

ecologist

Environmental Magazine of the Year

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SIR DAVID KING INTERVIEW

Contradictions, climate
change and you
Monbiot types

FLOOD ALERT

Has the Greenland
ice sheet tipped?

THE GARDEN TAX LAND GRAB

High seas plunder
in West Africa

LEMSIP MAX A REAL LEMON

The man who
farms water

Happiness

And how to
achieve it

by Bill McKibben

PLUS THE GREEN PAGES Local hero: a fisherman on a mission • The seasonal survival guide • Organic and biodynamic wine • Make your feet happy with Green Shoes • A whole world of window box wonders





More than Laundry

We've made some huge improvements to our laundry range.

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Ecover - it's brilliant cleaning, **it's protection of the future** - **it's more than Laundry.**

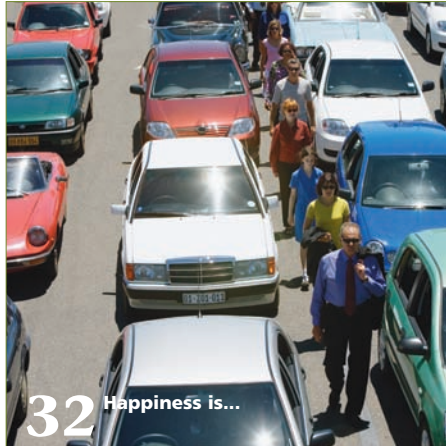


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THIS MONTH IN HISTORY: FEBRUARY 1972

Members of the GB women's ski team at the first ever winter Olympics, held in Sapporo in 1972. Just 35 years later, the viability of skiing is looking increasingly in doubt. A report released in December last year by the Organization for Economic Cooperation and Development said that about 10 per cent of the 666 medium-to-large ski areas in the Alps 'are already operating under marginal conditions' and that within 15 years, one-quarter of the region's ski areas will be unable to offer reliable skiing conditions.

PHOTOGRAPH: GETTY IMAGES

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EDITORIAL

When Sense About Science (SAS) launched its 'science for celebrities' pamphlet last month, it looked like the overdue backlash of a passive science community to years of misinformation from ill-informed celebrities.

The pamphlet is full of what SAS regards to be anodyne, but nevertheless false, assertions by celebrities about the benefits of homeopathy and so on, and ends with an offer by the organisation to act as a fact-checking service. However, the pamphlet's repeated objections to any hint that man-made chemicals might be bad for our health suggests an altogether less helpful agenda.

One of its experts writes: 'A whole host of unwanted chemicals find their way into our bodies all the time... Do they matter? No!' Another says – in response to a quote by Joanna Lumley – that if cancer is increasing 'it's because people are living longer'. This is hard to substantiate, not least since the US National Cancer Institute says that childhood cancers have been increasing by one per cent every year since the Fifties.

At the very least, you'd expect a bit more caution from a group dedicated to investigating the 'social consequences of unfounded research claims'. But on closer inspection, it's hard to reconcile that goal with the group's history.

SAS is often described as an aggressively pro-GM lobby group. It's much, much more. It is born of a bizarre political network that began life as the ultra-left Revolutionary Communist Party and switched to extreme corporate libertarianism when it launched *Living Marxism* (LM) magazine in the late Eighties. LM advocated lifting restrictions on child pornography, opposed banning tobacco advertising, supported human cloning and so on. In as much as it has a central philosophy, it is a fierce opposition to the State attempting to protect citizens from the excesses of big business. But its real goal, and the reason for its political zigzagging, may stem from a long-held hatred of any kind of positive reform that might prolong the system they hate. They call it 'revolutionary defeatism'. By helping to accelerate the contradictions of capitalism they believe they are hastening the move to the 'next stage' of human development.

During the Nineties, LM influenced British media coverage of environment and science issues, particularly relating to GM. But in 2000, it was sued for claiming that ITN had falsified evidence of Serb atrocities against Bosnian Muslims, and forced to close. It soon reinvented itself as the Institute of Ideas and the online magazine *Spiked*.

At each step in its evolution, it has been largely the same people who have given life to this strange movement and painstaking research by gmwatch.org shows that these same people now put themselves forward as the faces of respectable, trustworthy science.

It's a worrying development. According to its website, SAS urges scientists to 'engage actively with a wide range of groups'. But when SAS set up a Working Party on peer review, the Wellcome Trust declined to fund it precisely on the basis of its 'narrow' membership. 'It runs the risk,' said the Trust, 'of being seen to be fuelled by assumptions, and not "direct evidence".' And despite its claims to be 'independent', a list of SAS funders reads like a Who's Who of biotech, chemical and pharmaceutical firms.

Not all of SAS are members of the former LM network. Its Chairman is the Lib Dem peer, Lord Taverne, but he too is a comfortable fit. He routinely fires off about non-scientists debating scientific issues, calling at one point for Prince Charles to be forced to relinquish the throne if he made any further statements critical of GM. Yet his own understanding of science has also come under question. According to James Wilsdon, Head of Science and Innovation at the respected Demos think-tank, 'Dick frequently spouts nonsense. He's about as useful to science as Robert Kilroy-Silk is to race relations.'

When SAS puts itself forward as a fact-checking service, we can only hope its offer is rejected. For whichever way you look at it, SAS appears no more independent than an infant, no more objective than an animal rights fanatic – and, far from injecting sense into science, it is more likely to undermine what little remains of the public's faith in it.



A longer version of this editorial can be read at www.theecologist.org

Letters

DOWN ON THE FARMERS

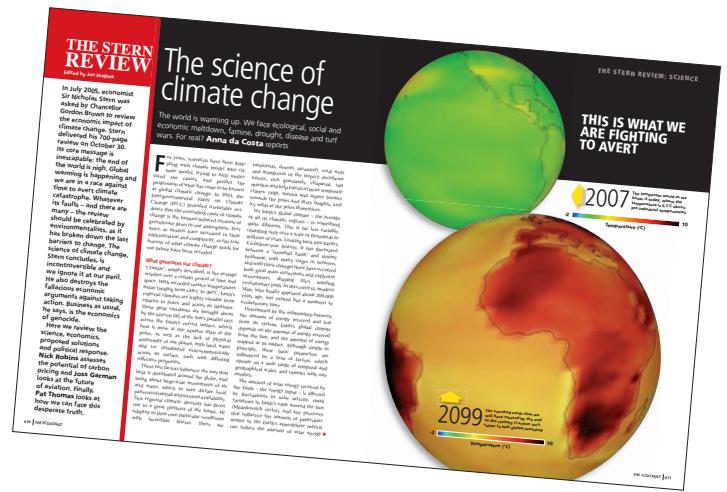
In the October 2006 issue of *The Ecologist* I couldn't help but read and disagree with Clive Dennis' essay 'Humanity's Worst Invention: Agriculture'. His perception of agriculture was very biased and extremely negative. Considering agriculture as humanity's worst invention, and the cause for many problems in societies, is a distorted perception of farming and of society.

