'

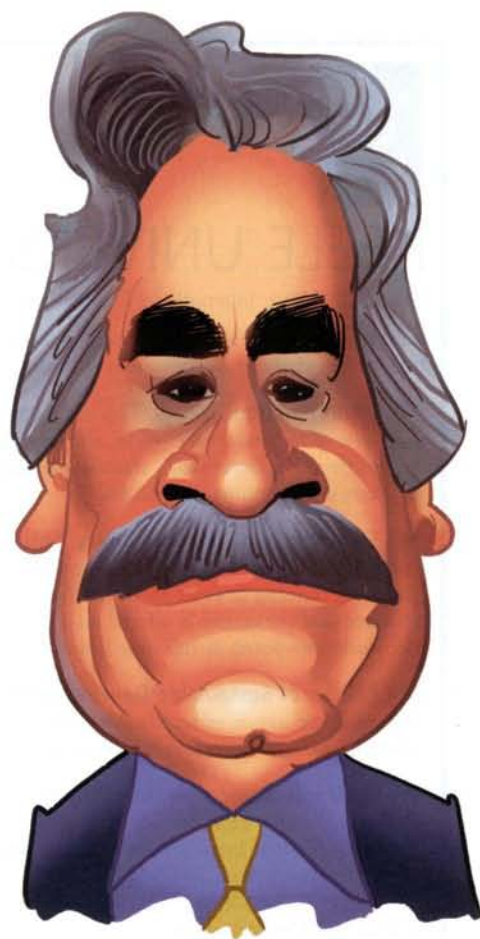
But it's not just moralists, ethicists and the religious establishment who are bothered about Antinori's work. Fellow doctors and sci-

PROFESSOR SEVERINO ANTINORI

entists are condemning him too. Dr Robert Lanza, an American fertility expert, calls human cloning 'unsafe and unethical'. Rudolph Jaenisch, an MIT scientist, says Antinori is being 'very irresponsible'.

What does Antinori say to such critics? Astonishingly, he has been publicly quoted as saying that creating a direct copy of a human being is 'a purely medical decision, not a matter for ethical assessment'. So that's all right then.

The German magazine *Der Spiegel* decided to put the public concerns to him in a revealing interview in February. Isn't cloning a dangerous process? Doesn't it lead to increased risks



of disease, for example? Those who ask such questions are 'enemies of science', replied the doctor. What did Antinori, who claims to be a Catholic, think of the Vatican's stance? 'The Pope welcomed me last November,' said Antinori grandly, then hedged his bets by pointing out that, in any case, the Vatican 'carries one million dead on its shoulders' for opposing 'effective medicine'.

But if he was so confident, he was asked, why did he need to carry out his work in a secret location? Was the country he was planning to clone in even democratic? 'These are dangerous questions,' he scolded.

The magazine then asked Antinori whether cloning wasn't, in fact, a scientific dead-end anyway. After all, it pointed out, what he was actually doing was creating a direct copy of one of the partners (in every case, the man!) rather than a new child. Antinori claims it is a human right to have children. Perhaps, suggested the interviewer, it is also a human right to have a unique genetic identity? 'This,' declared the doctor, dismissively, 'is too theoretical.'

In such hands, it seems, rests the future of science, and perhaps even the future shape of the human race.

...AND THE UGLY

'A switch to environmental good practice should not undermine the ability of good farmers to compete with global competition through the continued responsible application of modern science, including chemicals, pharmaceuticals and properly tested genetic modification.'

Lord Haskins, chairman of Northern Foods and Labour party donor.



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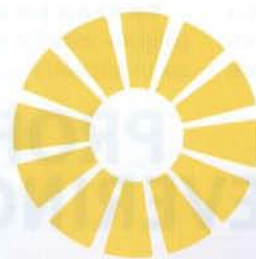
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CANDIDA-LY SPEAKING

Like an increasing number of columnists these days, I owe my livelihood to an illness of mine I once had and a passionate desire to get rid of it.

In the early eighties, after an extraordinary patch of bad choices, I underwent a prolonged bout of stress. In every important area of my life, green lights I'd always taken for granted suddenly began turning red.

In rapid succession I'd struggled under an impossible deadline, married and divorced Mr Wrong, bought the wrong flat, accepted the wrong job, incurred several large debts and spent a prolonged period of intense isolation in a foreign country. I couldn't, in those days, even get a good haircut.

Shortly after emerging from the eye of this personal squall, I began to experience strange symptoms, at first your workaday 'female' problems – cystitis, erratic periods and pre-menstrual tension so severe that it began the week after one period ended and lasted until the third day of the following one.

As time wore on, my symptoms multiplied; eczema, hives and allergies to a load of food and chemicals; diarrhoea and an irritable bowel, insomnia and night sweats, and severe depression. I had felt powerless for so long that my body seemed to be reacting in parallel, caving in under any sort of microbial onslaught.

For nearly all the three years that I was ill, I made the rounds of medical circles – first the standard ones, then the periphery with nutritionists and homeopaths and finally the very outer rim. I tried breathing from the abdomen. I had the negative emotions Rolfed out of me. Somebody diagnosed me by subjecting my hair samples to radio waves. I ploughed through autogenic training, colonic irrigation and even a form of psychotherapy – a mixture of Wilhelm Reich and what felt like being tickled on the face. I learned something about my relationship with my mother. But I did not, at any stage, get better.

At some point – the point at which I thought about having an AIDs test – it began to dawn on me that there was no miracle remedy out there that was going to turn my health around. If I was going to get better, I was going to have to take charge of the entire process myself.

I began doing some research, and one day came upon what was then a newly discovered illness whose symptoms matched almost every one of mine. When my own



By Lynne McTaggart

doctor sneered at the possibility, I sought out a renowned GP specialising in allergies and nutritional medicine, whose tests and diagnostic sensitivity confirmed my own suspicions and rooted out other contributory problems.

What I appeared to have inside me was, essentially, thrush of the body, or polystemic chronic candidiasis. *Candida albicans* is a

'The point is that all of us have to keep an open mind about candida and the host of other disturbing new illnesses that have befallen us.'

yeast that lives in the upper bowel of most of us without doing good or harm, kept in check by our immune system and the friendly bacteria that co-exist with it. An American clinician named C. Orian Truss first proposed that when the immune system is weakened and the good bacteria fall in numbers, these yeasts can start multiplying out of control, sending out toxins that eventually interfere with a range of bodily functions.

My treatment, which took, all-told, a year,

required a restrictive diet plus a well tolerated anti-fungal drug. I got better, I got extremely boring on the subject, and my husband Bryan talked me into starting up a newsletter so I could stop telling him about it and instead tell the world.

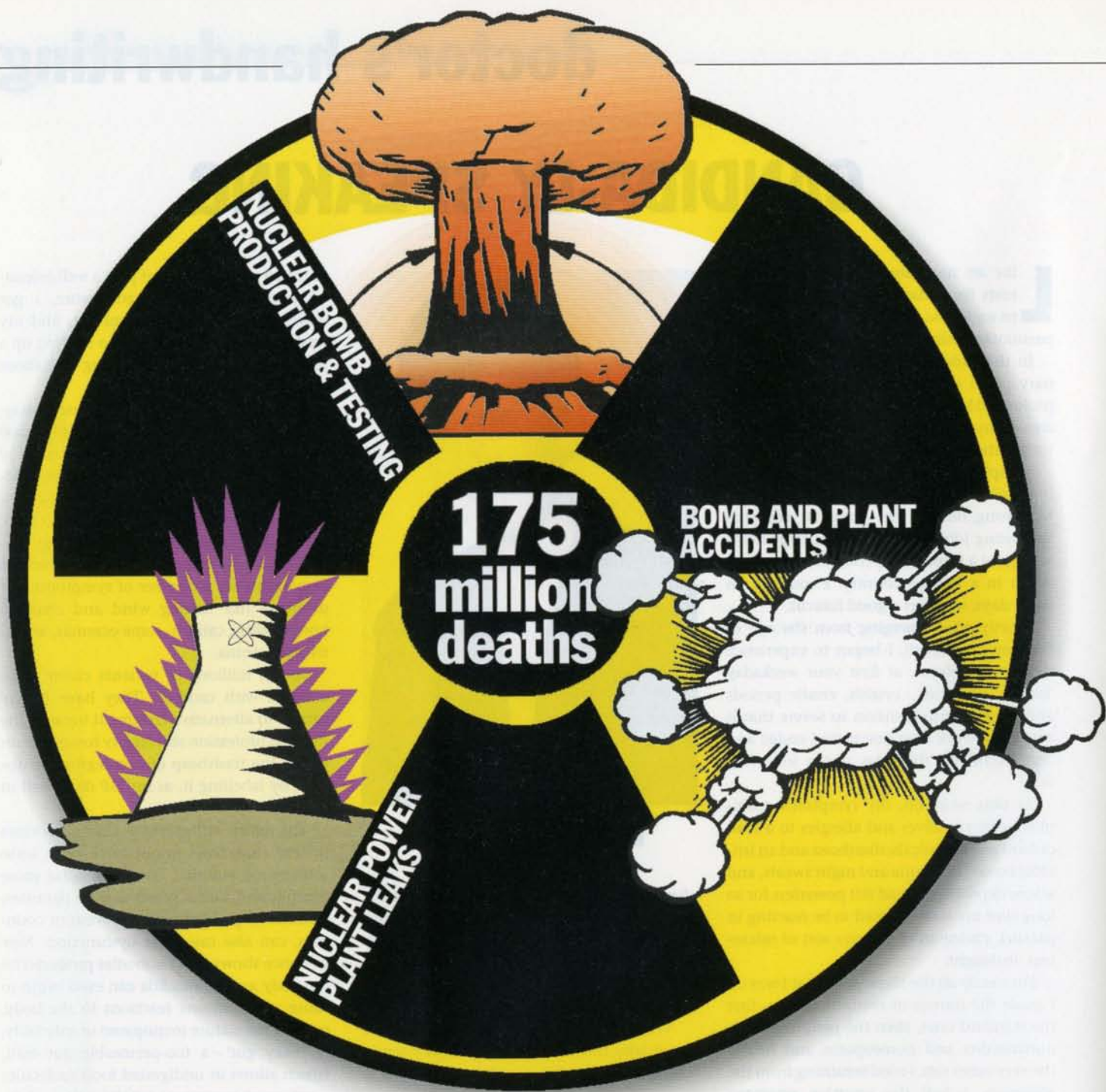
At the time, mine was an unusual diagnosis, a rare and exotic disorder. Only a few years later, the idea of a yeast that was out of control would capture the public imagination. Before long 'candida' became a catch-all term for any disorder which didn't have a diagnostic label. Today, British allergy specialists concur that a candida overgrowth is responsible for a number of symptoms: gut disorders like itching wind and changed bowel habits, catarrh, some eczemas, arthritis and asthma.

Today, millions of patients claim to be afflicted with candida. They have largely turned to alternative treatment because the medical profession still largely tosses this on top of the trashheap of non-legitimate disease, by labelling it, as my GP did, as all in the sufferer's head.

The more enlightened among doctors believe that Truss might have been onto something, but that the story is far more complicated. Other yeasts or even parasites, a common problem even in Western countries, can also cause gut dysfunction. New evidence shows that antibodies produced by the body against candida can even begin to cause auto-immune reactions in the body, causing premature menopause or infertility. A 'leaky gut' – a too-permeable gut wall, which allows in undigested food molecules – can cause symptoms redolent of candida. The yeast syndrome could be several syndromes – malabsorption of food, poor stomach acid production, allergies to environmental chemicals.

The point is that all of us have to keep an open mind about candida and the host of other disturbing new illnesses that have befallen us, the result of subjecting our bodies to entirely new sets of environmental and nutritional assaults. These, and not infections, will be responsible for the epidemics of the new millennium.

*Lynne McTaggart is the editor of **What Doctors Don't Tell You**, a monthly publication which exposes dangers and unproven practices in modern medicine. Annual subscriptions: £34.95. For details: Satellite House, 2 Salisbury Rd, London SW19 4EZ or tel: 020 8944 9555.*



the secret nuclear war

The equivalent of a nuclear war has already happened. Over the last half-century, millions have died as a result of accidents, experiments, lies and cover-ups by the nuclear industry. **Eduardo Goncalves** pulls together a number of examples, and counts the fearful total cost.

Hugo Paulino was proud to be a fusilier. He was even prouder to be serving as a UN peacekeeper in Kosovo. It was his chance to help the innocent casualties of war. His parents did not expect him to become one.

Hugo, says his father Luis, died of leukaemia caused by radiation from depleted uranium (DU) shells fired by NATO during the Kosovo war. He was one of hundreds of Portuguese peacekeepers sent to Klina, an area heavily bombed with these munitions. Their patrol detail included the local lorry park, bombed because it had served as a Serb tank reserve, and the Valujak mines, which sheltered Serbian troops.

In their time off, the soldiers bathed in the river and gratefully supplemented their tasteless rations with local fruit and cheeses given to them by thankful nuns from the convent they guarded. Out of curiosity, they would climb inside the destroyed Serbian tanks littering the area.

Hugo arrived back in Portugal from his tour of duty on 12 February 2000, complaining of headaches, nausea and 'flu-like symptoms'. Ten days later, on 22 February, he suffered a major seizure. He was rushed to Lisbon's military hospital, where his condition rapidly deteriorated. On 9 March, he died. He was 21.

The military autopsy, which was kept secret for 10 months, claimed his death was due to septicaemia and 'herpes of the brain'. Not so, says Luis Paulino. 'When he was undergoing tests, a doctor called me over and said he thought it could be from radiation.'

It was only then that Luis learnt about the uranium shells – something his son had never been warned about or given protective clothing against. He contacted doctors and relatives of Belgian and Italian soldiers suspected of having succumbed to radiation poisoning.

'The similarities were extraordinary', he said. 'My son had died from leukaemia. That is why the military classified the autopsy report and wanted me to sign over all rights to its release.'

Today, Kosovo is littered with destroyed tanks, and pieces of radioactive shrapnel. NATO forces fired 31,000 depleted uranium shells during the Kosovo campaign, and 10,800 into neighbouring Bosnia. The people NATO set out to protect – and the soldiers it sent out to protect them – are now dying. According to Bosnia's health minister, Boza Ljubic, cancer deaths among civilians have risen to 230 cases per 100,000 last year, up from 152 in 1999. Leukaemia cases, he added, had doubled.

Scientists predict that the use of DU in Serbia will lead to more than 10,000 deaths from cancer among local residents, aid workers, and peacekeepers. Belated confessions that plutonium was also used may prompt these estimates to be revised. But while NATO struggles to stave off accusations of a cover-up, the Balkans are merely the newest battlefield in a silent world war that has claimed millions of lives. Most of its victims have died not in war-zones, but in ordinary communities scattered across the globe.

The hidden deaths of Newbury

Far away from the war-torn Balkans is Newbury, a prosperous white-collar industrial town in London's commuter belt. On its outskirts is Greenham Common, the former US Air Force station that was one of America's most important strategic bases during the Cold War. The base was closed down after the signing of the INF (Intermediate Nuclear Forces) Treaty by Ronald Reagan and Mikhail Gorbachev. The nuclear threat was over. Or so people thought.

In August 1993, Ann Capewell – who lived just one mile away from the base's former runway – died of acute myeloid leukaemia. She was 16 when she passed away, just 40 days after diagnosis. As they were coming to terms with their sudden loss, her parents – Richard and Elizabeth – were surprised to find a number of other cases of leukaemia in their locality.

The more they looked, the more cases they found. 'Many were just a stone's throw from our front door,' says Richard, 'mainly cases of myeloid leukaemia in young people.'

What none of them knew was that they were the victims of a nuclear accident at Greenham Common that had been carefully covered up by successive British and American administrations.

On February 28 1958, a laden B-47 nuclear bomber was awaiting clearance for take-off when it was suddenly engulfed in a huge fireball. Another bomber flying overhead had dropped a full fuel tank just 65 feet away. The plane exploded and burnt uncontrollably for days. As did its deadly payload.

A secret study by scientists at Britain's nearby nuclear bomb laboratory at Aldermaston documented the fall-out, but the findings were never disclosed. The report showed how radioactive particles had been 'glued' to the runway surface by fire-fighters attempting to extinguish the blazing bomber – and that these were now being slowly blown into Newbury and over other local communities by aircraft jet blast.

'Virtually all the cases of leukaemias and lymphomas are in a band stretching from Greenham Common into south Newbury,' says Elizabeth. However, the British government continues to deny the cluster's existence, whilst the Americans still insist there was no accident.

Yet this was just one of countless disasters, experiments and officially-sanctioned activities which the nuclear powers have kept a closely-guarded secret. Between them, they have caused a global human death toll which is utterly unprecedented and profoundly shocking.

Broken Arrows

In 1981, the Pentagon publicly released a list of 32 'Broken Arrows' – official military terminology for an accident involving a nuclear weapon. The report gave few details and did not divulge the location of some accidents. It was prepared in response to mounting media pressure about possible accident cover-ups.

But another US government document, this time secret, indicates that the official report may be seriously misleading. It states that 'a total of 1,250 nuclear weapons have been involved in accidents during handling, storage and transportation', a number of which 'resulted in, or had high potential for, plutonium dispersal.'

Washington has never acknowledged the human consequences of even those few accidents it admits to, such as the Thule disaster in Greenland in 1968. When a B-52 bomber crashed at this secret nuclear base, all four bombs detonated, and a cloud of plutonium rose 800 metres in the air, blowing deadly radioactive particles hundreds of miles. The authorities downplayed the possibility of any health risks. But today, many local Eskimos, and their huskies, suffer from cancer, and over 300 people involved in the clean-up operation alone have since died of cancer and mysterious illnesses.

We may never know the true toll from all the bomb accidents, as the nuclear powers classify these disasters not as matters of public interest but of 'national security' instead. Indeed, it is only now that details are beginning to emerge of some accidents at bomb factories and nuclear plants that took place several decades ago.

Soviet sins

In 1991, Polish film-maker Slawomir Grunberg was invited to a little-known town in Russia's Ural mountains that was once part of a top-secret Soviet nuclear bomb-making complex. What he found was a tragedy of extraordinary dimensions, largely unknown to the outside world, and ignored by post-Cold War leaders.

His film – *Chelyabinsk: The Most Contaminated Spot on the Planet* – tells the story of the disasters at the Soviet Union's first plutonium

'It is believed that the estimated 1,900 nuclear tests conducted during the Cold War released fallout equivalent to 40,000 Hiroshimas in every corner of the globe.'

factory, and the poisoning of hundreds of thousands of people. For years, the complex dumped its nuclear waste – totalling 76 million cubic metres – into the Techa River, the sole water source for scores of local communities that line its banks. According to a local doctor, people received an average radiation dose 57 times higher than that of Chernobyl's inhabitants.

In 1957, there was an explosion at a waste storage facility that blew 2 million curies of radiation into the atmosphere. The kilometre-high cloud drifted over three Soviet provinces, contaminating over 250,000 people living in 217 towns and villages. Only a handful of local inhabitants were ever evacuated.

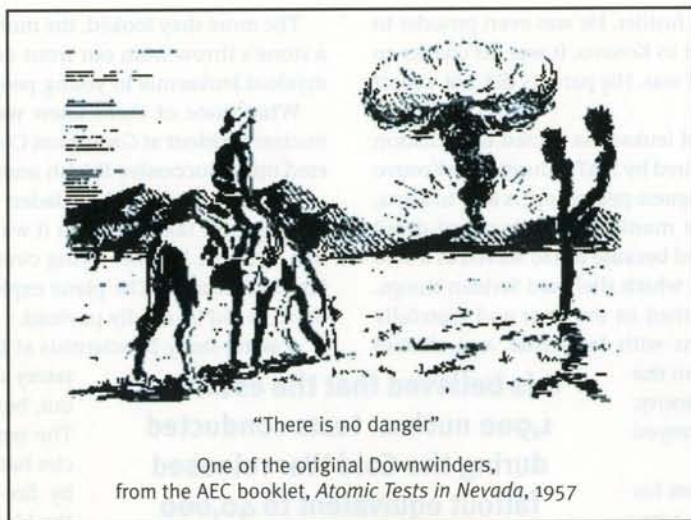
10 years later, Lake Karachay, also used as a waste dump, began to dry up. The sediment around its shores blew 5 million curies of radioactive dust over 25,000 square kilometres, irradiating 500,000 people. Even today, the lake is so 'hot' that standing on its shore will kill a person within one hour.

Grunberg's film tells of the terrible toll of these disasters on local families, such as that of Idris Sunrasin, whose grandmother, parents and three siblings have died of cancer. Leukaemia cases increased by 41 per cent after the plant began operations, and the average life span for women in 1993 was 47, compared to 72 nationally. For men it was just 45.

The secret nuclear war

Russia's nuclear industry is commonly regarded as cavalier in regard to health and safety. But the fact is that the nuclear military-industrial complex everywhere has been quite willing to deliberately endanger and sacrifice the lives of innocent civilians to further its ambitions.

The US government, for example, recently admitted its nuclear



"There is no danger"

One of the original Downwinders, from the AEC booklet, *Atomic Tests in Nevada*, 1957

scientists carried out over 4,000 experiments on live humans between 1944 and 1974. They included feeding radioactive food to disabled children, irradiating prisoners' testicles, and trials on new-born babies and pregnant mothers. Scientists involved with the Manhattan Project injected people with plutonium without telling them. An autopsy of one of the victims reportedly showed that his bones 'looked like Swiss cheese'. At the University of Cincinnati, 88 mainly low-income, black women were subjected to huge doses of radiation in an experiment funded by the

military. They suffered acute radiation sickness. Nineteen of them died.

Details of many experiments still remain shrouded in secrecy, whilst little is known of the more shocking ones to come to light – such as one when a man was injected with what a report described as 'about a lethal dose' of strontium-89.²

In Britain too, scientists have experimented with plutonium on new-born babies, ethnic minorities and the disabled. When American colleagues reviewed a British proposal for a joint experiment, they concluded: 'What is the worst thing that can happen to a human being as a result of being a subject? Death.'³

They also conducted experiments similar to America's 'Green Run' programme, in which 'dirty' radiation was released over populated areas in the western states of Washington and Oregon contaminating farmland, crops and water. The 'scrubber' filters in Hanford's nuclear stacks were

deliberately switched off first. Scientists, posing as agriculture department officials, found radiation contamination levels on farms hundreds of times above 'safety' levels.

But America's farmers and consumers were not told this, and the

'Scientists predict that millions will die in centuries to come from nuclear tests that happened in the 1950s and 1960s.'



The effect on people's lives: Luis Paulino (left) at a press conference following the death of his son, Hugo; Greenpeace protesters (right) pour concrete into a discharge pipe from the Aldermaston nuclear and weapons research facility.

DOWNWINDERS.ORG

LUSA/REUTERS

The cancer epidemic

Scientists at St Andrew's University recently found that cells exposed to a dose of just two alpha particles of radiation produced as many cancers as much higher doses of radiation. They concluded that a single alpha particle of radiation could be carcinogenic.

Herman Muller, who has received a Nobel Prize for his work, has shown how the human race's continuous exposure to so-called 'low-level' radiation is causing a gradual reduction in its ability to survive, as successive generations are genetically damaged. The spreading and accumulation of even tiny genetic mutations pass through family lines, provoking allergies, asthma, juvenile diabetes, hypertension, arthritis, high blood cholesterol conditions, and muscular and bone defects.

Dr Chris Busby (right), who has extensively researched the low-level radiation threat, has made a link between everyday radiation exposure and a range of modern ailments: 'There have been tremendous increases in diseases resulting from the breakdown of the immune system in the last 20 years: diabetes, asthma, AIDS and others which may have an immune-system link, such as MS and ME. A whole spectrum of neurological conditions of unknown origin has developed'.¹⁰

Around the world, a pattern is emerging. For the first time in modern history, mortality rates among adults between the ages of 15 and 54 are actually increasing, and have been since 1982. In July 1983, the US Center for Birth Defects in Atlanta, Georgia, reported that physical and mental disabilities in the under-17s had doubled – despite a reduction in diseases

such as polio, and improved vaccines and medical care.

