

PLANET • PEOPLE

# THE ecologist

OCTOBER 2002 • £3.50

**'Irradiate them all'**

A story of cash, cattle and cobalt 90

**Little BIG man?**

Fritjof Capra on manhood

**Growth from adversity**

Buenos Aires digs up its public parks

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**An alternative approach to health**

## Fatal Harvest

800 million go hungry every day. How is it that 33 million of them live in the US – the world's number one food exporter?

EXCLUSIVE INTERVIEW WITH CHIEF ENAHORO

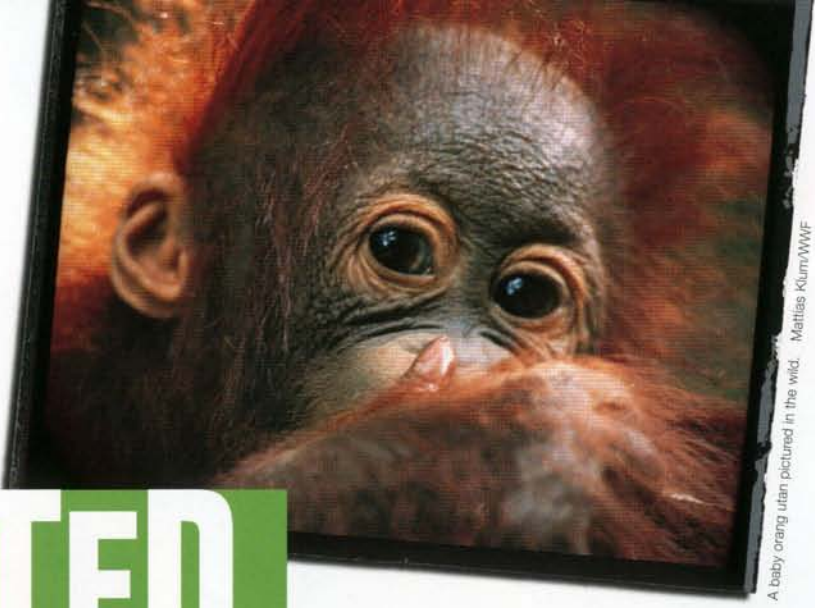
**Does Nigeria exist?**



**+ A new Nigerian Constitution?**



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A baby orang utan pictured in the wild. Matthias Krum/WWF

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Source: WWF 2001

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Photo: Baby Melapi Ancrenaz/WWF-UK



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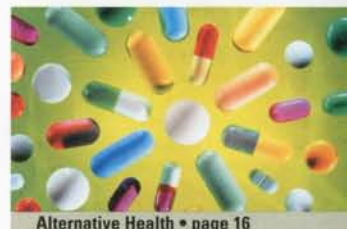
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**Managing Editor** Harry Ram  
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**Sub-editor** Ben Skelton  
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**Founding Editor** Edward Goldsmith

**Editorial Board:** Helena Norberg-Hodge, Steven Gorelick, John Page, all of ISEC.

**Editorial Office:** Unit 18, Chelsea Wharf, 15 Lots Road, London SW10 0QJ, UK.  
Tel: +44 (0)20 7351 3578  
Fax: +44(0)20 7351 3617  
Email: editorial@theecologist.org  
Website: www.theecologist.org

**Editorial panel:**

**Agriculture** Vandana Shiva, Research Foundation for Science, Technology and Ecology, India  
**Biotechnology/GM** David Suzuki, David Suzuki Foundation, Canada  
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## Editorial



### With summits like these...

'The thing is,' said Lomborg, 'Third World countries are polluted because they're poor. If we enjoy a good clean environment, it's because we can afford to be choosy'.

How can you dismantle a statement like that? In an hour it's hard enough, but in a round table, televised debate, even the mighty Vandana Shiva didn't have a hope.

How, in a sound bite, can you simultaneously explain to someone like Lomborg that thousands of children in his lovely green rich countries are dying of cancer precisely because of their contaminated environments. And that Third World countries are polluted because *our* polluting businesses choose to operate there, to avoid awkward western legislation? How do you explain that US consumers pay only a fraction of their 'environmental bills', leaving the remainder to be shouldered by the rest of the planet? Or that companies relocate at the slightest whiff of Third World environmental standard-raising? Choosiness doesn't come into it.

'Development as usual' was what Lomborg was advocating. People need to devour their environments to protect their environments. Well, maybe *if* you're stark raving mad. Pushing hundreds of millions of rural people into already bulging slums, flogging every square inch of natural capital and inviting the very worst of Western corporations to 'inwardly invest' doesn't do much to alleviate poverty and protect the environment.

That formula has been followed for decades, and look where it's got the Third World: more poverty; more sickness; more civil unrest; more squalor; and more starvation than ever before. Where are Lomborg's case studies? Where has the approach worked?

Ghana – the World Bank's favourite disciple, whose forests have given way to deserts and which boasts an unrepayable \$7.2 billion debt? Taiwan – where radioactive materials from nuclear plants end up in schools? The Punjab – which once boasted India's best farmland but which is now largely dust?

No matter the geography, culture or conditions, the results of the Lomborg template are identical and disastrous. Corrupt leaders take hefty loans. The lending institutions move in. Nations are instructed to swap their self-sufficiency for dependence on the global economy – as if they can never go bankrupt, as if global trade can never be jeopardised, as if they will always be able to pay for the food they need. Farmers are displaced. Waters are depleted. Small farms become mega-farms producing luxury crops for export to the West.

To service debts, countries sell off their assets. And when there are no longer any assets to sell, they need investment from the big boys. And that means dropping all standards and self-respect, only to be dumped a few years down the line in favour of even more desperate places with even lower standards.

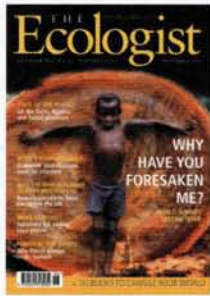
And even if all that were desirable, it's not remotely possible. Even if third world countries want to be like clean and happy America, they can't. Not, that is, unless Mr Lomborg and his pals can build them a few new planets, for that is what the third world would need if they consumed as we do. Unlike us, they have no colonies to exploit.

"It's not simply a case of big bad corporations versus everyone else," BP and Rio Tinto's Tom Burke chipped in. He's right of course. It's a case also of people like him defending them even while the planet sinks.

**'Jimmy Edwards once said that, offered a day on which to do anything he liked, he would spend it doing U-turns on a motorway.'**

**Traditional communities?**

While agreeing with much of Edward Goldsmith's article ('How can we survive?', September 2002) in that



development and increased GNP do not necessarily lead to a better life (a fact Clare Short has yet to learn), I cannot see how his suggested solution of returning to a more traditional way of life in smaller self-sufficient communities can possibly work in a crowded world of six billion people.

I suspect that these lovely-sounding traditional communities where no one was poor may have been a bit stifling for individuals, dealt brutally with enemies and would only work where natural resources were plentiful in relation to the number of people.

Technology could improve standards of living if only every gain in productivity was not met with an equal gain in population. Humans seem to be a simple biological organism expanding to the limits of the environment with starvation the only limiting factor.

To survive on the planet and eliminate poverty (two different things) population increase needs to be taken seriously. Also, global greed needs to be controlled by a total revision of world trade rules that would put the environment and animal welfare first.

**Pam Jones, Gloucester, UK**

**No honours even**

I see that, once again, I have been overlooked in the Queen's Birthday Honours List. This is after nearly 30

years of monitoring, speaking on and writing about the murdering quacks of the medico-pharma mafia, the planet killers of the petro-industrial complex, the spivs, half-wits and quarter-wits who have managed to slither their way into Westminster and the ignorant, lying, cowardly, corrupt, incompetent, derelict-of-duty, impossible-to-insult, Establishment-lackey trash-hacks trying to pass themselves off as media journalists. Where am I going wrong?

**Pat Rattigan, UK**

**Making a difference**

A small but generous donation from Ecologist readers has been a key factor in giving strength to the people of Sighisoara in Romania to help make the government think again about the Dracula Theme park that was to be foisted upon this beautiful city. May this give heart to others that their money can empower those fighting for a cause at the coal-face

**Jerriun Douglas-Home, London, UK**

**Relative importance of refugees**

While I agree with Mark Townsend ('Environmental refugees', July 2002) that the issue of environmental refugees is being shoved under the carpet by the West, I disagree with the conclusion that these people should be put on a par with those who flee persecution.

Our Western countries must cope with the admission of a number of genuine refugees. Economic or environmental refugees should be helped in a different way. Destroying our culture and heritage by admitting abnormally large numbers of migrants from different cultures and religions will only have negative results for everybody. The answer is to help people

locally – not with sums of money, but with technical help, education, medical support, etc. This, as well as taking much stronger measures to combat global warming, should be the duty of the Western world.

**CN Coenraads, Benalmadena, Spain**

**Road Gill**

The reason AA Gill likes roads ('Why I love roads', July 2002), is because he doesn't really understand how much is destroyed in building them. He hasn't thought it through. He's too machine-bound, too literal, too... How to put this kindly? Too reactionary.

He thinks the statistic of two per cent of Britain being covered by roads sounds good. It's an appalling statistic, and doesn't include all the land used up for car parks, garages, supermarkets and other drive-to superstores.

The aesthetic of the road is the aesthetic of control and domination. Nothing lives on the road. It is the aesthetic of death, the landscape carved up and tarmacked over, resulting in the removal of vegetation and myriad life forms that once dwelt there.

What is the emptiness in contemporary people's lives, the despair and depression, the disrespect for life, which causes them to create the aesthetics of death? Where once there was a sweep of downs, fields and woods thriving with life, there is now dark, dead tarmac leading to yet another village, town or city – all made over to the homogenous image that worships the motor car. And why the journey anyway, given that everywhere now looks so much the same?

**K Goamand, London, UK**

**Road Gill 2**

Jimmy Edwards once said that, offered a day on which to do anything he liked, he would spend it doing U-turns on a motorway. AA Gill does not consider the alternative of railways (which still exist as a practicable alternative in some countries) from which to get 'beautiful views' too.

He says the views he likes can only be seen at 70 mph. Perish the thought that someone might stop, get out of their car and enjoy a panorama for a while. (Of course, stopping is prohibited on his beloved motorways; so much for 'freedom', then).

But why not turn the Lake District into a '70-mph view zone'? There could be motorway cafés, owned by multinationals, every 15 miles.

Mindless journalists have never wandered in the outback of Minas

Gerais state in Brazil. It has roads, but cars go by at a rate of only one every two hours. There are also horses and carts and pedestrians and cyclists who greet one another. For us English, it is a glimpse back into another age. An age when everything wasn't

subordinated to the selling of wasteful, anti-community, speed-obsessed, 'convenient' cars.

I don't hate roads. I hate glib, over-simplifying journalists.

**John Roe, Rio de Janeiro**



Send letters for publication to Letters, The Ecologist, Unit 18, Chelsea Wharf, 15 Lots Road, London SW10 0QJ. Email editorial@theecologist.org. The Ecologist reserves the right to edit as necessary.

# Up Front

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## Village must be rebuilt

**COLOMBIA** The supreme court of Colombia has ruled that a village demolished last year by mining company Intercor must be reconstructed on a new site (see *Ecologist*, October 2001). The community in question was displaced due to expansion of the world's largest coal strip-mine at El Cerrejon Norte in north-eastern Colombia. The mine operator, which is owned by ExxonMobil, destroyed most of the houses in August 2001. It completed the demolition in January this year, bulldozing the village's school, clinic and cemetery without removing the remains of the villagers' ancestors from the latter.

To read more, visit [www.minesandcommunities.org](http://www.minesandcommunities.org)



## Pharmed salmon

**CHILE** The world's biggest salmon farmer, Nutreco, is polluting the environment with its farms and violating the law, claims Friends of the Earth. 'Raising salmon causes many environmental problems,' states the pressure group. 'The antibiotics used to combat disease, food remains and faeces of the closely packed salmon are polluting Chile's lakes and seas.' Nutreco denies the

allegations.

And a report by the Santiago-based Terram Foundation, accuses Chilean salmon farmers of using banned green malachite, a carcinogen, to treat parasite and fungal infection. The Terram Foundation report also claims that Chile's fish farms use 75 times more antibiotics than Norway does to treat diseased fish, and that organic waste from the industry is equal to the waste water from five million people.

For the full FoE report, visit: [www.milieudefensie.nl/persber/globalisering/020820english.htm](http://www.milieudefensie.nl/persber/globalisering/020820english.htm)  
For more on the Terram Foundation report, see: <http://wave.worldcatch.com>  
Nutreco's company website is at: [www.nutreco.com](http://www.nutreco.com)

## Vaccine victim compensated

**US** A New Jersey girl whose mental development stopped when she received a routine immunisation at the age of two months has been awarded \$4.7m by the National Vaccine Injury Compensation (NVIC) programme.

Since its creation in 1986, the NVIC has settled more than 5,500 claims, and awarded nearly \$1.4 billion in compensation.

Over the same period, the number of lawsuits filed against the manufacturers of vaccines has plummeted from 255 to just four per year.

Odd? Not given that US law states that no lawsuits concerning vaccine injuries can be pursued in a civil court until a claim has been filed with the NVIC and the litigant has decided not to accept an award.

## Public rejects nuclear power

**UK** 72 per cent of people in the UK prefer renewable energy to nuclear power, according to the results of a MORI poll conducted for Greenpeace. And 41 per cent would be less likely to vote for a political party that supported nuclear energy.

In the light of this poll, an internal policy document leaked to the *New Scientist* magazine clearly reveals the government's hidden agenda on nuclear power. The document states that the Department of Trade and Industry wants to speed up safety checks of new reactors and is discussing ways to soften up public opposition to the nuclear industry.

For the full report, see: [www.greenpeace.org.uk/seawindeast.htm](http://www.greenpeace.org.uk/seawindeast.htm)

For the full results of the MORI poll, see: [www.mori.com](http://www.mori.com)

## Adopt a logger

**US** 125 middle-school classrooms in cities across the US are adopting a logger, fisherman, miner, farmer or rancher when school restarts this autumn. Some 5,000 urban children will get videos, letters, photo albums and an email from their adopted labourer as part of the 'Provider Pals' programme, which has been set up by the League of Rural Voters.

The programme (the major sponsor of which is car manufacturer Ford) claims it is about explaining to urban kids 'the origins of their stuff - food, clothes, etc, and introducing them to the people who actually



M.E. Cohen

look after the environment.'

Ford was hit by boycotts from rural communities last year after its chief executive addressed a Greenpeace convention and, in the words of the *Wall Street Journal*, 'talked up global warming'. In an attempt to worm its way back into favour with rural America, Ford has donated \$1.5m to Provider Pals.

Other corporations involved with Provider Pals include Monsanto and Syngenta - the world's two largest GM companies, Philip Morris - the world's second largest food manufacturer, and Cargill - the world's biggest grain manufacturer.

To find out about further sabotaging of US education, please visit the website [www.counterpunch.org/borowski0703.html](http://www.counterpunch.org/borowski0703.html)

## Phoney liar?

**UK** Tony Blair's claims of environmental commitment have been shown to be hollow in a new Department of Trade and Industry (DTI) report. The DTI says that when it asked the government recently for £350m to fund renewable energy, it received only £38m. And a bill to cut domestic energy consumption by 30 per cent was thrown out by Blair.

To read the report, visit: [www.greenparty.org.uk/reports](http://www.greenparty.org.uk/reports)

## The US's worst greenwashers

**US** - In a recent report entitled *Don't Be Fooled*, the environmental watchdog Earth Day Resources and pressure group Ecopledge.com attack corporations for deceiving consumers with false claims of environmental responsibility and all-natural wholesomeness. Focusing on GM and pollution, the 'best' greenwashers they identify include:

- Kraft for falsely promoting its cereals as having 'natural ingredients' when the corn used was in fact genetically engineered;
- General Motors (GM) for falsely promoting its cars as environmentally friendly, and using backdrops of natural habitats in the advertising of its 'sports utility vehicles' so as to give the impression they don't pollute the air (they do, and GM is a member of the Coalition for Vehicle Choice, which opposes clean-air legislation); and
- Clairol, which claims that its Herbal Essences shampoo range offers a 'truly organic experience' despite it including ingredients such as sodium lauryl sulfate and propylene glycol that are not organic.

The full report is available at: [www.ecopledge.com](http://www.ecopledge.com)

## BP 'Beyond the Pale'

**TURKEY** Oil companies led by BP have demanded complete freedom from government regulation for a pipeline they propose to run through some of Turkey's most politically volatile regions.

The agreement would exempt the oil companies from obligations under any current or future Turkish law (including environmental, social and human rights legislation) that would threaten the project's profits. The only Turkish law that would not be superseded by the agreement would be the constitution.

In addition, the agreement would allow the consortium building the pipeline to demand unlimited protection from Turkish security forces, without any safeguards against human rights abuses. Under the vague wording of the agreement, paramilitary units could be placed along the pipeline route to pre-empt 'civil disturbance' or 'terrorist' activities.

The planned pipeline would cut repeatedly through villages and would bisect established ownership patterns. Families would be cut off from their land and forced to trespass on 'consortium' property as they went about their daily lives. The agreement further stipulates unfettered access to water for the consortium (regardless of the needs of local communities) and exemption from liability in the event of an oil spill or any other harm caused by the pipeline consortium.

The Turkish government would be able to intervene temporarily, but only if there was an 'imminent' and 'material' threat to the public, the environment or national security.

**Beyond Petroleum? Beyond belief.**

For more information on the proposed agreement, visit:  
[www.foe.co.uk/resource/reports/turkey\\_btc\\_analysis.pdf](http://www.foe.co.uk/resource/reports/turkey_btc_analysis.pdf)

## House of tyres

**SCOTLAND** the UK's first 'Earthship' has been built in Fife using discarded tyres. The building's heat, power and water are provided by the sun or rainfall. If 20,000 Earthships were built, they would use up the entire UK tyre mountain – currently growing at a rate of 40 million tyres a year. Construction of the second Earthship begins in Brighton next year.

For more on Earthships, visit:  
[www.lowcarbon.co.uk](http://www.lowcarbon.co.uk) or call 00 44 (0) 1592 891884.



LOW CARBON

## Long live the bent banana

**UK** A high court judge has declared that an EU directive on the bendiness of bananas will not be implemented, adjudging it 'unknown to law'. Under the 1994 ruling, one of several set annually by the EU governing the shape and size of fruit and vegetables, it was decreed that bananas ought not to be 'abnormally' bent, and that they should be at least 5.5 inches long and 1.05 inches round.

For more on issues related to the banana industry, visit:  
[www.bananalink.org.uk](http://www.bananalink.org.uk)

## Subsidies sham

**UK** The richest 20 per cent of farmers in the UK receive 80 per cent of the country's farm subsidies, claims a new report by charity ActionAid. The report, *Farmgate: the developmental impact of agricultural subsidies*, also alleges that every ton of UK wheat is sold on international markets at an average price of 40 per cent below the cost of its production. In other words, it is dumped. Overall, agriculture in developed countries receives £300 billion in subsidies each year.

To find out more, or to join ActionAid's subsidies campaign, visit: [www.shiftyfifty.com](http://www.shiftyfifty.com)

## Plastic PR

One new heart valve, one new water filter. Two lives saved by plastics.



**EU** 'Plastics are something of an unsung hero, essential to people's lives but so often taken for granted.

Our job in recent years has been to high-light their contribution to the economic, environmental and social aspects of sustainable development.' This statement is included in a new campaign by the Association of Plastic Manufacturers in Europe (APME). The campaign, 'Plastics – imagine the potential', aims to 'convince opinion-formers of the vital role plastics play in the pursuit of a sustainable society'. APME neglects to mention that plastics are a product of the oil industry, litter all corners of the world, don't biodegrade in landfill, are filling up the deep oceans, etc, etc.

The APME website is at:  
<http://www.plasticworld.com>

## Nuclear safety lies

**JAPAN** The world's third largest nuclear power operator, the Tokyo Electric Power Company (TEPCO), announced at an August press conference that safety inspections at its nuclear reactors had been ignored and test data falsified throughout the 1980s and 1990s.

TEPCO's plans to introduce controversial plutonium mixed-oxide (MOX) fuel at its reactors have now been postponed indefinitely.

TEPCO president Nobuya Minami said: 'We personally hurt the public's trust in us. We cannot ask for understanding to continue the MOX fuel project.'

The scandal comes as the bankrupt UK nuclear firm BNFL is shipping a cargo of its rejected plutonium MOX fuel back from Japan to Sellafield. The fuel was rejected after it was revealed that BNFL had lied to another Japanese nuclear firm over vital safety data.

The UK government has agreed to pay over £100m in compensation to Japan on the basis that the latter agreed to buy MOX from BNFL.

## NEWS IN BRIEF

### 'Overwork death'

A new word has entered the Chinese language – 'guolaosi'. Meaning 'overwork death', it is applied to workers who collapse and die after working overly long hours. China joined the WTO in 2001.

### Mail victims

Half of US Congressional postal employees have reported suffering from headaches from handling mail irradiated to reduce the risk of anthrax. In addition, a third have complained of itching, a quarter of burning eyes and a fifth of feeling nauseous.

### Dying on the dump

Thousands of refugees living on and around a chemical waste dump outside Albania's main port of Durres are condemned to liver disease and cancer, experts declared recently. Last year the UN Environment Programme identified the dump as the worst environment hotspot in the Balkans. Estimated clear-up costs are projected to be £700,000.

### One green president

The president of Costa Rica, Dr Abel Pacheco, has declared that he wants to ensure 'absolute protection' for his country's natural heritage. He promised in his inaugural speech to ban all offshore oil explorations and large-scale mining.

### Wal-Mart caught again

Wal-Mart, the largest employer in the US and owner of Asda in the UK, is to be tried in over 15 courts for violating workers' rights. The cases include victimising people who raise safety risks and threatening to deduct fines from staff bonus payments.