I strongly disagree with Dennis' theory that the hunter-gatherer lifestyle would better suit humanity. The world would not be able to sustain only hunter-gatherers, which was the reason why humans resorted to agriculture in the first place. Agriculture was a way to produce enough food for a population in times of need. According to Dennis, it was a surplus of food that led humans to other professions, including the much-hated office job.

The lifestyle of the Joneses should not be blamed on agriculture, but on those who choose to waste with surplus. Agriculture would not have created the horrid office job, if it was kept to a smaller scale, and not enhanced with technology and greed. Instead of everyone having an office job and if each household had a small farm where they produced just enough food to be sustainable, this would have the same effect as would Dennis's Utopian hunter-gatherer livelihood. Before attacking agriculture as a whole, he should realise that not only do certain civilisations not want to be hunter-gatherers, but some actually enjoy farming.

**Kaitlyn Kennedy,
Nova Scotia**

Send letters for publication to: **Letters, The Ecologist, Unit D102, 116-118 Commercial Street, London E1 6NF. Email: editorial@theecologist.org. The Ecologist reserves the right to edit letters as necessary.**



SOUND ADVICE?

Much as I enjoy reading *The Ecologist*, I found the article on obesity rather unnerving. While it may fit with the ethos of the publication to blame global obesity on pollution, this seems to absolve the individual from any responsibility (ie, I'm fat not because I eat more calories than I burn up, but because the Americans pollute the world). I am also disturbed by the section headed 'What else makes you fat?'. Given that I can't change my parents or ethnicity (items 6-10), are you suggesting that I sleep more, smoke more and stop the tablets my GP gives me? Certainly unconventional advice.

Malcolm Stone, by email

The Ecologist's health editor, Pat Thomas, replies:

When conventional advice fails, it's a clarion call for a new approach. As unnerving as it may be to read data like this for the first time, the science behind it is both comprehensive and convincing. Read the article

again – at no point did it say that chemical calories (or Americans) alone were responsible the obesity crisis. However, what is clear is that industrial pollutants are important co-factors in a global problem that isn't getting any better. If you spend your days comatose in front of the TV sucking down nachos and beer you are going to get fat. If your body is also riddled with industrial chemicals, your ability to permanently lose that weight, even with stringent dieting, is diminished and may, in some cases, be wiped out altogether.

IS TERMINATOR SO BAD?

I keep seeing this issue crop up in *The Ecologist* and I finally decided to send a short mail, because I really don't get it. Genetically modified foods are a serious hazard. If anyone insists on being stupid enough to grow GM food, the least they should have to do in terms of their responsibilities is to not allow modified crops to produce viable offspring – thus avoiding potentially widespread, and

ECOLOGIST POLL

Would you welcome the introduction of personal carbon quotas (see the article on carbon rationing on page 21)? Go to www.theecologist.org to cast your vote. In last month's poll, 93 per cent of you thought environmental studies should be made a core subject in schools.

harmful, contamination. If a modification does prove harmful to humans, or alter biodiversity in a serious way, the last thing that any sane human should want would be for those plants to successfully reproduce.

It is true that terminator seeds are a serious moral issue when it comes to supplying them to third world farmers who cannot afford to buy new seeds each year, amongst other issues. However, I firmly believe that putting so much weight behind campaigns like banterminator.org is a very bad idea. Please consider focusing on making people exercise the precautionary principle and not play with GM crops that no one needs, rather than advocating ecological suicide.

Matthew Karlsen, by email

The Ecologist replies:

Aside from the general arguments against GM technology, which have been reiterated again and again in these pages, all of which apply to terminator, there are two issues specific to the production of deliberately sterile seeds. The first – to which you refer – is the moral (and economic) repugnance of breaking the millennia-old tradition of farmers saving their seeds to

replant the following year. The second, and most worrying, concern, is that there is already some evidence from India of seeds bred with terminator technology cross-contaminating with non-GM seeds, and turning them sterile too.

STERN WARNING

Congratulations on your fantastic special report on the Stern Review (December 2006/January 2007 issue). After years of floundering in the dark I now finally feel I know what climate change is all about. Your commentary about the hypocrisy of the rest of the media, with its travel supplements and car adverts, was spot on. I urge you to therefore keep this issue at the top of your agenda for the good of us all. We need to know what is happening, and what we can do. If we don't sort out our impact on the climate, everything else is just irrelevant chatter.

Matt Cohn, by email

ARM GARDENERS: WITH INFORMATION

Thrilled to know that *The Ecologist* prints information that others will not ('Fryin' Air', October).

May readers please have information on the full cost of importing wild bird food and of the manufacture of trinkets (feeders, bird tables, nest boxes)?

What, likewise, is the full cost of importing plants that have not co-evolved with other organisms in the country to which they are imported; and how many extinctions in the wild have been caused in the countries from which they have been exported through over-collection by the horticultural and floristry industries? The obvious outcome of this

ECOLOGIST WINS 'BEST ENVIRONMENTAL MAGAZINE' AT INDEPENDENT PRESS AWARDS

The Ecologist has won the Best Environmental Coverage award in the annual UTNE Independent Press Awards. UTNE, a US-based digest publication which reprints the best articles from the independent press, praised *The Ecologist* for its 'gutsy activist journalism', 'soundly argued commentaries', 'unvarnished green consumer advice' and 'deeply researched features'. The editors said: 'To anyone who breathes air, drinks water, eats food, and enjoys nature, *The Ecologist* is a reliable and long-standing British friend, covering environmental issues with dogged assurance.'

In particular, the award focused on *The Ecologist's* recent analysis of the environmental costs of a BLT sandwich ('The Big Lifestyle Tradeoff', *The Ecologist*, September 2006). Credit is due to the report's inspirateur, Harry Ram, its authors, Jon Hughes and Pat Thomas, with additional reporting by Sophie Hackford and design by Cathy Constable.



strategy has been the deaths through the spread of *Trichomoniasis* parasite among 25 bird species throughout 40 countries, exacerbated by human-induced climate change.

Mowing native wild flower lawns twice a year at most, and learning to appreciate our native shrubs and trees once more, along with native mixed hedges managed traditionally, would be better for the environment and cheaper for the alleged 'poor and overworked' of the western world.

ERRATUM

The authors of the article 'Getting Clean' (December 2006/January 2007) are not freelance journalists, as they were described at the end of the piece. Gerald Marten is an ecologist at the East-West Center in Honolulu and author of *Human Ecology: Basic Concepts for Sustainable Development*. Donna Glee Williams is a Fellow at the North Carolina Center for the Advancement of Teaching.