Defects in new-born babies doubled between the 1950s and 1980s, as did long-term debilitating diseases. The US Environmental Protection Agency adds that 23 per cent of US males were sterile in 1980, compared to 0.5 per cent in 1938.

Above all, cancer is now an epidemic. In 1900, cancer accounted for only 4 per cent of deaths in the US. Now it is the second leading cause of premature mortality. Worldwide, the World Health Organisation (WHO) estimates the number of cancers will double in most countries over the next 25 years.

Within a few years, the chances of getting cancer in Britain will be as high as 40 per cent – virtually the toss of a coin.



Chris Busby: 'A spectrum of neurological conditions of unknown origin has developed.'

British public has never been officially told about experiments on its own soil.

Forty thousand Hiroshimas

It is believed that the estimated 1,900 nuclear tests conducted during the Cold War released fallout equivalent to 40,000 Hiroshimas in every corner of the globe. Fission products from the Nevada Test site can be detected in the ecosystems of countries as far apart as South Africa, Brazil, and Malaysia. Here, too, ordinary people were guinea pigs in a global nuclear experiment. The public health hazards were known right from the beginning, but concealed from the public. A 1957 US government study predicted that recent American tests had produced an extra 2,000 'genetically defective' babies in the US each year, and up to 35,000 every year around the globe. They continued regardless.

Ernest Sternglass's research shows how, in 1964, between 10,000 and 15,000 children were lost by miscarriage and stillbirth in New York state alone – and that there were some 10 to 15 times this number of foetal deaths across America.⁴

Those who lived closest to the test sites have seen their families decimated. Such as the 100,000 people who were directly downwind of Nevada's fallout. They included the Mormon community of St George in Utah, 100 miles away from 'Ground Zero' – the spot where the bombs were detonated. Cancer used to be virtually unheard of among its population. Mormons do not smoke or drink alcohol or coffee, and live largely off their own home-grown produce.

Mormons are also highly patriotic. They believe government to be 'God-given', and do not protest. The military could afford to wait until the wind was blowing from the test site towards St George before detonating a device. After all, President Eisenhower had said: 'We can afford to sacrifice a few thousand people out there in defence of national security.'⁵

'Over the years, the Harwell, Aldermaston and Amersham plants have pumped millions of gallons of liquid contaminated with radioactive waste into the River Thames.'

When the leukaemia cases suddenly appeared, doctors – unused to the disease – literally had no idea what it was. A nine-year-old boy, misdiagnosed with diabetes, died after a single shot of insulin. Women who complained of radiation sickness symptoms were told they had 'housewife syndrome'. Many gave birth to terribly deformed babies that became known as 'the sacrifice babies'. Elmer Pickett, the local mortician, had to learn new embalming techniques for the small bodies of wasted children killed by leukaemia. He himself was to lose no fewer than 16 members of his immediate family to cancer.

By the mid-1950s, just a few years after the tests began, St George had a leukaemia rate 2.5 times the national average, whereas before it was virtually non-existent. The total number of radiation deaths are said to have totalled 1,600 – in a town with a population of just 5,000.

The military simply lied about the radiation doses people were getting. Former army medic Van Brandon later revealed how his unit kept two sets of radiation readings for test fallout in the area. 'One set was to show that no one received an [elevated] exposure' whilst 'the other set of books showed the actual reading. That set was brought in a locked briefcase every morning.'⁶

Continuous fallout

The world's population is still being subjected to the continuous fallout of the 170 megatons of long-lived nuclear fission products blasted into the atmosphere and returned daily to earth by wind and rain – slowly poisoning our bodies via the air we breathe, the food we eat, and the water we drink. Scientists predict that millions will die in centuries to come from tests that happened in the 1950s and 1960s.

But whilst atmospheric testing is now banned, over 400 nuclear bomb factories and power plants around the world make 'routine discharges' of nuclear waste into the environment. Thousands of nuclear



RICHARD CAPEWELL/REUTERS

Lost dreams: Ann Capewell, who succumbed to acute myeloid leukaemia aged 16, and the plant at Sellafield near where she lived.

Waste dumping grounds, many of them leaking, are contaminating soil and water every day. The production of America's nuclear weapons arsenal alone has produced 100 million cubic metres of long-lived radioactive waste.

The notorious Hanford plutonium factory – which produced the fissile materials for the Trinity test and Nagasaki bomb – has discharged over 440 billion gallons of contaminated liquid into the surrounding area, contaminating 200 square miles of groundwater, but concealed the dangers from the public. Officials knew as early as the late 1940s that the nearby Columbia River was becoming seriously contaminated and a hazard to local fishermen. They chose to keep information about discharges secret and not to issue warnings.

In Britain, there are 7,000 sites licensed to use nuclear materials, 1,000 of which are allowed to discharge wastes. Three of them, closely involved in Britain's nuclear bomb programme, are located near the River Thames. Over the years, the Harwell, Aldermaston and Amersham plants have pumped millions of gallons of liquid contaminated with radioactive waste into the river.

They did so in the face of opposition from government ministers and officials who said 'the 6 million inhabitants of London derive their drinking water from this source. Any increase in [radio-]activity of the water supply would increase the genetic load on this comparatively large group.'⁷ One government minister even wrote of his fears that the dumping 'would produce between 10 and 300 severely abnormal individuals per generation'.

Public relations officers at Harwell themselves added: 'the potential sufferers are 8 million in number, including both Houses of Parliament, Fleet Street and Whitehall'. These discharges continue to this day.

Study after study has uncovered 'clusters' of cancers and high rates of other unusual illnesses near nuclear plants, including deformities and Down Syndrome. Exposure to radiation among Sellafield's workers, in north-west England, has been linked to a greater risk of fathering a stillborn child and leukaemia among off-spring. Reports also suggest a higher risk of babies developing spina bifida in the womb.

Although the plant denies any link, even official MAFF studies

have shown high levels of contamination in locally-grown fruit and vegetables, as well as wild animals. The pollution from Sellafield alone is such that it has coated the shores of the whole of Britain – from Wales to Scotland, and even Hartlepool in north-eastern England. A nationwide study organised by Harwell found that Sellafield 'is a source of plutonium contamination in the wider population of the British Isles'.⁸

Those who live nearest the plant face the greatest threat. A study of autopsy tissue by the National Radiological Protection Board (NRPB) found high plutonium levels in the lungs of local Cumbrians – 350 per cent higher than people in other parts of the country.

'Study after study has uncovered 'clusters' of cancers and high rates of other illnesses near nuclear plants, including deformities and Down Syndrome. Exposure to radiation among Sellafield's workers, in NW England, has been linked to a greater risk of fathering a stillborn child and leukaemia among off-spring.'

'Cancer clusters' have been found around nuclear plants across the globe – from France to Taiwan, Germany to Canada. A joint White House/US Department of Energy investigation recently found a high incidence of 22 different kinds of cancer at 14 different US nuclear weapons facilities around the country.

Meanwhile, a Greenpeace USA study of the toxicity of the Mississippi river showed that from 1968-83 there were 66,000 radiation deaths in the counties lining its banks – more than the number

of Americans who died during the Vietnam war.

Don't blame us

Despite the growing catalogue of tragedy, the nuclear establishment has consistently tried to deny responsibility. It claims that only high doses of radiation – such as those experienced by the victims of the Hiroshima and Nagasaki bombs – are dangerous, though even here they have misrepresented the data. They say that the everyday doses from nuclear plant discharges, bomb factories and transportation of radioactive materials are 'insignificant', and that accidents are virtually impossible.

The truth, however, is that the real number and seriousness of accidents has never been disclosed, and that the damage from fallout has been covered up. The nuclear establishment now grudgingly (and belatedly) accepts that there is no such thing as a safe dose of radiation, however 'low', yet the poisonous discharges continue. When those within the nuclear establishment try to speak out, they are

harassed, intimidated – and even threatened.

John Gofman, former head of Lawrence Livermore's biomedical unit, who helped produce the world's first plutonium for the bomb, was for years at the heart of the nuclear complex. He recalls painfully the time he was called to give evidence before a Congressional inquiry set up to defuse mounting concern over radiation's dangers.

'Chet Holifield and Craig Hosmer of the Joint Committee (on Atomic Energy) came in and turned to me and said: "Just what the hell do you think you two are doing, getting all those little old ladies in tennis shoes up in arms about our atomic energy program? There are people like you who have tried to hurt the Atomic Energy Commission program before. We got them, and we'll get you."'

Gofman was eventually forced out of his job. But the facts of his research – and that of many other scientists – speak for themselves.

The final reckoning

But could radiation really be to blame for these deaths? Are the health costs really that great? The latest research suggests they are.

It is only very recently that clues have surfaced as to the massive destructive power of radiation in terms of human health. The accident at Chernobyl will kill an estimated half a million people worldwide from cancer, and perhaps more. 90 per cent of children in the neighbouring former Soviet republic of Belarus are contaminated for life – the poisoning of an entire country's gene pool.

Ernest Sternglass calculates that, at the height of nuclear testing, there were as many as 3 million foetal deaths, spontaneous abortions and stillbirths in the US alone. In addition, 375,000 babies died in their first year of life from radiation-linked diseases.¹¹

Rosalie Bertell, author of the classic book *No Immediate Danger*, now revised and re-released, has attempted to piece together a global casualty list from the nuclear establishment's own data. The figures she has come up with are chilling – but entirely plausible.

Using the official 'radiation risk' estimates published in 1991 by the International Commission on Radiological Protection (ICRP), and the total radiation exposure data to the global population calculated by the UN Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) in 1993, she has come up with a terrifying tally:

- 358 million cancers from nuclear bomb production and testing
- 9.7 million cancers from bomb and plant accidents

'It is the nuclear holocaust that peace campaigners always warned of if war between the old superpowers broke out, yet it has already happened and with barely a shot being fired.'

- 6.6 million cancers from the 'routine discharges' of nuclear power plants (5 million of them among populations living nearby).
- As many as 175 million of these cancers could be fatal.

Added to this number are no fewer than 235 million genetically damaged and diseased people, and a staggering 588 million children born with what are called 'teratogenic effects' – diseases such as brain damage, mental disabilities, spina bifida, genital deformities, and childhood cancers.

Furthermore, says Bertell, we should include 'the problem of non-fatal cancers and of other damage which is debilitating but not counted for insurance and liability purposes'¹² – such as the 500 million babies lost as stillbirths because they were exposed to radiation whilst still in the womb, but are not counted as 'official' radiation victims.

It is what the nuclear holocaust peace campaigners always warned of if war between the old superpowers broke out, yet it has already happened and with barely a shot being fired. Its toll is greater than that of all the wars in history put together, yet no-one is counted as among the war dead.

Its virtually infinite killing and maiming power leads Rosalie Bertell to demand that we learn a new language to express a terrifying possibility: 'The concept of species annihilation means a relatively swift, deliberately induced end to history, culture, science, biological reproduction and memory. It is the ultimate human rejection of the gift of life, an act which requires a new word to describe it: omnicide'.¹³ ♦

*Eduardo Goncalves is a freelance journalist and environmental researcher. He is author of the reports **Broken Arrow – Greenham Common's Secret Nuclear Accident and Nuclear Guinea Pigs – British Human Radiation Experiments**, published by CND (UK), and was researcher to the film **The Dragon that Slew St George**. He is currently writing a book about the hidden history of the nuclear age.*

References and further reading on page 65.

*In 1998 **The Ecologist** published an article by Terry Tempest Williams. Titled **The Clan of One-Breasted Women**, it is the author's account of her Utah Mormon family who one by one succumbed to cancer after military atomic testing in the Utah desert between 1951 and 1962. (See **The Ecologist** Vol 28 No 2)*

The final reckoning

How many deaths is the nuclear industry responsible for? The following calculations of numbers of cancers caused by radiation are the latest and most accurate:*

from nuclear bomb production and testing:	385 million
from bomb and plant accidents:	9.7 million
from the 'routine discharges' of nuclear power plants (5 million of them among populations living nearby):	6.6 million
likely number of total cancer fatalities worldwide:	175 million
[Added to this number are 235 million genetically damaged and diseased people, and 588 million children born with diseases such as brain damage, mental disabilities, spina bifida, genital deformities, and childhood cancers.]	

* Calculated by Rosalie Bertell, using the official 'radiation risk' estimates published in 1991 by the International Commission on Radiological Protection (ICRP), and the total radiation exposure data to the global population calculated by the UN Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) in 1993.



strife on earth

Sir David Attenborough, Britain's most famous naturalist, has just announced that the environment is in crisis. Paul Kingsnorth asks him what we can do about it.

There are two roads in Richmond with the same name. One of them is where Sir David Attenborough has lived for the last 40 years. The other is where I turn up, at the appointed time, to meet him. They are a substantial jog apart.

'Not again,' says the weary-looking woman who answers the door. 'This happens about once a month. You go to the end of the road, turn left, cross the river...'

Arriving hot, sweaty, embarrassed and 25 minutes late to interview the most famous naturalist in Britain is not a promising start. But David Attenborough seems to be as unflappable in the flesh as on the screen. For a man who has waded barefoot through piles of diseased rats, smuggled sacks of armadillos into hotel bedrooms and woken up with a wild lion sitting on his chest, this is probably not, after all, a serious inconvenience.

'Come and sit down,' he says, in response to my apologetic gasps. 'You look like you could do with a glass of water.'

David Attenborough is a national institution. He doesn't like being reminded of the fact, but there it is. Virtually anyone under the age of 60 in Britain has grown up with him. He invented the modern television wildlife programme virtually single-handedly, and he has what may be the most instantly recognisable voice in the kingdom. His groundbreaking BBC documentaries have, over the last 50 years, explained, explored and exposed virtually every facet of life on planet Earth. From the classic, *The Living Planet*, *Life on Earth* – to the specific, *Life of Birds*, *Life in the Freezer*, *The Private Life of Plants* and the rest. Think natural history and you think David Attenborough. There must be vast numbers of people in Britain who have learnt everything they know about wildlife from him. It's an awesome position to be in.

'You know, it is a terrible thing to appear on television,' he says, 'because people think that you actually know what you're talking about.' He pours himself a cup of coffee, and looks concerned. 'Seriously, it is a real problem. People think "he's got a hotline to God" or "he knows all the facts". And I'm just a guy...'

State of the Planet

Even national institutions can be wrong. David Attenborough is not 'just a guy', whatever he might like to think. Or, if he is, he is a massively influential one. In his time, he has been controller of BBC2 (he oversaw the introduction of colour television), an award-winning writer (books and scripts), a knight of the realm, trustee, president and/or fellow of a long and very worthy list of wildlife and conservation organisations. Oh, and the pioneer of the first generation of wildlife film makers. Today, at the age of 75 (he only looks about 50), he bestrides the BBC Natural History Unit like a mild-mannered colossus. You can't help thinking that if he wanted to make a 13-part series about nematode worms, the BBC would clear the schedules and

write him a cheque without blinking. Nice work if you can get it.

All this makes Attenborough more than interesting. But what is really fascinating about him now, in the twilight of his career, is the most recent series he made for the BBC, which was screened at the end of last year. *State of the Planet* was a three-parter designed to examine just that. In what marked a radical departure for the BBC's Natural

History Unit, it turned its gaze away from the micro, (lovely landscapes, bizarre species, animals eating each other in inventive ways), to the macro; the world as a whole. For the first time it addressed, on prime-time television, the issue that the environmental movement has been

banging on about for the last few decades – humanity's impact on the planet.

And the message from the BBC? Simple: we are in the midst of a global environmental crisis, and if we don't do something substantial about it, it's going to get a lot worse.

We live in a time, the series explained, in which more species exist on Earth than at probably any other period in its existence. We don't even know how many – it is likely to be anything between 1.5 million and 100 million. And one highly successful and adaptive species, *homo sapiens sapiens*, is destroying others, and their habitats, at a speed and on a scale that is equally unprecedented. The destruction we are inflicting is so great that some senior biologists featured in the programmes say that we may be on the brink of a new mass extinction which could wipe out up to 50 per cent of all life on Earth.

Strong stuff from the traditionally cautious BBC. And *State of the Planet*, though not exactly a radical call to arms, was clear about the need to change the way society operates if we are to have any chance of tackling



the problems we have created. The end of the final episode sees Attenborough standing alone amongst the vast, abandoned statues of Easter Island. When the first Polynesian settlers landed there 1,500 years ago they found, in Attenborough's words, 'a rich fertile world in miniature'. By the time the first Europeans arrived, on Easter Sunday 1722, it had become 'a barren desert'. For once, the Europeans didn't have to destroy an isolated, Pacific society – it had destroyed itself. Forest destruction, competition for resources, warfare and overpopulation had reduced an advanced civilisation to starving remnants living in a denuded world.

It is a deliberately powerful metaphor, which Attenborough uses to good effect. It is, he says, simply, 'a warning of what the future could hold' for the whole planet. And he is clear, too, in his understated way, about the nature of the challenge. 'Many individuals,' he says, at the very end of the programme, 'are doing what they can. But real success can only come if there is a change in our societies and in our economics and in our politics.'

'I'm a very old BBC hand'

Even if none of this is surprising in itself – dire warnings of environmental doom not being exactly news to the viewing public – what made *State of the Planet* so effective can be summed up in one word: Attenborough. The reason, ironically, is that he's not really known for this sort of

thing. Unlike some of his fellow conservationists, David Attenborough has always remained, if not quite apolitical, then certainly above the fray. He does gorillas, birds of paradise, cute baby moles; he doesn't do preaching, politics or 'messages'. So when he does stand up and announce that the planet is in big trouble it is all the more effective.

Partly, he explains, his famous objectivity is historical. 'I'm a very old BBC hand,' he says, 'and in the old days...

it was a basic cardinal fact that its producers didn't have opinions. When I was producing natural history



programmes I didn't use them as vehicles for my own opinion. They were factual programmes.' But it's also a deliberate choice; it's part of the image he has constructed for himself. While he's keen to stress that he's always been involved in active conservation – he was involved in setting up the World Wide Fund for Nature (WWF), and he's been president of the Royal Society for Nature Conservation and other such august pressure groups – his studied 'objectivity' is his greatest asset. And he knows it.

'I do an awful lot of appearances,' he says, by way of explanation, 'and to have one person always grinding the same axe would not be a good idea. People are not going to care about animal conservation unless they think that animals are worthwhile.' And they will only think that if 'they think "the person on that box is telling us the truth; he is showing us what they are and not telling us too much what to think about them"'.

He is undoubtedly right. But maintaining a neutral, professorial public image for professional reasons is one thing. Actually having no opinions is quite another. The question is, then, what does David Attenborough really think about the state of the planet? What does he think needs to be done? And is he going to talk about it?

'Crying wolf is a real danger'

In the past, Attenborough has said remarkably little in public about the root causes of environmental problems. Even in interviews, he has tended towards the cautious. Asked about the possibilities of dramatic climate change, for example, or mass extinction, he always talks about the inevitability of change. The one thing the world has never been, he always says, is static.

I wonder, now, whether *State of the Planet* has changed his mind?

'I think that anybody with any sense of perspective – geological or evolutionary – will recognise that the one thing the world has never even been is static,' he says.

Right. But come on – after everything he said back there on Easter Island. He's not going to suggest, surely, that all the changes we are seeing are somehow 'natural'?

'I think there will be radical changes,' he says. 'But I don't actually think that within the next 100 years the natural world will be

reduced to rats and cockroaches, nor do I think that the plant world will be reduced to some kind of desert. Things change... I don't think we should regard change as a disaster. For example, I get Indian ring-necked parakeets in my garden every morning. There's a big colony living wild down the road. There might be some out there now.' We both squint out of the patio doors. Nothing, though I have to take

his word for it. I wouldn't know a ring-necked parakeet from a woodpigeon.

But there's something going on here, I think. And it's more than simply the fact that he claims to be a natural optimist ('by nature, I tend to think a bottle's half full').

I think that David Attenborough is holding back. I think he's erring on the side of

caution because the one thing he doesn't want to be associated with, above all else, is that bane of the entire environmental movement: the scaremonger.

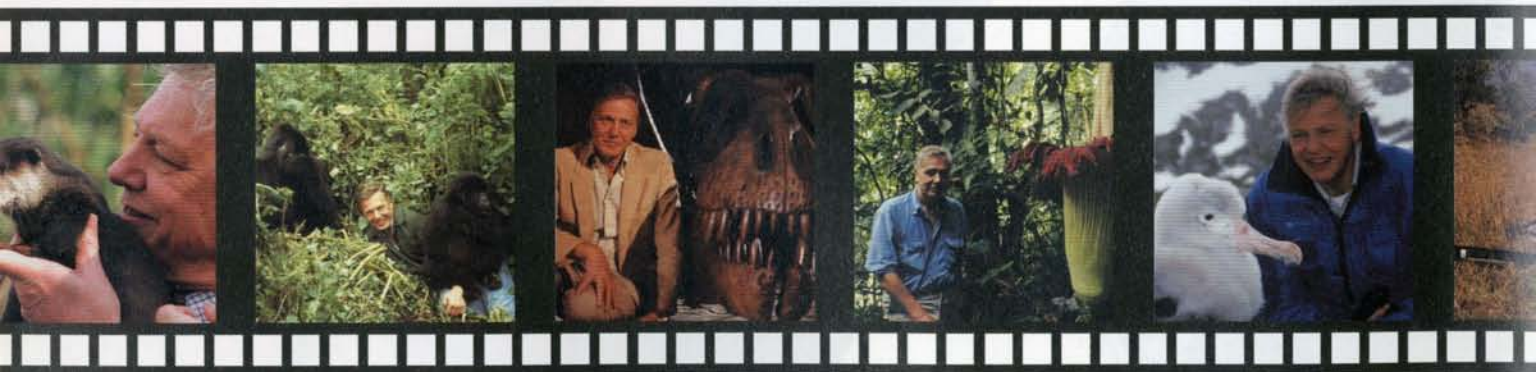
Bring up the subject, and he sits forward suddenly in his chair. For the first time since I arrived, his eyes flash.

'Precisely!' he says. 'We have said some terrible things! When I say we, I mean I identify myself with environmentalists and ecologists. We have said terrible things, like "in 10 years there will be no rain-forest left", and "do you realise that every minute an area the size of Luxembourg or France or something is felled?" And people out there say: "What, again? It seems alright to me". And so crying wolf is a real danger.'

So, what about those who don't cry wolf? There are a lot of very clear-headed warnings out there about environmental degradation. Now, Attenborough, through *State of the Planet*, has issued one himself. Does he think it will make any difference?

'I think that the justification for what I do is that in the end you will only get a real change, a real shift in people's behaviour, if it has political backing. Here we are with even the most obvious things like a fishing policy or a transport policy – we know what the consequences are, and yet the people who have got personal stakes in it say "what am I going to do if I can't put my boats out fishing? I'm going to get cod even if it's the end of it". You can only get really unpopular decisions through if the electorate is convinced of the value of the environment. That's what natural history programmes should be for.'

'I know from anthropology that people will not accept difficult political instructions or governmental decisions from somebody who is totally divorced from them.'



A life on earth: Sir David Frederick Attenborough, broadcaster and naturalist.

- 1926 Born 8 May.
- 1947-9 Served in Royal Navy.
- 1949-52 Editorial assistant in educational publishing house.
- 1952 Joined BBC Television Service as trainee producer.
- 1954-75 Undertook zoological and ethnographic filming expeditions to: Sierra Leone, British Guiana, Indonesia, New Guinea, Paraguay, Argentina, South West Pacific, Madagascar, Northern Australia, the Zambesi, Bali, Celebes, Borneo, Peru, Colombia, Mali, British Columbia, Iran, Solomon Islands and Nigeria.
- 1965-68 Controller, BBC2.

- 1969-72 Director of Programmes BBC2.
- 1973 Resigned in order to write and present BBC series including *Eastwards with Attenborough*; *The Tribal Eye*; *Wildlife on One*; *Life on Earth*; *The Living Planet*; *The First Eden*; *Lost Worlds*; *Vanished Lives*; *The Trials of Life*; *Life in the Freezer*; *The Private Life of Plants*; *The Life of Birds*; *State of the Planet*.
Trustee of the British Museum.
- 1985 Knighted.
Awarded some five honorary fellowships, 12 medals, prizes and other awards. Holds 20 or so honorary doctorates.