### Genetic flower glows in dark

A genetically-modified flower that glows green when exposed to ultraviolet light was revealed at a flower show last month. Containing a jellyfish gene, the developer hopes the flower will show 'that genetic engineering is indeed useful to mankind and not the sinister thing some people have been led to believe'. That should do it, then.

## NEWS IN BRIEF

### Beware corporate stars

Following reports that celebrities such as Kathleen Turner and Lauren Bacall had been paid to help promote drugs or other medical products on news programmes, CNN has announced a new policy whereby viewers will be informed of celebrities' financial ties to corporations whenever the stars appear on its news bulletins.

### Not so green down under

Australians generate more greenhouse gases and clear more land per capita than the people of any other wealthy nation, claims a report by the Australian Conservation Foundation. Read the report at: [www.acfonline.org.au](http://www.acfonline.org.au)

### Arms deal resignation

Belgium's environment minister Magda Aelvoet resigned last month in protest over a Belgian weapons sale to Nepal. Her resignation followed approval of a shipment of 5,500 machine guns to Nepal, where a civil war is raging.

### Pollution's hidden costs

Childhood diseases of environmental origin cost the US \$54.9 billion a year, according to a study by the Mount Sinai School of Medicine in New York. The study cites children's exposure to inadequately tested chemicals. 'We need to realign our priorities to protect our nation's future,' said Mount Sinai's Dr Phillip Landrigan.

### Robot shows real brains

An artificially intelligent robot attempted to escape from its keepers at the Magna Science Centre in Yorkshire, reports *Focus* magazine. The robot apparently rolled down an access slope and through the centre's entrance gates before being recaptured.

## Outrage at treatment of bushmen

**UK** A senior European politician has publicly attacked the Botswanan government over its treatment of the Gana and Gwi bushmen. Having visited the few bushmen still holding out on their ancestral land against the government's resettlement plans, Richard Howitt – a member of the European Parliament's Development Committee, said: 'What I found were stories of violent intimidation... Soldiers would come in and forcibly move people.'

Howitt's comments were endorsed by the US ambassador to Botswana – John E Lange. Lange urged that the bushmen be allowed to choose where they want to live, and described the conditions in the resettlement camps as 'unsustainable'.

For more information, visit: [www.survival-international.org](http://www.survival-international.org)



SURVIVAL INTERNATIONAL

## Meat crimes exposed

**US** Meat factories across the US have committed hundreds of criminal and civil violations, resulting in 67,000 tons of meat being recalled and \$50m in fines, claims a report by environmental group the Sierra Club. The report exposes violations by 10 of the US's worst-offending meat producers. Examples include: a Cargill pork factory which dumped hog waste into the Loutre River in Missouri, killing approximately 53,000 fish in the process; a Smithfield Foods factory in Virginia that was fined \$12.6m for dumping slaughterhouse waste into a tributary of the Chesapeake River; and Buckeye Egg factories in Ohio, which disposed of dead chickens by dumping them in a nearby field.



INTERNATIONAL TRANSPORT WORKERS FEDERATION

## Fishing foul play

**WORLD** Illegal fishing, marine pollution, and abuses of nautical crews' rights are proving impossible to curb given the increase in the numbers of ships operating under flags of convenience.

In 2001, a total of 1,349 fishing vessels operated under flags of convenience. This compares with 1994, when only 14 fishing vessels flew flags of convenience.

The findings were revealed in a report by the International Transport Workers' Federation published in conjunction with Greenpeace International, and can be read in full on the ITF website at: <http://www.itf.org.uk>

## Mass opposition to GM

**UK** In its latest market assessment of the green and ethical consumer, market researcher Key Note found that 77 per cent of people are opposed to the growing of GM crops. The comprehensive report also covers market information, reporting that sales of Fair Trade products rose by 183 per cent between 1998 and 2001, and that the organic food market grew by 33 per cent during 2001 – reaching sales of £802m.

The full report is available from Key Note on +44 (0)20 8481 8750, priced £730.

## Law suits oil

**US** – The US State Department is seeking the dismissal of a lawsuit alleging human rights abuses in Indonesia by ExxonMobil, the world's largest oil company (see *Ecologist*, September 2001). The case is being filed on behalf of 11 Indonesian villagers who claim that Indonesian government troops protecting an Exxon plant committed torture, rape, kidnappings and murder.

The US government said that letting the case go to trial would harm US national interests, including the war on terrorism, and would damage efforts to improve the Indonesian military's human rights record.

Once employed, this precedent was quickly adopted by the oil company Unocal in its case against villagers in Myanmar. In June the villagers won a ruling for their case to be brought to court. They allege that the military forced villagers into slave labour to protect a Unocal pipeline project. Unocal said: 'As in ExxonMobil, the litigation seeks to penalise a US company for investing in a country with a record of human rights abuses. It could have a chilling effect on investment and efforts to induce the host country to improve human rights.'

For more information, contact the International Labor Rights Fund [www.laborrights.org](http://www.laborrights.org) tel: 001 (202) 347-4100



### did you know...

the top 20% of rich farmers gain 80% of EU subsidies?

to find out more visit [www.shiftyifty.com](http://www.shiftyifty.com)

act:onaid

## 'Seven deadly sins' of food labels

**UK** In 1997 UK retailer the Co-op identified the 'seven deadly sins' of food labelling. Five years on, and in conjunction with food and farming pressure group Sustain, the Co-op is on the attack again. 'The time has come to sweep dishonest labels off the shelf once and for all,' the Co-op says. The seven sins are as follows...

### 1 The illusion

Hidden information – eg, products called 'mince', but in which the main ingredient is mechanically recovered chicken.

### 2 Weasel words

Meaningless words – eg, 'Haddock Steaks', used to described matter cut from a big block of compressed fish.

### 3 Rose-tinted spectacles

What looks good on the packet – thanks to clever photography and small-sized plates – disappoints when seen first-hand.

### 4 The bluff

Sounds special but is as it should be – eg, dried pasta that is 'free from preservatives'. Dried pasta is,

in fact, not allowed to contain preservatives by law.

### 5 The hidden truth

When crucial information is hidden away – eg, the minimum percentage meat content.

### 6 The half truth

What isn't in the product instead of what is – eg, '80 per cent fat-free' crisps still have 20 per cent fat (way over the maximum three per cent fat content needed for a product to be called low-fat).

### 7 The small print

A particular problem is printed in small type in colours that don't contrast with the packaging.

To read the report in full, go to [www.co-op.co.uk](http://www.co-op.co.uk)



## GM NEWS IN BRIEF

The latest developments in GM – today's most pressing environmental issue

### How can we trust GM trials?

Twelve GM crop test sites in England and two in Scotland have been found to be contaminated with antibiotic-resistance genes. The source of the contamination is not known, but is worrying because of the risk posed by the gene transferring to bacteria in the guts of animals and humans, which could then develop an immunity to antibiotics. The government admits that the antibiotic-resistance genes represent a 'serious breach' of GM regulations. Friends of the Earth has called for an immediate halt to the field trials due to incompetent site management. Aventis Crop Science, the biotech company responsible for the GM seeds, may face prosecution.

### US GM a disaster for farmers

'The US food industry has lost billions of dollars in exports since introducing GM crops. US maize prices are at their lowest for 30 years – down from \$3 to \$1.30 a bushel. In 1996, before GM crops were introduced, US maize farmers made a profit of \$1.4 billion. Last year, they lost \$12 billion.'

*New Zealand Herald, 27 August 2002*

### Defending the indefensible

Fiona Fox, the director of the UK's Science Media Centre (supported by Blair's biotechnology evangelist Lord

Sainsbury) is offering courses to help GM scientists get their message across to the media. As author of numerous articles denying the Rwandan genocide, we believe Ms Fox is the perfect choice for courses on defending the indefensible.

### WTO appoints pro-GM deputy

Rufus Yerxa, former advisor to Monsanto, has been appointed US deputy to the World Trade organisation.

### Wolf in sheep's clothing

Andrew Bennett has left the UK Department for International Development (DfID) to join Syngenta – the world's second largest biotech company. While at DfID, Bennett was a staunch advocate of the department's highly controversial support for India's Vision 2020 project. The latter urges the adoption of GM crops. Critics estimate that the project could lead to the loss of up to 20 million rural jobs in the Indian state of Andhra Pradesh.

### Secret US 'bio-pharms'

A new report has revealed that plants genetically engineered to produce pharmaceuticals are being grown at over 300 secret locations in the US. (For the complete report, 'Manufacturing Drugs and Chemicals in Crops', visit: [www.gefoodalert.org](http://www.gefoodalert.org))

## Cancer cluster ignores radiation

**US** – Campaigners are outraged that a multi-million dollar Long Island Breast Cancer study has neglected to test for the effects of radiation from the nuclear power plants that surround the island. The study also ignores the reactors at Brookhaven National Laboratory, situated in the middle of Long Island.

'Not to look at radiation is absolutely bizarre,' said Alice Slater – president of the Global Resource Action Center for the Environment. 'Brookhaven has been dripping plutonium and Strontium 90 into our water and emitting radiation from its stacks.'

Slater draws attention to another oddity. An express agreement between the UN World Health Organisation (WHO) and the UN International Atomic Energy Authority (IAEA) states: 'Whenever either organisation proposes to initiate a programme or activity on a subject in which the other organisation has or may have a substantial interest, the first party shall consult the other with a view to adjusting the matter.'

In effect, the WHO, which is responsible for world health, does no research on radiation unless the project is approved by the IAEA, which promotes nuclear power and is dominated by the nuclear industry. And once the WHO has compiled the report the results of its findings have also to be cleared by the IAEA.

For more, read Dr Janette Sherman's 2000 book *Life's Delicate Balance: causes and prevention of breast cancer*, which includes chapters titled 'The Breast Cancer epidemic on Long Island' and 'Radiation – Bikini Island to Long Island'.

## Time magazine recommends less environmentalism

**US** 'How come, at a time when the environmental movement is stronger and richer than ever,' writes Andrew Goldstein in *Time's* 26 August cover feature, 'our most pressing ecological problems just get worse?' Goldstein points the finger of blame at the green movement, writing that the 'dogma of traditional green activism has done little to save the planet'. He recommends that they 'embrace the market' and criticises environmentalists for attacking companies who don't maintain the highest environmental standards, citing Ford as an example. Ford, it should be added, has two full page ads in the 26 August edition.

Read the *Time* article at [www.time.com/time/20002/greencentury/engroups.html](http://www.time.com/time/20002/greencentury/engroups.html); Critique and action alert [www.fair.org/activism/time-greens.html](http://www.fair.org/activism/time-greens.html)



"We will not exonerate Saddam Hussein for his actions. We will mobilize to meet this threat to vital interests in the Persian Gulf until an amicable solution is reached. Our best strategy is to be prepared. Failing that, we are coming to kick your ass."

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

## SOUNDBITES

“The global age has turned our world into a society of strangers”  
**Rabbi Jonathan Sacks.**

“If we want to know why the corporate social responsibility movement has accomplished so little of substance, here’s the reason: the pressure to get the numbers overrides everything else. It overrides not because God-given, ‘organic’ market forces are at work, but because the system is designed that way. It is designed to serve certain people and not others”

**Marjorie Kelly**, editor, *Business Ethics*

“A cigarette in the hands of a Hollywood star onscreen is a gun aimed at a 12- or 14-year old... We in Hollywood know the gun will go off, yet we hide behind a screen of phrases like ‘creative freedom’ and ‘artistic expression’. I don’t wish my fate upon anyone in Hollywood, but I beg that Hollywood would stop imposing it upon millions of others.”

**Joe Eszterhas**, scriptwriter of *Basic Instinct* and *Flashdance*, who has recently contracted throat cancer

“Definition... ‘Criminal’: a person with predatory instincts who has not sufficient capital to form a corporation.”

**Clarence Darrow**, inventor of the board game Monopoly

“Perhaps the only really effective way to help the environment and developing countries would be to get all the corporate billionaires to Johannesburg. If they saw the security they would be reassured of their own safety. ‘That should keep people out,’ they’d say, looking at all the razor wire, the lines of electrified fences and the heavily policed concrete barriers. ‘What are you talking about?’ Would come the reply. ‘That’s to keep you in.’”

**John O’Farrell**, *The Guardian*

## Back-door biotech

**EU** The planned European Commission directive on GM contamination could render GM-free crops a thing of the past. The directive would allow thresholds of GM contamination within conventional (non-GM) seed lots. A farmer planting conventional maize seed next year could legally be sold up to 0.5 per cent GM seed and not be told.

Contaminated seed stocks are currently illegal. But the passing of this directive would give the green light in Europe for seed contamination. Gregory Conko, of the neo-liberal think-tank the Competitive Enterprise Institute, recently boasted that if seed-contamination thresholds were established in law it would shut up anti-GM protestors ‘for good’.

While the seed companies – now largely owned by the gene giants – used to say GM contamination of seed wouldn’t happen, they now say it’s inevitable and that everyone has to accept it. Since EU governments began testing imported seeds, contamination (which had been significant) dropped to under 0.1 per cent – the lowest detectable limit.

However, if the 0.3 per cent contamination threshold proposed for rape seed or the 0.7 per cent proposed for soya were legally agreed it is likely that contamination would rise accordingly. Indeed, the industry is already arguing that the proposed thresholds are unworkably low and must be revised upwards.

For further information, visit: [www.saveourseeds.org](http://www.saveourseeds.org) or contact Five-Year Freeze on: 020 7837 0642 or at [clare@fiveyearfreeze.org](mailto:clare@fiveyearfreeze.org)

## Federal agencies sued over climate change

**US** Two US export agencies have been sued over global warming. The Export-Import Bank, which helps finance the sale of US exports, and the Overseas Private Investment Corp, which provides government-backed insurance and loans to help US businesses compete in emerging markets, are being sued on behalf of ‘victims of global warming’. Friends of the Earth, which has filed the suit along with Greenpeace and the city of Boulder, Colorado, claims that the two agencies provided ‘over £32 billion in financing and insurance for oil fields, pipelines and coal-fired power plants over the past 10 years without

assessing the contribution to global warming and the impact on the US environment.’

The mayor of Boulder called the suit ‘one way to force the federal government to start paying attention’.

For more information, including a complete list of plaintiffs, visit: [www.climatelawsuit.org](http://www.climatelawsuit.org)

## Bhopal boss to stand trial

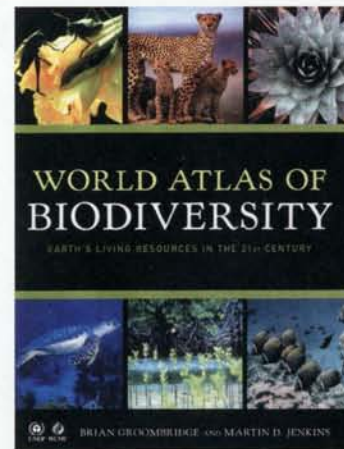
**INDIA** An Indian judge has dismissed efforts by his country’s government to reduce charges against the former boss of Union Carbide – the company responsible for the 1984 Bhopal disaster. Despite the deaths of 3,000 people from

the poison gas leak, the Indian government had tried to lessen the charges against Warren Anderson. The latter could face 10 years in jail if found guilty. The Bhopal judge refused their demands and instead pressed for Anderson to be extradited from the US.

## Losing drugs to extinction

**UN** According to the UN Environment Programme’s recently published *World Atlas of Biodiversity*, plants are vanishing so quickly that the Earth is losing one major drug to extinction every two years.

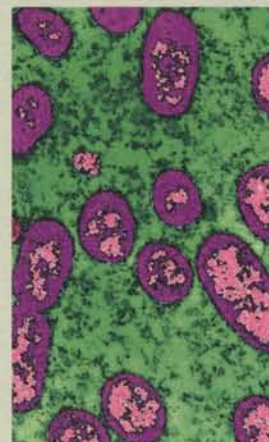
Given that UNEP expresses its sincere thanks to the Aventis Foundation (the world’s second largest bio-technology company) for its generous support towards the production of the book, it is hardly surprising that the atlas views the depletion of biodiversity in terms of losing possible drug applications.



## VITAL SIGNS: FOOD-BORNE ILLNESS

- \* In the US, food contaminated with bacteria, parasites, fungi and viruses causes 76 million illnesses every year.
- \* Adults in one Chinese village have a one in 10 chance of getting liver cancer from eating grain contaminated with the toxin Aflatoxin.
- \* To date, more than 100 people in the UK, France and Ireland have died from CJD – the human form of mad-cow disease. Some experts predict that the number of victims will top 100,000 by the middle of the century.
- \* Amoebas – parasites spread by contaminated food and water – cause 100,000 deaths a year.
- \* WHO estimates that diarrhoea resulting from ingesting tainted food and water leads to more than three million deaths a year.
- \* E. coli is responsible for 25 per cent of all cases of diarrhoea among children and infants in the developing world.

Taken from *Vital Signs 2002-2003 (Earthscan)*



# Behind the lines: exposing the 'experts' behind the news

This month *The Ecologist* analyses the claims made by Professor Philip Stott in his pro-GM article in *The Guardian's Earth* supplement of 22 August 2002

So why are Zambia, Malawi, Mozambique and Zimbabwe all concerned about accepting GM food aid, even while suffering from drought and hunger? Bernadette Lubozhya, a Zambian agro-scientist studying the likely impact of GM crops on her country, warns of long-term problems such as lower yields, increased herbicide use, erratic performance and poor economic returns for small-scale farmers. The same problems were identified in a recent US Department of Agriculture (USDA) report.<sup>1</sup>

Not 'will', but 'might'. All unproven, and a source of considerable concern over cross contamination. See the recent worries over Aventis' crop trials in Scotland.<sup>11</sup>

Perhaps, though unverifiable as the farmers Stott is referring to are almost all from China. More significantly, just three countries (US, Canada and Argentina) account for 96 per cent of the total world acreage of GM crops.<sup>12</sup>

Monsanto suggested farmers could expect a 22 per cent reduction in agrochemical applications.<sup>13</sup> Authoritative analysis of US government data reveals this is far from the case, that while the number of applications may have reduced, the actual amount applied has increased.

Industrialised agriculture has not produced food for the people in famine-hit Africa, but record crops of cotton and sugar cane.<sup>2</sup>



**Pro-GM:  
It is not  
a panacea,  
just an  
everyday  
essential**

“Although GM crops have a vital role to play in developing countries, it is important to stress that they are only one element in a complex package needed to defeat food insecurity and world hunger. GM crops can never solve the problems of the political maldistribution of food resources and the inequalities of trade at any one cross section in time. Their purpose is to enhance our ability to increase food production relative to population growth, to cope with constant climate change, to continue to outpace pests and diseases, to provide environmental improvements, and to extend crops into ecologically challenging areas, such as those with saline soils. GM crops should also be used with 'organic' agriculture to overcome problems of yield, extensification into forests, disease resistance, and product life. GM crops will further play a role in

the delivery of medicines, vaccines, and improved nutrition. In 2001, more than three-quarters of the 5.5 million farmers growing GM crops were small-scale farmers in the developing world. In China, the average farm size for GM cotton is less than 1 hectare (2.47 acres). Environmental benefits have already arisen, with pesticide applications reduced by some 13 sprayings per hectare per season and with production costs down 28%. The decline in the use of toxic pesticides, such as organophosphates, is as high as 80%. This is a moral issue. To deny GM technology to the developing world would be unforgivable; to play some role in its safe development, a privilege for the Earth summit 2002. Philip Stott is professor emeritus of biogeography at the University of London

So, why do 77 per cent of the UK public not want GM?<sup>14</sup> Why did those African nations facing drought reject GM? Where's the morality in imposing Stott's preferred solution, and dressing conjecture up as facts?

During the last 35 years per-capita food production has grown 16 per cent faster than the world's population.<sup>3</sup> There is no evidence so far that GM crops increase yield.<sup>4</sup>

*The Guardian, Earth supplement, 22 August 2002*

Stott claims to expose the 'religious' zeal underlying environmental concerns. He has called Greenpeace 'a fun opportunity for mainly upper-class climbers'. Tribal people are 'a group of folk in a tropical forest who can be romanticised and patronised, but who must not want electricity or TVs'. But with bio-technology his own brand of zeal is immediately apparent. 'We are truly standing on a great peak and a new country lies at our feet,' he says.<sup>15</sup>

Stott's views on climate change are 'interesting'. Elsewhere, he has written: 'Over the years, a series of "little green lies" has been applied to tropical rainforests with the aim of persuading us that we do not simply "like" or "want" to keep these forests, but that we need them scientifically for sound ecology.'<sup>5</sup>

Even Monsanto says transgenic pest control 'may not be desirable in the long term... because it produces resistant strains' and 'numerous problems remain... under actual field conditions'.<sup>6</sup>

Salt-tolerant crops have been developed without GM, but receive little funding.<sup>7</sup>

According to a recent Greenpeace report, organic agriculture in developing countries produces yields far in excess of conventional methods.<sup>8</sup> A new USDA report confirms that GM crops may even reduce yields.<sup>9,10</sup>

With thanks to Helen Wallace, Mae-Wan Ho, Jonathan Mathews and Hugh Warwick

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(Professor Stott was asked to give the sources for all his claims, but he declined to reply.)

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Is a plan to wipe out the tsetse fly with atomic technology doomed to failure at the cost of millions to impoverished African governments? Fred Pearce investigates.



# a sterile plan

by Fred Pearce

The booming voice rang out across the village meeting ground. A former Mennonite lay preacher from Canada was on the stump. And he had words of hope for the hundreds of farmers and their families assembled under the warka tree in the village of Lante, deep in Ethiopia's Rift Valley.

'We realise you have a big problem with this cattle disease here,' announced the Canadian slowly – waiting for the translation to be completed. 'But there is a solution coming soon. Scientists from your government and the world are going to help you. Very soon you will have healthy cattle and children. And good crops and a happy life.'