WHAT WE LEARNT THIS MONTH...

■ **Two students who died after climbing into a huge helium-filled balloon for the 'buzz' of inhaling the gas have been named the winners of the 2006 Darwin Awards. The awards are named in honour of Charles Darwin and given out every year to people 'who have improved the gene pool by removing themselves from it'.**

■ **French demonstrators saw in the New Year – by protesting against it. People carrying banners reading 'No to 2007' and 'Now is better' marched through the streets of Nantes calling on the United Nations to stop the 'mad race' of time and declare the indefinite suspension of the future.**

■ **Scientists in China say they can predict earthquakes by observing behaviour in snakes. Officials at the earthquake bureau in Nanning, in southern Guangxi province, monitor snake farms via 24-hour internet video links, noting that the creatures can sense a quake from 75 miles away, up to five days before it hits.**

■ **Viganella, a village in the shadow of the Italian Alps north of Turin, has installed a giant mirror on a mountainside to reflect sunshine into its main square. The village suffers from a complete lack of direct sun from November to February.**

CATTLE SUPERBUG KILLS HUMANS

A new superbug that has caused at least 50 human deaths has been linked to the excessive use of antibiotics on farms, say the Soil Association. Government scientists are still unsure why CTX-M ESBL *E.coli*, a fast-spreading form of the *E.coli* bacterium, which can be easily transmitted from livestock to humans, is spreading so quickly.

"There is growing evidence that the excessive use of antibiotics on intensive livestock farms is a central factor in the spread of this new type of *E.coli*," said Richard Young,

policy adviser at the Soil Association.

Although the government admitted seven years ago that the use of antibiotics on farms needed to be reduced, there has been no significant change in their usage since 1999. In 2005, for example, almost four tonnes of 'cephalosporin' antibiotics were sold for veterinary use, 58 per cent more than in 2002.

The Health Protection Agency has warned that overuse of livestock medication is also speeding the emergence of antibiotic-resistant strains of salmonella.

Gore's gift 'Inconvenient'

50,000 free copies of Al Gore's climate change film, *An Inconvenient Truth*, have been rejected by the American National Science Teachers Association because the gift might be seen as a 'political endorsement'.

The Association said that they saw 'little, if any, benefit to the Science Teachers Association or its members', and added that accepting the DVDs might place 'unnecessary risk' on their fundraising campaigns, especially with regard to 'certain targeted supporters'.

ExxonMobil Corp, Shell Oil, the American Petroleum Institute, and several major car companies are just some of the supporters of the Association.



CLONED MEAT FOR SALE

The United States government has ruled that meat from cloned animals is safe to eat, and does not need to be labelled separately. The decision by the Food and Drug Administration (FDA) has been widely condemned by consumer groups.

'Consumers are going to be having a product that has potential safety issues and a whole load of ethical issues tied to it, without any labelling,' said Joseph Mendelson, legal director of the Washington-based Centre for Food Safety.

Although it may be years before cloned meat appears on supermarket shelves – it currently costs around \$15,000 to clone one dairy cow – several hundred cattle have already been produced through cloning technologies in the US. Surrogate mothers are given large doses of hormones and antibiotics, and offspring are frequently born with birth defects.

Coca-Cola cancer link

A new study has shown a significant increase of breast and pancreatic cancer in rats fed regular amounts of Coca-Cola. The research, published in the *Annals of the New York Academy of Sciences*, also showed an increase in body weight compared to control rats fed with water.

'On the basis of the results of this study, excessive consumption of regular soft-drinks should be generally discouraged, in particular for children and adolescents,' the report's authors said.

600 MILLION

The number of batteries used in the UK each year – most end up as toxic components of landfill.



Left: The Union of Concerned Scientists map showing how much Greenland ice was lost last year. Below: Maps showing how much ice was lost between 1992 and 2002

Has the Greenland ice sheet tipped?

The Greenland ice sheet, which is considered by climate scientists to be the most important bellwether of climate change, is disappearing at a faster rate than has been previously anticipated.

An 80km³ loss had been widely expected in 2006. But the latest figures from NASA's Grace satellite has revealed that an alarming 287km³ has gone.

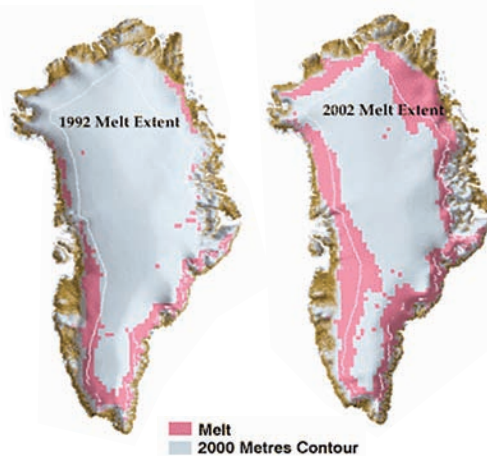
The American Union of Concerned Scientists has used this data to create the model pictured above. What it can't show is that in some areas the lost ice was 2km deep.

This hastening pace of change was confirmed to *The Ecologist* during an interview with the Government's chief scientific adviser Sir David King (see page 26).

Although the precise figures were unavailable at the time, Sir David admitted that 'it is melting faster than we anticipated'.

The latest figures raise the spectre that climate change is accelerating at a rate that current scientific models could not predict. The question no one can answer with any certainty is whether the Greenland ice sheet has passed tipping point and is now in terminal decline.

The reason the future of the Greenland ice sheet is critical is that it is 2,830,000km³ in size – approximately the size of mainland Europe – and each km³ contains one billion tonnes of fresh water. Released into the Arctic Ocean it will cause sea levels to rise, which in turn will disrupt thermohaline circulation



(of which the Gulf Stream is part), a kind of oceanic conveyor belt that drives the ocean's currents. Thermohaline circulation directly influences global climate and the ice melt will lower average temperatures in Europe substantially, with a devastating impact on climate and agriculture.

The consequences cannot be overstated. In an exclusive interview with *The Independent* newspaper, NASA scientist Dr Jim Hansen said that if the growth in greenhouse gas emissions was not arrested within a decade, sea levels could rise by several metres over the coming century. Such a rise would destroy UK cities such as Liverpool and London and overwhelm coastal areas such as East Anglia.

A World Bank map shows that a one-metre rise in sea levels would flood half of Bangladesh's rice crops.

WORTH A BOMB...?