'Right, we'd better have a bloody revolution'

But what I really want to know is how David Attenborough is going to follow up on the parting shot he delivered on Easter Island – the one about changing our societies, our economics and our politics in order to protect the planet. What did he really mean by it?

'That means that the electorate should be saying to political parties "yes, all very well, but you have only given us lip service so far. You haven't actually done anything, for example, about the roads or fuel policy or other matters of environmental concern."

Roads and fuel come up a lot in his conversation. Attenborough was refreshingly dismissive of the fuel protests last year, and he doesn't drive himself ('I don't run a car, have never run a car. I could say that this is because I have this extremely tender environmentalist conscience, but the fact is I hate driving. I loathe the damn thing.'). But on this issue, too, he comes back to public persuasion. 'The only way Prescott is going to get through something to do with transport policy,' he says, 'is if the public think there are too many damn things on the road, and use the railways.'

This still hasn't really answered the question, though. Persuading governments to pass environmental legislation doesn't amount to the sort of sea change he seemed to be talking about. Take economics. The rise of multinational corporations, and the change in the global economic landscape to accommodate their interests, has been blamed for a whole tranche of contemporary ills – and environmental degradation is certainly one of them. Does he see that as a problem?

'I think it's been like that for a long time,' he says. 'It's been like that since the Hanseatic League, whenever that was. And yep, that's right, it's the nature of capitalism. I suppose you could say, "right, we'd better have a bloody revolution", but by and large it doesn't seem to be a good idea. So OK, what do you do? It's very easy to say everything is outrageous. But if you have an oil company that's setting up its own environmental department, for example, what do you do? Do you spit in its eye, or do you make sure that what they do actually has some substance?'

One thing that really bothers him, he says, is how modern economics defines 'wealth'. The fact that most of the world's natural wonders simply don't show up on any balance sheets, he believes, is an urgent economic problem.

'Changing the way we measure things,' is vital. So is decompartmentalising society –

making sure that economics and politics are not divorced from other crucial areas of life... 'That's why – well, for example... I'm afraid I'm not a practising Christian, but it seems to me to be absolutely correct that the Archbishop of Canterbury should be a political force. And the

people who say "we're not having religion coming into politics, thank you very much" – I mean, what the hell are they talking about? Well, what else is it?'

'Being in touch with the natural world is crucial'

State of the Planet looked at the question of valuing nature. It used examples of local communities in the Pacific and Papua New Guinea, who make a living from sustainably harvesting butterflies and sea horses, which they export for sale on the world markets. Presumably the viewer was supposed to see such examples as ways out of a much bigger problem: economics versus the environment. Personally, I

wasn't convinced, but then, what do I know? Mention it, though, and Attenborough's nose wrinkles slightly; he waves his hand vaguely. It doesn't seem he was convinced either.

'Oh, I am convinced to a degree, but I mean they are so piddling really.'

Well, I mumble, I didn't like to say so...

'I don't want to knock my own programme, you know, and...'

Suddenly his eyes are elsewhere.

'Look,' he says, pointing across the room. 'There are those parakeets!'

'Where?'

'In that tree – the one with the bare branches. Go over to the window.' I do, slowly, and there they are – two bright green birds that look like they should be somewhere much hotter than England in February. I can now tell any future grandchildren that I have been personally tutored in ornithology by Sir David Attenborough. Sort of.

'Pretty, aren't they?' he says, doing that lopsided half-smile that several million people are familiar with. 'But getting back to those examples... they were a nice, as it were, closed case – you know, we could say yes, they were about to exterminate sea horses and now they aren't... But it isn't a solution to the world's problems.'

And here we are again – solutions to the world's problems. Attenborough seems to believe that global capitalism can be enormously damaging to the natural world. He believes that modern economics doesn't put a true value on the environment. Would he agree with another of the claims of the environmental movement – that localising economics and politics could help to tackle some of these problems?

It could certainly, he says, help bring people closer to nature – and 'being in touch with the natural world is crucially important – absolutely, totally. I'm especially involved, for example, in the Richmond Environmental Centre. That's one of those things you can hardly say no to.' He looks briefly pained, and runs his hands through his silver hair.

'But I'm only here for about eight days at a time, and I feel guilty about that. Oh, my capacity for guilt is enormous.' He grins, almost apologetically.

'I'm all the time thinking I'm not doing the things I should be doing, not doing enough of it, or I said I'd be vice-president of something or other, and what I have I done? Nothing.'

Well, I say, you've done more than most people to change things. No need to feel guilty about that, surely.

'Well, I'm having a good time. Which makes me feel guilty too.'

How very English. Let me guess: all that flying around the world emitting greenhouse gases makes you feel guilty too?

'Yep, I feel guilty about that. And if I can bicycle, I bicycle.'

So, even national institutions get angst-ridden. Somehow, this is oddly refreshing.

'I'm by and large against centralisation'

But back to that localisation argument, because things were just getting interesting. He seems to be in favour of some form of localisation. So what does he think of the proliferation of global and regional institutions in recent years? What does he think, for example, of the European Union, and Britain's future within it?

'I'm by and large against centralisation,' he says, simply. 'Not so much for ideological reasons but for practical ones. I once had aspirations to be an anthropologist, and I know from anthropology that people will not accept difficult political instructions or governmental decisions from somebody who is *totally* divorced from them. If it doesn't speak the same language, it's no good.' He emphasises the word 'totally'. He's leaning forward in his chair again, that Mission To Explain coursing through his veins.

'We're seeing examples of it now, people coming along saying "Germany says you will have to close your car factories because they



OTW/38

‘I want to put them somewhere else’. People won’t tolerate this. And it is extraordinary that at the same time people say we have all got to join Europe for reasons which even the economists themselves aren’t clear on – at the same time we’re saying, well yes of course Scotland has got to be independent. And why don’t we make Wales independent too? And the north of England.’ Those eyes are flashing again.

‘I’m against this huge globalisation on the basis of economic advantage,’ he says, determinedly. ‘Marginal advantage...’ He sits back and drums his fingers on the chair arm. I try to imagine the ruckus that would have been caused if he’d delivered this message at the end of *State of the Planet* instead.

‘There are perfectly good independent small nations,’ he says, as if it were an obvious point he’d already explained five times to a particularly dim child or government minister. ‘And since when has Finland been a rotten place to live in?’

I don’t know, I say, I’ve never been there.

‘Well, neither have I, but you get the point.’

Loud and clear, Sir David. Loud and clear.

‘The fundamental issue is the moral issue’

So, here we are. There is a crisis, and it’s going to affect us all. We’ve talked about some of the ways we could tackle it. But will we get the chance? One of the more miserable predictions made in *State of the Planet* is that, by the end of this century, over half of all the species on Earth are likely to be seriously endangered or even extinct. Do we have enough time to turn it around?

‘I don’t think “turned around” is necessarily the right verb. It’s like steering an aircraft carrier: you have to put the thing on the tiller and then you have to wait for 15 miles before the thing actually shifts. All we can hope for is that the thing is going to slowly and imperceptibly shift. All I can say is that 50 years ago there were no such thing as environmental policies. There is a shift... whether there will be some 180° turn – I don’t think there can possibly be. But I think that we might move away from some of the appalling materialist considerations which have governed politics for a long time.’

When David Attenborough talks, he talks seriously. When he offers you an opinion, you know he means it. And you know that, after more than 50 years in the business, he is still driven by something – something that you can see in his eyes. Something that fires him up. It’s an obvious question, but I’m going to ask it anyway: what makes him do what he does? Where does his passion for nature come from?

‘We’ve all got it.’ He waves at me. ‘You’ve got it.’

‘The overwhelming reason [for preserving the Amazon] is Man’s imaginative health.’

But I know people who haven’t.

‘You don’t know any kids who haven’t. There are some people who have had it beaten out of them in whatever social circumstances they’ve been brought up – but you don’t meet many five-year-olds who are not interested in a hedgehog or a stickleback.’

Does that mean that a love of nature is something ingrained within us? Might that be why the idea of extinction, for example, bothers people so much?

‘Yes... I have never said that the reason we have got to preserve the tiger or the seahorse or whatever is because if we don’t there will be some eco-disaster. Neither have I said we have got to do this because of some pharmaceutical advantage there may or may not be. The fundamental issue is the moral issue – and I’ve always said that. The moral issue is that we should not impoverish this world.’ Take, for example, the “we must preserve the Amazon because the cure for cancer might be in there somewhere” school of thought: ‘I mean, it’s not really the point is it? There might be a cure there, but the overwhelming reason [for preserving it] is Man’s imaginative health... it would be a grave impoverishment of our imaginal world.’

‘I’m coming towards the end of the shelf’

So how, as he approaches the end of his career, does David Attenborough want to be seen? What mark does he want to leave? Would he like to be seen, for example, as a prophet of some kind?

‘No... because, I don’t know... I’m lost in admiration for people like Teddy [Goldsmith, the founder of *The Ecologist*], for example – he has the answer to everything, you know. I don’t know how, but he does, and I believe every word he says. But I find that very hard, and that’s why I’m not in politics... No, I would like my legacy to be a set of DVDs on a shelf which people can point to and say – well, there’s the evolutionary history of life. That’s ecology, that’s birds, that’s mammals, that’s plants, that’s fossils. If you wanted to know anything about aggressive behaviour, if you wanted to know anything about birds of paradise, anything about marsupials – there’s a 50-minute thing which would give you the outline. That’s what I would like... and I’ve still got a bit to go, but I’m coming towards the end of the shelf.’

That, I say, will be a hell of a legacy.

‘Well, that’s why I’m here. That’s why it’s such a delight and joy, so self indulgent.’ He looks around furtively, and grins.

‘Now,’ he says, ‘I’m feeling guilty again.’ ♦

Paul Kingsnorth is deputy editor of *The Ecologist*

State of the Planet

State of the Planet is the video collection of Sir David Attenborough’s BBC1 TV series that was broadcast in November 2000. The series focuses on the current state of our natural habitat, and what the future holds for us all.

Over the three programmes his quest takes him on a global journey from the Philippines and the Maldives to Easter Island and from Kenya to Ecuador. He discusses whether our planet is really facing destruction, why this crisis has come about and what has caused it, and finally looks at how our actions over the next 100 years will ultimately determine the future of life on Earth.

Special Offer to readers of *The Ecologist*

The *State of the Planet* video*, which retails at £9.99, is available to UK readers of *The Ecologist* at the special price of just £8.99 including postage and packing (Europe £10.99, rest of the world £13.49).

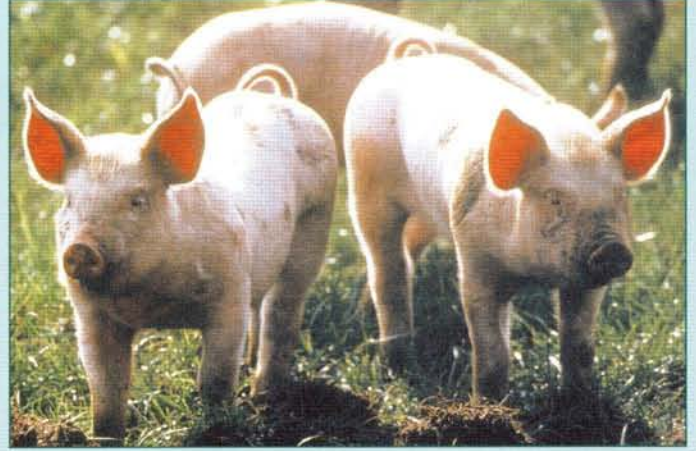
To pay by credit card, please telephone 0870 600 7080 quoting reference SOTPO4. The order lines are open from 9.00 – 5.30pm, Monday to Friday. Alternatively, please send a cheque made out to ‘BBC Worldwide Ltd’ to State of the Planet Video Offer, POBox 326, Sittingbourne, Kent, ME9 8FA. Please quote reference SOTPO4 and write your name and address on the back of the cheque.

Offer closes 30 April 2001.

*Please note that the video is available only in VHS format.



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¹ Livestock buildings are a major anthropogenic source of atmospheric pollutants, such as ammonia, nitrous oxide, methane and carbon dioxide, which contribute to soil acidification and global warming
[C M Wathes *et al.*, *British Poultry Science*, 38:14-28 (1997)]



campaigning
for farm animals

many nappy returns

As disposable nappies mount up in landfill sites, and new research questions their suitability for babies in the first place, **Rob Edwards** considers the alternatives.

Nothing in your life prepares you for changing nappies. You can't consciously remember wearing them. For the previous nine months or so you have been entirely focused on the process of labour and the miraculous act of birth itself. As a result, when the baby finally arrives, you suddenly realise that you have not the faintest idea how to look after it.

Your life has suddenly been turned upside down. You can't just pop out to the pub, go to the cinema or climb a hill. This tiny, wide-eyed bundle of howling, puking, dribbling, pissing, shitting humanity rips at your heart every moment of every day. Progressively sleep-deprived, you start to feel tired – more desperately tired than you have ever felt before.

It is in the midst of all this that parents have to learn about nappies, and learn fast. Most parents probably do whatever comes easiest, and put any awkward issues to the back of their minds. In the circumstances it is hardly surprising that the environmental impact of the type of nappy they are using is not at the top of their agenda.

The vulnerability of first-time parents is also ruthlessly exploited by the profit-hungry multinational companies that make throw-away nappies. Free samples are given away in maternity hospitals, their 'convenience' is heavily advertised on the television and expensive-looking brochures are produced claiming that disposable nappies are really kind to the environment.

'Throw-away nappies, given that parents have to buy scores of them every week for years, are a serious money spinner – WEN gives an estimated price tag of £1,000 per child.'

But what is the truth? How do the environmental claims made by disposable nappy manufacturers stack up? What are the alternatives and how do they work? What are the comparative impacts on the

environment? What, in short, should parents be doing if they want to be responsible without being drowned in a sea of baby-waste?

It is to answer these and other questions that the Women's Environmental Network is holding its second **Real Nappy Week** on 23-29 April 2001. The aim is to encourage parents to choose reusable cloth nappies in preference to disposables, and to persuade hospitals, local authorities and local groups to support them (see box page 43).

Significant progress has been made since the first Real Nappy Week in 2000, on which the organisers are hoping to build. Over 80 local authorities are promoting real nappies, some hospitals like Chichester and Lister now use real nappies in their neonatal, maternity

and paediatric wards and local groups have been set up around the country.

The money to fund the campaign comes from a government initiative to divert the tax being levied on landfill waste dumps into schemes that help reduce the amount of waste created in the first place. 'When I started six years ago, I was a lone voice promoting the benefits of real nappies,' says one of the founders of the Real Nappy Association, Gina Purmann. 'Now we have a full-scale operation.'

The growing success of the campaign has inevitably provoked a reaction from the disposable nappy manufacturers, who are worried about their profit margins. Throw-away nappies, given that parents have to buy scores of them every week for years, are a serious money spinner (WEN gives them an estimated price tag of £1,000 per child). Companies do not want people to feel they are acting irresponsibly by using them.

So, for example, Procter and Gamble, who make the best-selling 'Pampers' throw-away nappies, have produced a very pretty booklet called *Caring for babies, families and our environment*. It's got a charming picture of a mother and two young children feeding ducks on the front cover.

The launch of Pampers in the UK during the 1980s, it informs us, 'began a revolution in baby care'. Mums could do away with all the chores of cloth nappies and spend more time with their children, or 'pursuing their lifestyles'.

Dads are not deemed worthy of a mention.

While these carefree mums are 'pursuing their lifestyles', they don't need to have a guilty conscience about the environment. 'We want our consumers to know the facts about the actual environmental profile of our products and all we are doing to improve them further,' the booklet proclaims.





Over several green-tinged pages, we are treated to a litany of the environmentally-friendly features of Pampers. Did you know, for example, that the introduction of 'supersorber', an oil-based polymer that absorbs liquid, reduces the average weight of the nappies by 30 per cent? There is 'no consensus', they say, on whether reusable or disposal nappies are better from an environmental standpoint.

'Both options consume energy, water and raw materials; both have environmental emissions, but in the absolute, both options are a relatively small share of all human activities,' the booklet states. In other words, whatever you do with nappies has some impact on the environment, but it's not much compared to the military-industrial complex, globalising governments, multinational capitalist corporations and lots of other things. As if 'in the absolute', our only choice is to act with absolute irresponsibility.

Then, at last, the booklet gets down to the specifics. 'Although disposables produce more solid waste and consume more raw materials, cloth nappies result in more water consumption due to washing, and also produce more waterborne emissions.' The fact that disposables create more waste is inescapable, but if accompanied by unquantified assertions about the other impacts from reusables, maybe readers will not notice.

'While there are numerical differences due to different methods, assumptions, geographies and regional infrastructures, [lifecycle inventories] consistently support the general conclusion that neither type of nappy is environmentally superior in all aspects.'

'Disposable nappies have been shown to use 3.5 times as much energy, 2.3 times more waste water and 8.3 times as many irreplaceable raw materials as reusable nappies.'

It is those last three weasel words 'in all aspects' that give the game away. Of course reusable nappies may not be superior in every single aspect because they do need to be washed. But the key question – which type is better overall – is ducked. And it is ducked because Procter and Gamble simply don't like the answer.

Back in 1991 the company commissioned two studies to compare the ecological costs of reusable versus disposable nappies. They both concluded that there was very little difference in overall environmental impact.

Procter and Gamble used the results as the basis of an advertising campaign claiming that disposable nappies did no more harm to the environment than reusables. In response, the Women's Environmental Network, which has long led on this issue, commissioned another study from the Landbank Consultancy. This showed

that both Procter and Gamble studies had concentrated on the 'use' stage, during which reusables have their greatest impact, to the exclusion of other stages.

The industry-sponsored studies, in other words, were skewed in favour of disposable nappies. Landbank then used the raw data from the studies, together with additional publicly available information, to recalculate the impacts of the two different systems. The results, set out in the table on page 42, were dramatic.

Disposable nappies were shown to use 3.5 times as much energy, 2.3 times more waste water and 8.3 times as many irreplaceable raw materials as reusable nappies. Worse, disposables consumed 90 times more renewable raw materials, created 60 times more solid waste and

required up to 30 times more land. It was, overall, a pretty conclusive picture. Throwaway nappies are much more environmentally damaging than the alternative.

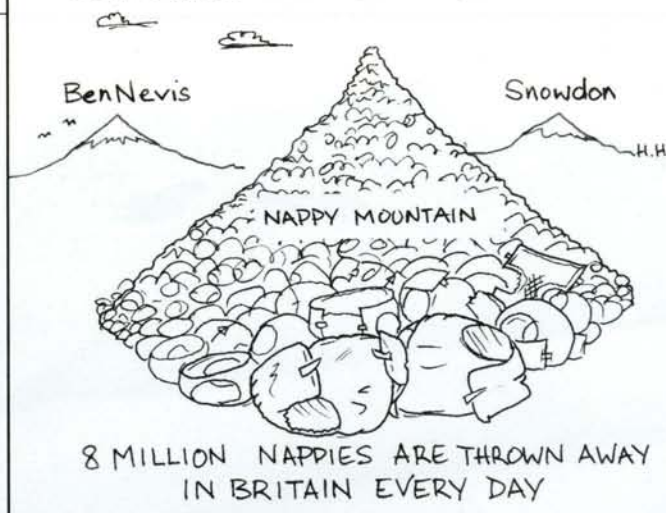
The Women's Environmental Network used the Landbank study as the basis of a complaint to the Advertising Standards Authority over Procter and Gamble's claims about disposables. In 1992 the authority accepted the environmental arguments made by the network and upheld the complaint. The company was asked to stop implying that the results of its studies were generally accepted. Rather, they were 'simply one side of an ongoing argument'.

In Britain over 8 million disposables are used and disposed of every day, dirty nappies making up half the waste produced by a one-baby household, 4 per cent of all household waste – around 1 million tonnes per year.

About 75 per cent of the used throw-away nappy consists of urine and faeces; the remaining 25 per cent is paper together with plastic and chemical components which can take up to 500 years before they fully decompose, quite a legacy for future generations. The total cost to the British council taxpayer of collecting, transporting and dumping disposable nappies in landfill sites is estimated at £40 million a year.

Landfill is unsightly, smelly, potentially dangerous, expensive and patently unsustainable. The rubbish rots and gives off gases like methane which is potentially explosive as well as adding to global warming. The rotting process releases acids which dissolve metals

BRITAIN'S HIGHEST MOUNTAINS



ESTIMATED ENVIRONMENTAL IMPACT OF NAPPIES PER INFANT, PER YEAR

Impact	Reusable nappies	Disposable nappies
Energy (MJ)	2,532	8,900
Waste water (m ³)	12.4	28
Non-regenerable raw materials (kg)	25	208
Renewable raw materials (kg)	4	361
Domestic solid waste (kg)	4	240
Land for raw materials (ha) (annually, for German infant population)	1,150-6,800	29,500-32,300

Source: Women's Environmental Network

The main alternative to landfill, which is increasingly being considered by local authorities, is waste incineration. But the problem with burning disposable nappies, as with other plastic waste, is that it can lead to emissions of cancer-causing dioxins to the atmosphere. That is not a brilliant idea, either.

As if all that were not enough, new scientific research is beginning to throw up other potential hazards with disposable nappies. In 2000 the Women's Environmental Network commissioned a scientific analysis of five leading brands of disposable nappies: Pampers, Huggies, Sainsbury's, Boots and Benetton.

Traces of a toxic 'gender-bender' chemical called tributyl tin were discovered in all of them. Although the amounts were tiny, cam-

into liquids which leach out of waste dumps and can poison local rivers.

The industry has little to say in response to these arguments, and the points it does make sometimes seem laughable. Modern landfill sites are lined with plastic to prevent leakage, protests Procter and Gamble. 'Within landfill sites, Pampers take up surprisingly little space,' the company continues. 'This is because the nappies are easily compressed in size. In addition laboratory-scale studies have shown that they fit and occupy the cavities that are formed between bulky pieces of waste.' So that's alright then. Never mind the putrescence, the pollution, the persistence – Pampers are no problem because they can be squashed between sofas and old filing cabinets.

Reusable nappies: the practical alternative to disposables

For most of the last century the most widely-used nappies were reusable. Small, square, 'Terry' towelling had to be folded in complex bottom-hugging shapes, secured with a huge safety pin and covered with a crude pair of plastic pants meant to prevent leakage.

Then they had to be washed. What a time-consuming unpleasant palaver that was! Soaking in large, sour-smelling vats of bleach, scrubbing, scraping, boiling and drying before they could be refolded into the 'triangles', 'rectangles' and 'kites' recommended by the professionals.

It was no wonder that when disposable nappies came along in the 1980s, they were welcomed by most parents with open arms. They were easier to use, they had sticky tape instead of safety pins and – blessing of blessings – you could just throw them away when they became soiled. OK, so they cost rather more and your dustbin was suddenly full, and smelling of them, but surely anything was better than those awful Terries?

Disposable nappies were the product of years of research investment by multinational companies keen to capture and expand a lucrative market. Of course they were more 'convenient' than the towelling squares used by our grandparents. But over the last 20 years, things have begun to change.

The reusable, cloth nappies now available can really give disposables a run for their money. They have stolen some of the disposables' design ideas, are shaped like pants rather than towels and have discovered velcro. Some

have three plush layers, some are made of cotton that feels as soft as silk and some come equipped with thin liners which can be flushed down the toilet. Unlike Terries, these cool, designer natural nappies actually work.

Their manufacturers – dozens of small-scale firms up and down the country with names like 'Cuddlebabes', 'Snuggle Bums' and 'Sam I Am' – say that boiling, scrubbing and soaking are also things of the past. For most nappies, most of the time, all that is needed is a 60°C whirl in a modern washing machine. Or in some areas there are special nappy-washing services that whisk away dirty nappies and deliver freshly-laundered replacements to your door.