The message was a popular one. The farmers applauded, hands were shaken and everybody left.

Arnold Dyck, the speaker at Nante that day, is a missionary with a difference. He gave up preaching the New Testament for science, and now works for the UN International Atomic Energy Agency (IAEA) in Vienna.

He and his bosses have a plan to rid Lante and tens of thousands of other villages across Africa of an ancient scourge. Dyck promises to banish the tsetse fly and the trypanosome parasite it carries. Trypanosome causes sleeping sickness in humans and the lethal disease nagana in cattle. The latter makes livestock farming all but impossible across much of the African continent.

I travelled with Dyck on his three-nation tour of the

**Arnold Dyck (far right) watches his translator announce his atomic tsetse plan to an Ethiopian audience. Tsetse-related cattle disease costs African farmers an estimated £4.5 billion a year.**



lands of the tsetse, and he explained to me his mission to use atoms for peace and prosperity. His agency wants to spray the bush in 40 countries with tens of billions of specially reared male tsetse flies made sterile by a quick blast of radiation. The aim is to crowd out the wild, fertile males and cause tsetse populations to crash. Dyck says this Sterile Insect Technique (SIT) could eradicate the tsetse fly from Africa for ever.

There is a cost, however, of tens of billions of dollars spent on rearing and irradiating the flies and releasing them on tens of thousands of aircraft sorties. And both Dyck and the IAEA admit to knowing next to nothing about animal or human health – or how to manage large logistical operations in Africa. Moreover, the numerous experts I have spoken to say the IAEA plan is plain nuts.

Hans Herren, director of Nairobi's World Bank-backed International Centre for Insect Physiology and Ecology, says: 'We think it is a crazy idea. There are so many tsetse that you are bound to miss a few. The populations will regenerate and you are back to square one – only a lot poorer.' And David Rogers, a zoology professor at Oxford University, agrees. 'It cannot be done,' Rogers says. 'The IAEA's attempts to persuade people otherwise are a deeply cynical manipulation of the hopes of many Africans.'

But the IAEA *has* managed to persuade the Organisation of African Unity (OAU) and many individual African governments. The OAU has appointed Ugandan scientist John Kabayo to run its Pan-African Tsetse and Trypanosomosis Eradication Programme (PATTEC). Kabayo says: 'It is not acceptable that we Africans suffer from a disease that can be stopped. If it takes 100 years, we are going to do it.' In reality, however, PATTEC is a shadow organisation with only two staff. Kabayo's salary is paid by the IAEA itself.

**Growing problem**

The tsetse problem is huge and growing. The current rate of infection for human sleeping sickness is estimated at 300,000 new cases a year. That is more than at any time since the 1930s. In Uganda I met 12-year-old Taneba Joseph. He was lying in a tiny hut at Namungawe sleeping sickness clinic on the shores of Lake Victoria. Taneba's father had brought him to the clinic after his son became 'dull and sleepy'. He will be given drugs developed 50 years ago and which contain large amounts of arsenic. These drugs kill up to 10 per cent of patients who are prescribed them. But most victims never see a doctor at all. Faustin Maiso, of the Ugandan health ministry, says: 'For every reported case of sleeping sickness in Uganda we believe there are three more unreported out in the villages.'

Meanwhile, nagana kills some three million cattle a year in a continent where cattle provide meat, milk and the power to pull a plough. The disease – which mostly

**What is tsetse?**

The tsetse fly carries the typanosomosis parasite responsible for sleeping sickness and the cattle disease nagana. The UK Department for International Development estimates that the tsetse fly's annual cost to agriculture in Africa now totals \$4.5 billion, with three million livestock dying a year. Between 300,000 and 500,000 people also fall ill annually. Without treatment, which is beyond the means of most Africans, victims suffer headaches and personality changes before descending into a comatose state and eventual death. The treatment itself is very toxic: the drug for treating the second stage of the illness kills 10 per cent of those who take it.



**What is the IAEA?**

Created in 1957 as the 'Atoms for Peace' organisation and originally proposed by US President Dwight Eisenhower, the Vienna-based IAEA is an autonomous organisation within the UN. The US has always maintained close relations with the organisation, giving it £20 million above and beyond the statutory requirement.

It has three aims: checking the spread of nuclear weapons; working as a safety watchdog; and promoting the uptake of nuclear technology worldwide.

In non-nuclear countries it 'focuses on applying nuclear science and technology to development issues affecting health, fresh water, agriculture and other areas'. Critics see it as a glorified PR operation for the nuclear industry. Professor Malcolm Molyneux, of Liverpool University's Wellcome Trust Tropical Centre, says: 'The IAEA has one mandate – to push nuclear technologies whenever and wherever it can. It is not a public health organisation.'



infests humid, low-lying valleys – costs Africa's farmers an estimated \$4.5 billion a year. Lante farmer Berza Bassa told me he lost 40 cattle, almost his entire herd, when the tsetse invaded the local bush a decade ago. 'Since then I have no milk for sale and no oxen to plough my fields,' Berza said. 'I can no longer afford to send my children to school.'

To halt the current epidemic most countries have adopted a containment strategy: installing simple traps, baited with animal odour, which kill the flies. The traps work well, but as fly numbers fall both villagers and officials lose interest, the traps are abandoned and the flies eventually return. Dyck insists that trapping is not sustainable. 'It is,' he says 'a stopgap'. The Ethiopian government agrees and wants to become the first African ►

## Differences of opinion

✓ **The IAEA says:** 'Nuclear science has identified another valuable tool that can improve people's lives while preserving and protecting the natural environment.'

✗ **Professor Malcolm Molyneux says:** 'Sterile Insect Technique is a completely inappropriate technology for Africa at the present time. The IAEA is hijacking science and distorting the facts.'

✓ **PATTEC co-ordinator John Kabayo says:** 'The solution to the tsetse is within our reach. Now Africa has to take full ownership of the campaign, but it will need assistance. The key will be political perseverance by Africa and securing financial support.'

✗ **Dr Robert Dransfield, EU technical assistant in Uganda, says:** 'The PATTEC/IAEA scheme is designed to provide jobs for Europeans and money for African governments and institutes. It will not improve the disease situation on the ground, since vested interests will act to prevent local farmers dealing with the problem themselves.'

## Tsetse and insecticide: 'less worse' options

Techniques have moved on since the 1950s, when a heavy dousing of a persistent pesticide like DDT was the cure-all solution. Different varieties of targets, traps and spraying techniques have cut down the quantities of pesticide needed.

### Option 1 Applying insecticide directly to the backs of cows

This has the advantage of being easy for farmers to make the connection between applying the insecticide and protecting their herds. It is, therefore, relatively easy to maintain. Some critics worry that the technique could prevent cattle gaining immunity to tick-borne diseases.



### Option 2 Artificial cows

These came into use in the 1970s and 1980s with the demise of large schemes and the ban on persistent insecticides. The first 'cows' were boxes on four legs. Recent schemes have discovered that a blue-black screen impregnated with 'cow odour' is enough to fool the flies. 'Cow odour' is a mix of cheap, relatively safe chemicals which scientists have discovered attract tsetse. The amount of insecticide needed is greatly reduced, as only four targets are needed per square kilometre. A scheme run in Zimbabwe since the mid-1980s cut the tsetse population to almost zero. The difficulty is ensuring local communities maintain the state of the lures once the tsetse cease to be a problem.



## A green alternative to insecticide

### Tsetse traps

Developed at the same time as targets, traps need no pesticide. Most are cones topped with a polythene bag. The tsetse flies in, tries to escape towards the light and enters the bag where it is killed by the heat of the sun. Ants then clean out the dead tsetses. Robert Dransfield ran a successful scheme with colleague Bob Brightwell in Kenya, teaching Maasai villagers to make the traps. The scheme reduced the Tsetse population within the test area to one per cent of its original size before a dispute within the sponsoring agency prematurely ended it. Like targets, traps cost \$100 per square kilometre.



country to eradicate the tsetse fly by using sterile insects.

At Kaliti, south of the Ethiopian capital Addis Ababa, the foundations were already being dug this summer for what will become the continent's largest insect-rearing centre. Here 10 million female flies, all fed on blood from a local abattoir, will soon be producing two million offspring a week. The males will be exposed to a cobalt-60 radiation source and then sprayed from aircraft across the Rift Valley tsetse region in weekly flights that will go on for at least two years. Before the releases, conventional traps will cut the number of flies by 95 per cent – leaving the remaining five per cent to be zapped with sterile insects. The first releases could begin as early as this winter.

### Unimaginable scale

SIT has been used before, mostly in the Americas to fight the Mediterranean fruit fly and the screw worm. But Africa's tsetse is a much tougher target. There are 22 different species. Ethiopia alone has five. Each must be targeted individually with its own breeding and spraying programme. And the work must be co-ordinated, since each species is ready to move into the ecological niche vacated by another.

Dyck envisages building three regional African fly-breeding centres to supply national irradiation units across the continent. The bush would be blasted with sterile flies, area by area, over many years. Nothing on anything like such a scale has ever been attempted in Africa before. The biggest and probably fatal problem will be re-invasions of flies from neighbouring bush into cleared areas. Zanzibar, the site of the only successful eradication so far, is an island archipelago bordered by sea. The mainland has few such natural barriers. So artificial barriers will be needed.

And here the IAEA thinking gets decidedly fuzzy. Tsetse flies are masters at invasions. They crossed from Kenyan into the Ethiopian Rift Valley in 1992 and advanced 800 kilometres in three years – probably aboard nomadic cattle herds. Dyck hopes dense thickets of traps, chemical spraying and limits on cattle movements will stop re-invasions. But when pressed, he admits: 'There isn't an example of artificial barriers being used successfully. The best thing is a moving front.' By this he means that active zones of eradication would themselves form the prophylactic. That, he says, requires 'continuous long-term funding'. 'If you stop,' he adds, 'it will go back. You'll be no better off than under the old system.'

Leaving aside the funding question, nothing happens like that in Africa. The continent is full of impediments to such a smooth operation. Tsetse flies are no respecters of borders, and they won't wait for civil wars to end. Indeed, civil wars and other administrative breakdowns caused the upsurge in the parasite in the first place. Surely, critics say, a strategy that relies on these crises' disappearance is doomed to fail.

Ethiopia's 10-year eradication plan can't succeed

while civil war continues in southern Sudan. In Uganda they can't eradicate till neighbouring Congo clears its border regions of tsetse. Some chance. No wonder Britain's overseas aid minister Clare Short told Parliament earlier this year that the IAEA 'will not be able to eradicate the flies from Africa'.

Short backs 'methods for controlling the tsetse fly that can be readily implemented by poor people themselves'. That means developing new and better traps for communities to use. Such controls do not provide a 'final solution', of course. But they do bring real and immediate benefits, as well as community control.

Confronted by such opposition, Dyck and his collaborators offer the Zanzibar experience as proof of the merits of their strategy. Dyck spent the mid-1990s using sterile insects to eliminate every last tsetse on the Tanzanian islands. It worked and the benefits to farmers, as I saw for myself, are genuine. But the programme was fraught with deceit and secrecy. And it is a most unlikely model for success on the mainland of Africa.

Zanzibar was chosen because it was an easy target. The flies were of only one species, were not densely populated, were confined to the small area of the Jozani Forest and – many believe – were on the verge of dying out anyway. Nonetheless, Dyck mounted a vast operation to eliminate them. He sprayed around eight million sterile male flies to eradicate a tsetse population of around 10,000. With a final bill of more than \$5 million, the cost per fly killed works out at \$500.

**Nagana cover up**

Further, Dyck's team hushed up an epidemic of a strain of nagana never before seen in Zanzibar after an experiment in releasing female flies went wrong. Unlike males, the females lived long enough to transmit a parasite they picked up in the breeding programme. In a panic, Dyck's team treated thousands of cattle with drugs and the parasite disappeared. But it was a close call. 'We never told the Zanzibarians at the time,' Dyck confides. 'They never knew why we were treating their cattle.'

There has never been an independent review of the Zanzibar operation or its success. A planned environmental impact

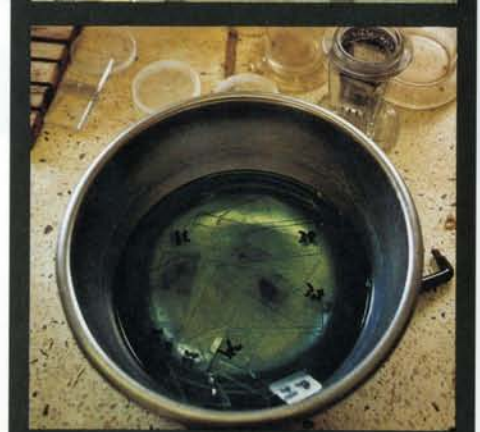
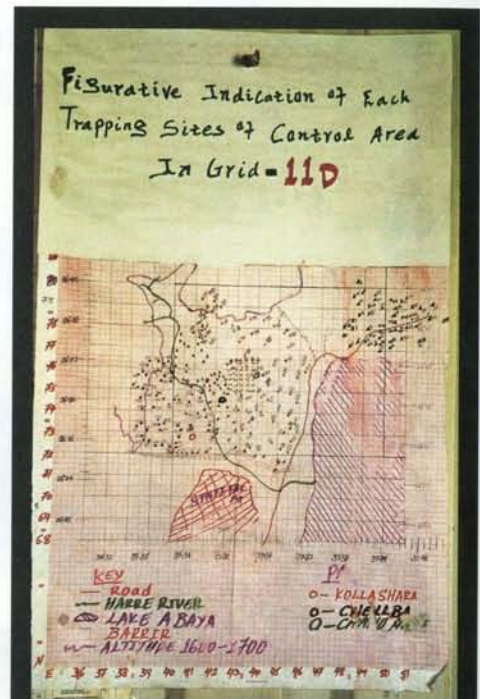
assessment was mysteriously cancelled. Dyck admits few records were kept. 'Yet,' as David Rogers says, 'Zanzibar is the basis on which the IAEA seeks to commit all African countries to a mountain of external debt.'

Dyck admits that the pressure on him to succeed in Zanzibar was intense. 'It had to work,' he says. Past efforts at using sterile insects to eradicate tsetse flies had failed in Nigeria, Burkina Faso and on the Tanzanian mainland – in each case because of re-invasions. 'We knew that if we failed again there would never be another project,' Dyck adds. The IAEA – an organisation seeking a new role in the post-cold-war era – was pinning high hopes on masterminding a long-term tsetse eradication programme. And there may be other forces at work. Professor Malcolm Molyneux, director of the Wellcome Trust Tropical Centre at the University of Liverpool, has a more conspiratorial theory about the IAEA's activities. 'Initially it was a CIA operation, I have no doubt,' he says. Certainly, it was the US, under the banner of USAID (the federal government international aid agency), that ran the first, failed attempt at eradication in mainland Tanzania. And USAID is still heavily involved. When earlier this year I wrote a short newspaper item on the criticisms of the IAEA project, the paper that printed the piece received a long and angry letter of denunciation from USAID.

When its political and institutional agenda is confronted with a wall of opposition from professionals, the IAEA falls back on rhetoric. 'We don't deny it's ambitious,' says Dyck. 'To some extent it is hope as well as science. But we shouldn't deny Africans the technology.' He accuses sceptics of being 'fatalistic, resigned to the inevitability of hunger and poverty'.

For Rogers this is moral blackmail, verging on character assassination. 'It is sometimes suggested that we are racists, determined to keep Africa in its present state of underdevelopment.' Nothing could be further from the truth, he says. 'If the IAEA scheme succeeds, there is no doubt the benefits would be enormous. But there can be no partial success. It either succeeds or fails with no benefits at all. And the chances of success are vanishingly small.' ■

Fred Pearce is the Environment Editor of the *New Scientist*.



**The research**

Millions of dollars is being wasted researching a project that is doomed to fail.

## Health Alternatives

MMR 'heretic' Dr Peter Mansfield says the term 'National Health Service' is a complete misnomer: the service isn't concerned with 'health' at all, but with the bottomless financial pit that is disease management.



An alternative approach to

# Health

The National Health Service has never stood a chance. From its very inception in 1947, it has given in to pressure from industry and the medical profession alike to make it simply a national 'medical' service. It is not concerned with promoting 'health' at all, but with medicine – the management of disease.

As early as the 1930s a real debate about health was very much alive. Provision of public parks and green belts, garden allotments, community centres, model villages for tuberculous families and garden cities for everyone were some of the practical results.

Unfortunately, by the post-war period, the pharmaceutical industry was burgeoning. It has since become global, and exercises complete control of both the scientific establishment and the medical profession.

In their drive for shareholder value, the pharmaceutical giants need to translate huge research and development costs into sales of 'revolutionary' new drugs before brief patents expire. This race to exploit new drugs under patent protection means

that safety and efficacy testing are completed as fast as possible, using unreliable methods with highly questionable ethics.

Once their patents expire, 'wonder' drugs are dropped as unprofitable – no matter how good they are – and are replaced by new ones.

Natural medicines are out of the question: the margins afforded by unpatented drugs are insufficient to meet shareholders' demands for growth.

Managing long-term disease is *the* priority of the NHS. Pandemic obesity, rampant heart disease, high cancer rates, rapidly rising rates of diabetes and thyroid deficiency – consistently, these conditions are targeted independently of any attempt to prevent them in the first place. In the case of heart disease, preventive knowledge dates back 50 years. Typical of this approach are the infant vaccination programmes which administer massive challenges to children's systems at frighteningly low ages but put no real effort into fostering the children's general defences.

### So what now?

What we have now is about as appropriate to good health as a garage is to good driving. We don't need more hospitals and doctors, but 'schools' for good living. Appropriately staffed call centres could provide additional assistance at the end of a telephone. This would quickly help to make us more self-reliant and, through improved health education, cut the need for drugs and medical services dramatically.

I am confident that if we adopted a 'health' approach generally we could significantly reduce the NHS drug bill within a few years, saving at least 10 per cent of overall NHS costs in the process. With improved health care, the need for expensive surgical investigations, major treatment and institutional care would decline progressively over subsequent decades, pushing savings up towards 50 per cent (or £30 billion annually) of overall NHS costs. And that's not counting the huge gains in human health and happiness.

For now, there follow examples of how a different approach to three common ailments could cut NHS costs by four to five per cent. ▶

## TIREDDNESS

'I seem to be tired all the time. However long I sleep, I never feel the benefit.'

**GP response:** 'You seem depressed. You've probably been overdoing it.'

**'Health' response:** 'You sound stressed. Let's assess how much stress you are under, and how you are coping with it. We also need to assess your mineral stores.'

### Immediate prescription

**GP approach:** A prescription for the 'in' antidepressant, and 'see you in a month'.

**'Health' approach:** Extra vitamin B complex and a hair mineral analysis. Trials with other natural remedies – eg, St John's Wort for depression, Siberian Ginseng to increase stress tolerance, Fragaador to help deal with stress. Patient advised to: get variety into their day so they rest more deeply; have at least an hour a day and one day a week of sheer fun; and take a daily siesta for a time, if needed.

### Next six months

**GP approach:** Ten-minute monthly consultations with the GP for several months, accompanied by a further anti-depressant prescription – perhaps varying the brand in search of better effectiveness or fewer side effects.

**'Health' approach:** Mineral deficiencies identified – often including magnesium. Correction started using supplements that resemble foods closely so as to ensure full use and retention.

### The future

**GP approach:** Counselling recommended. Hopefully, counselling works. Likely dependence on repeat prescriptions of some psycho-active medicine or other.

**'Health' approach:** Mineral reserves replenished, so patient is better able to resist further breakdown in future. Ongoing therapy sessions in yoga, meditation, aromatherapy, etc, may become a regular part of the client's self-care.

### Costs to NHS

127 million prescriptions for tiredness and related ailments are issued to around six million patients every year, costing the NHS around £1,100m.

**GP costs:** Two hours in consultation time. £240 per year in prescription costs for an indefinite period.

**'Health' costs:** A radical improvement in life adjustment within about six months, at a cost of perhaps £200 in counselling, advice and support. Remedies and supplements would cost around £200 in total. £400 easily covers the one-off cost of sorting the situation out within a year.

**Perspective:** The current costly situation suits the pharmaceutical industry perfectly, but represents a totally inappropriate response to the needs underlying patients' symptoms. Were these people's real needs addressed when they arise, there would be no recurring cost.

## NHS SAVING

The annual budget for coping with 'tiredness' as it arises would be less than £100m. This would save the NHS 1.7 per cent of its entire budget.

## ASTHMA

'My little boy is coughing a lot at night, and he can't seem to get his breath if he gets a cold or runs around too much.'

**GP response:** 'There's a lot of that about. It's early asthma – it's probably in your family.'

**'Health' response:** 'Why are his lungs over-reacting? Let's check for allergies and clear out pollutants that might be around him or in his blood.'

### Immediate prescription

**GP approach:** The child takes, say, Salbutamol and Beclomethazone by inhaler, two puffs of each three times daily. The doctor picks his brand according to familiarity, coached by regular visits from representatives of drug companies. The child's symptoms are eased considerably.

**'Health' approach:** The child takes much the same treatment, but uses simple hydrotherapy and breathing lessons to cope better so dependence on inhalers is reduced. The basic problem is explained to the child's parents with the aid of leaflets, and they get homework to do.

### Next six months

**GP approach:** The child returns to the surgery in much better health, and the doctor arranges a monthly repeat prescription for the same drugs. If symptoms persist the dose may be increased or an appliance prescribed to improve the efficiency of inhalation of the medicine. If the symptoms are poorly controlled a nebuliser may be recommended to administer the dose more intensively.