Shortly before Christmas, the Government issued a White Paper stating the necessity for Britain to retain its nuclear deterrent missile system, Trident, at an estimated cost of £65 billion over its lifetime. Here is how Dr Stuart Parkinson, a UK advisor on climate change to the UN, suggests the money could be better spent:

- In the UK, nine million homes need cavity wall insulation, and a further seven million solid wall insulation. Combined, these could reduce CO₂ emissions by 6.5 million tonnes annually, and eliminate fuel poverty. TOTAL COST £16 billion
- You could build 25,000 on-shore wind turbines, or 8,000 off-shore wind turbines for £75 billion – either would generate 33% of the UK's electricity.
- To reach the Government's target of a 60 per cent reduction in CO₂ emissions by 2050 has been estimated will cost between £30 and £60 billion.
- In 2005, the Government's expenditure on renewable energy research was £37 million. This is one per cent of the MoD's current research and development budget.

LOCAL POWER

In an impressive bid to tackle climate change by reducing emissions, Kirklees Borough Council, in West Yorkshire, has put solar panels on 500 homes and reduced its own emissions by more than 30 per cent since 1990. The council has set a target to further reduce its emissions by another 30 per cent by 2020. Its environment unit employs 195 staff and has invested £6 million in renewable energy projects.

Kirklees was cited alongside nine other local authorities in a survey compiled by *The Guardian* from information supplied by the Energy Saving Trust, the Carbon Trust, the Local Government Association and the Improvement and Development Agency.

The 10 local authorities listed below have all made exceptional efforts to tackle climate change through energy efficiency measures and renewable energy technologies:

- 1 Greater London Authority
- 2 Kirklees Borough Council, West Yorkshire
- 3 Shropshire County Council
- 4 Aberdeen City Council
- 5 Southampton City Council
- 6 Nottingham City Council
- 7 Woking Borough Council
- 8 Leicester City Council
- 9 Cornwall City Council
- 10 Merton (London)

'Bottom-up' community regeneration

The groundbreaking Sustainable Communities Bill has taken its first steps towards becoming government policy.

The Bill, introduced by Nick Hurd MP, calls for a more 'bottom-up' society, in which communities will have the power to make decisions affecting their local economies and environment.

Local councils would be measured according to a number of criteria, including how much food is produced within a 30-mile radius of its point of sale, the increase in the number of organic farms, the number of local jobs created, and how much energy is saved through

efficiency measures and produced from local, renewable sources.

The Bill will receive its second reading in Parliament days before *The Ecologist* goes to press, on January 15. LocalWorks, an organisation set up to promote the Bill, is calling on people to write to their local MPs and Ruth Kelly, the Secretary of State for Communities and Local Government, asking them to support the bill. Letters to MPs should also request that they sign the new Early Day Motion 468, which will move the Bill forwards.

For more information, please visit www.localworks.org, or call 020 7833 9898.



SHELL SHOCK

On February 1, Shell Oil is expected to announce record profits. To coincide with the announcement, the Stop Shell campaign plans to take a full-page advert in major British and Dutch newspapers, highlighting the ongoing environmental damage caused by Shell's operations around the world. It will call on the company to spend a portion of its profits on cleaning up its worldwide operations.

You can add your name to the petition by visiting www.shelladvert.org



CLIMATE CALENDAR

The World Development Movement has released a 'Climate Calendar', which shows the days of the year on which the average UK citizen's emissions of carbon dioxide will overtake those of their neighbours in developing countries.

By the end of New Year's Day, the average UK citizen will have emitted more carbon dioxide than a resident of Afghanistan or Chad will in the whole year. By January 8, when most New Year's resolutions have been broken, we will have emitted as much CO₂ per person as any citizen in the 50 least developed countries in the world. The report's authors call for cuts in UK carbon dioxide emissions of 85 to 90 per cent by 2050.

Project freesheet

Inspired by a comment in *The Ecologist* (*What A Load Of Rubbish*, November 2006), a photographer has launched a web campaign to highlight the damaging environmental consequences and waste problems that result from the current trend of bombarding commuters with free newspapers.

Campaign organiser Justin Canning is hoping to collect one and half million photographs of people reading and disposing of such papers on the project website, www.projectfreesheet.com



Promession for a green funeral

A local council plans to reduce pressure on burial grounds by freezing dead bodies in liquid nitrogen and shaking the remains to dust. The process, known as promession, has been recommended to Corby Council, Northamptonshire, as both a cost-saving and environmental measure.

'The initiative came from an environmental perspective,' explained Councillor Ray Boyd, the chairman of the committee set up to investigate cremation and burial processes for the council. 'When the body has been shaken to dust, any mercury fillings or prostheses are removed using a magnet, then the remains are

placed in a three-foot-square biodegradable box, which can be buried just two feet under the surface. If you choose to have a tree planted above the box, the remains become an organic fertiliser.'

Because there is oxygen in the soil up to one metre underground, human remains buried in this way will decompose completely within a year. In traditional burials, the corpse rots (in the absence of air), leaching pollutants into groundwater.

The promession process costs no more in energy or financial terms than standard cremation practices.

We are in a dangerous place now and it is going to be very difficult to get into a less dangerous place. The science is getting worse faster than the politics is getting better.

David Miliband, Environment Secretary

Greenwash

A press release arrives announcing that Tesco is going green. The reason: it has opened an environmentally friendly store in Wick, Scotland. We read on avidly. Are they increasing their farmgate prices to encourage organic farming? Are they reducing their food miles? Is it the end for over-packaged, convenience food? Eh, no. They are installing five micro wind turbines and six solar panels on a timber-framed building fitted with energy efficient bakery ovens, which it is hoped will reduce energy use in the store by 50 per cent. With 1,252 stores nationwide it's hard to get excited about such a small incremental step.



The benefits of carbon offsetting have been called into question by a new report, which says that planting trees in parts of the northern hemisphere may worsen the effects of global warming. Research by scientists at the Lawrence Livermore National Laboratory in California has shown that, although trees growing in the tropics can have a positive effect upon reducing global temperatures, those at higher altitudes produce little or no net benefit because their dark colour absorbs large amounts of extra heat energy.

Trees affect climate in three ways: by absorbing CO₂ from the air, which lowers the impact of the greenhouse effect; by producing water vapour, which forms clouds, cooling the Earth's surface; and by absorbing heat radiation through dark leaves, which can increase ambient temperature.

Ken Caldeira, a co-author of the study, attacked carbon offsetting practices, saying: 'It is only by transforming our energy system and preserving natural habitat, such as forests, that we can maintain a healthy environment. To prevent climate change, we must focus on effective strategies and not just 'feel-good' strategies.'

FUEL'S GOLD, FARMERS TOLD

David Miliband, Secretary of State for the Environment told British farmers at the Oxford Farming Conference in January that climate change could be an opportunity for them, as well as a threat.