Crucially for many parents, reusable nappies are much cheaper because you do not need to go out and buy more every week. For each baby you need maybe 18 reusable nappies, compared to having to buy about 50 disposables a week. The Real Nappy Association, founded by two concerned mothers, calculates that using reusable nappies instead of disposables can save up to £600 for your first child, more for any subsequent children.

For further information on reusable nappies and their suppliers, see the box on page 43, or contact the Real Nappy Association, PO Box 3704, London SE26 4RX or log on to www.realnappy.com. For a free parents' information pack, including a list of suppliers, send a large self-addressed envelope with two stamps on it.

paigners claimed that babies could be in contact with 3.6 times the tolerable daily intake recommended by the World



Health Organisation. Tributyl tin, which is used to prevent limpets from clinging to boats and in the manufacture of some plastics, is known to disrupt the hormones which govern sexuality.

The chemical has been found to cause shellfish to change sex and there are fears it could do the same to humans. That is why it is being progressively banned around the world. Although Ann Link, the coordinator of the Women's Environmental Network, stresses that no-one knows how much of the chemical might be absorbed by a baby's skin via nappies, she is worried.

'We are extremely concerned that a product is being sold for use on newborn babies even though the manufacturers know it contains a chemical which, in tiny amounts, can disrupt hormones. Tributyl tin is a chemical which should not be made, let alone occur in babies' nappies,' she says.

The disposable nappy industry reacted by denying that the chemical was present, or by suggesting that the levels were so small as to pose no risk. 'Disposable nappies are completely safe,' said the Absorbent Hygiene Products Manufacturers Association. 'All the manufacturers agree that tributyl tin should not be in nappies and if traces are found they will take every step to eliminate them.'

Another study published in autumn 2000 suggested that disposable nappies could be the cause of another problem – male infertility. There is mounting evidence that average sperm counts in the developed world are dropping. Research suggests that they have fallen by almost half over the last 60 years and are still falling by as much as 2 per cent a year.

Now a team from the paediatric department of the University of Kiel in Germany has discovered that little boys' testicles are overheating inside plastic nappies. In order to develop properly, testicles have to be kept cooler than the average body temperature. That is why they hang between the legs.

Doctors measured the temperature of the scrotum of 48 healthy boys aged between zero and 55 months. They found that when the children wore plastic nappies, the temperature was consistently higher than when they wore cloth nappies. 'The physiological testicular cooling mechanism is blunted and often completely abolished during plastic nappy use,' they conclude.

The doctors were testing the hypothesis that 'exposure to increased testicular temperature for prolonged duration during early childhood as a result of the use of modern disposable plastic-lined nappies could be an important factor in the decline of semen quality and the increasing incidence of testicular cancer in adult age'. Although it will take more work to prove the theory, the initial evidence is alarming.

Again, though, it is dismissed by the disposables industry. 'There is no evidence to support the assertions made by this study, which would appear to be implausible,' insisted Peter Stephenson, of the Absorbent Hygiene Products Manufacturers Association. 'The safety of our products is of paramount importance.'

So having considered all the evidence, what are the choices? An expensive, polluting, resource-consuming, waste-generating piece of potentially toxic plastic that profits multinationals? Or a cheaper, soft, cloth alternative which reduces waste, saves resources, limits environmental damage and helps sustain small companies – but has to be washed like underwear?

Not much choice really, is there? ♦

Rob Edwards is a freelance journalist and the father of two girls. Between 1990 and 1996 he changed about 2,000 nappies, both disposable and reusable.

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REAL NAPPY WEEK (23 - 29 APRIL 2001)

is organised jointly by the Women's Environmental Network (WEN), the Real Nappy Association, and the National Association of Nappy Services. As WEN co-ordinator, Ann Link, says: 'We want to make real nappies part of the mainstream culture, to give parents a fair choice.' This coincides with the launch of a project at WEN to promote greener alternatives to disposable nappies, the £55,000 funding for which comes from Biffaward, a multi-million pound fund set up by Biffa Waste Services. Under the terms of the 1996 Finance Act, landfill operators can redirect up to 20 per cent of the tax levied on them to environmental projects.

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keeping score

A recent highly-publicised survey suggested that rich countries were more 'sustainable' than poor ones. Unconvinced, **The Ecologist** teamed up with **Friends of the Earth** to work out the real story...

In January, an organisation calling itself the 'Global Leaders of Tomorrow Environment Task Force' published what it described as an ESI – '2001 Environmental Sustainability Index' (see www.ciesin.columbia.edu/indicators/ESI). The task force was appointed by the global economic top dogs who make up the World Economic Forum. The index was, said the Task Force, an attempt to measure and compare the 'environmental sustainability' of all the world's nations. Its conclusion was undoubtedly pleasing to the economic top dogs gathered at Davos: the most 'eco-friendly' nations were the world's most industrialised. The 'eco-offenders' were the poor. 'The good news,' wrote the chairman of the taskforce in *Newsweek* magazine, 'is that a clean environment may not have to come at the expense of economic competitiveness.'

It is certainly good news that such tables are beginning to be compiled; properly done, they will indeed give a useful picture of which nations need to do most. But the ESI is misleading in the extreme, and represents some of the worst eco-villains as the world's good guys; to the benefit of the powerful nations. This implies not only that modern industrialised nations are getting it right on the environment, but also that to be 'environmentally sustainable', poorer countries need to go down the same development path as richer countries. In fact, achieving genuine sustainability will require far more changes from richer countries.

The Ecologist and Friends of the Earth, in an attempt to rectify this, have reformed and recalculated the methodology by which the ESI was produced. The results – as the maps and tables accompanying this article demonstrate – tell a very different story.

The calculations

The ESI comprises 22 equally weighted indicators, in five categories (see table below). These 22 indicators, in turn, are made up of differing numbers of 'variables' – there are 67 variables in total.

Category	Number of indicators
Environmental Systems	5
Reducing Stresses	5
Reducing Human Vulnerability	2
Social and Institutional Capacity	7
Global Stewardship	3

It is this choice of categories, and the number of indicators within them, which is at the heart of the problem. The choice of categories is poorly justified, as are the numbers and types of indicators and variables within them. Yet these choices have great bearing on the final ESI ranking. This leads to a flawed categorisation, on a number of levels.

What's wrong with the ESI?

Too many socio-economic indicators

There are two separate conditions that need to be met for genuine

sustainability. Firstly, a 'socio-economic imperative' – addressing people's quality of life, including their health, standard of living, economic security and social justice. Secondly, an 'ecological imperative' – that humanity as a whole does not use more ecological services than nature can regenerate.

'Environmental sustainability' could be defined specifically as meeting this second imperative. A genuine ESI should therefore measure the extent to which this condition is met. Although issues such as infant mortality rate, and the percentage of the population with access to safe drinking water (which are included as part of the ESI's 'Reducing Human Vulnerability' category, above) are critical aspects of sustainability, they are socio-economic, not environmental, aspects of it. Including them in an index explicitly measuring environmental sustainability is thus an error which introduces bias in favour of countries able to provide these socio-economic services – in other words, rich countries.

Too many 'capacity' indicators

A category called 'Social and Institutional Capacity' swamps the ESI. This one category (of five) supplies seven out of 22 indicators. Also, having the 'capacity' to deal with environmental problems is not a measure of whether these problems actually get resolved.

There are a number of issues here:

- What does 'capacity' mean?

The 'private sector responsiveness' indicator includes as one variable – and a positive one – a country's number of members on the World Business Council for Sustainable Development (WBCSD). The logic is that the WBCSD is part of the solution to the world's environmental problems, because the WBCSD embodies the capacity to 'get things done'. Yet these same WBCSD members also have capacity to destroy environmental assets. It would be difficult to argue that member companies such as Rio Tinto or Texaco were using their 'capacity' as a whole to improve conditions of 'environmental sustainability', rather than destroying it in large swathes.

- Duplication

Some of the capacity indicators duplicate measurements already used elsewhere in the ESI. For example, there is a 'price of premium gasoline' variable within the 'capacity' section – but there is already an indicator of the end result – CO₂ emissions, and air pollutants. The price of gasoline has a greater effect on the overall ESI than CO₂ emissions.

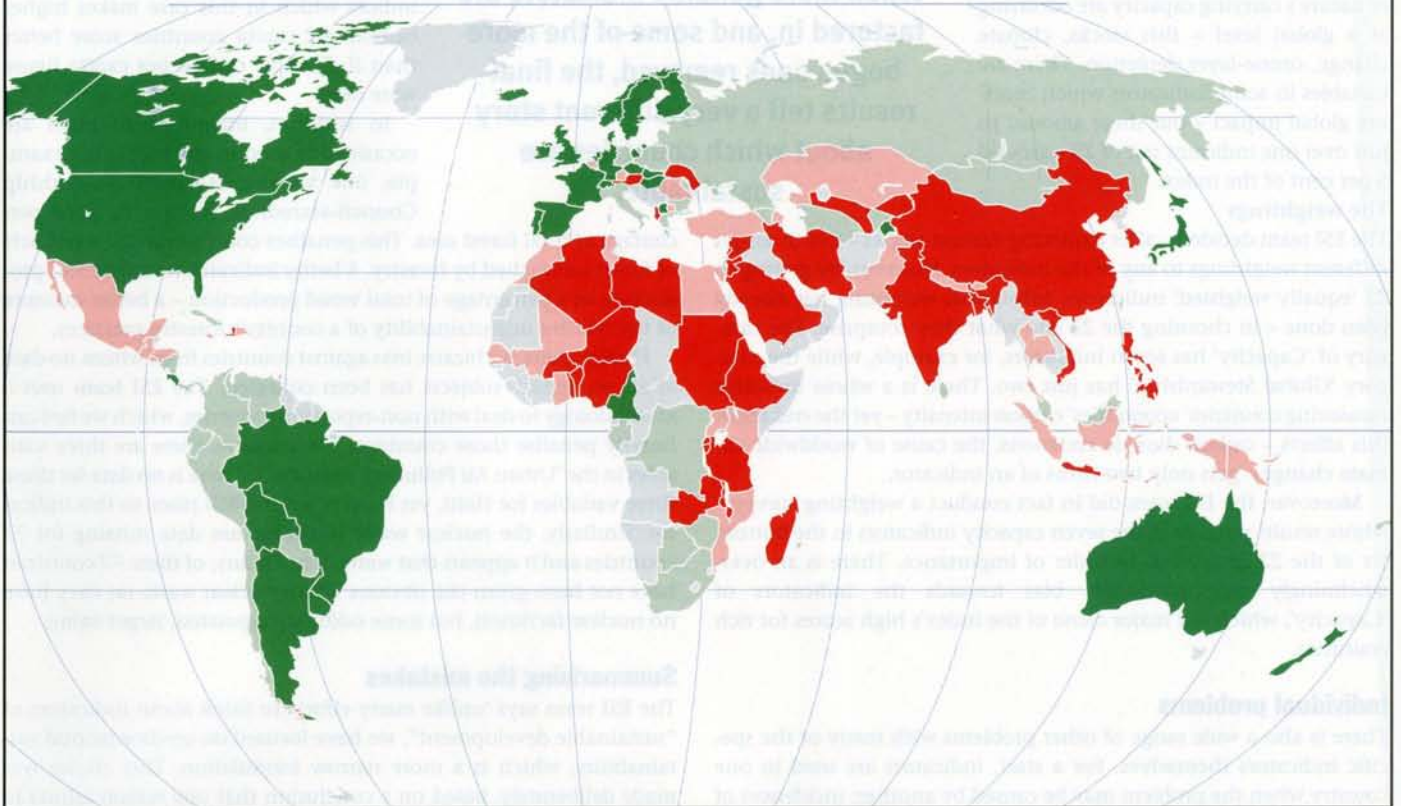
- Poor proxies for positive action

Some indicators are not directly related to environmental sustainability at all. An example is the 'number of scientists per head of population'. The effect of science on environmental sustainability is, of course, dependent on how it is deployed. Having lots of scientists around is not much good for environmental sustainability if their efforts result in nuclear wastes, endocrine-disrupting chemicals and ozone depleters, even if some short-term social or economic gains are made. Again, the potential for capacity to be used in a negative way is not recognised.

Not enough on global indicators

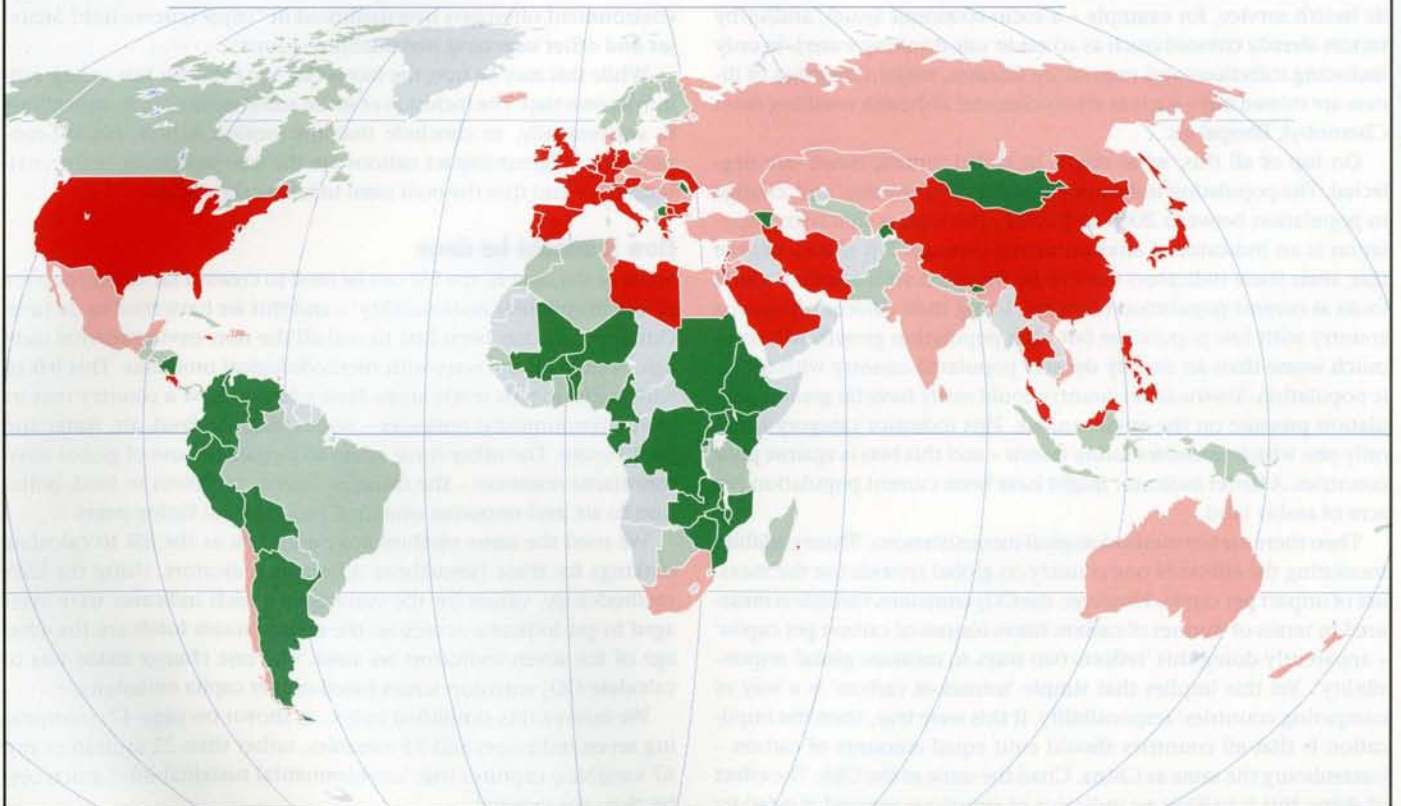
The indicator set is very focused on environmental effects or institutions within countries. However, many countries escape

'GLOBAL LEADERS OF TOMORROW' MAP



most environmentally friendly environmentally friendly not very environmentally friendly least environmentally friendly no data available

THE ECOLOGIST/FoE REVISED MAP



environmental constraints in their own country by drawing on environmental capital either from other countries or from global commons. The biggest overexploitations of nature's carrying capacity are occurring at a global level – fish stocks, climate change, ozone-layer depletion. There are variables in some indicators which measure global impact – but these amount to just over one indicator out of 22 – around 5 per cent of the index.

The weightings

The ESI team decided – after exploring various angles – not to assign different weightings to any of the indicators. However, by getting to 22 'equally weighted' indicators, substantial weighting has already been done – in choosing the 22 and what they comprise. The category of 'Capacity' has seven indicators, for example, while the category 'Global Stewardship' has just two. There is a whole indicator measuring countries' economies' carbon intensity – yet the end result this affects – carbon dioxide emissions, the cause of worldwide climate change – gets only two-fifths of an indicator.

Moreover, the ESI team did in fact conduct a weighting survey – whose results put five of the seven capacity indicators in the bottom six of the 22 indicators, in order of importance. There is an overwhelmingly disproportionate bias towards the indicators of 'Capacity', which is a major cause of the index's high scores for rich countries.

Individual problems

There is also a wide range of other problems with many of the specific indicators themselves. For a start, indicators are used in one country when the problem may be caused by another: incidences of acid rain being an obvious example. On top of this, major problems are omitted, leading to bias against particular countries.

The environmental health indicators, for example, have variables of 'child death rate from respiratory diseases' and 'death rate from intestinal infectious diseases'. These could be caused by a number of factors, not necessarily due to environmental problems (lack of public health service, for example – a socio-economic issue), and/or by factors already covered (such as access to safe drinking water). In only including infectious and respiratory diseases, major categories of illness are missed out – such as environmental ill-health resulting from Chernobyl, Bhopal etc.

On top of all this, what might be called 'timing issues' are neglected. The population indicator comprises 'fertility rate' and 'change in population between 2000 and 2050'. The logic is that high population is an indicator of environmental damage. But if they believe this, then these indicators need to be weighted with another which looks at current population (density). Using their current measure, a country with low population but high population growth will score much worse than an already densely populated country with a static population. Yet the latter country could easily have far greater population pressure on the environment. This indicator category is the only one which measures future trends – and this bias is against poor countries. A better indicator might have been current population per acre of arable land.

Then there are the methodological inconsistencies. Three variables measuring the effects of one country on global systems use the measure of impact per capita. However, the CO₂ emissions variable is measured in terms of 'tonnes of carbon times tonnes of carbon per capita' – apparently doing this 'reflects two ways to measure global responsibility'. Yet this implies that simple 'tonnes of carbon' is a way of comparing countries' responsibility. If this were true, then the implication is that all countries should emit equal amounts of carbon – Luxembourg the same as China, Chad the same as the USA. The effect of doing this is to have an indicator of emissions squared divided by

population – which creates wild extremes between countries, and has the effect of reducing the score for heavily polluting countries. The ESI uses a methodology for wildly skewed indices which in this case makes higher carbon per capita countries score better than if a simple carbon per capita figure were used.

In addition, inappropriate units are occasionally used in the index. For example, one variable is Forest Stewardship Council-accredited forest area as a percentage of total forest area. This penalises countries with large tracts of forest untouched by forestry. A better indicator would be FSC production as a percentage of total wood production – a better measure of the relative unsustainability of a country's forestry practices.

Finally, there is a bizarre bias against countries from whom no data at all on certain subjects has been collected. The ESI team uses a methodology to deal with non-reporting countries, which we feel can heavily penalise those countries. For example, there are three variables in the 'Urban Air Pollution' indicators. There is no data for these three variables for Haiti, yet Haiti is put in 98th place in this indicator. Similarly, the nuclear waste indicator has data missing for 77 countries and it appears that some, if not many, of these 77 countries have not been given the obvious '0' for nuclear waste (as they have no nuclear facilities), but some oddly-extrapolated, larger value.

Summarising the mistakes

The ESI team says 'unlike many efforts to think about indicators of "sustainable development", we have focused on environmental sustainability, which is a more narrow formulation. This choice was made deliberately, based on a conclusion that one reason efforts to measure sustainability fail is that they seek to fold too many disparate phenomena under the same conceptual umbrella. While we accept the premise that politics, economics and social values are important factors worthy of being sustained, we do not think there is a sufficient scientific, empirical or political basis for constructing metrics that combine all of them along with the environment. Moreover, the environment often gets overshadowed in "triple bottom line" analyses and other sweeping sustainability efforts'.

While this may be true, the fact is that the ESI, with this survey, falls into its own trap. The inclusion of social and economic indicators allows it, conveniently, to conclude that the world's richest, highest-consumption, highest-impact nations are the true protectors of the environment – and that the poor need to follow their lead.

How it should be done

Some of the data in the ESI can be used to create a far better measure of 'environmental sustainability' – and this we have tried to do here. Our approach has been first to cull all the non-environmental indicators, then all the ones with methodological problems. This left us with indicators in seven areas. Four relate to how a country uses its own environmental resources – with effects on land, air, water and biodiversity. The other three relate to a country's use of global environmental resources – the categories being pollution to land, pollution to air, and resources extracted (see table on facing page).

We used the same methodology and data as the ESI to calculate rankings for these (sometimes different) indicators. Using the ESI's methodology, values for the variables for each indicator were averaged to get indicator scores; so the revised index totals are the average of the seven indicators we used. The one change made was to calculate CO₂ emission scores based on per capita emissions.

We believe this simplified index, as shown on page 47, (comprising seven indicators and 15 variables, rather than 22 indicators and 67 variables) captures true 'environmental sustainability' much better than the original.

'When more genuine indicators are factored in, and some of the more bogus ones removed, the final results tell a very different story about which countries are sustainable.'

Revised Index Indicator Variables

urban air quality (national)	sulphur dioxide concentration nitrogen dioxide concentration suspended particulates concentration
water stress (national)	fertiliser consumption per hectare arable land pesticide use per hectare of crop land industrial organic pollutants per available fresh water % of territory under severe water stress
terrestrial systems (national)	human-induced soil degradation % land area affected by human activities
biodiversity (national)	percentage of mammals threatened percentage of breeding birds threatened
inputs to land (global)	radioactive waste
inputs to air (global)	carbon dioxide emissions per capita
resources consumed (global)	consumption pressure per capita ecological footprint per capita

The real story

When these more genuine indicators are factored in, and some of the more bogus ones removed, the final results tell a very different story about which countries are really environmentally sustainable – and which aren't. A look at the maps accompanying this article give a good idea of the swing.

One of the most obvious examples is the very unsustainable US which, under these new calculations plunges from 11th in the rankings to 112th. At the other end of the scale, the Central African Republic, Bolivia and Mongolia are elevated to the top three. This reflects the good environmental conditions in their own country, and the small effect their development has on global ecosystems.

In all, richer countries do worse – for although they often have good environmental conditions at home, and manage to protect what's left of their biodiversity, they have a large negative impact on global ecosystems. Some countries, of course, score badly whichever way you look at it – the bottom three are South Korea, Kuwait and the Lebanon.

What conclusions should we draw from this? Simply, if we are going to label nations 'good' or 'bad' in environmental terms, we must get our measurements right. Studies like the ESI, based on misleading data, which fail to take into account the true environmental costs that rich countries impose on the world, are designed to make dirty nations look clean.