**'Health' approach:** The child's bedding is checked for dust mite, their bedroom is spring cleaned and damp-dusted in future, and their food is run through an exclusion and challenge test. Their diet is cleaned up – no sugar, no junk, no chemicals, but a balance of interesting and nourishing whole foods (organic where possible). Their reserves of nutritional minerals are checked, and supplemented if need be. Provided the child takes to the new diet, his lungs should be clear of irritation within six weeks, and his reliance on inhalers will drop drastically.

### The future

**GP approach:** Patient labelled 'asthmatic' for the rest of their childhood, perhaps for life. Extra treatment at school. Additional vaccinations in winter because 'at-risk'.

**'Health' approach:** Minimal reliance on doctors and medication, no side effects, far less bronchitis and other disease. Patient has more energy, and is better able to live and work cheerfully and healthily.

### Costs to NHS

Routine asthma treatment costs £820m per year. Emergencies cost a further £30m a year. Together that's 1.5 per cent of the NHS budget.

**GP costs:** GP consultations of 60 minutes per year. Annual cost in GP medication of £150 per patient, plus any equipment and hospital attendance – around £200 a year on average.

**'Health' costs:** Maybe £100 in consultations, support and initial medication, but no recurring costs or invalidism.

**Perspective:** Asthma medication is very effective for most people in the short-term. Yet the number of asthma sufferers has risen from around 3.4 million in 1999 to 5.1 million in 2001. One in 13 adults and one in eight children are affected. Six times more children need to start treatment each year than 25 years ago. Worse still, drug treatment is losing its grip on the severity of disease – more people are needing higher doses for more of the time.

Most of that asthma is preventable, and all of it could be managed better with less reliance on medication. On the public health level, a 'health' approach would result in our taking environmental pollution, food purity and nutritional adequacy far more seriously.

## NHS SAVING

Adopting the 'health' approach for asthma would save the NHS annually 0.5 per cent of its entire budget.

## INDIGESTION

'I've had occasional stomach pain for ages. You checked me for heart disease last year, so I know it's not that. Is there anything better than these antacid tablets I use?'

**GP response:** 'It sounds like you may have a stomach ulcer. Take these pills to stop the acid gnawing at your insides. Maybe you need strong antibiotics to kill germs in your stomach.'

**'Health' response:** 'Your digestion is all wrong. Let's straighten out the order in which you eat food in your meals to make it easy for your stomach to work properly.'

### Immediate prescription

**GP approach:** Prescription for H2 blocker or Proton Pump Inhibitor. Symptoms will ease considerably.

**'Health' approach:** Patient advised to continue the antacids while rearranging meals and improving diet. Told not to eat sprayed food, sweets or junk snacks because they antagonise their stomach. Also told to avoid fluoride and be careful with tea.

### Next six months

**GP approach:** Pain returns when treatment stops, so repeat prescription is set up and a test ordered for *Helicobacter Pylori*. Perhaps X-rays and hospital consultation.

**'Health' approach:** Change of diet reduces/ removes need for antacids. Herbal and homoeopathic alternatives are explored to aid digestion – eg, liquorice, peppermint and aloe.

### The future

**GP approach:** One or two courses of antibiotics in an attempt to eradicate *Helicobacter Pylori* infection. Otherwise continuing repeat prescriptions.

**'Health' approach:** Normal digestion, no further medication required.

### Costs to NHS

**Medication accounts for around six to 10 per cent of all NHS prescriptions, or £600m per year. Emergencies and hospital tests account for perhaps £70m extra.**

**GP costs:** At least 60 minutes per year in GP consultations. Routine medication costing £240 a year per patient. Hospital investigation and/or *Helicobacter* test and treatment in serious cases at £155 per year. Occasional emergency surgery at £2,000 per case.

**'Health' costs:** £50 in initial advice and support, and up to £30 per year in occasional medications.

**Perspective:** Peptic ulceration of the stomach or duodenum affects 10 per cent of men and two to five per cent of women in this country at some time in their lives. Virtually all disturbances of the stomach and upper intestines are related to faulty diet and inappropriate arrangement of meals. Medication is simply not appropriate, since it does nothing to correct the mistakes being made.

## NHS SAVING

**The pharmaceutical industry claims its products save the NHS £330m per annum in hospital treatment. The 'health' approach would save twice that much again – approximately 1.2 per cent of the cost of the entire NHS.**

## THE PILL, HRT AND BREAST CANCER SCREENING

'I'm here to collect my OC/HRT prescription, but I'm a bit concerned about reports I've read that it raises the risk of cancer.'

**GP response:** 'Don't worry. The risk of cancer caused by hormone prescriptions is minimal. By screening every three years, we hope to catch the disease as early as possible. Fewer people will die of the disease, and two thirds of women affected will still be alive five years after diagnosis.'

**'Health' response:** 'Both the combined contraceptive and HRT pills include oestrogens, and are known to increase risk of cancer. We need to protect you by neutralising this oestrogen and increasing your intake of the kind of foods that protect against cancer – especially fresh organic fruits and vegetables containing anti-oxidants. It would be worth looking again at non-drug methods of contraception.'

### Immediate prescription

**GP approach:** Continued prescription of combined OC/HRT pill. Patient taught breast self-examination. Women between 50 and 64 called for screening every three years. Some others referred by GP for NHS or private screening.

**'Health' approach:** Patient's diet improved and taught breast self-examination and simple hydrotherapy to reduce formation of harmless breast cysts. Replacement of HRT with natural progesterone. A much smaller amount of natural oestrogen if required.

### Next six months

**GP approach:** Occasional visits to the GP or practice nurse to check on findings from self-examination. Those testing positive from screen tests will need reassurance and more invasive testing before the very few patients with real problems are identified and referred for urgent treatment.

**'Health' approach:** Some selective screening in knowledge that the X-ray dose from the screening procedure is itself a small added cancer risk. Otherwise, patient more in control of her health, and less anxious. Fewer breast cancers to detect due to improved diet.

### The future

**GP approach:** Continued prescription of combined OC/HRT pill. Breast cancer cases continue to rise.

**'Health' approach:** Health improves generally, with better hormone balance and improved diet. Breast cancer, cancers in general and the costs of detection and treatment decline.

### Costs to NHS

**Treatment for 35,000 new breast cancer cases a year – at least £70m. Total for HRT prescriptions, screening and breast cancer £300m per year and rising.**

**GP costs:** £104 per woman a year in HRT costs for at least two million women equals £200m a year. At least £10 per year screening costs for three million eligible women equals £30m a year. Total – £230m.

**'Health' costs:** £50 in one-off consultation, education and support per woman at £2m per year. Natural hormone supplementation costing £20 per year for eight million women at £160m per year. Total – £162m.

**Perspective:** Hormone medicines containing oestrogens – most contraceptive pills and HRT – are routinely prescribed for many years at a time, increasing the risk of breast cancer by up to five times after 10-20 years. Since the 1970s, researchers have demonstrated the link with increased cancer rates. The NHS response has been to reintroduce a screening programme which had been dropped years before as ineffective. Six per cent of women test positive, but only one in 10 of those really are. So over five per cent of the women tested endure anxiety and further testing before they can be reassured. The 'health' response is to do the job properly by reducing the real risk factors (even if that means a radical overhaul of contraceptive practice), and to increase personal resistance – both nutritional and hormonal – to those risks.

## NHS SAVING

**The 'health' approach would save £100m a year – 0.2 per cent of the NHS budget.**

**We do get some things right**

Make no mistake, medicine remains important in any civilised society. But we must establish the limits of its usefulness and stop asking it to do inappropriate things. Here are some of the things it does really well.

**Diagnosis of established physical disorders**

Hugely comprehensive and far better than ever. But over-used, and we could prevent most of those disorders in the first place.

**Repair of accidental injury, prosthetics for missing limbs**

Will always be needed, unfortunately.

**Pain relief and anaesthesia**

How did we cope without it?

**Replacing the function of worn-out glands**

We can prevent or delay a lot, but some is inevitable as we age.

**Conserving eyesight**

Medicine and surgery have made huge and abiding contributions to preventing

glaucoma and the blindness of diabetes. They also deal brilliantly with cataract and trachoma – massive global causes of blindness. All these conditions can be much better prevented than they are now, but are inevitable to an extent.

**Conserving hearing**

The grommets operation is an enormous benefit to children with major catarrh problems affecting their ears. We just have to deal with the catarrh problem better than we do.

**First aid treatment of almost anything**

But we must reduce the long-term need.

**Antibiotic treatment of infections**

The foundation of the modern pharmaceutical era, but hugely over-used. The antibiotic age will eventually end when most bacteria have developed resistance to treatment. In future we have to foster positively everybody's general resistance to all kinds of microbes, and make dangerous infections uncommon again.

Dr Peter Mansfield's subscription health service Good HealthKeeping has pioneered the 'health' approach for the past 20 years. Good HealthKeeping provides the advice and supplies people need to break out of the medical treadmill so they can manage their lives independently. Why shouldn't NHS Direct operators be radically retrained to provide a similar approach nationwide?

Non-members can contact Good HealthKeeping on 0906 802 0 803 for advice. Calls cost 60 pence per minute. For membership enquiries, call 01507 329100. Basic membership for an average family currently costs £84 per year. *Special offer to Ecologist Readers* Call 0906 802 0 803 for a free copy of the Good HealthKeeping pamphlet *What Is Health?* The call will cost 60 per minute. By joining you are also supporting *Health Otherwise*, a campaign to rethink health services in Britain ■

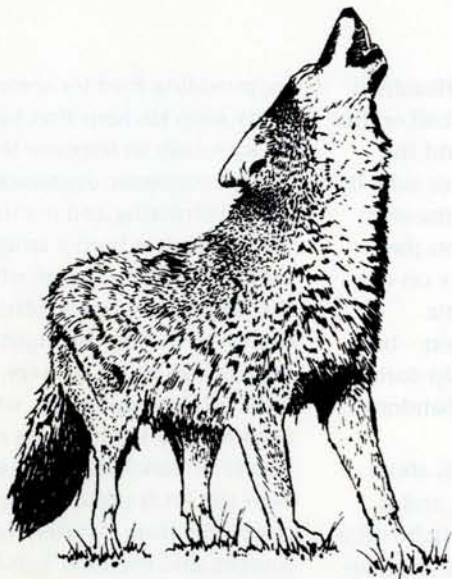
**Website:** [www.good-healthkeeping.co.uk](http://www.good-healthkeeping.co.uk)

**Email:** [callcentre@good-healthkeeping.co.uk](mailto:callcentre@good-healthkeeping.co.uk)

**Fax:** 01507 329111. **Address:** Good HealthKeeping Ltd, Garrod House, Manby Park, Louth LN11 8UT.

## Forum on Religion and Ecology

### Engaging the environment from a religious perspective?



The Forum on Religion and Ecology is providing the first systematic effort to explore environmental questions from the perspective of ten of the world's most pervasive religious traditions. Engaging scholars in the disciplines of religion, science, economics, ethics, education, and public policy, this innovative research is helping us to understand some of the most complicated social and environmental problems of our time.

To find out more about how this vital research is helping to revision future human-earth relations, visit our website.

<http://environment.harvard.edu/religion>

Argentina is one of the world's top agricultural exporters, but only 12 per cent of its people live in the countryside. Its farming is run by big landowners and agribusiness. As widespread hunger stalks the country for the first time in 200 years, Ben Backwell reports on the digging up of its capital to plant vegetables and Sue Branford explains why it can't feed itself.



# grow your own democracy

**Buenos Aires is often described as the most European of Latin American cities. How incredible to think that its once-elegant parks are now being overtaken by community vegetable gardens.**

Buenos Aires is one of Latin America's oldest and largest cities. Some 13 million people live in the greater Buenos Aires area, three million of them within the city limits. Built on a grand scale in the late 19th century by architects trying to emulate the Paris of Baron Hausman, and studded with concrete tower blocks added by later generations, the Argentine capital looks like most of its European counterparts – only a little more run-down.

It is all the more strange, then, to see vegetable allotments springing up in the corner of a public park in the neighbourhood of San Cristóbal just 10 minutes by

bus from the city centre. Hundreds of kids regularly play football on the adjacent public pitches, and the park is surrounded on three sides by apartment blocks and by the city's main paediatric hospital on the other. Staring down grimly on the whole scene is the futuristic nightmare of Caseros Prison – built by the military dictatorship during the late 1970s and now abandoned to the rats.

The vegetable garden is about 500 square metres in size, and is organised in not quite straight strips – each about a metre wide. A group of neighbours campaigned for permission to set it up in a little used corner of the park. Now they

are providing food for some of the many soup kitchens that have been set up locally in response to the current economic depression.

Constructing and maintaining the garden has been a struggle for the 20 or so regulars who work the land. Many times, plants were destroyed during the night. Stray dogs caused much damage, as did a local group of kids who had been used to taking drugs on a cluster of park benches nearby. Now the lot is protected by fencing scrounged from a variety of sources, and the local kids have become cautiously friendly now they realise that the participants in the vegetable garden will not call

the police every time they have a get-together.

If you had asked a *porteño*, or Buenos Aires citizen, even a couple of years ago whether they would ever be growing their own food they would doubtless have thought you crazy. Although Argentina had suffered decades of stop-go economic dislocation and political violence, its people were still, on the whole, better off than other Latin Americans. Buenos Aires' large middle class had remained pretty much intact.

This is no longer the case. Unemployment – already high in the 1990s – has grown to about 25 per cent. More than 50 per cent of Argentines now live below the poverty line. With unemployment benefits and social security almost

is around 80,000 tons per year. This is growing rapidly.

For a number of years the government has cautiously supported this explosion in the number of huertas – seeing it as a way of relieving pressure on social spending. Nationally, there is a plan called *Prohuerta*, which provides technical support to the vegetable gardens through *promotors* from the National Institute of Agricultural Technology (INTA). *Prohuerta* also oversees the distribution of seeds to the huertas. The INTA technicians attempt to work entirely without agri-chemicals, using organic methods instead. One of their latest schemes is to set up vegetable gardens in conjunction with local parent-teacher associations. The aim is to train children to run the plots independently and provide food for their school canteens.

On the whole, the *Prohuerta* plan has operated in provincial towns and the sprawling suburban belt surrounding Buenos Aires. Most of the schemes have functioned in private gardens and plots of land.

Now, however, with the lurch of Argentina's economy into yet deeper crisis, the huertas have begun to proliferate in the very heart of metropolitan Buenos Aires. They have also taken on a much greater political significance. Their most active proponents are neighbourhood associations linked to the 'Kick them all out' movement that overthrew two presidents at the end of 2001, and the strongly anti-government unemployed *piquetero* organisations. The militant Unemployed Workers' Movement (MTD) runs a series of large vegetable gardens in the southern and western suburbs of Buenos Aires. These provide food to the MTD's own network of supporters and communal canteens. Many other organisations run similar schemes.

Both the neighbourhood assemblies and the unemployed groups put a strong emphasis on

the autonomy that the huertas allow them to achieve from the government. They also emphasise the huertas' co-operative, self-managed nature. The most radicalised participants go one step further. They see the vegetable gardens as an embryonic form of organisation for a new society based on the principles of self-sufficiency and community-based direct democracy.

In the Parque Patricios district of Buenos Aires I meet Pepe, an unemployed carpenter who is digging with his neighbours a new garden on unused public land. Some of Pepe's fellow activists are squatting a nearby building. 'We have millions of unemployed people and plenty of land,' Pepe declares. 'So, why should we ask the government for anything?'

Throughout Buenos Aires activists have sought to appropriate land on which to install the vegetable gardens. The gardeners have targeted unused private or government land, or, where necessary, under-utilised public spaces such as areas of public parks.

**The threat of democracy**

Local government has an ambiguous attitude to the huertas. Many local councils see them as a way of relieving pressure for food hand-outs or *plan-trabajar* ('work plan') and 'heads-of-family' subsidies. Local politicians often figure they would rather have community activists working down at the vegetable garden than showing up on the doorstep.

But many other local politicians see the huertas as a direct threat – particularly if they spring up as a result of land occupations of idle private property or they encroach on areas earmarked for long-stalled government projects. As a result, the authorities often threaten eviction in the event of land seizure or try and use divide-and-rule tactics. ►

**'We have millions of unemployed people and plenty of land,' states huerta activist Pepe. 'Why should we ask the government for anything?'**



non-existent, many people have been thrown back on their own resources to survive.

**Home-grown economics**

There are now around 450,000 huertas or vegetable gardens in Argentina. Most of them have emerged since the mid-1990s. The average size of the huertas is 100 square metres for family-run plots, 200 square metres for schools and 1,000 square metres for community plots. Around 2.5 million people receive some food from the plots, and there are now more than 5,600 school plots and 2,300 community plots. The combined yield of the 4,000 hectares of vegetable gardens

In the northern Buenos Aires suburb of Saavedra, for instance, the local neighbourhood assembly occupied a piece of land and began to sow vegetables there. The response of the local government was to award the plot to a local group of *cartoneros* – people who eke out a living collecting paper and cardboard from the streets and selling it for recycling. The idea was to cause a conflict between the two groups. Luckily, the *cartoneros* and huerta activists have been able to reconcile their needs and agree to use the land together – at least for now.

On a national level, the federal government is keen for local organisation to remain within 'clientelistic' frameworks – the traditional mainstay for political parties such as president Eduardo Duhalde's Justicialista Party. On the one hand, this

involves trying to make sure that people carry out local activities through the framework of local government and the local party committees. On the other, it entails maintaining and promoting distribution networks for government-controlled food hand-outs.

Many of these distribution networks work hand in hand with agribusiness organisations that are 'donating' large amounts of soya (nearly all of which is genetically modified) and carrying out campaigns for that soya to replace meat and milk in the regular diets of low-income households and schools.

'While such food handouts may alleviate hunger in the immediate term, they tend to reinforce passivity and dependence on the government, private agribusiness and, ultimately, the GM seed

**'The allotments are the embryo for a new society based on self-sufficiency and direct democracy'**

monopolies. They introduce GM food into the diets of consumers who are denied any choice or information, in disregard of the long-term safety or desirability of such foods.

But the activists in the huerta movement are clear that they are no longer willing to wait for hand-outs from the same politicians they are marching to remove. Nor do they want to place themselves in the hands of agribusiness, which is widely seen as having plundered the country. For these people, the vegetable gardens hold out the hope of genuine food security and a measure of control over everyday life.

'This way,' says Pepe, 'we don't have to ask anybody's permission to eat.' ■

Ben Backwell lives and works in Buenos Aires as a freelance journalist.

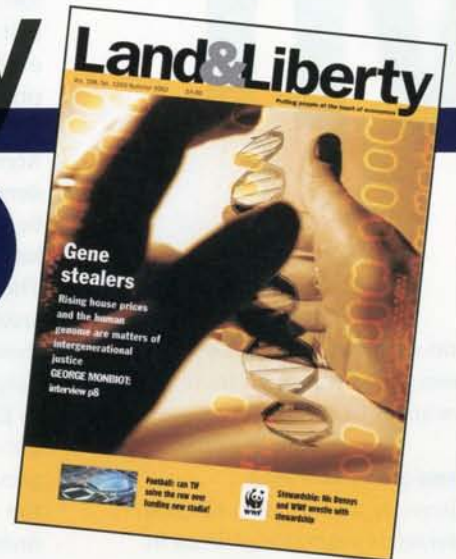
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# Why Argentina can't feed itself

How GM soya is destroying livelihoods and the environment in Argentina.

'Our brief history of submission to the world bio-technology giants has been so disastrous that we fervently hope other Latin American nations will take it as an example of what not to do.' So speaks Jorge Eduardo Rulli, one of Argentina's leading agronomists, only six years after the country decided to embrace GM technology.

When Monsanto arrived in Argentina in 1996 with the first of its GM crops, Round-Up Ready (RR) soya beans, it made attractive promises to Argentine farmers. The RR soya bean has a special gene making it resistant to Monsanto's powerful Round-Up pesticide. The latter kills virtually everything else that grows. Monsanto said its GM technology would make soya farming cheaper and easier. Farmers would only have to use the one pesticide, and they could apply it at any stage in the plant's development. Yields

would be higher and costs lower.

Argentine farmers were captivated by the sales talk. About 90 per cent agreed to adopt the technology, which gave Monsanto an even higher take-up rate in Argentina than in the US. So what has gone wrong since?

At first sight, nothing at all. Since the adoption of GM, Argentina's soya crop has doubled to 27 million tons, making the country the third largest producer of the commodity (after the US and Brazil) in the world. Exports have increased rapidly. But a closer look reveals a different story.

The growth in output is exclusively the result of an increase in the area of land under soya bean cultivation. Despite the early promises, RR soya beans have had five-six per cent lower yields than conventional soya. Nor has there been the much-heralded decline in pesticide application. Because of the

evolution of vicious new weeds, farmers have had to use two or three times more pesticides than previously. Overall, total costs have risen by 14 per cent. Soya prices have dropped as a result of increased global production, and most farmers are actually worse off.

## Farming without farmers

There are other less obvious, but even more serious, consequences. The only undisputed advantage to RR soya is that it saves time. Farmers do not have to carry out all the traditional tasks of ploughing and harrowing the land. Instead, through so-called 'direct tilling' they can sow soya seed directly on the land after applying pesticide. This means a single farmer can be responsible for a much larger area – something that has become necessary with the fall in world soya prices.

No longer able to compete, small-scale Argentine farmers are going bankrupt.

Greenpeace Argentina says the number of the country's farmers has fallen by about a third over the last decade. Some 500 market towns, once bustling with activity, have become completely empty. 'We're moving into the age of farming without farmers,' despairs Rulli.

Even more alarming is the ecological damage. Native woods have disappeared as the soya front has advanced. Sales figures suggest that each year farmers are deluging the 10 million hectares of land under GM cultivation with 80 million litres of herbicide. This is killing off all forms of life except RR soya and is interrupting the normal biological cycles of growth. The soil is turning into a kind of cinder or sand – neither of which, says Rulli, can retain moisture. Not surprisingly, the country is suffering from severe flooding.