Miliband reminded farmers that as the market for renewable fuels grows, the demand for fuel crops will increase. 'These are new markets,' he said, 'and they are an important part of our future.'

He added: 'If we are successful, farmers will be making money from a wide variety of new products, notably in the environmental field as they farm water and carbon, as well as food.'

However, Miliband pointed out that agriculture would have to address its substantial emissions of greenhouse gases, currently seven per cent of total UK emissions. He said that releases of methane and carbon dioxide from farming would 'carry a price' that would need to be paid in the same way as other industries. The Secretary of State added that flatulence from cattle, high in methane, would need to be controlled, possibly through a change in diet and the use of biogas digesters which produce combustible gas from manure.

2006: the year in reviews...

2006 has seen no fewer than seven independent reviews and a pre-budget report published by the Treasury. The Chancellor commissioned Lord Davidson to investigate EU legislation (128 pages), Rod Eddington to report on UK transport (372 pages), Kate Barker to investigate land use and planning (226), Sandy Leitch to assess the UK's skills shortage (154 pages), Andrew Gowers to examine intellectual property rights (150 pages), Sir David Cooksey

to assess health research funding (127 pages), and Sir Nicholas Stern to evaluate the impact of climate change on world economic growth (575 pages). Including the pre-budget report this amounts to an uncanny 2,006 printed pages of material. Since Labour came to power in 1997, the Government has commissioned 39 such reviews. Here we assess the critical issues raised in the last three to be published in 2006.

LAND USE PLANNING

Kate Barker is the former Chief Economic Adviser at the CBI. Her review examined how to streamline planning processes, how demand for housing could be met, and how to tread a line between market demands and sustainable development. Barker's core recommendations are:

- 1 Planning decisions should take into account the benefits of a development, with regard to 'market and price signals'.
- 2 A 'positive planning culture' should be created, in which applications should be approved unless 'there is good reason to believe that the environmental, social and economic costs will exceed the benefits'.
- 3 Local authorities should review their green belt boundaries to ensure they remain 'relevant and appropriate'. Barker suggests that areas of green belt land could be 'enhanced', and that the green belt might be redefined into 'wedges' or 'corridors' of green land which penetrate into urban areas.
- 4 Large projects should be streamlined. The government would be given the power to draw up 'Statements of Strategic Objectives' for large-scale transport, energy, waste and water projects, which would justify their national importance, overriding traditional planning procedures. An 'Independent Planning Commission' consisting of a panel of 'experts drawn from a range of professional fields', would assess these applications. Barker recommends that survey information gained from Environmental Impact Statements should be limited on the grounds of cost.
- 5 Planning applications should be

processed in 18-24 months, not the current 36-42 months.

The report has been widely criticised.

Hugh Ellis, Planning Advisor for Friends of the Earth, said: 'Local communities will be the big loser if the Barker Review is implemented. Barker's vision of uncontrolled development will mean communities have little or no say in how their local area is developed.'

Shaun Spiers, Chief Executive of the Campaign to Protect Rural England, said: 'Our fear is that [the] review could end up shifting the balance of our planning system away from protecting the environment and countryside and towards catering for developers' profits.'

TRANSPORT STUDY

Rod Eddington, the former chief executive of British Airways was asked to examine the impact of England's transport network on economic growth and environmental targets. He proposed three areas of study: city centres, motorways and airports. His key recommendations are:

- 1 The government should 'make best use of existing networks', instead of investing in large scale, grand projects. High speed train links were deemed 'unfeasible' on the grounds of cost.
- 2 A 'sophisticated policy mix' is needed to meet both economic and environmental goals, and should be assessed and costed in regard to both.
- 3 The planning process should be reformed to speed the delivery of large transport projects (the review was published before Kate Barker's).

Although the review steered away from specific schemes, it gives strong support to road pricing and expansion of existing roads, and airport expansion.

The Eddington review received a largely warm response.

Tony Bosworth, Friends of the Earth transport campaigner said Eddington's stance on aviation, saying it was on a 'collision course with UK climate targets'. Stephen Joseph, Executive Director of the pressure group Transport 2000, said that he 'remained opposed' to any growth in roads, and airport expansion.

THE PRE-BUDGET REPORT

In light of the Stern review into climate change, the Chancellor's pre-budget report was one of the most keenly anticipated Treasury documents. Gordon Brown's key environmental measures are:

- 1 An increase in all rates of air passenger duty, from £5 to £10 for EU economy flights, and from £20 to £40 for long-haul flights, with effect from February 1, 2007.
- 2 An increase in fuel duty of 1.27 pence per litre, meaning the price per litre remains 15 per cent lower in real terms than in 1999.
- 3 Allowing householders who own microgeneration technologies to sell power back to the grid without paying income tax.
- 4 An increase in the rate of landfill tax of £3 per tonne to £24 per tonne.
- 5 A commitment to maintain the lower rate of duty on biofuels (20 pence per litre less than ordinary fuels).

The response to the pre-budget report was a universal thumbs down.

Side-effects secret

Drugs company Eli Lilly failed to tell doctors that a drug used to treat schizophrenia can cause obesity and raised blood sugar, the New York Times has revealed.

Zyprexa, which made more than \$4.2 billion for Eli Lilly last year alone, is prescribed to around two million people worldwide. It has caused some patients to gain more than 45kg and is more likely to cause diabetes than other schizophrenia drugs.

Leaked documents show that sales executives within Eli Lilly acted to downplay the risks of the drug to prescribing doctors. In 1999 Dr. Alan Breier, then chief scientist on the Zyprexa programme, wrote an e-mail to senior managers stating that 'weight gain and possible hyperglycemia is a major threat to the long-term success of this critically important molecule'. The following year, an email was sent between managers which admitted that 'unless we come clean on this, it could get much more serious than we might anticipate'.



BEAR NECESSITY

The Bush administration has pledged to protect the polar bear in a significant admission of the impacts of global warming. Dick Kempthorne, the Interior Secretary, has recommended that the bears should be added to the threatened species list, preventing any US government activities which might jeopardise the polar bears' arctic habitat.

The decision has been hailed as a success by environmental groups, who claim that the Endangered Species Act could now be used to force the government to cap CO₂ emissions, which are directly contributing to the thawing of polar ice and destruction of the bears' feeding grounds.

Kempthorne was less enthusiastic about the prospect of reducing greenhouse gas emissions, telling reporters that such a move 'is outside the scope of this.'

Polar bear populations in Canada and the US have declined by around 20 per cent in the last 20 years.

LOCAL FIRMS FROZEN OUT BY SOLAR 'CARTEL'

Funding from the government's Low Carbon Buildings Programme, which is designed to support the installation of renewable energy technologies in schools and community centres, is being withheld from 60 small solar panel installers and given to three larger businesses.