When the 'Global Leaders for Tomorrow' next sit down at their calculators, their results should tell a very different story. ♦

Table of environmental sustainability

	our ESI	old ESI		our ESI	old ESI		our ESI	old ESI		our ESI	old ESI
Central Afr Rep	1	57	Sweden	31	4	Azerbaijan	61	68	Libya	91	118
Bolivia	2	30	Senegal	32	87	Dominican	62	72	Jamaica	92	88
Mongolia	3	50	Ghana	33	63	Slovak	63	18	Portugal	93	20
Mali	4	71	Papua	34	62	Iceland	64	9	Macedonia	94	100
Gabon	5	49	Nigeria	35	117	Egypt	65	67	Mauritius	95	46
Nicaragua	6	43	Burundi	36	120	Belarus	66	56	Ireland	96	17
Mozambique	7	78	Nepal	37	66	Australia	67	7	Thailand	97	74
Bhutan	8	75	Brazil	38	28	Kazakhstan	68	90	Austria	98	8
Niger	9	111	Cuba	39	35	Switzerland	69	5	Iran	99	105
Peru	10	38	Tanzania	40	95	Tunisia	70	84	Germany	100	15
Armenia	11	48	Pakistan	41	85	India	71	93	Spain	101	25
Cameroon	12	76	Canada	42	3	Sri Lanka	72	51	Netherlands	102	12
Colombia	13	36	Madagascar	43	113	Syria	73	106	Malaysia	103	52
Malawi	14	92	Panama	44	34	Chile	74	31	China	104	108
Uganda	15	81	Morocco	45	89	Haiti	75	122	Philippines	105	112
Togo	16	101	Bangladesh	46	99	Russian	76	33	France	106	13
Zimbabwe	17	42	Uruguay	47	14	Slovenia	77	24	Poland	107	58
Argentina	18	19	Paraguay	48	54	Hungary	78	21	Bulgaria	108	59
Venezuela	19	47	Croatia	49	39	Turkey	79	70	Costa Rica	109	26
Sudan	20	107	Lithuania	50	23	Vietnam	80	114	Saudi Arabia	110	121
Benin	21	103	Algeria	51	102	Jordan	81	96	United Kingdom	111	16
Burkina	22	104	Finland	52	1	Trinidad	82	69	United States	112	11
Kenya	23	82	Botswana	53	40	Romania	83	80	Greece	113	41
Rwanda	24	115	Fiji	54	55	New Zealand	84	6	Singapore	114	65
Kyrgyzstan	25	98	Honduras	55	64	Mexico	85	73	Ukraine	115	110
Moldova	26	60	Uzbekistan	56	91	Estonia	86	27	Israel	116	53
Ethiopia	27	119	Guatemala	57	61	Latvia	87	32	Italy	117	37
Ecuador	28	44	Indonesia	58	86	Denmark	88	10	Japan	118	22
Zambia	29	97	Norway	59	2	Czech	89	29	Belgium	119	79
Albania	30	77	El Salvador	60	83	SouthA	90	45	Lebanon	120	109
									Kuwait	121	116
									South Korea	122	94

Country ranking (1 = most environmentally sustainable)

THE MAGIC HEXAGON

GERMANY'S NEW GREEN AGRICULTURE MINISTER RENATE KÜNAST PLANS A RADICAL NEW AGRICULTURAL TURNAROUND.

ALL OVER EUROPE today, one topic is the centre of attention: food. The shudder people feel when they consider the BSE crisis is a shudder at ourselves; at the way we farm, the way we treat our animals and the way we produce our food.

Of one thing, now, I am absolutely certain: the BSE scandal marks the end of agricultural policy as we have known it in recent decades. It marks – it must mark – the end of intensive farming as we know it; and a move towards ecological, ethical methods of food production.

As never before, we are realising the ills and implications of an agricultural policy geared to mass production. BSE has catapulted the public out of the treadmill of thoughtless mass consumption, and we can never return.

Normally, we slaughter 6 million cattle every year in Germany. The BSE scare, though, gave us such a fright that beef consumption has declined by 57 per cent since last November. Our livestock buildings are becoming ever more crammed, ruling out species-specific animal husbandry. Exporting beef is impossible, as the world systematically closes its markets to European beef. In short, we cannot sell the 400,000 cattle we have in surplus – and even if we could, nobody seriously believes that consumers will be prepared to eat them.

What can be learned from this? I believe the lesson is that BSE is not an isolated problem but a symptom of an agricultural system gone badly wrong. For that reason, I back a turnaround in agriculture – and I intend to implement one in Germany; our yardstick, in future, should be simple: quality instead of quantity.

I am under no illusions about this ambitious proposal. It will be a path of trial and tribulation. A change in agricultural policy will take time, and have strong opponents. We will only be successful if we start right away, take firm action and involve as many people as possible.

Six sectors of society will ultimately determine the success of our new agricultural policy: the consumers, the farmers, the animal feed industry, the food industry, the retail sector – and the politicians. These six players form the magic hexagon of Germany's – and, ultimately, Europe's – agricultural U-turn.

Let us address them one by one.

The consumers: in future, the choice must truly be yours! We plan to give consumers guidance with two new quality labels. The first will designate organic products, for which we intend to secure a 20 per cent market share within 10 years. The second will uphold minimum food production standards: more species-specific animal husbandry, medication only to cure a disease and a preference for regional products. Consumers need to be prepared to



OUR YARDSTICK,
IN FUTURE, SHOULD
BE SIMPLE:
QUALITY INSTEAD
OF QUANTITY

change their eating habits: if they do, we can guarantee them quality food.

The retail sector: we want change through trade. Currently, 80 per cent of foodstuffs are bought in supermarkets. Our turnaround in agriculture will only be successful if all, in particular the larger chains, no longer focus their competition on who offers the cheapest milk, but who provides consumers with the broadest range of good products. Organic products must lose their marginal status. It is quality that counts. Quality has its price, of course, but we will ensure that the new products will remain affordable for all. It is a question of quantities, of marketing and social justice.

The food industry: our food suffers from the fact that we are watching out for prices first and quality second. I am campaigning for a partnership between the food industry and farmers. This alliance will ensure quality for the food industry and income for farmers. The days when the farmer was the cheapjack are over. Those producers who fail to meet the requirements of the new quality labels, will, quite simply, incur a serious competitive disadvantage.

The animal feed industry: good feed is a prerequisite for good quality. We are going to introduce a transparent production system through open declaration and a positive list of feeds. I am in favour of tightening the penalties for intentional feed contamination by means of the legislation on feeds.

The farmers: in the past few weeks it has almost seemed that they, along with politicians, were solely to be blamed for BSE. But this is not the case. The turnaround in agriculture opens up opportunities for them to focus on quality again and not just on quantity. It's not the farm size, large or small, that counts, and we will need both organic farms and conventional farms.

Farmers' readiness to rethink, and their inventiveness, will constitute key prerequisites for our turnaround in agriculture. I want to give farmers in this country, who have been suffering from structural changes for some years now, a clear incentive towards more organic and regional production. This means, there must be an alliance of farmers with nature. We need more direct and regional marketing, thus retaining the value added in the region.

And finally, to us politicians. Is politics capable of assuming its responsibility? If I have anything to do with it, the answer will be yes. Already, we have taken an active part in developing a new quality standard for meat. We got all the protagonists in this magic hexagon around the conference table earlier this year to thrash these issues out. And we have provided DM 1 billion for measures against BSE: the buy-up campaign and the disposal of meat-and-bone meal.

STEVE CARROLL



What is truly heartening, too, is to see that the possibilities of a genuine and radical turnaround in agricultural policy – from the intensive to the sustainable – go beyond the borders of our country. EU Agriculture Commissioner Franz Fischler has already taken up the challenge we have posed here in Germany, and recently he posed four pertinent questions to the EU itself: Why do we focus our attention on the products only and not on their quality? Why do we spend less than 10 per cent of our funds on rural areas? Why don't we take cost decreases into account? And why do 45 per cent of agricultural funds go to the arable crop sector?

They are vital and sensible questions, and they bring me to the subject of how we will finance our turnaround. Simply, the politicians in Europe, in the federal government and in the Laender, our local government, must do more. Every year, German agriculture receives about DM 27 billion in state assistance, about DM 12.6 billion from the EU and DM 10.2 billion from the federal government. There is, in other words, a lot of funding available.

But consumers want their tax money to be responsibly spent on the turnaround in agriculture. And they do not want any new charges. So we propose not to subsidise surpluses, but to pay for quality. We do not want any cruelty to animals, but we will pay for a move to species-specific animal husbandry. And we do not want any overexploitation, but the conservation of water and soils.

I have said it before and I will say it again: this is a very ambitious aim. But the overwhelming majority of Germans want a new agricultural policy, and I want to give them one. I will endorse more flexibility in the policy on subsidies so as to relieve the strain on our local government. But for this I will need the support of our partner countries in the European Union.

For agricultural policy is European policy. The signs I have received from Brussels are encouraging, and I hope we can change course Europe-wide at the next meeting of the Agriculture Council at the end of February, or certainly not later than with the mid-term review of Agenda 2000. I hope we can widen the scope for individual nations to change their agricultural subsidies.

So, what are the hallmarks of our new agricultural policy? For a start, the turnaround in agriculture means more sustainability in agricultural policy. The federal Environment Minister has introduced a draft Nature Conservation Act, and this pivotal bill will not fail because of the farming sector – as it has done in the past. I will actively support new ideas on nature conservation which contribute to the turnaround in agriculture.

As producers of energy, farmers will be able to tap new sources of income in the field of renewable energies. My principal idea is for those farmers who contribute to the management of our cultural landscapes to get some returns out of it.

Forests, for example, are important to us, and the current problems do not make us forget that German forests have been suffering for a long time already.

Sustainability also has a social dimension. For years, structural changes in agriculture have resulted in the loss of jobs in rural areas. The turnaround in agriculture focuses on regional structures; a great leap forward for local economies. In the future, regional products must be first choice.

A change in animal husbandry also forms part of the new policy. In Europe, animals are still having to make too many long and unpleasant journeys. Animals are still kept in miserable conditions. It is still the quantity that counts, not the life of the animals. We fully support the current Swedish presidency of the EU in its efforts to tighten the Regulation on the Keeping of Farm Animals

and the Animal Transport Directive. Export subsidies which make these long-distance journeys so agonising for the animals and at the same time so profitable for people must become a thing of the past.

We also want to create a transparent production system; vital if we are to restore trust in farming and food production. What happens to our food must be monitored from pasture to barn to shop counter. As a first step, I will therefore implement the EU Herd Record Book Directive, and improve the documentation of the herds.

The federal government is completely committed to banning antibiotics in animal feed. In the future, animals should be treated with medication if and when they are sick. Farmers should keep the animals in such a way that they do not have to be treated prophylactically. Pig doping, turkeys being no longer able to walk, and millions of chicks being killed after hatching because they are the 'wrong' sex are part of yesterday's agricultural policy. We will introduce a positive list of feed stuffs and secure transparency through open declaration.

Our aim is also to turn away from overproduction. We should start right now to reshape the premium system for cattle – in other words, to move away from the herd or slaughter premium towards a premium system which rewards a reduction of herd numbers and environment-friendly extensification.

To this end, I have already proposed practical steps.

To begin with, we want to link livestock farming to the land again. In the medium term, we only want to support those farmers who do not keep more than two livestock units per hectare. The support also includes forage crops. We will reduce the unjust favouring of silage maize. And we will promote grassland by including area aid in the shape of a grassland premium.

Finally, we will take measures to reduce the slaughter weight of cattle.

Let us not delude ourselves. There will be people who refuse to become involved in this turnaround in agriculture, those who profited from the previous system. Yet one thing is clear: people have lost their appetites. We want our food to taste good again. We want the ecological modernisation of

Germany, and the turnaround in agriculture is a central project of this ecological modernisation.

A new agricultural policy is the prerequisite for successful consumer protection. And I am very pleased that most consumers in Germany seem to support the path I have taken.

Many people – certainly in Germany – remember how fiercely the Germans fought for the German beer purity law when it was threatened some years ago. At that time, consumers, farmers and the breweries formed a united front. We now need a purity law for handling the animals we consume. Calves drink milk, cows need water, beet, grass and cereals – and nothing else. Purity of agriculture, for the benefit of all.

We can do it, and we will.

Renate Künast's background is in social work, and from 1977-79 she was employed at the Berlin-Tegel penal institution, working mainly with drug addicts. She went on to study law, becoming a barrister in 1985. She became actively involved in politics in 1979 when she joined the 'Westberliner Alternative Liste'.

Last year Künast was elected chair of the German Red/Green coalition and on 24 June was appointed Minister for Consumer Protection, Food and Agriculture.

This article is taken from a speech Künast gave on 8 February 2001.

ONE THING IS CLEAR: PEOPLE HAVE LOST THEIR APPETITES. WE WANT OUR FOOD TO TASTE GOOD AGAIN

COIN ME A PHRASE

WE CANNOT UNDERSTAND THE TRUE NATURE OF TODAY'S WORLD IF WE USE DEAD LANGUAGE TO DESCRIBE IT, SAYS JEREMY SEABROOK.

WILL THE AMERICAN economy make a soft or a hard landing? Is there a level playing field between the poor countries and the rich? Is the subject of race a political football? Is immigration a hot potato? Are Labour's chickens coming home to roost? Which politician has shot himself in the foot? Who has kicked a contentious issue into the long grass? Are the markets on a roller-coaster? When America sneezes does Europe catch cold? Are we stuck between a rock and a hard place? Are we robbing Peter to pay Paul? Will tax cuts be the icing on the cake?

Who will make a last-ditch stand in defence of the pound? Should some dictator be made to eat humble pie? Is the economy leaner and fitter? Has someone run a coach and horses through government policy? Did some warring country get a bloody nose? Are we opening a can of worms? Should we use the carrot or the stick? Will the election be a shoo-in? Does the economy need a kick-start? Has there been a rash of initiatives over crime or health? Does child protection need root and branch reform? Will the government deliver the goods? Can we go the extra mile?

As globalisation proceeds, and interdependence increases, our way of looking at the world shrinks. It has long been clear that public interest in news from distant places has waned and, ever responsive to the market, the media have retreated into an agreeable Toytown parochialism. Just look at the unthinking familiarity of the phrases above – all of which are taken from the British media in the first two months of this year. What a cosy, easy place the world is, how pleasantly full of the familiar activities of suburban comprehensibility! Political discourse has been reduced to a handful of clichés, based on an insular and archaic imagery of the natural world, sporting activity, health, domestic labour and simple technology.

What is happening to us can be understood only within the constraints of a few comforting images: these effectively domesticate the complexity of global integration, and make it appear unthreatening, even welcome. Our ability to classify everything satisfactorily in ready-made, off-the-peg expressions, gives us a feeling that we understand everything, and are therefore in control. This is no doubt all very proper in a democracy: it turns out the whole world is only a golf-house, a rugby pavilion, a farm-yard or a parlour after all. And thank goodness; after all, the perils of rocking the boat are well known; we wouldn't want to throw out the baby with the bathwater, would we? Perhaps we have, after all, put all our eggs into one basket; in which case, crying over spilt milk would make no sense whatever. Whatever



WHAT ARE THESE
IMAGES, IF NOT THE
LULLABIES WITH WHICH
PRIVILEGE SINGS ITSELF
TO SLEEP?

we do, we mustn't frighten the horses.

Are these friendly and rustic images calculated to conceal the epic uprootings of humanity, the driven change transforming whole societies – including our own – compelling ancient cultures on unchosen pathways? Maybe the pictures of barnyard, countryside and the chase help us adjust to the reality of Creutzfeldt-Jakob disease, the poisoning and adulteration of our daily bread, the genetically modified foods, the toxins and alien substances in our sustenance. Perhaps the verbal innocence numbs the pain, and justifies the willed unknowing of the time. The faux-naïf iconography of a rural idyll represents the structuring of a world so simple, artless and beguiling that no one in his or her right mind could possibly wish to dissent from it. There can be no opposition to the end of history.

It is extraordinary that we should reach for so many pre-industrial words and phrases, evoking the life of a countryside now largely inert and lifeless beneath its freight of chemicals, toxins and additives. At the very moment when the resource-base of the Earth is terminally threatened, we resuscitate archaic and exhausted forms of expression to reassure ourselves that nothing

has changed, and that our lives are a form of unspoiled fête champêtre; a celebration of a rural simplicity long since extinguished.

Despite the reductive nature of the imagery in which our dilemmas, problems and anxieties are expressed, it should not surprise us if more and more people say that they do not understand politics, that they turn off the news, that they are not interested, that it has nothing to do with them. How right they are – how are they to recognise the stress, fear and anxiety for the future in the nursery stories, the congealed folk-wisdom, the empty metaphors, which speak of a vanished world? How can this be reconciled with the market-driven, high-octane, modernising spirit of the new millennium?

We should be grateful to the media, whose incomparable command of a dead language furnishes us with such an easy grasp of reality. Even when alarm-bells are ringing, signals are passed at red, and storm clouds are gathering, nothing disturbs our national somnolence. There have been many recent incidents which government ministers have said should serve as 'a wake-up call': a railway accident; catastrophic floods; the death of a child. To what effect? Even the wake-up calls fall on sleepy ears made deaf by the cotton wool of media platitudes.

Jeremy Seabrook is a writer and journalist.

BREAD OF SORROW

BREAD IS BIG BUSINESS, SAYS SATISH KUMAR, BUT WHETHER IT IS ANY GOOD FOR US OR NOT, WE CAN NO LONGER BE SURE.

GONE ARE THE days when we had the time to bake our own bread, when the fresh smell of wholesome bread filled the kitchen, when every loaf of bread was different and when making bread was a creative and an aesthetic experience.

Also gone are the days when we could walk to our local bakery and enjoy the sensual pleasure of seeing and smelling the freshly baked bread arranged on the wooden shelves, to chat with the baker and with others from our neighbourhood. Those were the days when the bakery was the centre of the local community. Now only 4 per cent of bread is baked in small, neighbourhood bakeries. 86 per cent of bread is mass produced in factory conditions. Bread diversity was a symbol of cultural diversity. Regional varieties represented grain diversity as well as diversity of style. Now, wherever you are, you buy the same kind of bread under a limited number of brand names, like Mother's Pride – but no mother would ever be proud of that ghastly stuff. Where is our mother and where is her pride? We not only have corruption of our food, we also have corruption of our language.

Thirteen big manufacturers control the bread market of over £3 billion a year. They sell nearly 10 million loaves every day, involving neither mother nor pride. Our nation as a whole should be ashamed of such bread – not proud!

We should be ashamed because the quality of bread has dramatically deteriorated over the years. Our bread is stale and sterile. It is so devoid of any life that bread manufacturers have to inject vitamins and minerals artificially into the bread they sell. Yet, with massive advertising, people have been fooled to eat what is a national disgrace.

I am constantly surprised that a Christian society should tolerate such desecration and degradation of bread, which was considered so sacred that Christians celebrated Holy Communion with it. Now, since there is no real bread around, the ceremony is wafer-thin.

Lorries full of factory bread rush up and down the country on our motorways, polluting the air so that they can provide the nation with cheap bread. But no intelligent mind would see this kind of bread as cheap. The price we pay in terms of environment and health is very high. The loaf on our table has travelled hundreds of 'bread miles'.

If we eat good, wholesome, fresh bread, baked locally or at home, the cancer rate will decrease, the rate of heart disease will fall. The nation will not have to be taxed so highly to pay the huge amounts of money for medicines and hospitals. There will be less depression and more joy in life: less congestion on our roads and cleaner air to breathe. Good bread is an essential health measure. An NBS (National Bread Service) would make the NHS (National Health



GOOD BREAD SHOULD
BE THE SYMBOL OF
ENVIRONMENTALISM

organic flour should be easily available from the village bakery. White flour which is bleached with chlorine dioxide is toxic. This fact should be made known to the general public. White bread is the bitter bread of sorrow.

Once, E F Schumacher was invited to a prestigious dinner party. The hosts served this ultra-white bread. Any sign of a crust was neatly removed. Next to the bread was a serviette. There seemed hardly a difference between the bread and the serviette. To make the point, Schumacher started to put butter on the serviette. The embarrassed host pointed out the actual bread to Schumacher. He appeared surprised and said that when one is unable to differentiate between the bread and the serviette, we have lost something precious.

We need to begin with good bread if we wish to restore the physical, as well as the mental health of the nation. When we are mindful of the quality of bread, we will be mindful of the quality of food. When we are mindful of food, we will be mindful of the quality of life in general.

The quality of bread is too important to be left to the bread factories and bread manufacturers – their prime motive is to make profit, rather than provide bread for health. Baking your own bread, or bread baked at the local small bakery are the only two options which can free us from the monopolistic stranglehold of big bread business. The first step towards the autonomy of the individual and of the local community is to take back our basic right of access to good bread.

A healthy loaf is everybody's birthright.

Satish Kumar is director of programmes at Schumacher College and editor of *Resurgence* magazine.

Service) more successful.

How can we launch such a bread revolution? Perhaps we could have a Campaign for Real Bread, like the campaign for Real Ale? We need to organise a massive boycott of factory bread. How about a car sticker: 'Bring Back the Local Bakery'?

Our schools will be a good place to start. Good education cannot be provided on bad bread. Let every school teach children the art and science of baking. Let the school lunch be based on good bread. Baking bread is not a waste of time, it is the foundation of good education. Let learning be led by bread.

Secondly, every environmentalist needs to make time to bake bread. Mahatma Gandhi in India made spinning an act of defiance against oppressive colonialism. The spinning wheel became the symbol of the independence movement. Similarly, good bread should become the symbol of environmentalism. There should be no white bread sandwiches in the offices of Greenpeace or Friends of the Earth.

Bread made with stone-ground, organic flour should be easily available from the village bakery. White flour which is bleached with chlorine dioxide is toxic. This fact should be made known to the general public. White bread is the bitter bread of sorrow.

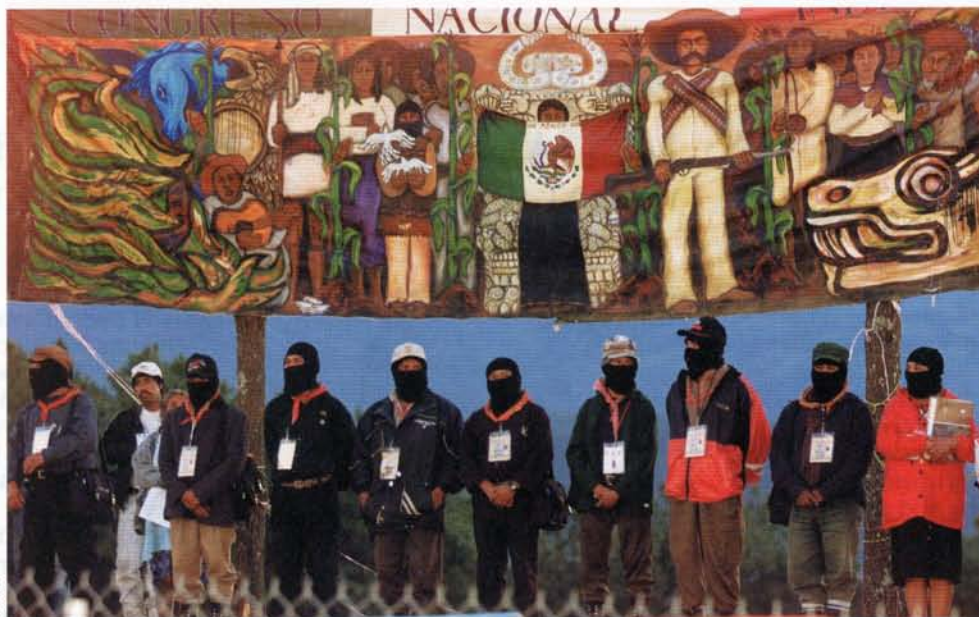
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MEXICAN WAVE

JOHN ROSS ANALYSES THE RECENT ZAPATISTA MARCH ON MEXICO CITY – AND LOOKS AT THE THREATS AND OPPORTUNITIES FACING THE REBELS.

THE DENVER COLORADO cafe was packed to the rafters on a snowy Saturday night, all eyes glued to the video screen where raw footage of the New Year's eve takeover of a Chiapas military base by Zapatista rebels was being displayed. Cheers erupted as the unarmed but ski-masked Indians pushed aside the automatic weapons of the troops and declared the camp closed.

Denver's Human Being Company is a bastion of solidarity for the insurgents. Its founder, Kerry Appel, wholesales organic fair trade coffee he buys from rebel farmers in Chiapas and markets under the 'Zapatista' label. For his efforts, Appel has twice been deported from Mexico by hostile immigration authorities. But despite the dangers, he recently packed his bags for another trip south to accompany the Zapatista Army of National Liberation (EZLN) on its historic 3,000 kilometre 'March of Indian Dignity', which left San Cristobal de las Casas in the Mayan highlands of Chiapas on 25 February under a new moon and, at the time of writing, is scheduled to arrive in Mexico City on the 11 March under a full one.