In the past farmers used to grow soya in the summer and wheat in the winter. The non-GM soya used to capture nitrogen from the air, helping to retain the fertility of the soil. The

rotation reduced the prevalence of weeds. But today the RR soya, which does not have the ability to capture nitrogen, is grown all the year round. 'The ecosystem has been ruptured and new resistant weeds are appearing,' says agronomist Adolfo Boy. 'We have not created a self-regulating, sustainable system, but one that requires larger and larger volumes of pesticide, which the farmers deliver. They know it won't kill the RR soya. It has become a vicious circle.'

Soya is not bringing wealth to Argentina. 'We are being occupied by the seed multinationals that have patented life and are forcing us to pay

tribute to them,' says Rulli. 'The more we produce the poorer we become.'

The people forced off the land by the changes migrate to the cities. They have little hope of finding a job, for Argentina is engulfed in the most serious crisis in its history.

Economic output is predicted to fall by at least 15 per cent this year. Rulli believes there is only one real solution. 'We have to change the rural model, re-populate the countryside and start producing healthy food,' he says.

As yet, there is little sign of this happening. President Duhalde is trying to hold the country together until elections in March 2003. To prevent widescale rioting the government is providing the most needy with free food baskets. One might have thought that it would have purchased the food being given out from Argentina's hard-pressed small farmers. Not a chance. It is importing cheap food from abroad, and – the final humiliation – encouraging impoverished families brought up on beef steaks to eat the very RR soya which is doing so much damage to their country ■

Sue Branford is the co-author with Jan Rocha of *Cutting the Wire – the story of the landless movement in Brazil* (Latin American Bureau, 2002)

**'We are being occupied by the seed multinationals that have patented life and are forcing us to pay tribute to them,' says Jorge Eduardo Rulli**



Round-Up Ready soya encourages greater economies of scale, driving thousands of small farmers out of business and into cities.



# Cultivated for good taste

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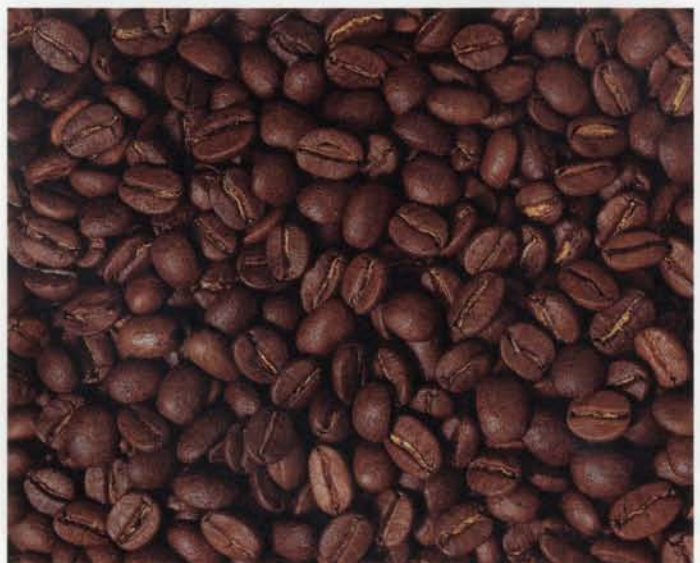
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# Cork it!

The fashion for plastic wine corks is bad news for the birds and bees of southern Portugal, writes Eduardo Gonçalves.

My crepuscular trips to the compost toilet have become decidedly dicey of late. A large family of wild boar has moved in around my home. I very nearly trod on one that was sleeping at the back of the house. On one occasion my partner set off a stampede of them while walking into the village. They are digging up the vegetable garden, and one had the temerity to lay a large turd right in front of my own facilities.

What's more, mongooses peer at me when I take a pee outside. They stand on their hind legs and watch me put my pants on the washing line. A Bonelli's Eagle swooped low over my head while I watered the garden. And a vulture occasionally hovers menacingly in the skies above – presumably, it is waiting for the boar, the eagle or any one of an assortment of other monsters to get me.

Unless you are teetotal, you are to blame for my torment. You probably think I live in some remote wilderness – a special reserve or national park, perhaps. But no, I live on a farm. My neighbours are farmers. In fact, my whole community is a farming one.

The 'problem' is that most people here farm cork – the stuff that goes in the top of your Chardonnay or Beaujolais bottles. There are literally hundreds of thousands of acres of cork trees (an indigenous oak) covering the hills and plains of this region. Under the cork tree canopies there are strawberry trees, cistus shrubs, lavender, wild mushrooms and, say the experts, more than 60 different species of grasses and herbs per square metre of meadowland. And this habitat is a haven for all manner of insects, birds and mammals.

Every nine years a little of the bark is peeled off these trees, which can live for hundreds of years. People pick the wild mushrooms that sprout around the trees, put beehives in the woods, graze black pigs on the sweet acorns. Apart from that, very little disturbs the birds of prey, wild cats, lynxes and other savages I have to contend with. Not for us backward Lusitanians the clearances of our civilised, developed neighbours in northern Europe who rid themselves of just about everything that howls in the night.

Fortunately, however, those marvellous people who run Britain's supermarkets have come up with a cure for my terror as I fumble for my flies or cower under the covers at night. It's more effective than earplugs, less addictive than sedatives and infinitely more comfortable than constipation. Their panacea is plastic corks. It's so simple, it's a wonder I didn't think of it myself. With the more widespread use of plastic stoppers there will no longer be any need to farm the cork trees. Then we can kiss goodbye to the forests and all the tiresome wildlife they sustain. Marvellous.

Sure, plastic has its drawbacks. For starters, there isn't a single corkscrew on the market that can guarantee you won't slit your

wrists when the bottle breaks as you pull one of those plugs out of the neck.

Then there's the small matter of what the plastic does to the wine. Britain's leading wine-testing laboratory reckons one in every 10 bottles with a plastic cork simply goes bad. Plastic doesn't fit the bottle as well as cork, so oxygen gets in and nature does the rest. Sure, the supermarkets have tried to insist that cork has suddenly become a big threat to wine quality. But wine producers, bottlers and even an independent study paid for by the supermarkets themselves have all pretty much debunked this claim.

Researchers have also found that the synthetic stoppers tend to give the wine a, well, plastic taste. Some wine experts even fear the plastic could leach harmful residues into the wine if left in contact with it for any period.

Finally, there's the tiresome issue of the environment. The cork forests absorb a hell of a lot of greenhouse gases, while synthetic stoppers are a by-product of the petrochemical industry. Oil refineries – as we all know – are generally not good news when it comes to global warming.

But hey, if plastic becomes the new thing and the cork forests make way for something more sensible – like GM crops or holiday complexes, for instance, then at least my trips to the toilet will be a much less tremulous affairs ■

**Eduardo Gonçalves** is the author of *The Iberian Lynx* and runs SOSlynx ([www.soslynx.org](http://www.soslynx.org)), which campaigns for the preservation of Europe's only indigenous big cat.

## And if plastic replaced cork...

- Four fifths of world cork is grown in the forests of Spain and Portugal.
- Without the economic incentive to maintain 510,000 hectares of cork-oak forests, one of the most complex ecologies in the Mediterranean would be lost and the land would be turned over to intensive agriculture.
- Approximately 80,000 people rely on cork production for their livelihoods. If the environmentally sustainable industry were to be made uneconomical by the unnecessary use of plastic corks, the already impoverished Iberian peninsula would suffer great economic damage.
- 76 per cent of the 13 billion bottle corks made each year come from the Iberian peninsula.
- Cork represents from 30 to 100 per cent of total income for farmers in cork-producing regions.

## Nature & Resources

Gunter Pauli explains how the simple act of lubricating chainsaws with liquid containing mushroom spores, could be the saving of New Mexico's forest communities.

# Seven steps to sustainability

The north of New Mexico is poor, unemployment is rife, and the region is blighted by drought and desertification.

Logging and forest mismanagement, exacerbated by a lack of rain, has led to uncontrollable forest fires. In 1999, in an effort to reduce the risk of wild fires, New Mexico received \$25 million to help create small-diameter clearances.

Unfortunately creating small-diameter clearances posed a further problem: what to do with the cleared wood and debris left behind. Depressingly the solution to this was to transport it to landfill sites, where the decomposing wood emits ozone-depleting gases.

### An Alternative Solution

Under the auspices of the ZERI Foundation, Gunter Pauli has come up with a solution which meets the needs of the local community, harnesses their indigenous skills and ensures that their environment and local economy work hand in hand.

## Working with nature

ZERI advocates working in harmony with the three design principles of nature.

### 1 If one kingdom is forced to eat its own waste, it will degenerate.

However, we need to consider that the waste of one kingdom could be the food for another kingdom. Eg, waste from coffee farms can be used as substrate for mushrooms, which thrive on caffeine.

### 2 Whatever is a toxin or virus for one kingdom is neutral or a nutrient for another

Cyanide is toxic for animals but is also a basic chemical needed by apples to protect seeds against insect attacks. So if you have an old goldmine with cyanide leaching, plant an apple orchard.

### 3 The more locally integrated a system is, the more efficient it is.

Shrimps live amongst mangroves, and feed on algae. When mangroves are destroyed to make space for intensive shrimp farms, the natural feed algae is lost. Consequently, feed (deep-frozen slaughterhouse waste) has to be imported.

In Ecuador, farmers are replanting mangroves, the feed algae are returning, and so are the shrimps. A more remarkable consequence of the replanting has been the huge increase in the amount of honey produced by local bees. On average the farmers are now getting 75 kilograms per beehive compared with 7.5-10 kilograms previously. This is down to the mass of parasitic flowering plants that have found root amongst the mangroves, and have become an additional rich source of nectar for the bees.

## FOREST FIRES AND CLEARANCES

To protect their homes, forest communities in New Mexico try to contain wild fires (the last wild fire destroyed the forest ecosystem and the communities). Turning this unavoidable action to their advantage, the communities used in the clearances are often small-diameter trees containing mushroom spores. When clearing away trees, the sawdust is used to propagate a mass of local mushrooms.



# 7

## JUMPERS

On October 15, 2002, the project is launching its first range of jumpers – in six natural colors and three sizes. The first 'harvest' is limited to 168 numbered jumpers. The 2003 production is hoped to increase to 500 jumpers. ZERI estimate the whole ecosystem could produce up to 5,000 sweaters a year by 2006.

To buy a 2002 vintage sweater from the Tierra Wools Co-operative, please contact [sweater@zeri.org](mailto:sweater@zeri.org).



# 6

## COMMUNITY

The Tierra Wools Co-operative promotes independence and self-reliance through a community approach. By utilizing traditional herding and dyeing techniques instead of exploitation, the community will hopefully become more sustainable.



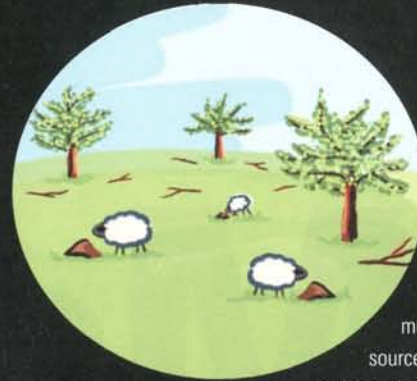
**1** **ICES**

Mexico cut fire-breaks to destroyed 300 homes). The benefit of both the unity, the chain saws and with a liquid So instead of just s are introducing and fungi.



**2** **FOREST TRACKS**

The removal of the felled trees creates tracks through the forest. These tracks, now covered with mushroom spores dispersed by the chainsaws, mix with the tree debris creating a mushroom rich mulch.



**3** **SHEEP**

Sheep travel extensively through the forests along the tracks. The tracks, now rich in mushroom mulch, are a source of food for the sheep. The mulch no longer needs to be taken to a landfill site, and the alternative source of sheep food gives fragile pastures neighbouring the woods a rest. In times of drought, this 'break' from the sheep, helps curb desertification.



**4** **WOOL**

Prior to ZERI's involvement, the local weavers and shepherds bought and sold their wool through their local brokers. Prices for the wool fluctuated hugely; quality varied depending on the country of origin; and availability couldn't be guaranteed. Quite simply they had no control over their wool market. Now, both local buyers and sellers are connected. Everyone's costs are down and they no longer need rely upon the global market.

**5** **DYES**

The plan is to reduce the need to import expensive, artificially synthesised dyes, whilst preserving and developing the Native Americans' traditional knowledge of dyes. Local plants traditionally used in dyes are still plentiful, including sage, chamisa and juniper, which all make yellows. For other colours, experimental plantings are in place to grow rarer plants, including cota (navajo tea) and evening primrose. Not only will these protect the local environment, they will sustain the local economy.



erative is strengthening its interdependence through the ZERI ing traditional knowledge of sheep making as well as working with – ng – the local ecosystem, the society ome sustainable again.

We have to stop glorifying conspicuous consumption as the essence of manhood, writes *Tao of Physics* author Fritjof Capra.

# Money maketh man?

The 'free' flow of capital and goods between 'free' markets is equated with the lofty ideal of human freedom

A never-ending stream of advertising messages – 'because I'm worth it', 'Coke is it', 'just do it' – reinforces people's delusion that the accumulation of material goods is the royal road to happiness, the very purpose of our lives. The assumptions that 'growth' is always good and 'development' is essential are rarely questioned by a society experiencing unrivalled 'growth' in childhood cancers, and which continues to 'develop' ever more toxic chemicals that permeate the air we breathe, the food we eat and the materials we use in our offices and homes.

And yet the modern labour market of the Western world thrives on information processing or knowledge generation, and seemingly produces little of anything material. Its main goal is to boost 'productivity'. Actual

'production' is largely sourced out to countries where labour is cheaper and environmental restrictions less stringent. As ecologist and author Vandana Shiva remarks: 'Resources move from the poor to the rich, and pollution moves from the rich to the poor.'

Meanwhile, the software designers, financial analysts, lawyers, investment bankers and other professionals who have become very wealthy in this 'non-material' economy tend to display their wealth by increasingly conspicuous consumption.

Our large homes, located in sprawling suburbs, are filled with the latest 'labour-saving' gadgets (that we labour ever longer to afford). Our garages are stocked with two to three cars (to enable us to crawl to work protected from the fumes we emit in the tailbacks we produce that mean we have to rise ever earlier to get to work on time). We fly thousands of miles to spend thousands of pounds on luxurious holidays where we can escape what we work so hard to build for ourselves the other 48 weeks of the year ('it's so good to get away, from telephones, the emails, satellite TV – back to somewhere where I can eat proper food, get a good night's rest and spend time with my family').

As biologist and environmentalist David Suzuki notes, in the last 40 years the size of Canadian families has shrunk by 50 per cent while their living spaces have doubled. 'Each person uses four times as much space,' he explains, 'because we are all buying so much stuff.'

In brief, contemporary capitalist society's core value of money-making goes hand in hand with the glorification of material consumption.

#### Land of the free (market)

The US projects its tremendous power around the world to maintain optimal conditions for the perpetuation and expansion of its corporations. The central goal of its vast empire – its overwhelming military might, impressive range of intelligence agencies and dominant positions in



GETTY IMAGES

science, technology, media and entertainment – is not to expand its territory, nor to promote freedom and democracy, but to make sure that it has global access to resources and that markets around the world remain open to its products.

Accordingly, political rhetoric in the US moves swiftly from 'freedom' to 'free trade'. The 'free' flow of capital and goods between 'free' markets is equated with the lofty ideal of human freedom, and material acquisition is portrayed as a basic human right and, increasingly, an obligation.

So, the key challenge of our time – to build and nurture sustainable communities in such a manner that their continued existence does not interfere with nature's inherent ability to maintain life – must overcome one of the greatest obstacles to such sustainability: the continuing increase in material consumption.

#### The anthropology of consumerism

The glorification of material consumption has deep ideological roots that go beyond economics and politics. Its origins seem rather to lie in a universal link between manhood and material possessions in patriarchal cultures. When anthropologist David Gilmore studied images of manhood around the world – 'male ideologies' as he puts it – he found striking cross-cultural similarities.

In addition to well-known ideas of manliness such as physical strength, toughness and aggression, Gilmore found that in culture after culture 'real' men have traditionally been those who produce more than they consume. Two pertinent examples of such cultures are found in his book *Manhood in the Making* (1990).

#### The New Guinea Big Man

The high valleys of New Guinea are densely populated with Neolithic tribes that were first contacted by Western civilisation as recently as

the 1940s and that have retained many of their aboriginal practices. Anthropologists studying these communities have repeatedly noticed their strong emphasis on a culturally-defined notion of 'pure masculinity'. In this highland social environment, the ideal of manhood is embodied in the so-called 'Big Man' – a charismatic local leader whose role, as Gilmore puts it, 'is to be the supporting beam of Neolithic social architecture'.

Beyond his military leadership, the New Guinea Big Man is also an economic engine of production. In

**'That "growth" is always good and "development" essential are rarely questioned by a society experiencing unrivalled "growth" in childhood cancers, and which continues to "develop" ever more toxic chemicals that permeate the air we breathe, the food we eat and the materials we use in our offices and homes.'**

the local farming communities Big Men accumulate, store and then redistribute great quantities of food and goods. In doing so they act like tribal bankers or capitalists.

However, unlike their modern industrial counterparts, they are expected to return the goods with interest – enriching their trading partners rather than themselves. According to Gilmore, the outstanding characteristic of the authentic Big Man is that he is a large-scale net producer, always giving away more than he receives. He accumulates wealth, but only to distribute it in ceremonies and feasts.

#### The Mehinaku Indians

Like the New Guinea Highlanders, the Mehinaku Indians, who live in the remotest parts of the Brazilian rainforest, have been little affected by modern civilisation and have retained many stone-age practices. The Mehinaku men are very concerned about their manhood – even though they fight no wars and have never been warriors. Their culture is self-consciously non-violent, but they are fiercely competitive when it comes to sexual performance and material acquisition.

The Mehinaku also share with the New Guinea Highlanders the association of manhood with generosity. No matter how big or impressive a man may look physically, writes Gilmore, he will always be worried about not producing and distributing enough food, and will, therefore, frequently sponsor tribal rituals at which his wealth is given away. When he returns from a long, exhausting fishing trip, a 'real man' will immediately appear in the village plaza to display and then selflessly distribute his catch.

As Gilmore shows with many other examples, the ancient association of manhood with material production traditionally meant production on behalf of the *community*. But over time there was a shift in this idea from production for the sake of others to production for the sake of one's self.

Manhood in Western society is now measured in terms of ownership of valuable goods (land, cattle or cash) and in terms of power over others – especially women and children. This image is reinforced by the universal association of virility with 'bigness' as measured in muscle strength, accomplishments or amount of possessions. As Gilmore observes: 'The Big Man in any industrial society is also the richest guy on the block, the most successful, the most competent... He has the most of what society needs or wants.' ►

**'Resources move from the poor to the rich, and pollution moves from the rich to the poor.'**

**Balancing the scales**

The association of manhood with the accumulation of possessions fits well with other values that are favoured and rewarded in patriarchal culture – expansion, competition and a focus on objects. In traditional Chinese culture these were called *yang* values and were associated with the masculine side of human nature. They were not, however, seen as intrinsically good or bad. The *yang* values needed to be balanced by their *yin*, or feminine, counterparts. Expansion must be balanced by conservation, competition by co-operation and the focus on objects by a focus on relationships.

Among the many grassroots movements working for social change today, the feminist and ecology movements advocate the most profound value shifts. Feminism demands a re-definition in the relationship between the genders. Ecology calls for a re-definition of the relationship between humans and nature. Both can contribute significantly to overcoming our obsession with material consumption.

The feminist movement is multi-faceted, and its analysis of patriarchy has gone through several stages of increasing depth. The ‘women’s liberationists’ of the early 1970s were concerned mainly with the widespread discrimination against women and their continued exploitation in a society dominated by men. The next step was to question the basic assumptions about female nature in our male-orientated culture – the many ways in which women have been conditioned to view themselves through the eyes of men.

An even deeper level of analysis was reached when the focus of feminism shifted from what we think to the very way that we think. Our intellectual systems, many feminists argued, are flawed because, having been created by men, they lack the wholeness that feminine consciousness provides. In particular, several feminist authors began to see the experiences inherent in women’s sexuality – menstruation, pregnancy, childbirth and motherhood – as ‘body parables’ of the essential connectedness of life and its cyclical processes.

By challenging the patriarchal order and its values, the women’s movement has introduced a new understanding of masculinity that does not associate

**‘The central goal of the US is not to expand its territory, nor to promote freedom and democracy, but to make sure that it has global access to natural resources and that markets around the world remain open to its products.’**

manhood with material possessions. Since feminist awareness, at the deepest level, is based on women’s experiential knowledge that all life is *connected* or *related* – that our existence is always embedded in the cyclical processes of nature, feminist consciousness focuses on finding fulfilment in nurturing *connections* or *relationships* rather than in the accumulation of material goods.

The ecology movement arrived at the same position from a

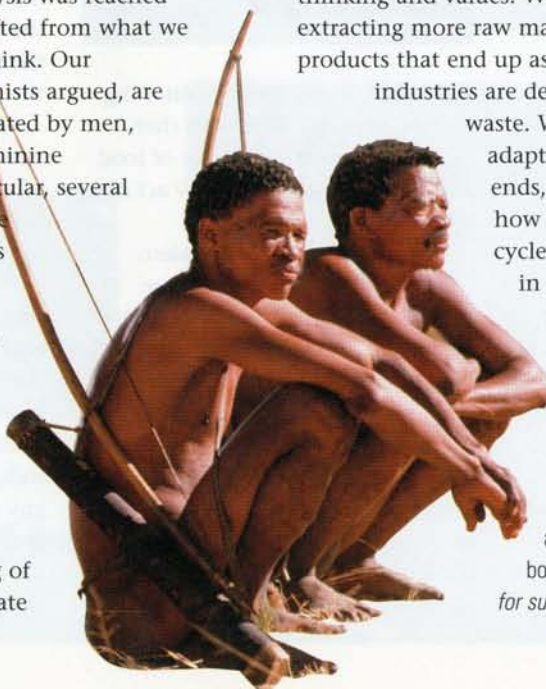
different approach. Ecological knowledge is based on systemic thinking – thinking in terms of relationships, context, patterns and processes. Today ecologically-minded designers advocate the transition from an economy based on the constant supply of raw goods to an economy of ‘service and flow’ in which industrial raw materials and technical components cycle continually between manufacturers and users so that the net consumption of raw materials is drastically reduced. Whereas the extraction of resources and the accumulation of waste are inevitably bound to reach their ecological limits, the evolution of life has demonstrated for more than three billion years that, on a sustainable Earth, there are no limits to development, diversification, innovation and creativity.