The £50 million available in 'Phase II' of the programme has been ring-fenced for three 'approved' solar photovoltaic installers – British Gas, Dulas and SolarCentury – in what has been described as a 'cartel stitch-up'.

'We are appalled,' said Rajit Bhatia, Managing Director of solar suppliers Altenergy. 'For years the Government has been encouraging businesses to get into this industry. And then, at a stroke, they take away half of our business.'

The smaller suppliers, many of whom face losing up to 50 per cent of their business, claim that the Department of Trade and Industry (Dti) made no attempt to contact them in consultation on the proposals. Bhatia says that he witnessed two

executives from SolarCentury – one of the winning companies – in a meeting with Dti officials a month before the tender process officially began.

'If the Dti had time to hold private meetings with companies like solarCentury, why didn't they have time to contact smaller operators in the sector, asking if we wanted to participate,' says Bhatia.

The smaller companies also say that the three companies who won the tender are not obvious choices. 'There were some very strange selections of companies who won the Dti's tender process,' said Jim Kenny, Director of small-scale solar installers, Chelsfield Solar. 'People like British Gas and Eon, who have never done a solar PV installation in their life, have now been given tens of millions of pounds worth of work in the next eighteen months.'

Kenny believe that the government's funding programme may actually result in less solar photovoltaic installations during the next 18 months. 'It takes a long time

to build up a relationship with community groups. It took us eighteen months to develop a close enough relationship with the Church of England for them to trust us to fit solar panels on listed buildings. Those relationships have now been broken.'

In response to claims that smaller suppliers were excluded from the tender process, a spokesman for the Department of Trade and Industry said, 'There were no written communications to individual companies as this would have provided an unfair advantage to those companies and would therefore not have been in keeping with our desire for a fair and open competition.'

£1.2
TRILLION

The overall figure for
personal debt in the UK.

BEHIND THE LABEL

LEMSIP MAX COLD & FLU CAPSULES

As doctors can tell you, the best remedy for colds and flu is the traditional one: rest, warmth, fluids – and time. Drug manufacturers want you to believe otherwise. But, as **Pat Thomas** reports, pharmaceutical ‘cures’ may be more than just a waste of money

Most of us believe there are only four seasons; but actually there is a fifth season that runs from November to February – the cold and flu season. Out of a UK population of 48 million adults aged 16 and older, around 33 million will suffer from at least one cold or a bout of flu annually, so the odds are that at some point you are going to catch a cold. For healthy individuals, the best medicine is rest, warmth and lots of liquids – this combination being the age-old remedy that best facilitates recovery from a cold or flu.

But convenience culture has become as prevalent in over-the-counter (OTC) medicines as it is in food and other

consumables. So, if you do succumb to a cold or flu this winter, there are now literally dozens of OTC remedies that claim to relieve cold and flu symptoms.

However, most have been found – through objective, scientific studies – to be useless. The most popular varieties use a scattergun approach, mixing several different types of ingredients. And the more ingredients, the greater the chance of a variety of side effects, which means that you may ultimately end up substituting one type of symptom for another.

Crucially, people who regularly purchase cold and flu remedies are usually

ill when they make their purchases, and this phenomenon, known as the ‘distress factor’, is a real boon to manufacturers. Sick people don’t think, they simply want relief – immediately. They don’t care how it works and they don’t usually care how much it costs. The distress factor, along with continuing government policy that encourages self-medication wherever possible, means that commercial cold and flu remedies are finding happy homes for increased sales not just in pharmacies but also in supermarkets, newsagents, petrol station forecourts and 24-hour convenience stores.

In the UK, the ‘winter remedies’ market – comprised of cold treatments, cough liquids, decongestants and cough/throat lozenges – is worth around £200 million a year; and the Lemsip brand, made by Reckitt Benckiser, is the market leader, with a 12 per cent share of total sales.

Pushing too hard

So, in spite of the fact that nothing you can buy will cure your cold, a huge number of us have succumbed to the hit-it-hard-and-hit-it fast remedies such as the Lemsip ‘Max’ range, which predominate on the pharmacist’s shelves and promise that you can happily continue to work long hours and enjoy a full social life, even if your body is telling you to slow down.

As medical and scientific studies have repeatedly shown, the best remedy for the common cold is rest and time; and when you reflexively reach for a product that temporarily suppresses a range of minor but irritating symptoms, you may



only end up making things worse.

For instance, Lemsip's active ingredients may produce quick effects, but in the long run have no real curative value. Non-steroidal anti-inflammatory drugs (NSAIDs) such as aspirin, acetaminophen and ibuprofen can relieve pain and lower fever, but may actually increase nasal symptoms. While not strictly an NSAID, the paracetamol in Lemsip Max Cold & Flu Capsules also relieves pain and lowers fever.

The catch, according to a recent study in *Nature Immunology*, is that mild fevers actually disrupt the ability of viruses that thrive at body temperature to multiply. The influenza virus grows best at a temperature of 34-35°C but poorly, if at all, at temperatures greater than 37°C. So lowering fever with drugs may actually prolong the agony of a cold or flu.

Lemsip's other active ingredient, phenylephrine hydrochloride, is what is known as a vasoconstrictor – a drug that narrows blood vessels and is associated with higher risk of hypertension (high blood pressure). Other potential side effects, according to the information leaflet, include headache, vomiting and palpitations.

Faking it with colours

Lemsip Max is also choc-full of artificial colours, which may make the product look impressive and give it a strong 'identity', but which have no therapeutic value at all.

There are currently more than 100 dyes and colouring agents approved for use in pharmaceutical preparations. This in spite of the fact that exposure to dyes and colorants in medications has been associated with a range of hypersensitivity reactions, including the classic triad of allergic symptoms – asthma, hives and, ironically, rhinitis (a runny nose). These can occur in anyone but can be particularly severe in some people – for instance, the two to 20 per cent of asthmatics who are also aspirin-intolerant. Many synthetic dyes are also potential human carcinogens.

Vegetarians and vegans should note that the so-called 'inactive ingredients' magnesium stearate (which has its own potential toxicity, see table opposite) and gelatine are derived from animals, and shellac is derived from insects.

ACTIVE INGREDIENTS

Active ingredients: Paracetamol 500mg, phenylephrine hydrochloride 6.1mg and caffeine 25mg.

Inactive ingredients: starch, croscarmellose sodium, sodium lauryl sulphate, magnesium stearate, talc, gelatin, titanium dioxide (E171), quinoline yellow (E104), patent blue V (E131), erythrosin (E127), shellac, tartrazine (E102), aluminium hydroxide

► PARACETAMOL

Painkiller (analgesic)

Used in the treatment of mild to moderate pain and to reduce fever.