From a British Columbia Catholic church to an El Paso farm workers' meeting hall; from Austin, Texas to Hollywood, California, resurgent interest in the Zapatista movement is cresting if a recent

THE ZAPATISTA NATIONAL *Liberation Army has never been more lionised. But can it achieve its aims?*

author's tour of the North American West is any measure. The EZLN's role in shaping recent Mexican history is now examined at prestigious academic forums, and supporters flock to bookstore presentations – three new Zapatista titles have already been released this year.

The current surge of fascination with the Zapatistas signals an amazing bounce-back for a rebel band that, less than 100 days ago, had disappeared from public view and whose continued existence was being questioned after five months of stony silence from its leaders. Despite ranks riddled by desertion and no material gain to show for seven years of feisty resistance in the jungles and highlands of Chiapas, the EZLN has now succeeded in recapturing public imagination both in and outside of Mexico.

The catalyst for this sea change has been Mexico's new president, Vicente Fox, who, from the first paragraphs of his 1 December inaugural address, extended an olive branch to the long-embattled rebels. Although Fox has yet to completely meet the three conditions the EZLN has

demanded in exchange for returning to peace talks with the government, he has sent a much-debated Indian Rights & Culture law onto Congress. The ostensible reason for the Zapatistas' two-week trek up to Mexico City is to lobby that august body for passage of this landmark legislation.

March of dignity

Despite what promises to be a strong international presence, the Zapatista 'march of indigenous dignity' is a profoundly Indian affair, not historically distinct from the civil rights movement in the US during the 1960s. Its objectives are to achieve first class citizenship for Mexico's 10 million Indian peoples, who have long been the victims of a vicious – if largely unspoken – racism.

The Indian Rights law pending before Congress would grant the nation's 57 distinct indigenous cultures limited autonomy over political, judicial, cultural, agrarian, and environmental facets of their communities and regions.

Indeed, the key to the Zapatistas' resilience in the popular imagination is the movement's links to a half millennium of Indian resistance to European ethno-centrism. 'This is a march of those who are the colour of the earth', the rebels' colourful spokesperson Subcomandante Marcos



declared to 10,000 supporters cramming the cathedral plaza of San Cristobal de las Casas on the eve of the Zapatistas' 24 February departure. The EZLN's 1994 uprising touched a universal nerve of white guilt at the plight of the nation's 'first peoples' that mobilised Mexican civil society and spread the rebels' influence throughout the country and the world.

As the conscious vanguard of indigenous militancy, the EZLN, whose ethnic base includes five Chiapas Mayan subgroups, are following a deeply Indian route on their march up to the capital. From Chiapas, the Zapatista delegation – 23 members of the rebels' general command plus its mestizo spokesperson Marcos – travelled into Oaxaca, a state in which 16 distinct 'etnias' (Indian cultures) account for nearly half the general population. Then they entered the Nahua (descendants of the Aztecs) heartland in Puebla, Veracruz, Tlaxcala, Hidalgo, Queretero, and Guanajuato states.

The EZLN leadership then headed for the Michoacan Sierra, the home grounds of the 300,000-strong Purepecha nation, where the Zapatistas will sit in session with the National Indigenous Congress (CNI), a formation that includes representatives from most of Mexico's 57 indigenous peoples, and one that the EZLN was instrumental in assembling five years ago.

Before setting foot in Mexico City, the travellers plan to pass through Morelos and Guerrero states, to pay homage to their namesake, the revolutionary martyr Emiliano Zapata, a Nahua farmer himself who fought for the land of his village. The rebels will follow Zapata's old trail through the Indian outskirts of Milpa Alta and Xochimilco before finally touching down in Mexico City, the 'Gran Tenochtitlan' of the Aztec empire.

Danger zone

Despite highly publicised efforts by the Fox administration to smooth the way, the rebels' route is fraught with dangers. Just getting out of Chiapas, where ranchers and members of the no longer ruling Institutional Revolutionary Party (PRI) are viscerally irate at the turn-around in Zapatista fortunes, could be sticky.

Several business federations have called for the arrest of the EZLN leaders once they leave Chiapas, pleading with President Fox that the caravan is bad for business. One business leader, Raul Picard of the National Transition Chamber (CANACINTRA), has even calculated that interest rates would leap from 16 per cent to 28 per cent should a Zapatista be injured or killed during the march.

Leaders of Fox's conservative National Action Party (PAN) in both houses of congress are stridently opposed to the insurgents' appearance in their sacrosanct chambers unless the rebels take off their masks. The PANista governor of Queretero, through whose state the Zapatistas passed on their march, calls the Indians 'cowards' and 'traitors', who deserve execution rather than accolades. A homophobic PAN congressman in Morelos has labelled Subcomandante Marcos a 'faggot' and challenged him to a fist fight. Saloman Salgado who subsequently resigned from Fox's party, suggested that snipers would halt the advance of the Zapatistas' march.

All along the route, the risk of provocation is latent. Four non-EZLN-affiliated armed groups operate in the territories which the Chiapas rebels are traversing, and some, like the seriously split Popular Revolutionary Army (EPR), are not friendly.

Although President Fox has promised a police and military escort, the EZLN asked the International Red Cross to help ferry the comandantes up to Mexico City. When the IRC claimed that participation in a political event was beyond its mandate, Subcomandante Marcos accused foreign secretary Jorge Casteñeda, a former leftist, of forcing the International Red Cross from the march and setting the rebel leadership up for ambush.

Even if they arrive unscathed in the capital, the EZLN march is a big gamble – they must draw crowds equal to or surpassing the number of supporters who have turned out for three previous forays up to the capital, or risk being ignored by Congress. Even if the turn-out is considerable, it is doubtful that the Mexican Congress, long insulated from accountability by political impunity, will respond to the public outcry for passage of the Indian Rights bill.

For Vicente Fox, the Zapatista march is an equally serious gamble. 'I am risking my political capital', the new president frankly told reporters on the eve of the march for indigenous dignity. After having lavished his attentions on the Chiapas rebels during the first hundred days of his presidency, Fox's credibility hangs in the balance. Defeat of the Indian Rights bill in Congress would torpedo any chance of an immediate peace – a promise the President has repeatedly made to the Mexican people.

Gunfire, arrest, or a no vote in Congress are not the only hazards facing the EZLN. The shadow of co-option also creases their path. One example: the nation's two-headed television monopoly, TV Azteca and Televisa, long at war over ratings, have declared 'peace' to stage a much hyped

'Concert for Paz in Chiapas' in Mexico City's biggest soccer stadium. Apparently, the commercial opportunities presented by the Zapatista march have encouraged the battling TV giants to overcome their aversion towards the EZLN – Televisa and TV Azteca have spent the past seven years vying to outdo each other in insulting the rebels.

Media circus

From the first day of the uprising, Televisa labeled the Zapatistas 'foreigners', and TV Azteca created handpuppets to mock Marcos and ex-San Cristobal de las Casas bishop Samuel Ruiz. A TV Azteca helicopter blew the roof off the local school during an unauthorised landing at the EZLN's most public outpost of La Realidad, deep in the Lacandon jungle, and its crews have long been banned from rebel territory. Now the two monopoly networks are waging a 'sign up for peace' campaign that seems designed to portray the EZLN as intransigent. 'I'm not the Ricky Martin of the Zapatista Army of National Liberation', Subcomandante Marcos recently told an interviewer, confirming his boycott of their planned 'concert for peace'. What the networks will do with an estimated four million pesos in profits from the event, is unspecified. But co-option is not limited to Televisa and TV Azteca. Ironically, although the EZLN has long been in the forefront of the battle against globalisation, the globalisation of the event threatens the integrity of the march for indigenous dignity.

Renewed international attention is bringing many luminaries to Mexico – Nobel laureate José Saramago, Spanish troubadour Joaquin Sabina, former French first lady Danielle Mitterand, and US novelist Susan Sontag reportedly booked their passage, and several thousand international solidarity workers, including 400-plus foreigners expelled from Mexico for pro-EZLN activities under former president Ernesto Zedillo, accompanied the Indians to the capital. Among the most noticeable were several hundred Italians, members of the white overall-clad 'White Monkeys' who were forcibly removed from the country in 1998.

Combined with the lionising of Marcos as an international pop idol, the inevitable media carnival surrounding the Zapatistas could smother the very Indian nature of this historic march. It is only to be hoped that it does not succeed in doing so.

John Ross is a journalist and writer specialising in Mexican politics. This article is an edited version of one which appeared in his newsletter 'Mexico Barbaro', which can be found at <http://home.earthlink.net/~dbwilson/mexbarb.html>

THE BLOTTING OF INDIAN INC.

A SMALL VICTORY HAS BEEN WON BY 'PROJECT AFFECTED PEOPLE' (PAPS) IN INDIA'S COAL-MINING REGIONS. MATILDA LEE FILLS IN THE BACKGROUND.

WHEN I FIRST met Bina Stanis in a hotel in Ranchi, India, I listened in awe as she rattled off acronyms like ESMP and CSR as if she were talking about the day's lunch. But for Bina, like others living in villages throughout India's coal-belt, World Bankese has become a necessary but unwelcome *lingua franca* born through struggles to retain land, livelihood and life.

ESMP stands for Environmental and Social Mitigation Project, and CSR for Coal Sector Rehabilitation Project, names for the two-part \$563 million part-loan part-credit by the World Bank to the Indian government started in the mid-1990s. Bina, a community worker, had come to Hazaribagh to assist the displaced Adivasis, or tribal groups. In World Bankese they are known as 'Project Affected People' or 'PAPs' and they will number more than 10,000 for this particular project which involves 24 opencast mines in different coalfields of India.

Bina has her hands full with just one mine, and has assisted around 50 displaced families of the Sental tribe so far. 'These people were resettled in a village that houses a school with no teacher, a clinic with no nurse and a community centre with no community. This is what they call rehabilitation.'

The resettlement camp is a stark example of how seemingly well-intentioned policy is turned into flawed practice. A short distance from the coal mine, two rows of cramped houses face each other divided by a small dusty road. The resettlement colony plots are a mere 0.02 acres per family, not the 0.12 acres the villagers requested in order to be able to grow vegetables, keep animals and to have space for second generation expansion. The vast expanses of land once available for farming a diversity of crops are no longer. Hunting has ceased because, well, there is no more wildlife in the area.

The most visually striking aspect of the area, however, is the environmental pollution. Everything that had once been green has been caked in layers of black dust. The nearby rivers are black with soot. The water used for drinking, irrigation and bathing has been contaminated.

It is utterly desolate.

THE WORLD BANK has announced that it will cancel its backing of coal-mining development in India's Hazaribagh this June.

The World Bank lists the social benefits of coal mines as access to health care and education, employment opportunities, the provision of facilities like roads, power, water and electricity. Very few of these amenities reach project affected people. Many of the villagers are employed in the coal dumps where they load coal by the handful into trucks for transport. The workers are not given any protective gear, their hands and faces left exposed to the coal. Nor are they given a safety education. The coal dumps are teeming with young children and women.

A single grove of trees jutting above the deep coal pits paints a bittersweet picture of the Adivasis' struggle to preserve some sort of cultural identity. This grove of trees is sacred to the Adivasis and in the past was used during many ceremonies and religious events. At other mines, the coal company has usually 'removed' the primal forest grove to another place after paying the local pahan, or priest. In the face of protests and demands, however, the coal company has begun to leave the groves and mine around them. Here, the grove is still standing but has become, almost literally, an island in a sea of coal.

'The saddest part of this is that our religious beliefs are anchored in our land, particularly our sacred sites. Destroy the land and sacred sites, then our culture begins to collapse,' said Shishir Tudu, a local journalist who writes on Adivasi issues.

In many cases, India has relied on the violation of environmental, labour and land rights in the exploitation of mining areas. 'If you do the cost-benefit analysis including externalities, the mining shouldn't be done,' said Ramesh Sharan, professor of economics at the University of Ranchi, India. The Adivasis, who make up 28 per cent of the project affected people, have enjoyed little legal protection despite tribal lands being given special recognition in the Fifth Schedule of the Indian Constitution.

Coal mining areas are beset by political

problems – and support for indigenous causes is not easily found. In the new state of Jharkhand, where the Adivasis are fighting to ensure that they are properly represented in the state assembly, relations between the police and left-wing extremist groups like the Maoist Communist Centre (MCC) and the People's War Group (PWG) are tense. Groups like Mines, Minerals and People (mm&P), a national network of over 100 groups protecting mining communities, face hostility from both sides when trying to mobilise mining-affected communities to protect their rights.

Dirty development

Half of India's 1-billion-strong population earns less than \$1 per day each. Efforts by the World Bank and India's own government aimed at 'eradicating poverty' ignore the fact that the social fabric of the community is often destroyed once money and private property are introduced into cultures traditionally governed by community ownership. For India, transformation into an industrial society is seen as central in countering deprivation, and the exploitation of mineral resources has historically gone hand in hand with economic development.

India is the world's fourth biggest producer of coal, and coal currently accounts for about 62 per cent of its total commercial energy supply: 90 per cent of India's coal is produced by the state-owned Coal India Ltd. Struggles for land rights are in direct conflict with the Indian state's confirmed 'national interest' in exploiting non-renewable resources. Indeed, Jawaharlal Nehru, independent India's first Prime Minister and an architect of its development policy appealed to soon-to-be displaced villagers to, '...suffer in the interest of the country'.

Yet the quality of Indian coal is low, usually containing about 40 per cent ash, and imports of coal have increased in recent years. During the 1990s, the Indian government appealed for more foreign investment and has embarked on policies to liberalise the mining sector.

According to a report by the Institute for Policy Studies in Washington, DC, between 1992 and 1998 the World Bank's energy

sector investments totalled some \$13.6 billion for oil, gas and coal projects. The Indian government and the state-run National Thermal Power Corporation received the largest chunk of investment.

Coal has the highest carbon content of all the fossil fuels, and mining and burning coal affects the global as well as local environment. India will have to endure the effects of climate change in many ways. A sea level rise of one metre from global warming will lead to some 7 million displaced people. Higher temperatures will mean increased incidences of vector-borne diseases like malaria, dengue and measles. Developing nations in general are more vulnerable as their economies and institutional infrastructures are less able to adapt to the harmful effects of climate change. Yet, swaying the Indian government towards a path of more sustainable development is like redirecting a super-tanker. Coal is likely to be included in the Clean Development Mechanism of the Kyoto Protocol, largely due to the efforts of China and India.

More bittersweet victories

Last July, the Indian government asked for a cancellation of the remaining \$250 million balance of the CSRSP loan. The five-year surveillance period for the ESMP credit is up this June, and the World Bank will then pull out. Some are breathing a sigh of relief, but it may be a short one. Bina speaks of it as 'a small spark of success'.

According to the project information document, ESMP's aim was to support the implementation of environmental action plans, rehabilitation action

plans and indigenous peoples' development plans for the 24 opencast mines. 'At this point in time, there are absolutely no plans for further World Bank coal projects in India,' said Asger Christiansen, task manager within the World Bank on Coal India Ltd.

For the local inhabitants of India's coal belt, the World Bank's exit comes as a mixed blessing. The opinion expressed at many local NGOs is that the social conditions imposed by the World Bank were only accepted by the government because they were a precondition to the larger loan. Now that the World Bank pulling out, the danger is that export credit agencies and multinationals with lower standards and less accountability will move in to fill the gap.

Unsettling policies

The ESMP was run under the guidelines of the World Bank's Policy on Involuntary Resettlement. The Bank's resettlement policy states that those people involuntarily displaced should receive benefits from the project and that their livelihoods should be improved as a result of being displaced. It also says that project affected people should be consulted, that they should be able to participate in the decision-making and that they should be given a range of choices in terms of resettlement.

The Bank has historically failed at living up to the aims of its resettlement policy and the ESMP is a case in point. In the environmental impact assessment for this project, Coal India confirmed that the victims of resettlement, 'often end up as exploited contract labourers trapped in perpetual poverty or they simply leave the area, to reappear in the slums of the city or as squatters'.

The Bank's Policies on Involuntary Resettlement and Indigenous Peoples are currently under revision, though 'the

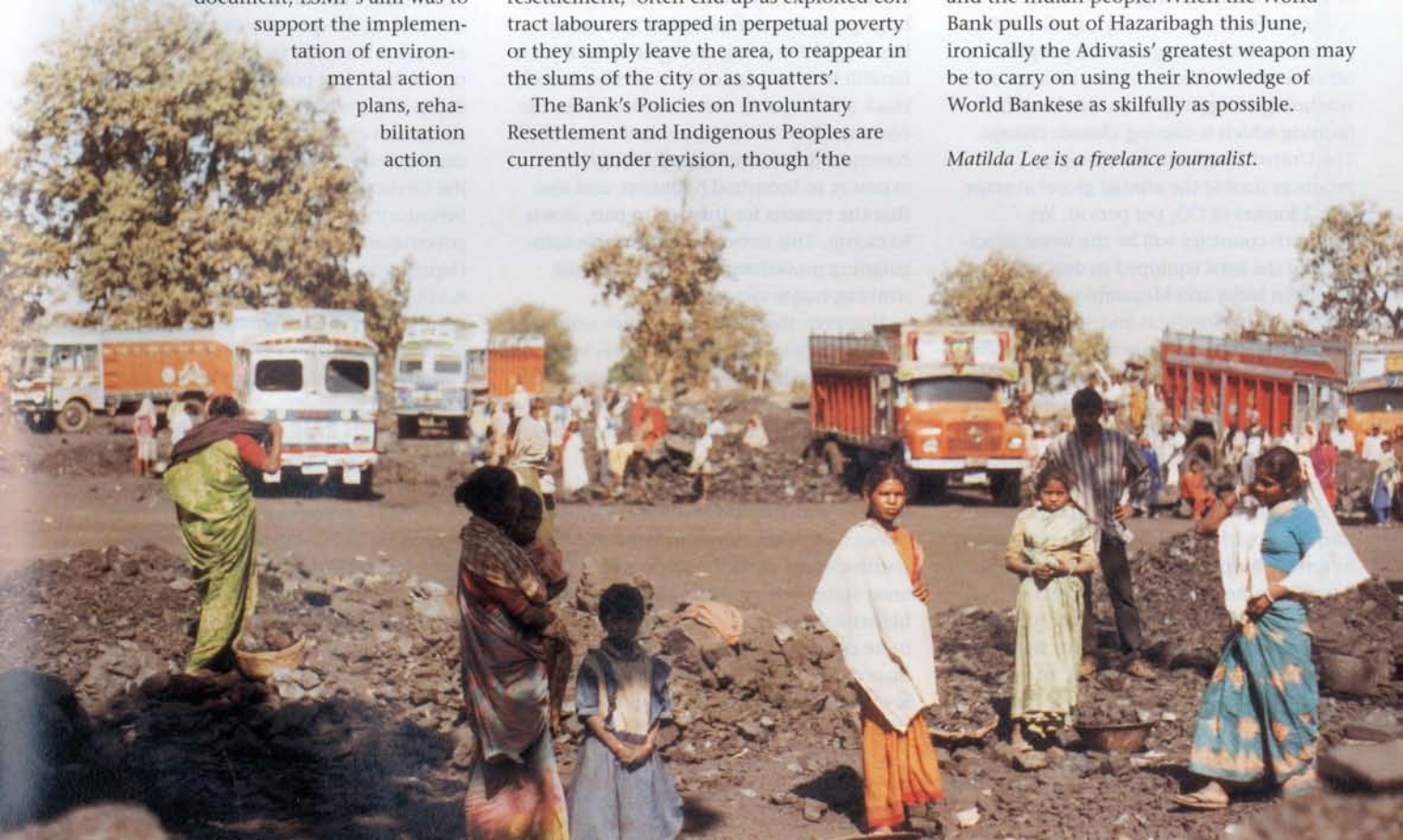
changes are more in details and clarity,' according to Asger Christiansen. However, a recently leaked draft version of the revised resettlement policy reveals what the World Bank considers to be details.

The revised policies stipulate that those who are not recognised as having a title or a claim to title under the national land legislation would no longer get compensation for land. This would be a big blow to people like the Adivasis who already suffer from their marginal status in Indian society. Also the World Bank would only be responsible for the *direct* impacts of its policies. In other words, the World Bank would no longer be accountable for indirect impacts such as pollution and environmental degradation.

Dana Clark, of the Center for International Environmental Law in the US, has followed the World Bank for years and is appalled by the implications of a watered-down resettlement policy. 'If you have a river and you dam the river, some people are displaced by the dam and the reservoir. Those people would obviously be directly affected. What about the people who have depended on fish in the river for their protein or for their livelihood and the fish disappear? They have to move away and search for a new livelihood. Are they directly affected or indirectly affected? I think the Bank would say indirectly and they would wash their hands of those people,' she says.

India's tribal population has been dealt continuing blows from international financial institutions, the Indian government and the Indian people. When the World Bank pulls out of Hazaribagh this June, ironically the Adivasis' greatest weapon may be to carry on using their knowledge of World Bankese as skilfully as possible.

Matilda Lee is a freelance journalist.



POLLUTING THE POOR

NEW EVIDENCE SHOWS THAT IT IS THE POOR AND THE MARGINALISED WHO SUFFER MOST FROM POLLUTION, SAYS SIMON BULLOCK.

BOB BULLARD, a US lawyer and environmental campaigner, said in 1993 that, 'Social inequality and imbalances of social power are at the heart of environmental degradation... The environmental crisis can simply not be solved effectively without social justice.'¹ It is generally poorer and relatively powerless people who bear the brunt of this environmental degradation. This is 'environmental injustice'. There are three main types.

Environmental injustice

First, there is inter-generational environmental injustice. Future generations will suffer as a result of many of today's actions. We get electricity from the operation of nuclear power stations, and the next 50 generations will have to pay to clean up and contain the nuclear waste produced. We use cheap fossil fuel; future generations will have to live with rising sea-levels, extreme weather and the impact of global climate change.

People from one country can also inflict environmental damage on the people of other countries. Western countries are overwhelmingly responsible for the fossil fuel burning which is causing climate change. The United Kingdom, for example, produces double the annual global average of 1.2 tonnes of CO₂ per person. Yet Southern countries will be the worst affected, and the least equipped to deal with it. Floods in India and Mozambique, hurricanes in Honduras and sea-level rise in Bangladesh; the consequences will become more severe and more common as climate change takes hold. And Western imports of large quantities of metals, wood, minerals and food cause major environmental devastation, often for the poorest communities in the poorest countries. The giant copper mine in Ilo, Irian Jaya; vast soya plantations in former Brazilian rainforest; a proposed ilmenite mine in the coastal forests of Madagascar (to produce whitener for toothpaste) are a few examples of costs imposed on poor countries by the 'needs' of people in rich ones.

LEVELS OF CARCINOGENIC pollution are highest in areas with the most acute social deprivation, according to a report by Friends of the Earth.



The third area of environmental injustice is the uneven distribution of environmental degradation and pollution within countries.

Pollution begins at home

Over the last 15 years in the United States a huge grassroots campaigning movement has fought the siting and operation of toxic landfill sites and factories in predominantly black and hispanic communities across the country. There is strong evidence that black communities in the US suffer far greater exposure to industrial pollution, and also that the reasons for this are, in part, down to racism. This network of grassroots campaigning movements is expanding and winning major victories.²

However, there are inequalities within other countries also. This issue has been under-researched until very recently in the UK, but evidence is emerging that poorer people have to endure the worst environmental conditions.

Two years ago, the London School of Hygiene and Tropical Medicine published research on traffic levels in London.³ Their results clearly showed that people in poorer areas suffered from worse air pollution, had higher levels of respiratory illness, lived in more congested streets and had worse traffic accident levels. Moreover, they had lower levels of car ownership. In other

words, poorer people suffered more from the pollution and traffic accidents caused by others driving through their communities.

Factoring factories

At around the same time as the traffic report, we published a report at Friends of the Earth showing that polluting factories were overwhelmingly likely to be situated in poorer areas.⁴ There were 662 factories in areas where the average household income was less than £15,000 a year, and only five factories in areas where the average annual household income was above £30,000. This work tied in with research from the University of Staffordshire which showed that poorer people were more likely to live in the

high-risk areas around major potential accident sites; sites such as nuclear and chemical plants which the Health and Safety Executive deem sufficiently dangerous to need evacuation plans.