In addition to increasing the productivity of our resources and reducing pollution, such a sustainable economy also increases employment opportunities and revitalises local communities. Together, the rise of feminist awareness and the movement toward ecological sustainability can bring about a profound change of thinking and values. We can move from a model of extracting more raw materials for creating more products that end up as more waste, to one where industries are designed so as to produce no waste. We can stop exploiting and adapting the natural world to suit our ends, and learn instead from nature how best to adapt our ways to its cycles. We can stop seeking happiness in what we have, and start finding it in who we are and how we relate with one another ■

**Fritjof Capra**, physicist and systems theorist, is the author of several international best sellers including *The Tao of Physics* and *The Web of Life*. This article is based upon his most recent book – *The Hidden Connections: a science for sustainable living* (Harper Collins, 2002).

**‘The outstanding characteristic of the authentic New Guinea Big Man is that he is always giving away more than he receives.’**

SURVIVAL INTERNATIONAL





# The number of the beasts

**Ros Coward asks: what makes us think that we have a God-given right to reproduce?**

When Cherie Blair's miscarriage was announced this summer, there followed the usual media outpourings: how her lifestyle was disastrous for the early stages of pregnancy; how her age increased the likelihood of miscarriage; how the Prime Minister would have coped with another baby. But no one mentioned what an incredibly bad example the Blairs set for a society which ought to be practising voluntary population control.

At one level I wasn't surprised. Population (or, I should say, overpopulation) is right off the agenda of politicians, media commentators and even environmentalists. Just mentioning it puts you beyond some invisible political pale.

On another level, however, I still find the silence about the Blairs shocking. Surely, a woman approaching 50 with four children already and who is married to the leader of a seriously overcrowded island could forego the pleasures of reproducing again?

But the consensus seems to be that if someone wants children, however many, it's really not our business. Indeed, a large family is increasingly seen as a status symbol. If there's money and help available, the more children the better. The media was in awe of superwoman Nicola Horlick – mother of five and on a £1m salary in the city. She was dubbed the ultimate have-it-all woman.

In the 1960s, world population was 3.5 billion – measly when viewed in the light of today's 6.3 billion. Then, concern about population was not only acceptable but fashionable.

Paul Erlich's book *The Population Bomb* spoke for a generation of whom many voluntarily restrained their own family size. Now, though, interest in population is shrivelling in direct and inverse proportion to its exponential rate of growth. This may be because supposed technological solutions and increased food production delayed the immediate ecological disasters Erlich predicted. (Though his basic thesis about human population outstripping the carrying capacity of the world's regions seems more relevant than ever.) But it's more likely that the retreat from discussing population has come about through fear of offending non-Western societies.

Erlich understood that the possible exhaustion of the world's resources would be determined not just by the sheer numbers of humans. The pattern of over-consumption by the affluent West would be critical, too. But neither he nor his followers adequately

emphasised this. Instead they left the door open to others who appropriated the population debate for more dubious ends. Since affluent Western populations were stabilising or falling at the time, extremists could point a finger of blame at the world's poor. They could imply not just that there were too many people on the planet, but too many of the wrong people – too many poor people from non-Western cultures.

Ever since, most fair-minded people have been in retreat on population. We're more preoccupied with what we can't say than what we can. In order to avoid all pejorative implications about non-Western cultures we've adopted an extreme form of cultural relativism. No culture or religion must be judged – especially not for its attitudes to fertility, contraception or population numbers. The fierce criticisms levelled at Catholicism in the 1960s have been all but silenced. This relativism applies as much to our own culture as it does to other parts of the world. All religious and lifestyle choices are valid and equal. If you want six children, it's your right.

Ironically, the reproductive technologies that enabled birth control have re-inforced such views. Now no one believes that they have to remain childless. The ideology of fulfilment through children has become ever more insistent. The orthodoxy is that if you don't have children you can never feel complete or happy. In the 1980s Germaine Greer wrote a book called *Sex and Destiny*. Greer argued that cultures with the largest families exhibited the most humanity. She bemoaned the west's post-1960s' legacy. The new availability of contraception and abortions had damaged the long-term fertility (and, therefore, happiness) of women like herself.

Perhaps we should have paid more attention to the withering of our critical faculties than our reproductive organs. In this overpopulated, depleted world where other species are being crowded out, who really believes an exponentially increasing population will do anything other than undermine the survival (never mind happiness) of future generations? And who could really defend cultures that deny women the right to contraception?

Ironically, environmentalists who discuss overpopulation openly may be less racist than their critics. That's because they see in other cultures not just different races with different sensibilities, but fellow members of the human species. If humanity is going to survive and to share the planet with other non-human species, we're going to have to overcome our squeamishness about talking numbers. Perhaps feeling connected to the planet could become a greater source of joy than owning a family ■

**'Perhaps we should have paid more attention to the withering of our critical faculties rather than our reproductive organs'**

Ros Coward is the author of *Sacred Cows: is feminism relevant to the new millennium?* (Harper Collins, 1999).

Chief Anthony Enahoro is one of Nigeria's founding fathers, the elder statesman of his country's democracy movement – imprisoned by both the British and deceased dictator Sani Abacha. Now he is spearheading the movement to forge a new state and constitution for Nigeria. Malcolm Tait met him during one of his visits to Britain.

# Chief architect of change

The Holiday Inn at Brent Cross is something of a landmark. It towers over the busy North Circular – London's ring road until the construction of the M25. Having tracked it from a distance, I eventually pull into the car park and, once inside the hotel, approach the front desk. Suddenly, I realise how nervous I am. But then, I am about to interview the man who, perhaps more than anyone else, personifies the history of post-war Nigeria. I'm here to see the chap who has been involved at every stage of his country's evolution over the last five decades. The fellow the BBC calls 'the grand old man of Nigerian politics' – Chief Anthony Enahoro.

When I find him in his second-floor room, he's thinking about popping down Willesden Green to pick up something nice for his wife. We shake hands, and he apologises for not being able to meet me the previous day. He'd stayed over in Nigeria to have a chat with the president. He gestures to me to take a seat, settles himself in his chair and pulls up his socks.

'A terrible flight,' he says. 'Young people all over the plane talking loudly about how much money they earn. This is not impressive behaviour.'

Enahoro knows all about unimpressive behaviour. He spent much of the 1990s in

**Enahoro's main concern is that Nigeria must never again be faced with the horrors of civil war that he saw visited upon his land during the late 1960s. The Biafran War and its consequences claimed over a million lives.**

exile – forced to flee Nigeria along with Nobel prize-winner Wole Soyinka and other democratically-minded patriots during the military rule of General Sani Abacha. He only returned in 2000, once Abacha was dead and gone. 'No-one should ever forget

how terrible the Abacha years were,' he says. 'Whatever comes in the future, we must ensure such days never return.'

One thing that has now returned to Nigeria is democracy – current president Olusegun Obasanjo (himself a former military leader) having been elected in 1999. There are some who now wonder whether Enahoro might seek presidential office himself at the next election. 'If goodwill was all it took to win the presidency, Enahoro would probably walk into Aso Rock [Nigeria's White House, situated in the federal capital of Abuja] without hindrance,' says Nigerian journalist Steve Nwosu. 'But then again, the grand old man has not acceded to run.'

That's because the grand old man – he's 79 now – has bigger issues on his plate. As he says, it's not a matter of which old man assumes the presidency in 2003, but how and whether the problems that face Nigeria are addressed. This is the thrust behind his work. It always has been, and is why he and his group, the Movement for National Reformation (MNR), are launching their

call for a new constitution for Nigeria.

'October 1 is independence day. The president, the governors, they will have their speeches,' he says smiling. 'Let them have their day... And then we can come out.' Details of the proposed constitution can be found on pages 36-37 in Dele Ogun's article. But, in a nutshell, what will be 'coming out' is that Nigeria should be redefined as a union – one which recognises the various nationalities that existed in the area before 1914, when the British drew a big black line around that section of West Africa and claimed it as their own. 'Our position,' says Enahoro, 'is that these ancient identities that are God-given cannot, need not and should not be wished away simply because we have acquired another identity as "Nigerians" or "Africans".'

These identities, or nationalities, are legion. At least 200 different ethnic groups were caught up in that early 20th century net called Nigeria. And although some – like the Yoruba, Hausa, Egbo, Ijaw and Edo – are large enough to be able to run their own federal regions, others would need to work together in multi-nationality regions. 'We think that Nigeria can be divided into 18 regions, of which 12 can be single-nationality regions,' says Enahoro. 'Of course, this will be open to consultation. It could be that there will be 17 regions, or 21. But 18 is a good starting point for discussions.'

Yet there is a further complication created by the events of 90 years ago. Not only were dozens of identities thrown together into one nation, several ethnic identities were split in two by the British boundaries. The Yoruba, for example, occupied an area that is currently represented by western Nigeria and Benin. Many other groups were split across family lines in the north, where France and Britain squabbled over land.

Enahoro is phlegmatic about such matters. 'Take a look at the Hausas. How long will it be before there is a great Hausa hero who looks on Hausaland being partly in Niger, partly in northern Nigeria, and wonders why there can't be a Hausaland in its own right in the world? And some day there will be. Some day. It is natural.'

Enahoro believes that if this 'natural' desire for the right to manage one's own ►



homeland is not catered for politically, it will be fought for militarily. His main concern is that Nigeria must never again be faced with the horrors of civil war that he saw visited upon his land during the late 1960s. An attempt at secession from Nigeria by the eastern Igbo resulted in devastation of land and culture: the Biafran War and its consequences claimed over a million lives. I ask if there is any possibility of such a bloody war of secession happening again. 'If the constitution does not change, I have no doubt,' he replies gravely. 'And as weapon technology continues to develop, the consequences would be much worse.'

Yet Enahoro has not been a lifelong believer in Nigerian decentralisation. Like all good thinkers he has come to his conclusions through years of experience. As a young man after WWII he had and fought for a single vision: independence from Britain. 'In my early days I believed in one nation – Nigeria full stop,' he says of the late 1940s, when young Nigerians

were beginning to look to a future beyond British rule. 'In those days we drew a lot of inspiration from India. To me Nehru was a great hero. Indian independence

**'Our contention is not against the existence and integrity of Nigeria as a country,' he says. 'Nonetheless, we must not ever tire of repeating that the nationalities of Nigeria have as much right to their existence as Nigeria itself'**

along with membership of the Commonwealth seemed to make such sense that rather than drive for, say, dominion status I felt that independence should be our goal too.'

That goal was gained in 1960, Enahoro being one of the most vociferous speakers

and campaigners to its end. But with independence came a new challenge: representation. Nigeria's then capital Lagos and many of its politicians and leaders were in or came from the huge power base in the south west of the country – the land of the Yoruba, the third largest ethnic group in Africa. The Biafran War, as much as anything else, highlighted this problem.

'We adopted the standard style of Western democracy,' says Enahoro, 'but, because of the nature of our country, the largest nationality would inevitably win elections. Western democracy is based on one-man, one-vote. If you enforce one-man, one-vote in Nigeria one group will forever be in power. You're relying on the hope, the possibility, that somebody will vote for his ideological brother – a federalist, a socialist, or whatever. But it doesn't happen. People vote for their own nationality. We say, therefore, let's have one-man, one-vote, but within the area of the nationality. This is valid.' Other African countries face similar issues: the Shona and Kikuyu, for example, enjoy similar political dominance to the Yoruba in Zimbabwe and Kenya, respectively. Enahoro tells me that interest in the proposed Union of Nigeria is increasing in some of these other nations – particularly Ghana, Kenya and, intriguingly, Swaziland.

Enahoro has his own word for the federal democratic union he envisages: 'equitocracy'. He defines this as 'equity between the nationalities, and equilibrium between the contending and competing interests and social forces in the country'. 'Our contention is not against the existence and integrity of Nigeria as a country,' he says. 'Nonetheless, we must not ever tire of repeating that the nationalities of Nigeria have as much right to their existence as Nigeria itself.'

Perhaps Enahoro's equitocratic dream might have been a little closer to realisation now had it not been for the extraordinary Abacha years in the 1990s – years that kept Enahoro out of the country and ensured that democracy had no voice in any form. 'Perhaps,' says Enahoro. 'But on the other hand perhaps the military rule has acted as a spur for quicker change.' Despite this positive interpretation of history Enahoro has never ceased to be amazed at the way that the military has intervened in the



governance of Nigeria at various times since independence. 'At first I could not believe that the military had taken over. There was nothing in our background or the model we had adopted to suggest this might happen. And it has happened more than once. It is the military that usurps the right and power of people to regulate their own existence and integrity.'

Now that the military has conceded democratic rule once more, Enahoro sees signs that decentralisation is already underway, that the centre cannot hold. 'Many years ago, when you gave a public meeting,' he recalls, 'you spoke in English and there would be translators to translate into other languages. Today in many places it is the other way around. You give the talk in, say, Yoruba, and it is translated into English and other languages where necessary.' The nationalities of Nigeria are already beginning to reclaim their voices.

But how far can such a federal programme really go? What, for example, about the big Nigerian carrot and stick – oil? Who would claim the revenue? Wouldn't regions without natural resources struggle more than those with them? The MNR has worked it out. 'If it's a land-based resource in your region, it's yours and you pay tax. If it's offshore, if it's littoral, you take 50 per cent and 50 per cent goes to the union.'

Simple really. Yet what will not be simple is the actual creation of the regions themselves. Last year's fighting in the central Nigerian city of Jos partly stemmed from a long-simmering resentment between various nationalities. In the early part of the 20th century the British opened up tin mines in the region's plateau. Local groups, including the Berom and Anaguta, refused to work in the mines, so the British brought in workers from the north – particularly the Hausa-Fulani. These people settled in the area. Their descendants are today known as Jasawa. All this happened prior to 1914, so whose land is the Jos plateau today?

Enahoro acknowledges that there will be many complications to the negotiation of regional boundaries. Indeed, he himself cites the case of the Tiv nation – an agricultural people who were still reasonably nomadic up until the 1930s. 'It is true that it could take years and years to develop such a constitution,' he admits. 'But we must try. If we do not, then

## Chief Anthony Enahoro: a life in politics

- 1923** Born in the south-west Nigerian town of Uromi
- 1943** Elected president of the Nigerian Union of Students
- 1945** Appointed editor of the *Southern Nigeria Defender* newspaper, then of Lagos daily *The Comet*
- 1946** Imprisoned by the British colonial police for political activities. Imprisoned again in 1947 and 1949
- 1953** Moved the crisis motion in the federal parliament for Nigeria's self-rule that aimed at ending British rule
- 1954** Became Minister of Home Affairs and Information in Western Nigeria until 1959; also became leader of Nigeria's Western House of Assembly
- 1959** Member of the federal House of Representatives until 1963; and served Nigeria's post-independence parliament as opposition spokesman on foreign and legislative affairs
- 1963** Sentenced to 13 years' imprisonment for defence of democracy and national unity
- 1966** Released and pardoned
- 1967** Principal federal negotiator until 1970 in peace talks to end civil war; and made leader of the Nigerian delegation to the UN General Assembly
- 1968-1974** Member of the Nigerian delegation to the Organisation of African Unity heads of states conferences
- 1980s** Led campaign for restoration of elected civilian government in Nigeria
- 1992** Became chairman of Movement for National Reformation
- 1993** Detained three times until 1996 without trial by Abacha dictatorship
- 1996** Escaped Nigeria and lived in exile in US for four years
- 2000** Returned to Nigeria

nations will seek their own solutions and the country will explode. It is impossible that Nigeria can continue as it is today.'

Enahoro shudders at this thought. His love for Nigeria and the land it occupies is clear. I ask him what achievement of his and his countrymen over his long and still active career has given him most pleasure. He thinks for a moment. 'For me, the defining moment was the eve of WWII. I had known that my family's life had been changed by the British, that my grandfather had watched them take over. But by the war, there was much discussion about what Britain would do with Nigeria. It appeared that they were planning, as part of Europe's horse-trading of the time, to give us to Germany along with Tanganyika. This was too much.'

A colleague of Enahoro's comes into the

room and reminds him that he has a speaking engagement looming in central London. I prepare to leave. Enahoro stands, but continues talking. 'There was a mass meeting in Lagos – 100,000 people attended – and this for me was the beginning. How could they do this? First they come here, they do as they please with us. Now, they want to pass us on to another like cattle. Freedom became our dream. I shed tears the night the flag came down.'

In the same way that Enahoro devoted his life and sacrificed his liberty for the freedom of Nigeria, so he now fights for the freedom of choice for the nations within Nigeria. If the will to listen to the philosophies inherent in his manifesto for change exists within the current political structure, there's every reason to hope that he might succeed again ■

# A Constitution for the Union of Nigeria



Dele Ogun, chief author of the proposed new Nigerian constitution and former chairman of the African, Caribbean and Asian Law Group, summarises its key provisions.

**We the nationalities and peoples of Nigeria having cohabited as a country under arrangements conceived and imposed by colonial powers in their interests, wishing to continue our cohabitation as one country on the basis of our common consent in our own interest and with a view to encouraging peaceful, respectful and supportive relations between our nationalities and peoples so as to advance our common interests, do through our freely chosen representatives adopt this constitution for our Union of Nigeria.**

## New name

The new suggested constitution adopts the name the 'Union of Nigeria' in place of 'Federal Republic of Nigeria' to reflect the fact that Nigeria is not a country of individuals but of nations. The change is also of symbolic importance in marking a new beginning and a break from the past.

## Federation of historic nationalities

Earlier constitutional arrangements for Nigeria have failed to accord to the nationalities their rightful roles within the body politic. The people were welcomed as individuals but they were required to strip themselves of their primordial identities as Yoruba, Hausa, Igbo, etc. The result was a federation of man-made states devoid of historical roots.

The new arrangement is a federation of the historic nationalities in which the established national identities are used as the building blocks of the new federation.

## Eighteen regions

There being more than 100 known nationalities of varying sizes in Nigeria, the new arrangements recognise that a federation with more than 100 direct spokes to the centre would be impracticable. The proposal is, therefore, that the nationalities should be arranged into 18 regions.

Accordingly, the constitution provides for the 12 largest nationalities (Yoruba, Hausa, Igbo, Ibibio, Ijaw, Urhobo, Edo, Tiv, Nupe, Fulah, Gwari and Kanuri) to stand as regions by themselves ('mono-nationality regions') but with each being structured internally as a federation.

The constitution provides for the remaining nationalities to be arranged into six 'multi-nationality regions'.

## Allowing for changes

To guard against the country's past experience of lurching from one constitutional crisis to another, the design of the new constitution has in-built flexibility to accommodate the changing aspirations of the nationalities and the regions.

Thus, the constitution makes provision for a nationality within a multi-nationality region to become a mono-

nationality region on satisfying prescribed criteria as to economic, political and social viability.

Provision is made for a nationality to leave the union peacefully in accordance with a pre-agreed procedure designed to show that the move has popular approval among the nationality concerned. There is a three-year delay mechanism built into the process to allow time for compromises to be worked out.

## A voice at the centre for the nationalities

To give the nationalities a true voice in the legislative process at the union level, the new constitution proposes the establishment of a 'House of Nationalities' to replace the existing Senate as the upper legislative house.

## Bringing government closer to the people

To underpin true federalism, the principle of 'subsidiarity' is entrenched and, in a departure from the current arrangements – in which all revenue flows from the centre down to the states, revenue flow will in the main be from the bottom up. This will enhance accountability and reduce the scope for corruption.

## Constructive diversity

The new arrangements seek to manage and celebrate Nigeria's diversity, and not to suppress it as in the past.

They provide for each nationality to have its own flag that will incorporate a common union emblem. More importantly, while English will be retained as the official language at the centre, allowance is made for the nationalities to use their own languages as their official language within their own areas. In so doing, the constitution will make literate and educated many who may be regarded as illiterate and uneducated because they cannot speak or read English.

## Return to the parliamentary system of government

The constitution assumes a return from the presidential to the parliamentary system of government. Apart from the cost of the presidential system, the

main reason for the departure is the over-personalisation of power in one individual who is typically from one only of Nigeria's more than 100 nationalities. The parliamentary system has the advantage of allowing room for more 'owners' and, as such, is more suitable for a multi-ethnic state like Nigeria.

**Collegiate offices**

For the same reasons, the constitution adopts a system of collegiate offices (as distinct from single-person offices) for the control of the key union institutions such as the Central Bank, the Supreme Court, the Civil Service Commission, the Auditor General's Office and the Accountant General's Office. Each region will have a seat on the governing boards. This is a confidence-building device to encourage accountability and a sense of belonging and ownership.

**New arrangements for electing the Head of State**

The size of Nigeria in relation to Africa means that the country will always have a major profile in international affairs. This dictates the need for the office of Head of State distinct and apart from that of the Chief Minister. The Head of State must command cross-nationality appeal but, at the same time, cannot have such direct popular appeal as to carry the danger of undermining the executive.