Paracetamol is liver-toxic in high doses.

By reducing fever, it also reduces the body's ability to naturally fight off cold and flu viruses.

► SODIUM LAURYL SULPHATE

Disintegrator, surfactant

Promotes the breakup of the capsule contents in the body. The same substance is commonly found in shampoos, foaming bath products and washing-up liquids. It has been shown to build up in the heart, liver and brain of experimental animals.

► CROSCARMELOSE SODIUM

Disintegrator

Promotes breakup of the capsule contents in the body and brings the ingredients into better contact with bodily fluids and improves their bioavailability.

Widely used but poorly studied in respect of its cancer-causing, mutagenic, teratogenic or reproductive effects.

► TITANIUM DIOXIDE (E171), QUINOLINE YELLOW (E104), PATENT BLUE V (E131), ERYTHROSIN (E127), TARTRAZINE (E102)

Synthetic colours

Tartrazine is known to provoke asthma attacks and skin rashes, altered states of perception and behaviour and hyperactivity. Quinoline yellow may cause asthma, rashes and hyperactivity. Aspirin-sensitive people should avoid it. Erythrosin is an iodine-containing dye linked with sensitivity to light and learning difficulties; it can increase thyroid hormone levels and lead to hyperthyroidism, and was shown to cause thyroid cancer in rats. Patent Blue V is linked with dermatitis and purpura.

► PHENYLEPHRINE HYDROCHLORIDE

Nasal decongestant, vasoconstrictor

It works by triggering the contraction of blood vessels in the walls of the mucous membranes in the nose and sinuses. With less fluid travelling through the mucous membranes, the production of mucus is also reduced. Vasoconstrictors like this are associated with high blood pressure, angina and arrhythmias. They also affect the central nervous system, causing headache, excitability, restlessness and tremors. Phenylephrine may also induce skin rashes and is a potential reproductive toxin.

► MAGNESIUM STEARATE

Anti-caking substance

Frequently used in high-volume manufacturing processes to speed the flow of ingredients through the machinery. It is a hydrogenated fat that may impede the absorption of certain nutrients and can interfere with liver function and the body's immune response.

► CAFFEINE

Stimulant

Claimed to enhance the painkilling effects of paracetamol. It has no therapeutic value on its own. In high doses, caffeine is addictive, can reduce adrenal function and the body's immune response. If taken close to bedtime it may interfere with sleep.

► ALUMINIUM HYDROXIDE

Stabiliser, preservative

Can cause constipation and occasionally skin allergy. Leeches calcium and phosphorous from the body and interferes with absorption of folic acid. Neurotoxic. Used as a preservative in vaccines, aluminium hydroxide has been linked to symptoms associated with Parkinson's, amyotrophic lateral sclerosis (ALS), and Alzheimer's Disease.

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You get what you pay for

Multimillion pound city bonuses are distorting the economy, says our resident economist

Everyone loves a good bonus. None more so than the thousands of financiers across the globe who enjoyed ‘stonking’ payments in 2006. In the vanguard was Lloyd Blankfein, the lucky chairman and chief executive of Goldman Sachs, the world’s leading investment bank, who coined a staggering \$53.4 million payout on top of the rather more modest \$38 million he gathered in 2005. Indeed, the average bonus package for Goldman’s 26,500 staff now stands at \$622,000. Such largesse has not gone unnoticed by unions campaigning on behalf of those who work on low pay to keep offices clean and tidy for these new ‘masters of the universe’. Thus, last November, Goldman’s London HQ on Fleet Street became the focus of a protest led by the T&G trade union, which presented the bank its ‘golden vacuum’ award – for ‘sucking cleaners dry’.

2007 will see bonuses in Britain topping £20 billion, a colossal sum worth three times Britain’s annual aid budget. On the back of a 40 per cent hike in their earnings in 2006, the country’s chief executives are set to enjoy another bumper year, with their pay packets rising to over 100 times average earnings. Admittedly, this is nothing compared to the 411-to-1 ratio that now exists in the USA, but it marks a remarkable widening of the earnings gulf since the beginning of the decade, when the gap was ‘just’ 39 times.

The most ironic – if not tragic – aspect of this latest surge in inequality is that it has occurred during one of the most active periods for corporate governance in decades, with increasing shareholder focus on unacceptable levels of executive pay. But while shareholders have won a number of battles and succeeded in curbing some of the most egregious plans for executive self-enrichment, the governance movement risks losing the wider earnings war.

The paradox is profound. Increasingly, the workers ‘own’ capitalism through a combination of pension plans and mutual fund investments. Yet, just as the long-held

BY NICK ROBINS

dream of social ownership was being realised, a concerted counter-attack from corporate and financial elites has delivered one of the most profound transfers of wealth in recent history. Two groups have benefited from this redistribution effect: ‘big finance’ on the one hand and corporate executives on the other. The past 30 years has witnessed a growing ‘financialisation’ of the economy, with finance sector profits growing as a proportion of the total in the USA from 14 to 39 per cent. As well as securing a larger slice of the economic surplus, investment bankers in particular have proved particularly adept at rewarding themselves as individuals. City watcher Philip Augar has calculated that between 1980 and 2000, more than \$120 billion was diverted from shareholders and customers to well-placed staff in the US securities industry alone.

Executives as a whole have benefited from the triumph of shareholder value as the new lodestar for corporate management. With an exclusive focus on boosting the share price, clever compensation consultants have devised ever-more complex (and lucrative) packages that supposedly align executive pay with investor interests. The result has been an upward spiral in pay, pensions, options and other perks.

Dubious as it may seem, much of this is entirely legal – justified on the pious principle that great performance deserves great pay. Yet, in spite of the furore that followed the Enron debacle, some schemes still seem to step over the line of illegality. The shocker of 2006 was the exposure of the great option scandal at more than 120 US firms. In essence, executives and staff were granted share options at preferential prices, essentially ‘picking the lottery numbers after they have been announced on the evening news,’ in the words of one of the many investor lawsuits now underway. In all, damages to shareholders – including the pension plans of low-income employees –

could total tens of billions of dollars.

Beyond the social pain caused by this deliberate engineering of inequality, there is increasing evidence that today’s incentive culture is bad economics, worse psychology and pitiful ethics. Bonuses are already creating local inflationary bubbles in housing and land, as well as distorting national wage figures, potentially prompting unjustified hikes in interest rates that could damage the wider economy. Behavioural financier James Montier has catalogued the perverse impacts of incentives, which don’t always have the effect on motivation and performance that compensation consultants would have us believe.