The first Friends of the Earth study did not look at the quantity or type of emissions from the factories. As a follow-up, we have just published an updated in-depth study which sets actual emissions of dangerous chemicals against the level of deprivation in that area.⁵ We have taken the Environment Agency's 1999 pollution inventory data, and mapped it against the government's Index of Multiple Deprivation – an indicator which ranks all 8,414 local authority wards in England according to the government's definition of deprivation, measuring income, health, employment, education, housing, and access to services.

The results show an overwhelming burden on the most deprived communities. Of the 156 factories churning out more than a tonne of carcinogens a year, 49 per cent were in the most deprived 20 per cent of wards. Only 6 per cent were in the least deprived 20 per cent of wards. Even more starkly, of these 156 factories, the worst were concentrated in the most deprived wards. 82 per cent of the 10,600 tonnes of carcinogens were pumped out in the most deprived

20 per cent of wards. Only 8 per cent of these emissions were emitted in the least deprived 50 per cent of wards (see graphs below).

More research is needed on this subject, without a doubt. But the bottom line is that in the United Kingdom the poorest people live in the worst environments.

From here to there

So what does this tell us? First that environmental problems such as factory pollution are a clear component of social exclusion, inequality and deprivation. At Friends of the Earth, we believe that there is no place in a modern society for factories spewing out thousands of tonnes of carcinogenic chemicals – this additional burden on top of all the others poorer communities face is an additional reason to reduce this pollution.

There is also a strong message here for politicians who still believe environmentalism is solely a middle-class concern. The grime of industrial pollution is as far from a middle-class issue as you can get.

Environmentalism is not yet at the heart of the government's policy agenda – to get there it needs to be seen as more than a worthy cause for the middle classes. The deep inequality in exposure to environmental problems needs to be hammered home to a government not yet convinced that the environment is a core concern for everyone, rich and poor alike.

The report also holds a lesson for environmental organisations. Understanding that it is the least powerful people who are suffering the worst environmental problems should push environmental groups to work more with the people most directly affected. It is right that environmental groups negotiate with governments and powerful groups, but this will only lead to change on those groups' terms. Truly tackling environmental injustices means that environmental organi-

sations also need to work more with, and understand the concerns of, relatively powerless people in a way that changes the priorities and messages of those organisations.

These unequal environmental impacts can be perpetuated or made worse for a variety of reasons. Powerless groups may be less able to fight off a potentially polluting development in their community. Or it may be easier for authorities to site a polluting factory in an already polluted area. There are many reforms which will be needed to reduce environmental injustices – at a national level a critical step is the need for policies to be assessed for their distributional impact. There is too little formal appraisal of who benefits and who loses out from different environmental policy options. Explicit and public discussion of the distribution of benefits, impacts and risks needs to become a central part of the policy making process.

Dealing with uncertainty

Formally assessing who wins and loses from policy proposals also has relevance for another area of environmental policy – that of risk assessment and how to deal with uncertainty. Environmentalists argue that the current policy on a range of issues – GM food or chemical pollution, for example – asks the wrong questions. Policy makers ask: 'Is this chemical/product/technology safe or not?' But because the pathways of chemicals and substances in the environment and their interaction with people is so complex, it is usually not possible to say with any certainty whether anything is safe or not. So we see the depressing and repeated spectacle of politicians arguing that 'no evidence of harm' is the same as 'evidence of no harm'. And having to pay for it later.

The current policy solution to issues which involve uncertainty – risk assessment – is so narrow, and so incapable of dealing

with uncertainty, that it is too flawed to be used as the major basis for environmental policy making. Instead, a precautionary approach could lead to 'alternatives assessment' being used. Instead of asking: 'Is GM food safe?', the key policy question becomes: 'What sort of agricultural system do we need?' Instead of trying to estimate uncertain risks from chemicals, the policy response should be to reduce chemical exposure and risk. In this way, policy decisions move away from being narrow scientific debates to becoming explicit political debates which use the best available science to inform them.

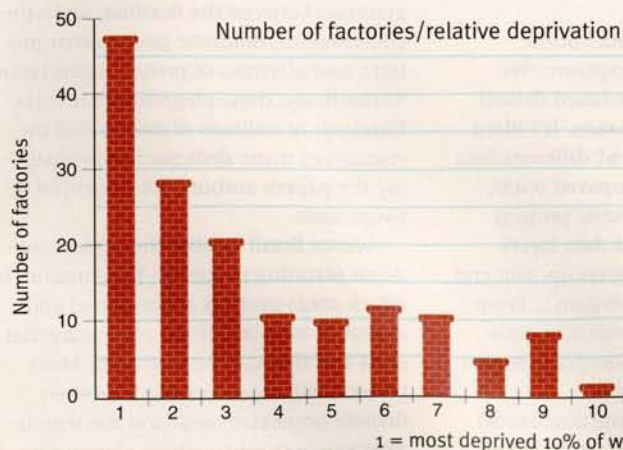
What now?

Action to tackle environmental injustice in the UK needs to be taken within a global context. The government's sustainable development strategy says: 'Our needs must not be met by treating people elsewhere in the world unfairly.' In other words, environmental justice in the UK should only occur in a way that does not compromise the ability of people in other countries or those living after us to live in a healthy environment themselves. This will mean using less environmental resources more efficiently – allowing poorer countries and future generations a fair share for their own needs.

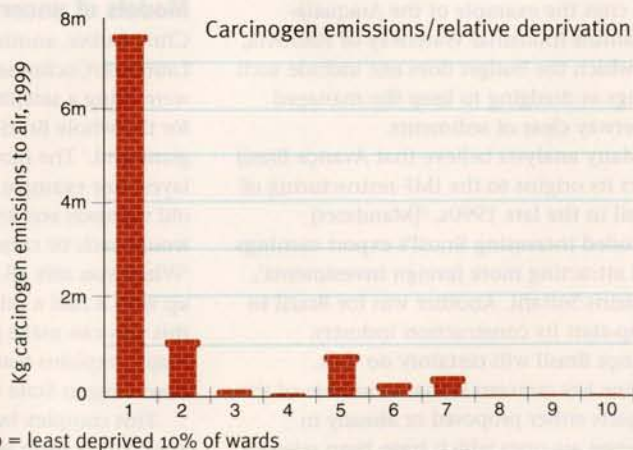
As Friends of the Earth Scotland rightly states: 'We have a right to a decent environment. But so does everyone else in the world. We want to have decent homes, decent jobs, a decent standard of living. So does everyone else. No less than a decent environment for all: no more than a fair share of the Earth's resources.'⁶

Simon Bullock works in the Policy and Research unit at Friends of the Earth. The research cited can be found at: www.foe.co.uk/factorywatch
References on page 65.

Where the factories are:



Where the pollution is:



WHEN FORWARD IS BACKWARD

BRAZIL IS PLANNING VAST DEVELOPMENT IN THE AMAZON BASIN, DENYING THAT IT WILL DESTROY FOREST. PENELOPE JACQUACU REVEALS THE TRUTH.

ON 19 JANUARY, the prestigious American journal *Science* published an article analysing the impact of Avança Brasil, a huge development project planned for the Brazilian Amazon.¹ While the implications of the paper's findings are profoundly disturbing, its reception was a remarkable illustration of how some government elements will attempt to vilify and undermine unpopular conclusions.

Avança Brasil (Forward Brazil) is designed to increase trade through the expansion of industrial agriculture and mining in the Brazilian Amazon, and provide supportive infrastructure for projects such as the development of the Urucu oil and gas fields. It will include road-building projects, canalising the Araguaia, das Mortes, Xingu, Madeira and Tocantins rivers, hydroelectric projects, mining, and expansion of agribusiness. Overall, the project is slated to cost some \$40 billion – a sum that dwarfs the \$340 million earmarked by the G7 nations for Amazon conservation under their Pilot Programme to Conserve the Brazilian Rainforest.

Paying the piper

Much of this \$40 billion has been guaranteed by BNDES, the Brazilian national development bank. But significant proportions are also coming from external sources of venture capital. 'Each project has its own separate sources of funding', explains Atossa Soltani, from the California-based Amazonwatch. Soltani expresses concern that the projected costs and economic benefits of many of the projects are unrealistic. She cites the example of the Araquaiá-Tocantins Industrial Waterway or Hidrovia, for which the budget does not include such things as dredging to keep the managed waterway clear of sediments.

Many analysts believe that Avança Brasil owes its origins to the IMF restructuring of Brazil in the late 1990s. '[Mandates] included increasing Brazil's export earnings and attracting more foreign investments', explains Soltani. Another was for Brazil to jump-start its construction industry. Avança Brasil will certainly do that.

One key concern is that a number of the projects either proposed or already in progress are ones which have been rejected

AVANÇA BRASIL, an enormous infrastructure project designed to promote industry and mining in the Amazon, has nothing to do with conservation, and everything to do with profit.

for funding by the World Bank as being too environmentally damaging. A lack of transparency has been a real problem for those who wanted to check any official environmental impact analyses that were being conducted. 'We believed that where they were being conducted, they were just rubber stamping official policy', says Soltani. 'But without access to the documents, we couldn't be sure.'

It was in this climate of uncertainty that William Laurance of the Smithsonian Institution and Philip Fearnside from the Brazilian National Institute for Amazonian Research (INPA) put together a joint Brazilian-American team to analyse the environmental impacts of Avança Brasil. 'Our motivation was simply the realisation that the Avança Brazil programme was so massive, and that there had been no systematic attempt to assess its effects... the analysis that led to the *Science* paper followed quite naturally from that', explains Laurance. 'To give the study as strong a factual basis as possible, we decided to base our projections on the kinds of impacts that have happened in the Brazilian Amazon with similar projects in the past', explains Mark Cochrane, from Michigan State University, a member of the team who has worked on many modeling studies.

Models of uncertainty

Chris Barber, another member of the Laurance/Cochrane team explains: 'We were using a satellite image-based dataset for the whole Brazilian Amazon. It's like a giant grid.' The model has 61 different data layers (for example, new unpaved roads, old railroads and hydro-electric projects would each be considered a data layer). 'When you mix all these layers up, you end up with a half a million polygons... From this you can make predictions and draw maps', explains team-member Scott Bergen from Oregon State University.

This complex but sophisticated model allowed the team to produce maps for an

optimistic and a non-optimistic scenario. The results of this number-crunching were extremely worrying. The 'optimistic' scenario predicted that 28 per cent of the Amazon would be destroyed or heavily damaged over the next 20 years, while the 'pessimistic' scenario forecast 42 per cent. Forest loss would be greatest along the southern and eastern areas of the basin, and there would also be extensive fragmentation and degradation of the remaining forest in central and northern Amazonia. Under the pessimistic scenario, few pristine areas will survive outside the western quarter of the region. Only 5 per cent of Brazil's Amazon would remain in a pristine state (see map on opposite page).

'If this development plan goes ahead, then even the massive environmental destruction inflicted on the Amazon rainforests during the 1980s and 1990s will appear tiny by comparison', said Friends of the Earth's Tony Juniper when the study's results came out in *Science*.

Destroying protected areas

The Amazon is dotted with National Parks and other classes of protected areas. 'We were especially concerned about this', says Laurance. 'It was the specific job of one team member to look at the effect of Avança Brazil on such areas.' Depressingly, the models suggest that even these will be overwhelmed by the destructive trends Avança Brasil unleashes. The same is true for such integrated initiatives as the G7's Pilot Programme to Conserve the Brazilian Rainforest, and a host of bilateral programmes between the Brazilian and other governments, domestic government projects, and activities of private organisations. 'Collectively, these programmes involve hundreds of millions of dollars and the energies of many dedicated individuals,' say the paper's authors. All this could be swept aside.

Avança Brazil typifies the current top-down planning process in the Amazon, in which mega-projects are proposed and approved long before the environmental costs and risks can be evaluated. Many projects will create corridors between densely populated areas and the remote Amazonian frontier, which commonly

initiate a process of spontaneous colonisation, logging, mining, and land speculation that is almost impossible for governments to control. The result is massive forest loss – and the forest that remains is often so fragmented as to be hardly worthy of the name.

Publicity and the backlash

The publication in *Science* prompted a blizzard of publicity that nearly overwhelmed the authors. 'I've never been mobbed by the press before', reported a bemused Laurance, after 150 people, plus TV film crews and their lights, had crammed INPA's seminar theatre. Among the audience was at least one high-ranking minister, who had flown in especially from the country's capital, Brasilia. *Folha de São Paulo*, one of Brazil's most prestigious newspapers, came out with an editorial in support of the team's work.

The official Brazilian response was interesting. João Paulo Silveira, the Development Ministry official in charge of the plan, said the paper had 'no technical foundations'. He said its projections were faulty because it did not consider the effects of recently passed environmental legislation.

The Brazilian Embassy in Washington, DC, commented that the study 'does not seem to have a sound basis since it takes into account the experience of the last 25 years when none of the different policies [to stop deforestation] now adopted were in place'. In the UK, the Brazilian Embassy released a denouncement which pointed out that the correct current figure for annual deforestation was 'only' 1.7 million hectares and not 2.0. To top it all, the Brazilian Science and Technology Ministry issued a bulletin which said that the worst case scenario would see 'only' 25 per cent of the Amazon destroyed by 2020.

Getting to the truth

So how valid are the suggestions of flawed methodology? 'Laurance et al used relationships between roads and deforestation to predict the effects of river channelisation, electric lines, and gas pipelines on deforestation,' says Dan Nepstad of the Woods Hole Research Centre, Massachusetts. 'This is, we think, where the guesswork begins. There is no empirical basis for describing how these infrastructural developments will affect the Amazon.' The *Science* study has value, he says, but 'their numbers should be interpreted qualitatively'.

'It's true that we used educated guesswork to estimate the likely effects of river-channelisation projects,' responds Laurance.

'This was because there are no comparable projects in the Amazon that we could use as examples.' But he defends the rest of the report. 'We assumed gas pipelines and power lines would behave like unpaved roads, because such projects require roads for construction and maintenance.' And he says that the Ecuadorian Amazon provides a telling example. 'There, roads created to construct gas lines have led to drastic increases in forest destruction, logging, hunting, and land speculation. Most major infrastructure projects can't proceed without road networks, and those are the real enemies of the rainforest.'

Brazilian criticism also focused on the paper's supposed 'anti-development stance'. 'I cannot speak for my co-authors, but I am not wholly against development in the Amazon', says Cochrane. 'But I am interested in the Brazilian people being able to make an informed decision. *Avança Brasil* has been promoted as a great benefit to Amazonia without any estimation of its environmental costs.'

As for the claim that Brazil's recent environmental legislation now

has everything under control. 'Past and present attempts to regulate industries such as mining and logging [in Brazil] have proved inadequate because of the lack of resources available to official agencies, corruption and blatant violations of environmental codes,' says Tony Juniper. Brazilian Philip Fearnside, veteran Amazonian ecologist and author of a review of how Brazil's environmental law works in practice, shares this opinion. 'The idea that Brazil's environmental legislation is such that one can build roads and other infrastructure crisscrossing the Amazon without leading to deforestation is, of course, exceedingly naïve,' he says. 'While the new environmental crimes law represents a valuable advance, it is nowhere near being up to such a challenge.'

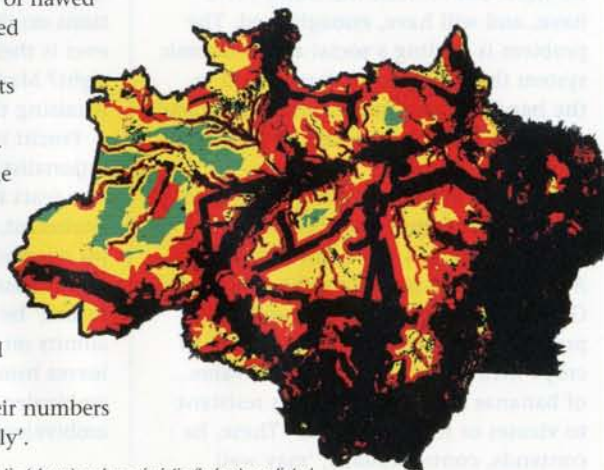
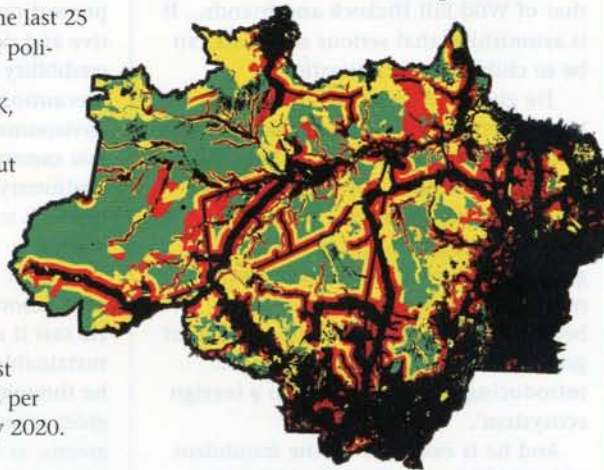
Seeking alternatives

The team didn't want to offer up a computer-generated portent of ecological doom without suggesting alternatives. They pointed out that the Kyoto Protocol on climate change could provide substantial remuneration for nations who save their natural forests. 'Brazil's government could get paid for not destructively developing Amazonia. There'd be substantial revenues to promote sustainable development in Amazonian communities,' says Laurance. However, Brazil's Foreign Affairs Ministry opposes the linking of carbon-offset to deforestation avoidance, seeing this as an infringement of national sovereignty. Instead, they want credits linked to growth of plantation trees, like eucalyptus, and will bring this up at the next climate summit in Bonn in May.

It seems, though, that despite the greenwash, the study has made an impact on the Brazilian government. The most recent response from the Development Ministry is to promise a study of the probable environmental impact of all projects envisaged. To be carried out over the next year, it is expected to cost \$400,000 and, according to the Ministry, if environmental damage is feared, projects will be altered.

'The pledge to do an environmental impact assessment of *Avança Brasil* indicates at least a step in the direction of informed and rational decision-making,' says Mark Cochrane. 'And that', concludes William Laurance, 'was what we wanted all along'.

Penelope Jacquacu is a tropical ecologist and journalist with field experience in West Africa, Central & South America, and SE Asia. She is now working in the Brazilian Amazon. References on page 65.



Mapping the damage: Optimistic (above) and pessimistic (below) predicted forest degradation by the year 2020. Black – deforested or heavily degraded; red – moderately degraded; yellow – lightly degraded; green – pristine.

Jonathon Porritt sometimes seems like the chameleon of the environment movement. One moment unbending in his green finery, the next schmoozing with business. Or, as this book reveals, sometimes on the side of the scientists and at others railing against them.

Most of us are like that, perhaps. But Porritt does it better. And here he lays bare the reasons for what he admits is a growing ambivalence about some of the certainties of the environment movement. As he says in his introduction: 'I have come to despise equally both the cornucopian fantasies of those who can't think beyond the next technical fix, and the dyspeptic, dystopian fundamentalism of those who scapegoat science and technology as the easiest way of avoiding some of the less palatable truths about human nature.'

Porritt sells out? Porritt in mid-life crisis? Porritt grows up? Porritt tells it like it is? Take your pick.

The timing of this book is interesting. Porritt has just become chairman of the 'Sustainable Development Commission', advising Tony Blair. This book may be a final swipe at a range of foes before he muffles his language a little and plays the diplomatic game. (Not that that should be too foreign to him. He is after all, the son of a governor-general of New Zealand.)

Porritt sees scientists at their best in his chapter on global warming. He sees them on bodies such as the UN's Intergovernmental Panel on Climate Change acting as a model for the application of the precautionary principle in scientific advice to policymakers. He suggests they got it right because their work was funded and driven by governments, rather than by private industry, as has happened in the debate on genetic modification.

I'm not sure he is right about that – given what we now know about the wretched subservience and pathetic scientific 'rigour' displayed by MAFF's finest during the mad cow fiasco. But his chapter on the 'Genetics Revolution' certainly shows very well the dreadful effect of commercial pressure on scientists in their blinkered pursuit of value-free research.

This chapter is as good and as dispassionate a run-down on the GM debate as I have read anywhere. It is Jonathon Porritt at his best: measured but forensic, democratic and humane but unafraid to say boo to the mythology of 'Frankenstein foods'.

He spots the gold-rush mentality



PLAYING SAFE SCIENCE AND THE ENVIRONMENT

by Jonathon Porritt
THAMES & HUDSON 2000
£6.95

among many entrepreneurial scientists. 'Though they are among the brightest people in the world, there's not much to distinguish their frontier mentality from that of Wild Bill Hickock and friends... It is astonishing that serious scientists can be so childishly enthusiastic.'

He gives the lie to the facile claim that genetic manipulation is no different to millennia of selective breeding. Till now, humans have not been able to do more than nature might, at least in theory, accomplish. But 'an anti-freeze gene from the Arctic flounder would never, ever find its way into a strawberry... Firing alien genes into a different genome is exactly the same thing as introducing exotic species into a foreign ecosystem'.

And he is excellent on the fraudulent moral blackmail behind the claim that we need GM to 'feed the world'. (We have, and will have, enough food. The problem is finding a social and economic system that can put the fertile land in the hands of poor farmers and their produce into the right markets at the right prices.)

But he is also wary of the green colonialism that argues that, because Europeans do not want GM foods, African farmers have no right of access to GM technologies. 'I am excited by the prospect of drought-resistant crops... of crops with enhanced nutritional value... of bananas and sweet potatoes resistant to viruses or fungal diseases.' These, he contends, controversially, 'may well

prove to be of real benefit to developing countries'.

He is interested in the way GMs made their way silently onto supermarket shelves in the US in the early 1990s before Europeans blew the whistle on the enterprise. (So am I. As news editor of *New Scientist* in the 1980s, I ran endless stories on the court cases brought by lone warriors such as Jeremy Rifkin in an effort to stop the tide, without anyone on either side of the Atlantic taking the slightest interest in proceedings.) He concludes that 'you can never tell what combination of factors will pitch an issue over that threshold which divides relatively calm, rational scientific discourse from media-hyped, polarised confrontation. But once it's over that threshold, science often loses out to extremism, fear and ignorance'.

Brave words from Porritt.

He clearly sees his former colleagues at FoE and elsewhere as part of the problem, not part of the solution. He renews his very public attack on former Greenpeace director Peter Melchett for his militant opposition to environmental field trials for GM crops. Porritt calls Melchett 'fundamentally misguided... disproportionately and manipulatively emotive and potentially devastating to the credibility of those seeking to put the precautionary principle at the heart of environmental decision-taking'. Ouch. You cannot, he argues, argue for a precautionary approach and then ban research to determine the truth of the matter.

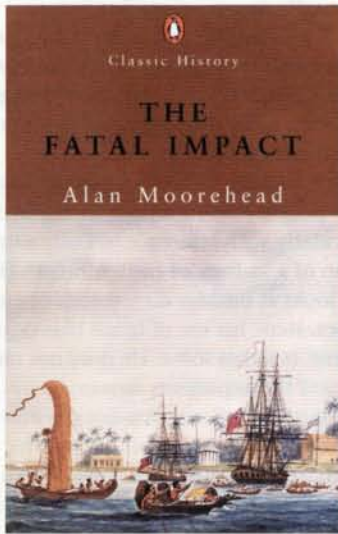
At FoE, Porritt always had problems with emotive, single-issue campaigning. He saw it as the opposite of the holistic, sustainable and precautionary approach he thought necessary to progress on green issues. And he clearly fears that greens, as much as industrialists and politicians, are guilty of pushing scientists into making unequivocal declarations on the safety or hazards of whatever is their flavour of the month. Is he right? Maybe, maybe not. But at least he is raising the debate.

Porritt is not a scientist, but he is a rationalist. He is excited by science but also fears it. 'It's not easy to reconcile the exuberant, devil-take-the-hindmost spirit [of science] with the quest for a genuinely sustainable and more equitable future,' he says. But we have to. As he admits on the final pages, this truth leaves him 'well and truly mired in ambivalence'. Well, let's hear it for ambivalence, I say.