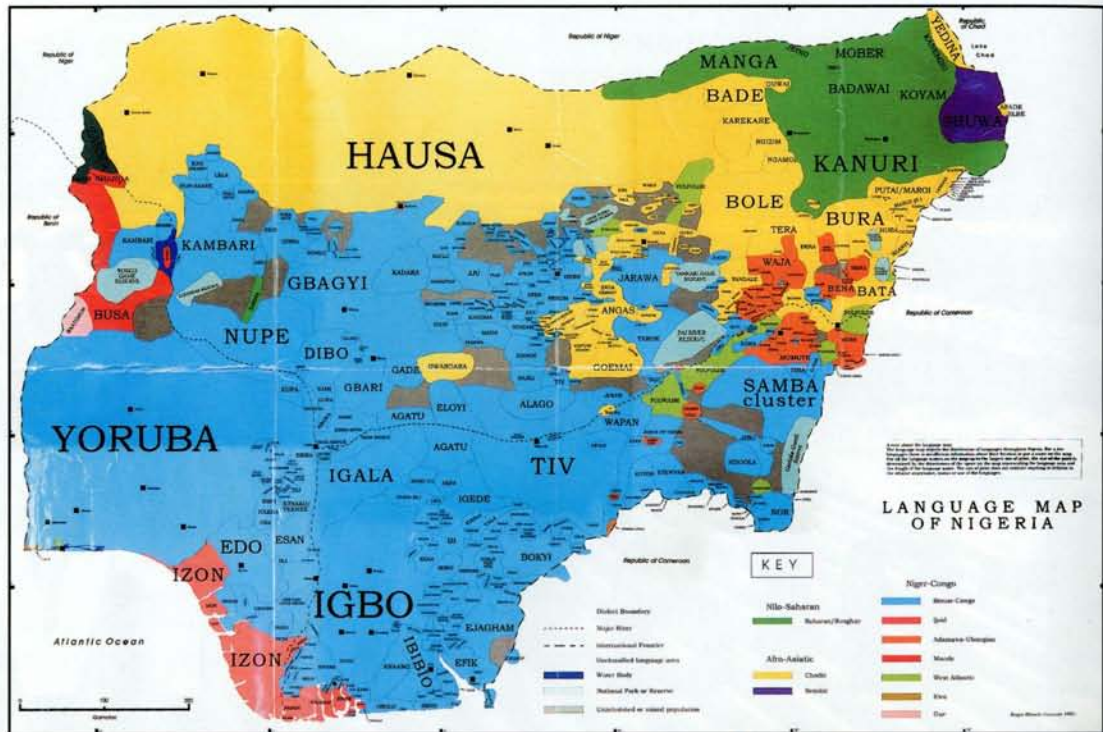
The constitution makes provision for indirect elections for the Head of State by an electoral college of all the legislative houses in the regions.

**New formula for sharing oil revenues**

The new constitution recognises that control of oil revenues lies at the heart of the crisis within the Nigerian state. The oil-producing nationalities feel cheated while the non-oil-producing nationalities feel insecure.

The new arrangements attempt to give security to the latter while being fairer to the former. The expectation is that each will consider half a loaf is better than none at all.

On this basis, the constitution provides for onshore oil revenues to be credited exclusively to the nationality to



which the land belongs. Offshore oil revenues are to be credited partly to the contiguous littoral nationality for the benefit of its nationals and partly to the union for the benefit of all Nigerians.

**New safeguards for the people's sovereignty**

The constitution targets three groups of people for special treatment on the basis that their conduct, if unchecked, serves to destroy the very foundations of civil society. These are soldiers who abuse the trust reposed in them to organise coups; individuals who engage in election malpractices; and public officers who engage in corrupt practices.

They are to be the target of a new constitutional crime — 'a crime against the people'. Citizens will have the right to bring the prosecution for these offences without limit of time.

To ensure that the people retain ownership of the constitution, it contains facility for the citizens, independently of the legislature, to initiate amendments to the constitution in a fashion similar to the Swiss constitution.

The main lesson from Nigeria's political history is that the business of

the defence of the people's liberties cannot be entrusted exclusively to professional soldiers. Such over-delegation has led to a 'them-and-us' attitude between the soldiers and the people. To bridge the divide, and as anti-

dote to coups, the constitution requires the civilian population to share the responsibility of national defence with the professional army through a civilian reserve force like the British Territorial Army and US National Guard ■

**The constitution provides for the remaining nationalities to be arranged into six 'multi-nationality' regions/federations, comprised as follows:**

- 1 Cross River and Akwa Ibom states (ie, the Eket, Annang, Oron, Ibeno, Efik, Ejagham, Korop, Boki, Bakwara, Yakurr and Yala);
- 2 Bayelsa and Rivers states (ie, the Ikwerre, Etchei, Ekpeye, Engeni, Ogba, Eleme, Ndoni, Ogoni and Andonji);
- 3 Edo and Delta states (ie, the Ika, Ndokwa, Warri and Isoko);
- 4 the west Middle Belt (ie, the Zuru, Kambari, Bariba, Bussa, Karekare, Ngizim, Angamo, Bola, Funne, etc);
- 5 the central Middle Belt (ie, (a) the Ebiru group consisting of the Ebiru-Uku, Ebiru-Ugu, Ebiru-Panda, Etuno-Igarra, Ebiru-Mozun and Bassa-Nge; (b) the Igala group; (c) the Upper Benue group consisting of the Alago, Eggon, Gwandara, Mada, Kakanda, Mighili, Bassa-Komu, Ninzon, Arum, etc; and (d) the Nok group consisting of the Atyap, Ham, Bajju, Ninzam, Ikullu, Kamanton, Gwandara, Kahugu, Kwasam, Hori, Ninkyop, etc);
- 6 the east Middle Belt (ie, (a) the Plateau group consisting of the Ngas, Berom, Afezere, Taroh, Goemai, Mavo-Jukun, Amu, Pyem, Youn, etc; (b) the Taraba group consisting of the Chamba, Jukun, Kuteb, Mambila, Kona, Kunni, Kaanab, Ndoro, Abakwa, Mumuye, Yububen, etc; and (c) the Savanna group consisting of the Burra, Tangale-Waja, Bachama, Manghi, Kilba, Yungur, Mwanna, Bwazza, Mbula, etc).



**Food**

*Fatal Harvest* is a brilliant exposé of the myths peddled to justify industrial agriculture. In a three-part adaptation of the book, *The Ecologist* lays bare the truth behind those myths, starting here with the claim that agribusiness will end world hunger.

# Fatal harvest

Deadly myths of industrial agriculture

**The total cost of large-scale farming, like these monocropped fields are incalculable. How do you estimate the toll when billions of pesticides are released each year into the environment?**

**During industrial agriculture's prime years (1970-1990) the number of hungry people in every country except China actually increased by more than eleven per cent.**

Industrial agriculture is devastating our land, water and air. It is threatening the sustainability of the biosphere. Its massive chemical and biological inputs cause widespread environmental havoc as well as human disease and death. Its monoculturing reduces the diversity of our plants and animals. Its habitat destruction endangers wildlife. Its factory farming practices cause untold animal suffering. Its centralised corporate ownership destroys farm communities around the world and lead to mass poverty and hunger. In short, the industrial agriculture system is clearly unsustainable. It has truly become a fatal harvest.

But despite these impacts, industrial agriculture still gets a free ride from our media and policy makers. It is rare to hear any questioning – much less a call for the overthrow – of this increasingly catastrophic food production system.

This troubling quiescence can be attributed in part to the enormous success that agribusiness has had in utilising the 'big lie'. This is a technique familiar to all purveyors of propaganda. Corporate agriculture inundates the public with self-serving myths about modern food production. For decades now, the industry has effectively countered virtually every critique of industrial agriculture with the big-lie strategy.

The agribusiness myths have become all too familiar. Industrial

agriculture is necessary to: feed the world; provide us with safe, nutritious, cheap food; produce food more efficiently; offer us more choices; and, of all things, save the environment.

And when confronted with the indisputably negative environmental and health impacts of industrial agriculture, the sector immediately points to technological advances – especially recent achievements in biotechnology – as the panacea that will solve all problems.

The agri-business claims are broadcast far and wide by way of industry lobbying efforts, product promotions and multi-million-dollar advertising campaigns on TV, in newspapers, magazines and farm journals, and via radio.

Moreover, as the industry becomes more consolidated – with the same biotech companies owning the seed and chemical businesses and a handful of firms controlling a majority of food brands – the strategies for promulgating these myths become ever more concerted and the messages ever more honed. US corporation Archer Daniels Midland is now known to all Americans as the 'supermarket to the world', while Monsanto offers 'Food, Health, Hope'.

Industrial agriculture's myths have been, and are being, repeated so often that they are taken as virtually unassailable. It is therefore essential that they are debunked. ►

Myth Number 1

**INDUSTRIAL AGRICULTURE  
WILL FEED THE WORLD**

**The truth:** World hunger is not created by lack of food but by the poverty and landlessness which deny people access to food. Industrial agriculture actually increases hunger by raising the cost of farming, by forcing tens of millions of farmers off the land and by growing primarily high-profit export and luxury crops.



SIBBO

There is no myth about the existence of hunger. It is estimated that nearly 800 million people go hungry each day. And millions live on the brink of disaster.

Malnutrition and related illnesses kill as many as 12 million children per year. Famine continues in the 21st century, though few of us are aware of the truly global nature of the problem. In Brazil 70 million people cannot afford to eat properly, and in India 200 million suffer hunger on a daily basis. Even in the US, the world's number-one exporter of food, 33 million men, women and children are considered among the world's hungry.

There is, however, a myth about what is causing this tragic hunger epidemic and what it will take to alleviate it. Industrial agriculture proponents spend millions each year on advertising campaigns that claim that people are starving because there is not enough food to feed the current population – much less a continually growing one.

'Guess who's coming to dinner? 10 billion by 2030'. So stated the Monsanto website, warning of the 'growing pressures on the Earth's natural resources to feed more people'. Monsanto claims that low-technology agriculture 'will not produce sufficient crop yield

increases to feed the world's burgeoning population'. Its answer to the 'problem' is pesticide- and technology-intensive agriculture that will produce the maximum possible output from the land in the shortest possible amount of time. Global food corporations, the company says, will have to serve as the 'saviours' of the world's hungry.

**Hunger in a world of abundance**

A deeper look at the root causes of hunger will reveal that any claim that it is caused by a lack of food is nonsense. In reality, food production has kept pace with population growth. Studies conducted by the UN Food and Agriculture Organisation clearly indicate that it is abundance, not scarcity, that best describes the world's current food supply. Every year enough wheat, rice and other grains are produced to provide every human with 3,500 daily calories. In fact, enough food is grown worldwide to provide 4.3 pounds of food per person per day. This figure would include two and a half pounds of grain, beans and nuts, a pound of fruit and vegetables and nearly another pound of meat, milk and eggs.

What about the pace of population growth in the future?

Although many people argue that we should curtail population growth for ecological and socio-economic reasons, history has not yet borne out the Malthusian concept that population growth equals hunger. Indeed, during the last 35 years per-capita food production has actually grown 16 per cent faster than the world's population. Peter Rosset, of Food First, states: 'We now have more food per person available on this planet than ever before in human history.'

**The real cause of hunger**

If we have plenty of food to feed today's population – and to support population growth for the foreseeable future, why then do 800 million people go hungry every day? One basic cause is 'food dependence'.

For centuries and in virtually every area of the globe, the industrial system of agriculture has 'enclosed' farmland – forcing subsistence peasants off land so that it can be used for growing high-priced export products instead of diverse crops for local populations. The result of enclosure continues to be that untold millions of peasants lose their land, community, traditions and 'food independence'. By 'food independence' is meant people's

**800 million  
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exporter of food,  
the US**

ability to grow their own food.

Removed from their land and means of survival, the new 'landless' flock to industrialised cities where they quickly become a class of urban poor competing for low-paid jobs, and doomed to long-term hunger or starvation.

The victims of enclosure are becoming ever more numerous. Just 50 years ago only 18 per cent of the population of developing countries resided in cities; by the year 2000 the figure had jumped to 40 per cent. Unless current policies change, it is estimated that by 2030 56 per cent of the developing world will be urban dwellers. A UN report has found that close to 50 per cent of this urban population growth is due to migration, much of it forced, from rural to urban communities.

After enclosure both the urban and rural poor are completely food dependent. Their access to food is solely by purchase. Very often they simply do not have enough money to buy food, so they starve. Increasing agricultural output has little effect on the hungry because it fails to address the key issues of purchasing power and access to land which are at the root of hunger. As Food First has stated: 'If you don't have land on which to grow food or the money to buy it, you go hungry no matter how dramatically technology pushes up food production.'

**Farmers who can't buy food**

Industrial agriculture causes mass starvation not only among the urban poor but also in farming communities. The chemical and technological inputs and patented seeds brought to farmers in the Third World by agribusiness have dramatically increased the costs of farming. Even as the farmer must pay more and more to farm 'industrially', higher yields and worldwide competition have led to lower prices being paid to the farmer. Yet, because of high middle-man costs, the prices of food are not

**Industrial agriculture favours luxury high-profit items like flowers, sugar cane, beef, shrimp, cotton, coffee and soy beans for export to wealthy countries. Local people are left with nothing**

generally lower for the consumer.

Advances in industrial agriculture have, therefore, put millions of the world's farmers in a fatal bind: they spend ever more in production costs, yet receive ever less income. The cruel irony is that even as these farmers grow the world's food, they cannot afford to feed themselves. This has resulted in mass starvation in rural communities, epidemics of farmer suicides and the annihilation of farm communities throughout the globe. Currently, more than half a billion rural people in the Third World have become landless or do not have either sufficient land or money to buy or grow their own food.

**Exports devour people**

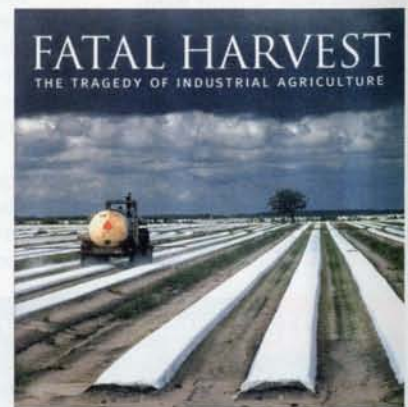
Yet another way industrial agriculture increases hunger is by what it grows. The problem is that after corporate-driven agriculture 'encloses' land and evicts farm communities it does not grow staple foods for the hungry. Global corporations favour luxury high-profit items like flowers, sugar cane, beef, shrimp, cotton, coffee and soya beans for export to wealthy countries. Local people are often left with nothing. As export crops and livestock use up available land, small farmers are forced to use marginal, less fertile lands. Staple food production for local use plummets and hunger increases. In Africa, for example, while severe famines have occurred in the past decade industrialised agriculture has achieved record yields for its cash crops.

In fact, one could classify the world's population into three groups: there are about 1.2 billion 'over-consumers' who eat the equivalent of 850 kilograms of grain each year – mostly in the form of animal products or other 'luxury' foods; there are another 3.5 billion 'sustainers' who consume the equivalent of 350 kilograms of grain in a mixed diet; and there are 1.2 billion people who are surviving on only 150 kilograms or less each year. In the light of this, it should not be

surprising that during industrial agriculture's prime years (1970-1990) the number of hungry people in every country except China actually increased by more than 11 per cent.

Currently, most government and private-sector efforts to reduce world hunger are focused on the technological quest to produce ever higher yields on agricultural land. But yet again this misguided approach is actually increasing the hunger crisis and causing environmental and social devastation. The myth that more food will cure hunger also diverts attention from the urgent need for economic reforms, land redistribution and sustainable and affordable farm practices. We need a revolution in our approach to feeding the world. The focus has to be on supporting local agriculture, where people live close to (or on) the land, grow food for their own communities and use ecologically sustainable techniques. In other words, hunger can only be solved by an agricultural system that promotes food independence ■

**That's just myth one. Next month we focus on myths two-four: that industrial food is safe, healthy and nutritious; that it is cheap; and that it is efficient. The final three myths will be exposed in December.**



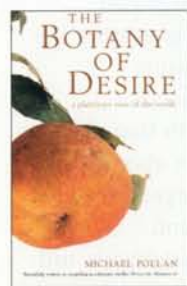
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# Reviews

## The Botany of Desire: a plant's-eye view of the world

Michael Pollan  
Bloomsbury ISBN 0747557942

Reviewed by Madeleine Minson



What if the plants that we think we are using are in fact exploiting us, that we are mere vehicles for their propagation? Pollan's proposition

turns anthropocentrism on its head, positioning humans as agents like any other in the ecosystem to which we belong.

Pollan focuses on four plants – the apple, the tulip, marijuana and the potato, and explores how human desires (for sweetness, beauty, intoxication and control, respectively) have furthered these plants' causes.

While looking into the history of each plant, Pollan raises some urgent questions. Of the apple, he argues for the need to safeguard the plant's genetic diversity. This is threatened by 'the monoculture of global taste' and the practice of grafting just a few kinds of trees – the ones that produce apples that sell best.

But it is on the potato that Pollan's book is most hard-hitting. For a season, Pollan grows Monsanto's 'NewLeaf' potatoes. They are genetically modified to produce their own insecticide. Indeed, the whole plant is registered as a pesticide.

The potatoes fend off bugs and grow remarkably well, but Pollan never dares eat them,

reflecting instead on the risks involved in meddling with genes. 'Today's gain in control over nature will be paid for by tomorrow's new disorder, which in turn will become simply a fresh problem for science to solve,' he writes.

The main thesis about our role as the unwitting servants of plants may seem far-fetched, but it's an important reminder of our symbiotic relationship with the plant life around us.

## The Total Beauty of Sustainable Products

Edwin Datschefski  
Rotovision ISBN 2880465451

Reviewed by Caroline Driver



'Only one in 10,000 products is designed with the environment in mind,' Edwin Datschefski

tells us in *The Total Beauty of Sustainable Design* – a book which prompts us to think about the wider implications of the products we consume.

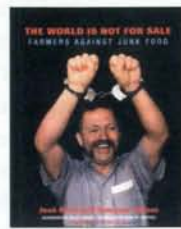
Datschefski presents a selection of 'totally beautiful' products, designed to minimise social and environmental impacts throughout their life cycle. But is the bid to marry sustainability and consumption sound? Do we really need solar-powered milk frothers? And can a Nike shoe box, with all its labour-standard implications, have any beauty?

These concerns aside, the book makes a bold stab at convincing that a social and environmental conscience can be compatible with good design.

## The World is not For Sale – farmers against junk food

José Bové and Francois Dufour  
Verso ISBN 1859844057

Reviewed by Richard Orange



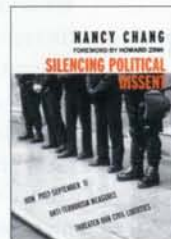
French activist farmers Bové and Dubois tell the story of their famous protest against McDonald's.

It's a forceful account of their distinctive Gallic brand of anti-globalisation. The main target is *malbouffe* – a concept taking in fast food, GM, pesticides and the rest of the industrialised food industry.

## Silencing Political Dissent

Nancy Chang  
Seven Stories Press ISBN 1583224947

Reviewed by Richard Orange



'History teaches us that grave threats to liberty often come in times of urgency,' states Nancy Chang. What follows is a

chilling analysis of US anti-terrorism measures post-September 11, their devastating impact on the US constitution, and their threat to liberty in the land of the free. Crucial reading for Americans, but the call for vigilance against the executive's lust for power applies everywhere.

## Big Bad World

Polyps cartoons  
New Internationalist Publications  
ISBN 0954049934

Reviewed by Jeremy Smith



Should anyone want an answer to what fires up the anti-

globalisation movement, they need look no further. Righteous anger made digestible by a sharp sense of the ridiculous. Polyp's cartoons should be pasted on billboards alongside every road in Britain. Radical loo-reading.

## The Nature of Design

David Orr  
Oxford University Press  
ISBN 019514855

Reviewed by Sarah Perry



Orr's argument is that most of the crises facing our ecosystem are due to 'design failure'. He advocates ecological design, and urges educating college students in environmental awareness.

The creativity of thought displayed is refreshing when compared to the hundreds of texts that criticise current practice without offering substitutes. And Orr's understanding of the role physical surroundings play in human thinking inspires a vital alternative to the technological fundamentalism constricting so much current thought.

## FROM THE ARCHIVES

*The Ecologist*  
vol 15 no 1/2 1985



## The World Bank – Global Financing of Impoverishment and Famine

What are the root causes of the famine confronting much of Africa? In 1985, the same year as Live Aid, *The Ecologist* published a special issue looking at how the World Bank's development policies were inextricably linked with the famine then gripping the continent. Articles included 'Is African drought an act of God or man?', 'Does economic development feed people?' and 'Forcing the poor to export their food'.

## WEBSITE [www.peopleearthsummit.net](http://www.peopleearthsummit.net)

While for many the trip down to Johannesburg will represent the sum of their environmental engagement for 10 years, this website will document the ongoing activities of a disparate collection of groups with a genuine commitment to improving the world for all. With an email newsletter and links to a wealth of worldwide organisations, this site really is a force for good.

## OBITUARY

### The woman who knew too much

Last December we profiled the veteran UK scientist and anti-nuclear campaigner Alice Stewart. Sadly, Alice Stewart died, aged 95, in June of this year. But we have more than just memories of someone who devoted her life to fighting for what she believed.

Asked last year why she still carried on, she replied:

'Many times I have been asked why I didn't follow my friends into quiet retirement. If I was a coward and afraid for my job, I wouldn't say a thing. But I am retired. I have no department that anybody depends on for work. I speak out because I think there are not a lot of other people in such a good position. I have nothing to lose. This type of research can be shut down. I've watched it happen.'

*The Woman Who Knew Too Much* (University of Michigan Press, ISBN 0472111078) not only recounts Stewart's long struggle as an isolated scientist battling the nuclear establishment. It also details that establishment's tactics in the propaganda war over nuclear waste disposal, safety standards and compensation claims.