Fred Pearce

THE FATAL IMPACT

By Alan Moorehead
PENGUIN 2000 £4.99



First published in 1966, and now reissued, *The Fatal Impact* tells of Captain Cook's voyages around the southern oceans, and exposes the trail of devastation that he, his crew, and those who followed in his footsteps, left in their wake. It is one of the most depressing yet important books of the last 40 years.

Cook hove into Matavai Bay on the north coast of Tahiti in April 1769. Although the crew of the Endeavour had been given a clean bill of health by the ship's doctor a month before, within weeks of going ashore a third of the men had been struck down by venereal disease, an affliction that must have been passed to the islanders either by the crew of the Dolphin in 1767, or La Boudeause in 1768. Whether by England, France, or both, the infection of Tahiti had begun. By the 1820s European diseases, weapons, alcohol, and internal conflicts aroused by the culture shock of first contact had reduced the native population from 40,000 to 9,000, and the previously uninhibited, often joyous lifestyle of the islanders had been largely eradicated by Christianity.

The corrosive effect of European missionaries on Tahitian culture prompted Gauguin to write, centuries later: 'The natives, having nothing, nothing at all to do, think of only one thing, drinking... Many things that are strange and picturesque existed here once, but there are no traces of them left today; everything has vanished'.

The aborigines of Australia fared little better in the years after Cook arrived in 1770. It wasn't long before the news reached England and the first ships of con-

victs set out for Botany Bay. From here the story, at least in outline, is well known: driven from their land, persecuted and murdered by successive waves of European invaders, the aboriginal population has declined to a scattered 250,000 amongst 18 million immigrants. Obscenely, the survivors still await an apology.

Between 1772 and 1775, Cook went on to circumnavigate Antarctica. His account of this voyage revealed the staggering wealth of wildlife in the area. From Le Havre, Hull and Nantucket the sealers and whalers duly set out. For Antarctic mammals it was to be a holocaust; so many were slaughtered that by the 1830s there was virtually nothing left to kill.

The most ironic aspect of *The Fatal Impact* is that Cook himself was among the most gentle and humane travellers ever to drop anchor. He knew that contact between Europeans and the people of the South Seas probably would not be to the latter's advantage, but he could have had no idea just how much misery and destruction would follow in his wake.

Not worried about globalisation? Read *The Fatal Impact*.

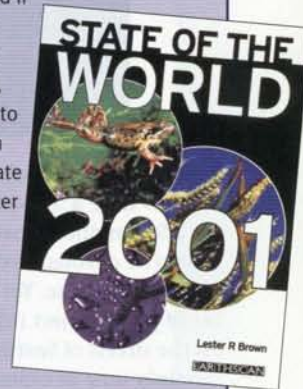
Chris Lavers



WORTH READING

'Facts!' wrote Joseph Conrad, in *Lord Jim*, 'as if facts could prove anything!' Well, sometimes they can. In the battle over the future of the planet, in particular, we can't really do without them. And for years now, one of the best sources has been the annual **State of the World** report from the US Worldwatch Institute (www.worldwatch.org). This year's edition is just out, and if you want a good overview of the facts that shape our world, this is the best place to start. Everything from world hunger to climate change, taking in water pollution, commerce, species numbers, transport and more – it's here.

Arm yourself.
Paul Kingsnorth



WORTH SEEING

We've had a heartening level of reader response to recent pleas for examples of contemporary art that connects, or aims to connect, with the natural world. There is plenty of it about. Here, for starters, are three very different examples.

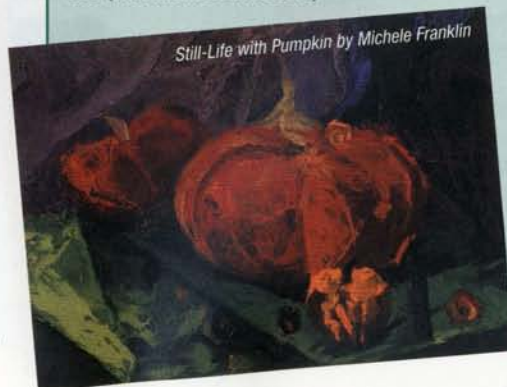
Plunge straight in at the deep end – those of you with computers, that is – by checking out the work of one of the world's leading 'virtual reality artists', **Char Davies**. Doesn't sound promising, does it? But she's actually produced some very interesting attempts to use cyberspace and the latest virtual technologies to make people think about the interplay between the self and the real world. Her website (www.immersence.com)

contains examples of 'spaces based on metaphorical aspects of nature' – an interesting interface between the real and the created worlds. Check out the 'Osmose' section, for example.

More traditional is the husband and wife partnership of painter **Michele Franklin** and sculptor **Brian Taylor**, who work from London and have had various exhibitions around the country. Their work covers everything from still life to chilling engravings of the holocaust, charcoals of the human form and sculptures of animals. A real appreciation of connections – from the body to the wider world. They have a website, www.tressdircon.co.uk, or can be contacted at 020 8692 2157.

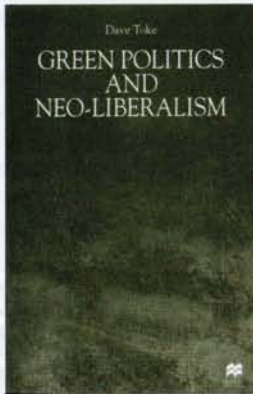
Finally, an institution that aims to explicitly promote the connections between art and nature is **Art Culture Nature**, based in New York. It's fairly academic, but seems a good starting point for exploring the connections between the various 'disciplines' that have become so disconnected in modern times. Their website is <http://Faculty.ssu.edu/~can>. More next month!

Paul Kingsnorth



GREEN POLITICS AND NEO-LIBERALISM

By Dave Toke
MACMILLAN 2000 £42.50



Dave Toke's new book is certainly timely. We now have a 'neo-liberal' President in the US, convinced that government policy should be devoted to deregulation and freedom of enterprise. Yet an increasing number of people reject this vision, as shown on the streets of Seattle and elsewhere. It is certainly time to examine green politics, neoliberalism and how they interrelate.

This may not be the best vehicle, though. Toke's analysis is mostly academic, focusing on how protagonists frame debates rather than what is at stake. The style is rather turgid, and the author is so wrapped up in 'discourse theory' that he loses sight of the issues themselves.

In the section on the road programme controversy, for instance, one gets little sense of the ongoing strength of pro-car forces (witness the renewed surge of road-building). Instead, he suggests that 'support for the dominant "road-building" discourse is weakening... [leading] politicians to choose new policy options'. Pigs might fly. In a chapter on the politics of science, he says some necessary things about how environmental groups use and misuse scientific data, but his discussion about 'epistemic communities' sheds little light on why fish stocks or forests are exploited to the point of ruination. Little is made of the fact that corporations can walk away from the wreckage they create (mobile capital simply being reinvested in new avenues of exploitation).

It is only in Chapter 4 that serious discussion of neo-liberalism begins. Toke wants to explore how 'green politics [can] provide an alternative to this discourse [of

neo-liberalism]'. He might help by showing how the latter is riddled with contradictions. One yearns for a forceful polemic, backed up by hard evidence from, say, the Chilean free market 'experiment' or the equally disastrous market 'reforms' in Eastern Europe. But no. Neither does he get to grips with the real world of privatisation scams, 'private finance' swindles, and gambling with other people's livelihoods on the stock exchanges.

More usefully, Toke does explore why so many people remain loyal to the system, particularly with reference to Galbraith's notion of a 'culture of contentment'. He then looks at broader dimensions of green politics. Here, his use of terms like 'development' is rather loose. He does not take on board the arguments developed by economists like Georgescu-Roegen about the impossibility of ongoing economic growth, no matter how defined. Nor does he do justice to the moral and intellectual current he calls 'ecocentrism'. Instead, he argues for an enlightened anthropocentrism.

His charge that Greens have failed to address social concerns also seems unfair. All the grand statements of green politics such as *The Blueprint for Survival* had big

ANIMAL QUEST: A NATURALIST ON FOUR CONTINENTS

By M J Delany
CAPPONNELLAN PRESS 2001 £9.95

Animal Quest recounts the life and work of M J Delany, a distinguished and widely-travelled animal ecologist. Brought up in Manchester in the 1930s, Delany went on to become one of the first predominantly field-based ecologists in the country. He studied zoology at Manchester University, then moved on to conduct research on heathland insects at Exeter, outbreaks of the microbe *gymnodinium brevis* in the Gulf of Mexico, beetles inhabiting Scottish heathland, rodents on the Hebridean, Scilly and Channel Islands, small mammals in Uganda and southern Arabia, harvest mice in southern England, and more. Interesting stories inevitably accumulate around such wide-ranging travels, particularly when study areas are remote and strange, and Delany has stories in abundance. My favourites involve snake-catching in the Florida Everglades, and the time he dangerously mistook the dictator Idi Amin for a waiter!

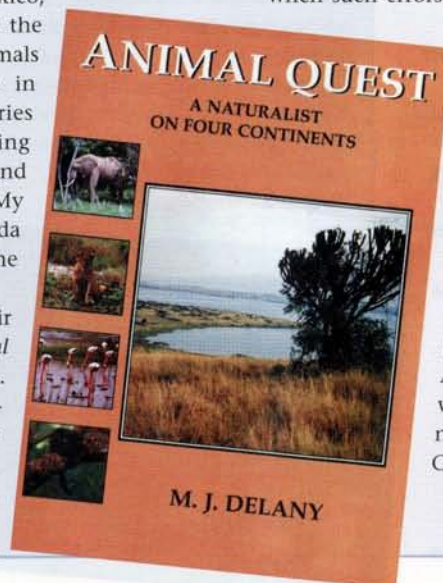
Many ecologists these days study nature in their offices in front of computer screens, but *Animal Quest* reminds us that the truth really is out there. Only so much modelling can be done before ecologists must get out in the field and hold their ideas up against reality. The increasingly heavy commitments of academic life, however, have sorely

restricted the amount of time that most ecologists can spend in the open, and Delany's book of field-tales stands as a timely reminder of how damaging and demotivating this trend has been.

But *Animal Quest* is a highly personal book – essentially an autobiography – so beyond the spheres of professional ecologists and the author's friends and family, the market for it is likely to be rather restricted. This limited appeal is reflected in the publishing house, a small operation called Capponnellan Press. Some small publishers are extremely good and occasionally turn out little gems, but others do themselves no favours at all. Nearly all books contain grammatical errors and typos, for example, but when such errors appear in the cover copy one begins to suspect that something is amiss.

And when the words are printed so close to the binding that you virtually have to break the spine to read them, one's suspicions tend to be confirmed. And when the author's proof-quality grammar and punctuation end up in the final version, one can't help but wonder whether the publisher actually employs any editors. And there's no index. Sadly, although charming in many respects, *Animal Quest* is a prime example of what can happen at the cheap-and-nasty end of the publishing industry. Commiserations to the author.

Chris Lavers



sections on social issues. A look at the first ten years' issues of *The Ecologist* will unearth numerous articles on education, crime, unemployment, and war as well as the expected ones on nuclear power and so forth.

He then explores alternatives to neo-liberalism. Toke seems unduly optimistic about computer technology and the internet. No mention is made of the ecological costs of the manufacture, use and disposal of related equipment.

Nor does he deal with computerisation's restructuring of knowledge and the promotion of an even more individualistic culture. He does cite, however, some interesting case studies about improving the quality of working life and, more generally, 'downshifting' in lifestyles. And he rightly puts modern technology in a broader context. After all, the axe and the plough have probably done more to change the face of the Earth than most of today's supertechnologies.

In the final straight, Toke starts off by quoting Fukuyama ('the end of history') but does not launch a direct attack on defenders of the status quo. Instead, he pursues a rather unwieldy discussion of epistemology, ontology and 'species realism'. He concludes by advocating a 'social green' approach. Usually this has meant a politics of ever-growing lists of individual entitlements and less greenery. He gives the impression that we can 'maximise human welfare' while maximising 'wider ecological welfare'. Sadly in a finite world, we cannot maximise every good thing. And the programme Toke proposes fails to match the seriousness of the ecological crisis.

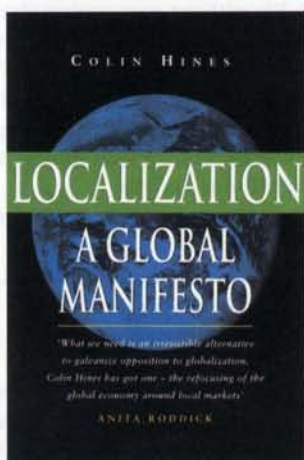
A comparison could be made with John Gray's *False Dawn: Delusions of Global Capitalism*. It also attacks neo-liberalism but deals in real world dimensions rather than debates between academics. Grey is also far more alive to the fact that, the odd minor

victory apart, we are steadily losing the battle for the planet.

Sandy Irvine

LOCALIZATION: A GLOBAL MANIFESTO

By Colin Hines
EARTHSCAN 2000 £10.99



So – you're against global capitalism, but what are you for? Colin Hines, co-author with Tim Lang of the landmark *The New Protectionism*, argues that the answer ought to be localisation: 'a set of interrelated and self-reinforcing policies that actively discriminate in favour of the local'. Trade and investment liberalisation, or 'beggar-your-neighbour' economics as Hines puts it, is destroying people and planet. What is needed now, as the author explained in this magazine last month, is a policy of 'Protect the Local, Globally', by emphasising local trade and reducing damaging, long-distance trade to a minimum.

How will such a radical transition be

funded? Ecological taxes on energy, other resource use and pollution will all help. But how will corporate obstructionism be overcome? By a broad-based citizen movement demanding action at the level of powerful regional groupings of countries, especially Europe and North America. Instead of the corporate-led World Trade Organisation, a shift from economic globalisation to localisation would be facilitated by a 'World Localisation Organisation' administering a Global Agreement on Sustainable Trade. Presumably this WLO would eventually become obsolete, as local economies begin to flourish.

Development NGOs are scolded for adhering to the 'flawed paradigm that exports from the South to the North are a major route for the poor's development'. Indeed, Hines points out how the majority of social-needs activists have failed to take into account the pressures of globalisation on government expenditure which is subservient to the mantra of 'international competitiveness'. It is therefore no surprise that social and environmental priorities fall by the wayside. Hines warns that unless NGO 'demands are put within the context of overarching change that prioritises protecting and rebuilding local economies, then campaign gains will be very limited in their scope'.

So, campaign issues such as Third World debt, pollution, global warming, ozone depletion and biodiversity loss all have to be placed within a context of opposing global capitalism and replacing it with 'Protect the Local, Globally'. But how is this message to reach beyond a small ardent band of cognoscenti? The author crucially notes that: 'Localisation requires widespread involvement; it will therefore be something done by people, not something done to them'. And yet the book, like so many ardent polemics about globalisation and how to counter it, tends towards



the dry and impersonal. This sparked a barrage of questions in my head: What exactly will motivate people to become involved in a mass movement? Will people act out of compassion, a sense of fair play, or raw self-interest as they seek to protect their own jobs, health and backyard? What are the roots of localisation in ethics, morality, culture and human emotion? What motivates Colin Hines to write and campaign for localisation? Why do so many activists consider such questions irrelevant in the struggle to developing alternatives to globalisation? Are they, in fact, not central to developing a mass movement to achieve our common aims?

That a reviewer can even raise these issues is perhaps a measure of how much Hines has actually achieved here in laying out the nuts and bolts of an alternative

economy, and suggesting in broad terms how it might come about in the political arena. But what about the interface between the personal and the political? To kickstart a 'mindwrench' in sufficient numbers that will effect the transformation to localisation will surely mean addressing the demons of greed, hatred, ignorance and indifference that lurk within us all.

As Bertrand Russell wrote in 1918 in *Roads to Freedom*: 'The great majority of men and women, in ordinary times, pass through life without ever contemplating or criticising, as a whole, either their own conditions or those of the world at large.' Therein lurks the roadblock to radical societal change. The fundamental challenge, therefore, is to connect with the hearts and minds of those around us.

David Cromwell

TERRORISM ACT 2000: AN OVERVIEW

Go to <http://www.homeoffice.gov.uk/terrorism/index.htm> and you will find your way to the Terrorism Act 2000. The Act itself proceeded through Parliament with all party support; received its Royal Assent last July and came into force on 19 February 2001. From its introduction in December 1999 to its swift enforcement, the act was de facto restricted to a wider debate. Traditionally, cracking down on terrorism in the UK was based and derived from everyday laws. The Terrorism Act changes this by firstly defining terrorism ('applicable to all types of terrorism'), then deriving procedures and finally enacting a policy. Criticisms however, are based on the very definition of what constitutes 'terrorism'.

The procedural problems are augmented in that, besides the courts, the act's enforcement will first rely on the police. The paper understands 'terrorism' as the use of or threat of action where – 'the use or threat is designed to influence the government or to intimidate the public or a section of the public; and the use of threat is made for the purpose of advancing a political, religious or ideological goal'. Using 'OR' in the first clause implicates that all items in this section can viewed separately; for example one valid interpretation of the bill would be an action aimed at influencing the government. 'Action' falls within this subsection if, amongst anything else, it 'involves serious damage to property, creates a serious risk to the health or safety of... a section of the public, or is designed to seriously interfere with or seriously disrupt an electronic system'. So what constitutes 'seriously'? Based and judged on precedents, 'serious' constitutes both a too-wide and too-vague basis for judgement which in return is left open to exploit.

Let's assume for a moment that an environmental NGO wants to 'influence the government' against its decision to drill the Arctic and plans to take 'action' by setting-up an email campaign to the one politician deemed responsible. Equally assume that this NGO has many members to which it reaches out by urgent email alerts to which they 'immediately' respond. On the receiving end, the email alert has created some havoc and the main server is 'down' for an hour. If that very politician went to court claiming that this very campaign (not even in the name of public interest) 'seriously disrupted his electronic system', then this environmental NGO and all of its members would be found guilty.

To date many online protest actions have caused some sort of 'disruption of electronic systems' because particular email/internet systems were unable to handle the sudden influx of information.

This is just one of the many possible scenarios but by including a wide range of issues within a 'wide' set of interpretations, the Terrorism Act 2000 facilitates, thus enabling, a 'legal' clamping-down of the very forces that constitute a true and healthy democracy.

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Page 28 *The secret nuclear war*

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RELIGION AS A TOOL TO RULE

THE CROW wonders what happened to the US concept of 'separation of church and state'.

It is not hard to believe that 'man was created in the image of God', when you realise that our God is actually a mirror image of ourselves — a deified double designed to justify the abuse of our fragile planet and its other occupants. Throughout the brief history of mankind religion has been a trusted tool in the hands of elected as well as self-anointed rulers, whether in the spiritual or material realm. For kings and clerics alike, 'God's will' has always been the most persuasive weapon in their bag of self-serving tricks: it is much easier to get your subjects or converts to do your bidding, if you claim that it is 'the will of God', and threaten the intractable with eternal damnation in some fictional hell.

But for those in a position of power it is crucial to exercise sound judgment in the choice of religion; its tenets should preferably conform to their personal politics and prejudices. Thus Henry VIII found himself in a bit of a pickle when His Holiness, the Pope, refused to grant him a divorce from that Spanish wench, Catherine of Aragon. This refusal caused the king to have a spiritual epiphany and establish a rival religion, the Church of England — loosely based on the teachings of a contemporary German heretic by the name of Luther — with the King as the secular deputy of Christ. His timely conversion allowed him to betroth, and subsequently behead, a comely English lass, Anne Boleyn. To add injury to insult, the king proceeded to confiscate all papal property within his British bailiwick, and doled it out to his loyal vassals, thus securing their allegiance to the crown. Such is the power of ardent faith!

Several consorts and centuries later some disgruntled Englishmen fled the stifling fold of the Church to establish their own spiritual haven in America. When the Founding Fathers (this being long before women's emancipation, there were no Founding Mothers) drafted the constitution which was to become the foundation of their new republic, one of its corner-stones was the separation of church and state. They wanted no clergy breathing down their necks, any more than they would allow themselves to be browbeaten by a king. For over two centuries freedom of (or from) religion was to make the United States a magnet for millions of immigrants of every religious persuasion — or lack thereof.

The principle that a person's beliefs is nobody else's business

is fundamental to the American Way of Life — or so it was until the ascension to the presidency of George W Bush, aka George II, a nickname rife with historic irony. In his inaugural address Bush invoked 'our lord Jesus Christ', thus with one exclusionary phrase disenfranchising millions of Buddhists, Hindus, Jews, Muslims, and native American animists — as well as assorted agnostics and atheists — who had heretofore been able to claim full membership in the Great Society.

After announcing that no US funds shall henceforth be made available for such frivolous pursuits as defusing the population explosion which is threatening the very survival of our planet, the former Texas playboy and born-again Christian proposed to Congress that federal funds be made available to religious organisations for charitable work. This would free church funds previously used for this purpose to be applied to other activities — such as proselytising for new members. In legalese, such funds are called fungible — monies that can be transferred from one budget to another — the very principle that the new president quoted as his reason for denying aid to

'Bush invoked 'our lord Jesus Christ', thus with one phrase disenfranchising millions of Americans.'

Third World groups advocating birth control: *their* own funds might then be applied toward abortion counseling — a no-no to any true 'pro-lifer', for whom the end-all of life is being born, even if you are doomed to an early death or an existence of utter misery and deprivation. Nevertheless, dozens of bishops and prelates from every corner of the United States lost no time in boarding a jet for Washington, skullcaps figuratively in hand, begging for a handout from Uncle Sam.

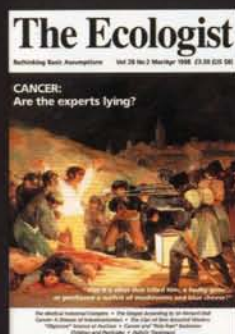
At best, this double standard reflects an intellectual dishonesty which does not bode well for the continued White House tenure of the junior Bush, burning with new-found religious fervour. At worst, it is a sign of utter contempt for the US Constitution, or a failure to grasp the significance of the concept of separation of church and state. Perhaps we should expect nothing more from a president who made a self-fulfilling prophesy of an imminent recession as an excuse for opening up the last vestiges of Alaskan wilderness to exploitation by his buddies in the oil biz.

But then, what good is wilderness? Didn't God make man lord of all creation? Or is it possible that we are committing 'a weird form of suicide [by] bleeding our planet to death' — as naturalist Gerald Durrell has suggested. And did that 'primitive heathen', Chief Seattle, have it right back, in 1854, when he said: 'The earth does not belong to us, we belong to the earth?'

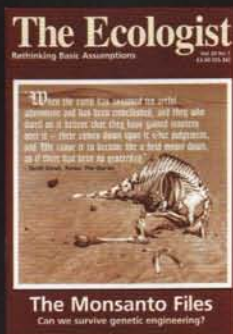
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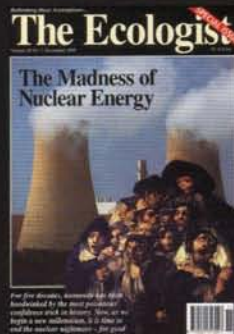
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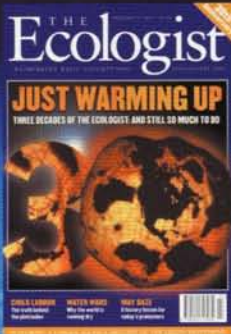
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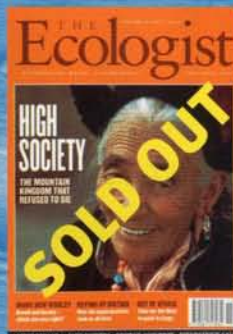
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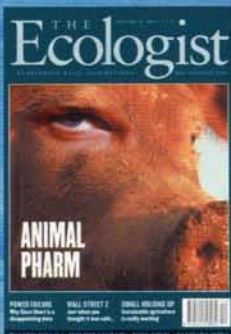
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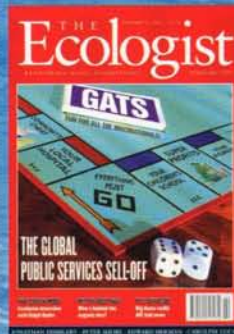
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