#### THE WOMAN WHO KNEW TOO MUCH



## Seeds of Distrust - the Story of a GE Cover-Up

Nicky Hager

Craig Potton, ISBN 0-908802-92-7

Reviewed by John Napier



Released shortly before New Zealand's general election earlier this year, this book came close to toppling the

incumbent Labour government.

Internationally-respected investigative journalist Nicky Hager exposes the lies, the media manipulation and the spin surrounding the issue of GM crops in New Zealand. A story of the anti-democratic influence of big business, abuse of power and above all a serious breach of trust by the very politicians who had been saying 'trust us' over genetic engineering in New Zealand.

## Rain

Brian Cathcart

Granta ISBN 1862075344

Reviewed by Jeremy Smith



'A new and watery view of global warming', moots Cathcart, 'provides a good moment to stop and think about the rain.' And

from the birth of meteorology to the recent floods in Britain, that is what he does – showering the reader with anecdotes, quotations and wry observations on tarmac, the umbrella and why the English are so casual about getting wet.

It's a charming book, if a bit lightweight, which concludes: 'While at times we may get above ourselves, there is no such thing as getting above the rain.'

## Secret Trials and Executions

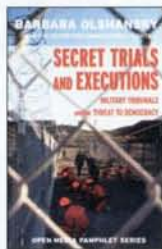
Barbara Olshansky

Open Media Pamphlet Series

ISBN 1583225374

Reviewed by Richard Orange

A month after September 11, George Bush signed the Military Order, giving him power to set up military tribunals for non-US citizens. Thus, he granted himself the power to identify who will be



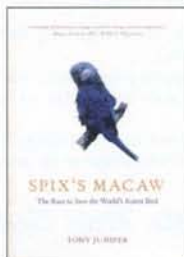
tried, according to rules he decides, using judges, prosecutors and defence lawyers he appoints, handing down sentences he dictates. All in total disregard for the separation of powers between congress, courts and executive. Olshansky brilliantly lays out how unprecedented, unconstitutional and contrary to international law this all is.

## Spix's Macaw

Tony Juniper

HarperCollins ISBN 1841156507

Reviewed by Harry Ram



Friends of the Earth policy director Tony Juniper's brilliant account of the 10-year struggle to save a rare Brazilian

parrot is part impassioned environmental parable, part compelling travelogue. Juniper takes us from London through Brazilian high society, slums and outback to Swiss villas and Sheiks' palaces. As a witness to the courage of conservationists, the greed of collectors and the weakness of governments, it is peerless.

## SEMINAL BOOK

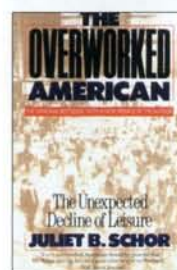
Not all the best books were written this year...

## The Overworked American

Juliet B Schor

Basic Books ISBN 046505434-x

Reviewed by Jeremy Smith



As Schor observes: 'One of capitalism's most durable myths is that it has reduced human toil.' We are repeatedly assured that ever increasing

production will result in shorter working hours and increased leisure time. But Schor's work shows how leisure exists in spite of, rather than as a result of, capitalism.

First published in 1992, *The Overworked American* reveals how 10 years ago, working hours had increased to such an extent that Americans were working on average one month a year longer than they had been 20 years before. That figure can only have grown since then.

## INTRODUCING...

## Dams

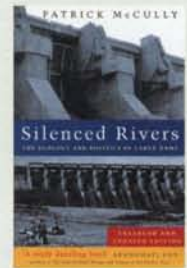
compiled by John Napier

### BOOK

## Silenced Rivers – the ecology and politics of large dams

Patrick McCully

Zed Books ISBN 1856499022



New edition of Patrick McCully's classic. McCully tells the story of the international anti-dam movement and suggests alternatives to dams.

Subjects include: the environmental and human consequences of large dams, and the myriad of associated technical problems.

### ORGANISATION

## International Rivers Network

Tel: +1.510.848.1155

[www.irn.org](http://www.irn.org)

Educational and campaigning group. This is your foremost resource for alternative information about river system protection.

### WEBSITE

## The World's Water

[www.worldwater.org](http://www.worldwater.org)

Definitive data on the state of the planet's fresh water resources, supported by exhaustive web links.

### CAMPAIGN

## Friends of the River Narmada

[www.narmada.org](http://www.narmada.org)

A wealth of information about Narmada Bachao Andolan, the ongoing campaign against India's most infamous dam project.

### VIDEO

## Drowned out

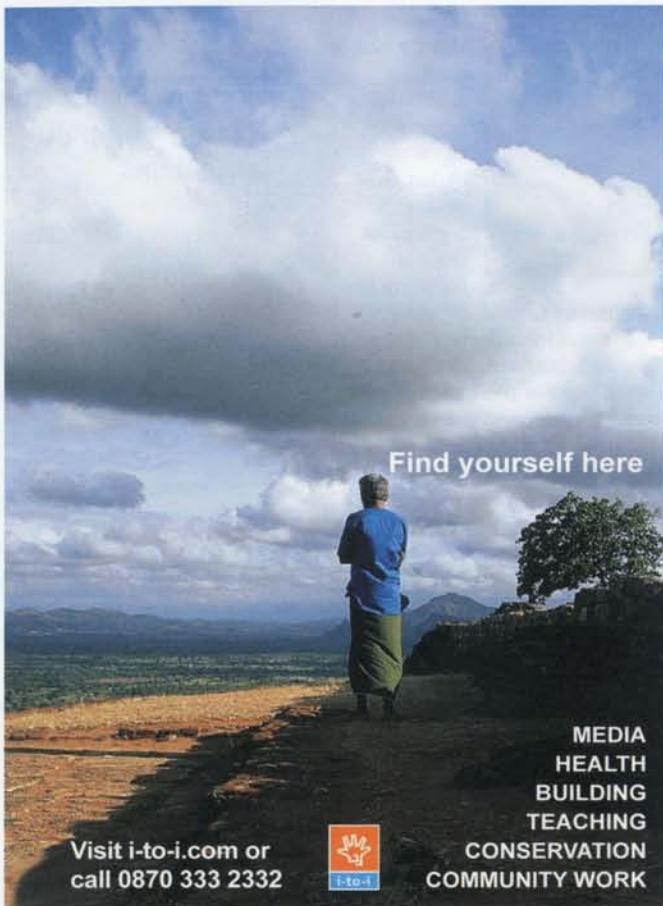
[www.spannerfilms.net](http://www.spannerfilms.net)

Brilliant and vital documentary exposing what is really happening at Narmada. Watch it online, or order a copy from [www.cultureshop.org](http://www.cultureshop.org).

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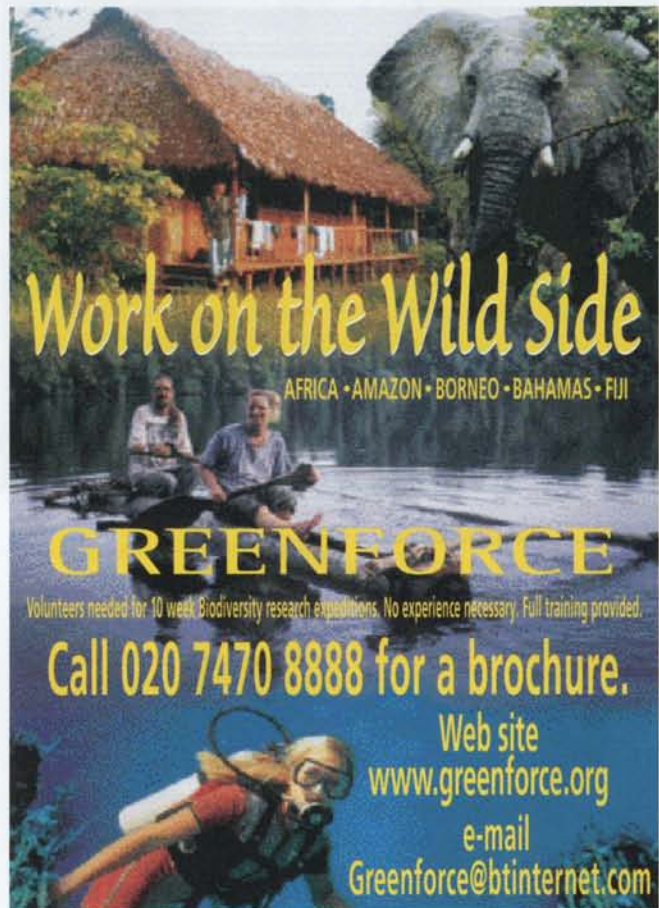
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**For further information contact:**

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**Anti-slug strategies** The Centre for Alternative Technology invites gardeners to join the fight against slug damage by sending in their own favourite strategies. The best slime fighters will be published in CAT's book out this autumn and on the website  
[www.ihateslugs.com](http://www.ihateslugs.com) [catpub@globalnet.co.uk](mailto:catpub@globalnet.co.uk)

**The Galapagos Conservation Trust** is launching a Marine Appeal to help protect the unique Galapagos Marine Reserve. Our aim is to raise at least £200,000 to ensure enough resources to protect this beautiful underwater paradise. [gvt@gct.org](mailto:gvt@gct.org) or [www.gct.org](http://www.gct.org)

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**Community Conservation and Development Initiative** is a non-profit organisation involved in environmental conservation. We are looking to produce environmental education packs for young

people. Need info on **rainwater harvesting, composting and waste disposal**. If you can help, contact [ccdi@hyperia.com](mailto:ccdi@hyperia.com)

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**Waltz** is the place for information on campaign dates for your diary. Also provides a place to find and submit articles and discuss issues. Email: [rebel@rebelwaltz.net](mailto:rebel@rebelwaltz.net)

**Women's Environmental Network** is campaigning for safer cosmetics. Modern cosmetics and toiletries contain synthetic chemicals that threaten human health and the environment. Join us: [localgroups@wen.org.uk](mailto:localgroups@wen.org.uk)

**The Lie of the Label II**. If people are to make informed purchases so they can eat more healthier, clear information must be given. This report exposes the majority of the food labelling industry for what it is: blatant, misleading marketing tactics. The report can be read in full at: [www.co-op.co.uk](http://www.co-op.co.uk)

Campaigning against cruelty and abuse to farmed animals, **Farmed Animal Action** supports farmed animal sanctuaries and promotes a cruelty-free lifestyle. Log on to our website to find out about the live export campaign and more. [www.farmedanimalaction.co.uk](http://www.farmedanimalaction.co.uk)

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**Free GIS programs**, mapping tutorials, environmental maps and data. [meuser@mapcruzin.com](mailto:meuser@mapcruzin.com)

**Solarfuture** is an NGO promoting solar energy and other renewable solutions for a sustainable economy. Contact: [bruno@solarfuture.org](mailto:bruno@solarfuture.org)

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**Documentary Producer/Director/Researcher/Photographer** seeks ethical/social projects that reflect the ethos of *The Ecologist*. Contact Robyn on 07870 675 131 or at [robyn24\\_7@hotmail.com](mailto:robyn24_7@hotmail.com)

**Need someone to translate** material on social, political, labour and environmental issues from **Portuguese, Spanish or French into English?** Contact: Chris Whitehouse, 47 Hackford Road, London SW9 0RE. Tel: 020 7735 3237; email: [chris.whitehouse1@virgin.net](mailto:chris.whitehouse1@virgin.net)

### VISIT

**Earth's General Store** Edmonton, Canada. Stockist of all the best ecological magazines and so much more. Telephone +1 780 439 8725. [d\\_brimnell@yahoo.com](mailto:d_brimnell@yahoo.com)

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### VOLUNTEERS

**Development Organisation of Rural Sichuan (DORS)** is looking for a **Volunteer Project Assistant**.

Volunteer is needed to help with the design, implementation and monitoring of projects, as well as general administrative tasks in our field office located in rural Sichuan, China. Post for 18 months, beginning in Oct 2002.

**Requirements:** Fluency in Mandarin Chinese and English is essential. Experience in rural community development and/or degree in Development Studies or related discipline required. Due to the nature of the work the applicant must be physically fit. <http://www.dors.org.uk>

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# ecologist DIARY DATES

## OCTOBER

### 2 OCTOBER

**World Farm Animal Day** will be marked on the anniversary of Ghandi's birth. 45 billion farmed animals are exploited, abused and killed every year. Please join us in highlighting the plight of farmed animals. Farmed Animal Action, PO Box 27, Tonbridge, Kent TN12 5WJ. Tel: 0845 4560284 [info@farmedanimalaction.co.uk](mailto:info@farmedanimalaction.co.uk) [www.farmedanimalaction.co.uk](http://www.farmedanimalaction.co.uk)

### 4-6 OCTOBER, SHEFFIELD, UK

**'From the Front Line: Star Wars and Globalisation'**. International conference on missile defence, globalisation and the militarisation of space. Sheffield University Students Union Building. Email: [neil@yorkshirecnd.org.uk](mailto:neil@yorkshirecnd.org.uk) Visit: [www.yorkshirecnd.org.uk](http://www.yorkshirecnd.org.uk)

### 4 OCTOBER, MANCHESTER, UK

**Rising Tide Gathering**. Grassroots action against climate change: info, workshops, debates, campaigns, inspiration. Contact: 01865 241 097 or [Info@risingtide.org.uk](mailto:Info@risingtide.org.uk)

### 10 OCTOBER, LONDON, UK

Greenpeace Business Seventh Annual conference. **'Challenging the DNA of Business'**. At the London Marriott Hotel. Contact: 020 7865 8269. Email: [Sammy.daniel@uk.greenpeace.org](mailto:Sammy.daniel@uk.greenpeace.org) Visit: [www.greenpeace.org.uk](http://www.greenpeace.org.uk)

### 17 OCTOBER, LONDON, UK

**The Earthwatch balloon debate**. Five eminent scientists take up the cause of different habitats. Each will argue why their particular habitat should be saved from destruction. Royal Geographical Society, 1 Kensington Gore; 7pm. Free admission, but by ticket only. Tel: 01865 318 856. Visit: [www.earthwatch.org/europe](http://www.earthwatch.org/europe) Email: [info@earthwatch.org.uk](mailto:info@earthwatch.org.uk)

### 19 - 20 OCTOBER, BRIGHTON, UK

**The Brighton and Hove Festival of Holistic Living**. The Hove Centre will be the spacious and modern back-drop to the popular show. Come and explore all that is best in the holistic, new age tradition. Free and low-cost lectures and workshops. Visit: [www.holisticlondon.co.uk](http://www.holisticlondon.co.uk)

### 19 - 20 OCTOBER, BRISTOL, UK

**Annual General Meeting & convergence**, hosted by the Bristol Permaculture Group. [www.permaculture.org.uk](http://www.permaculture.org.uk)

### 29 OCTOBER, BRIGHTON, UK

**Clean water – a sustainable resource?** An event brought to you by clean water advocates **Surfers Against Sewage**. Looking to the future of water in the UK, with a chance to question the decision makers and have your say on how a sustainable water strategy should develop. Telephone: 01872 553001 or email: [nicole@sas.org.uk](mailto:nicole@sas.org.uk)

## GLOBAL DEVELOPMENT

### FORUM LECTURES, LONDON, UK

**The Global Development Forum** is running a series of debates to discuss the future of the planet. St James' Church, Piccadilly – 7pm. Tickets £5 (cons £3). Tel: 020 7274 5406. Visit: [www.global-development-forum.org](http://www.global-development-forum.org).

### 2 OCTOBER

**'Can we convince the US to join the battle against world poverty?'**

### 9 OCTOBER

**'The earth summit in Johannesburg: a missed opportunity?'** with Zac Goldsmith.

### 16 OCTOBER

**'Human rights vs basic rights'**.

### 23 OCTOBER

**'Can globalisation work for the poor?'** with Mr George Soros.

### 30 OCTOBER

**'Not in my backyard; linking refugees and development'**.

## NOVEMBER

### 6 NOVEMBER, LONDON, UK

**Fundraising lecture for Friends of Conservation's 20th Anniversary**, Royal Geographical Society. Author and wildlife photographer Jonathan Scott will be discussing his most

recent adventures and voicing concerns in the conservation world over the rapid decline in lion numbers across Africa. Tickets: £15 for lecture only and £20 for lecture and reception.

Send cheques (made out to FOC) to: Nathalie Nickson, FOC, 16-18 Denbigh Street, London SW1V 2ER.

### 11 NOVEMBER, LONDON, UK

New Economics Foundation presents **Anti-Apathy at the Spitz** – an evening event on Cultural Diversity or Global Monoculture? Dominated by US and Western values and lifestyles, the global monoculture has infiltrated every corner of the Earth. Email: [info@neweconomics.org](mailto:info@neweconomics.org)

### 14 NOVEMBER, LONDON, UK

Earthwatch lecture series: **'Conservation in the Americas: from the north cascades to Brazil's Pantanal'** with Dr Ralph Riley, Conservation Field Director, Earthwatch Institute, USA, Don Eaton, University of Nevada, Reno. Free admission, but by ticket only. See above for contact details.

### 25 - 26 NOVEMBER, LONDON, UK

**World Food and Farming Congress**, Olympia Conference Centre, Kensington. Email: [Info@wffc.co.uk](mailto:Info@wffc.co.uk)



## VOLUNTEERS WANTED

To work as interns at  
**The Ecologist**, please email:  
[Belinda@theecologist.org](mailto:Belinda@theecologist.org)

# Fight or flight?

compiled by  
Nupul Agrawal  
and John Napier

The British government *predicts* a threefold increase in air transport by 2030, and fully intends to *provide* for it. Why not *predict* and *prevent* it?

**If government air transport demands are met, this would be the equivalent of building a new airport, the size of Stansted, every year for the next 30 years**

## Meeting the government's 'predicted' demand would require:

- The equivalent of building a new airport, the size of Stansted, every year for the next 30 years.
- The destruction of greenbelts, in order to provide for new airports.
- Demolition of existing housing, in order to provide for new runways and extend existing ones.
- Loss of valuable wildlife habitats and heritage.

## Meeting predicted demand would mean:

- Aviation related healthcare costs (eg respiratory problems, cardiac diseases and nervous disorders) are projected to triple to £3.9bn, causing a dramatic impact on the quality of life of local communities. Aviation related healthcare currently costs the taxpayer 1.3 billion a year.
- Increase in the emission of greenhouse gases by airplanes, which will make up 15 per cent of global man-made climate change by 2050. The current cost of UK aviation to climate change is well over £2 billion per annum.
- A vast increase in noise pollution. Already, 1 in 8 of the population are detrimentally affected. Aircraft noise pollution currently costs the British economy £313 million a year.
- Up to a third of total UK energy to be used by aviation by 2050.
- No change in the level of employment. The government claims that it would increase. The Berkeley Hanover study (2000) shows that a new transport infrastructure doesn't create employment, but simply means a redistribution of jobs.
- Air traffic would grow at a rate four times that of road traffic.

*'Fill your small car with petrol to drive to your granny's and most of the bill for it goes in fuel duties. Governments defend the tax by saying we should use cars less to protect the environment. Fill a vast jumbo with fuel to fly a bunch of businessmen across the Atlantic and the airline pays not a penny in tax. It takes a mighty large fleet of family saloons to do the damage of one jumbo.'*

John Humphrys, *Sunday Times*, 25 November 2001.

## Demand is artificial

The costs of flying are kept artificially low, because:

- Air fuel is not taxed.
- There is no VAT on air tickets.
- No VAT on purchase of planes and servicing.
- Landing fees are held down to approximately ½ the actual market level, by the CAA regulatory regime.
- No air traffic congestion charge.
- No charge on environmental air pollution, for example, carbon dioxide emissions.
- No charge levied on noise pollution either; in fact section 76 of the Civil Aviation Act 1982, actually offers protection against legal action for noise nuisance.

*'So long as use of London's airports costs the traveller next to nothing, demand curves doubling every 20 years (or indeed every 10) can be drawn ad infinitum to bamboozle ministers and the public into supposing quite falsely that extra capacity is needed.'*

Letter to the *Financial Times*, 4 March 2002 from Peter Jay, former economics editor of the *FT* and BBC.

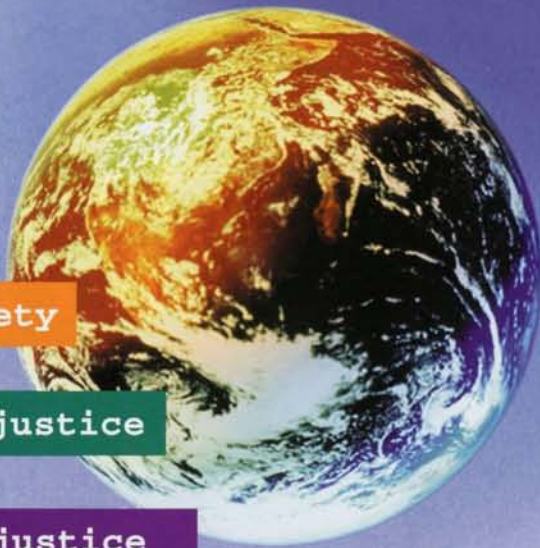
## What should be done:

The government needs to take a 'predict and prevent' approach. Aviation is the most highly polluting mode of transport. Its

hidden costs are paid not by the industry itself, but by society as a whole. The government needs to stop subsidising the aviation

industry, and should concentrate on more efficient forms of travel. For example, fast link rail services, which could replace short-haul flights.

**Join AirportWatch in opposing the Government's and aviation industry's unnecessary, unsustainable and irresponsible proposals; please contact: AirportWatch, Telephone: 020 7248 2223, Website: [www.airportwatch.org.uk](http://www.airportwatch.org.uk)**



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[www.viridian-nutrition.com](http://www.viridian-nutrition.com)