Just as this recent divergence in fortune has been entirely man-made, so the solutions equally lie within the powers of every pension fund in the land: set clear targets for the multiples of executive pay to average earnings and vote accordingly. The US organic supermarket chain Whole Foods Markets – which owns Fresh & Wild in Britain – has set the benchmark for fair pay, with employees’ salaries strictly limited to 14 times the group average. For cutting executive excess is just as important for sustainability as cutting carbon emissions.

FairPensions, the campaign for responsible investment, is calling for pension schemes to be active investors: to use their shareholder power to challenge poor environmental and social behaviour, and to be transparent on such issues. For more information, see www.fairpensions.org

“ 2007 will see bonuses in Britain topping £20 billion – three times Britain’s annual aid budget – while chief executives’ pay is set to rise above 100 times average earnings ”

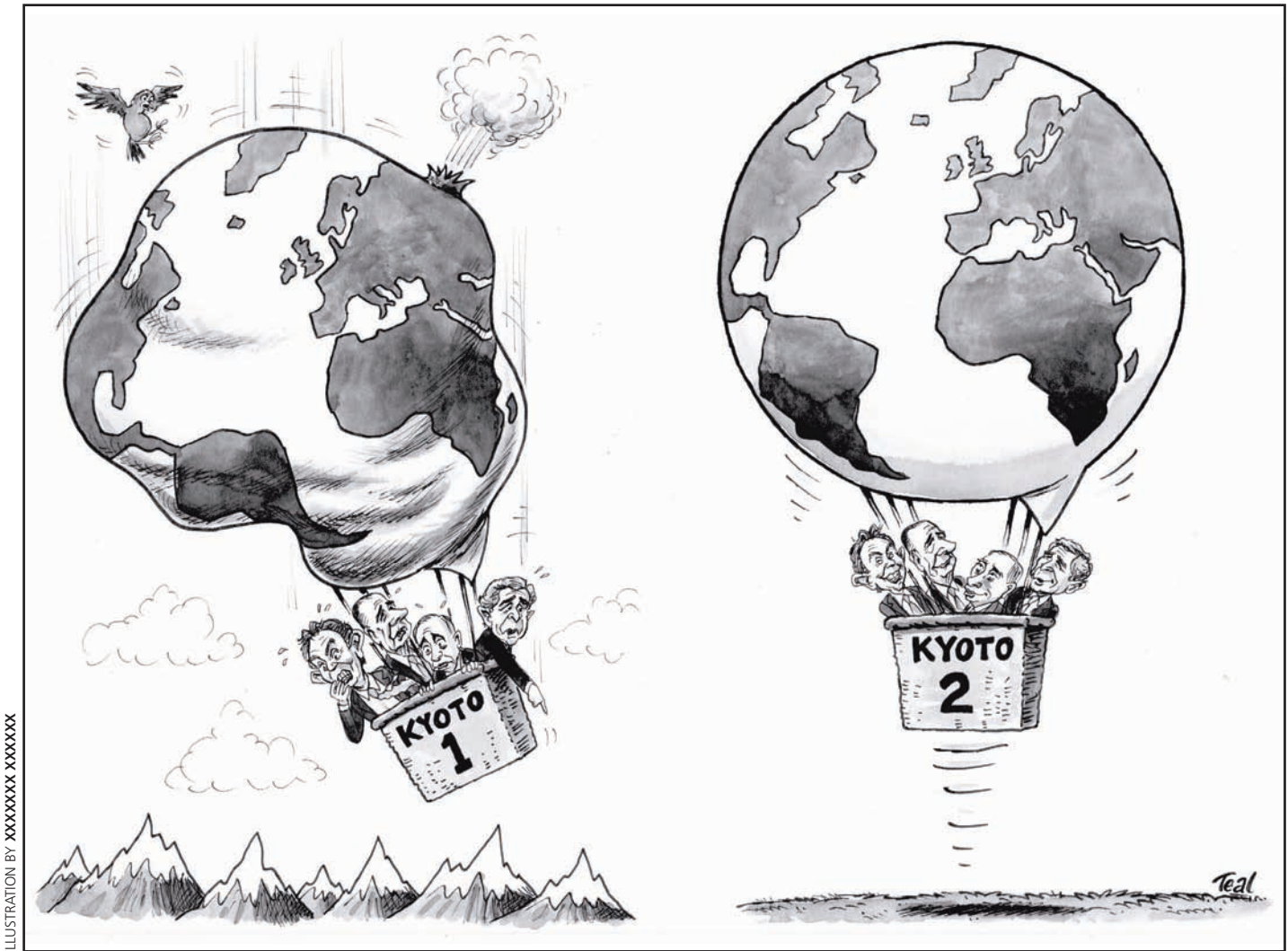


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Making preservation pay

BY OLIVER TICKELL

The market can solve climate change and tackle world debt if we start to sell emissions rights

“ Kyoto 2 proposes that greenhouse gas emissions should be controlled not at the point of emission but at the point of production ”

There should be no underestimating the importance of Nicholas Stern’s review of the economics of climate change. Let me restate here what I see as his core finding: ‘Mitigation – taking strong action to reduce emissions – must be viewed as an investment, a cost incurred now and in the coming few decades to avoid the risks of very severe consequences in the future. If these investments are made wisely, the costs will be manageable, and there will be a wide range of opportunities

for growth and development along the way ... Costs of mitigation of around one per cent of GDP are small, relative to the costs and risks of climate change that will be avoided.’

In a few short sentences, Stern demolishes the arguments of quasi-economists such as Bjorn Lomborg, with their elaborately fraudulent arguments for inaction. And his message is one that governments cannot ignore – neither the British government, nor indeed other governments for which his economic calculus applies with equal force. In a nutshell, action to deal with the causes of climate change is affordable, far cheaper than the cost of inaction, and will bring many benefits along the way.

There are weaknesses in Stern’s report. His choice of 550 parts per million as a target for maximum CO₂ concentrations goes against

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COMMENTS

“ Funds raised from emissions rights – of the order of \$500-\$1,000 billion per year – would be applied to solving the problems of climate change ”

scientific advice that such a concentration would be dangerously high. And while Stern calls for a worldwide carbon trading system, he never defines the nature of the carbon marketplace, or the rules that would apply.

These are key questions. The existing Kyoto Protocol (Kyoto 1) expires in 2012. What is to take its place? If any new Protocol is to have any significant effect, it must go much further, and its framework must encompass all nations, not to mention areas excluded from Kyoto 1, such as aviation. Indeed, the core theory of Kyoto 1 – that ‘industrial’ and ‘non-industrial’ nations must be treated differently, and that trading in carbon and its derivatives can produce meaningful results in the absence of a global cap – must be abandoned.

The main alternative approach – one that has gained much ground in the South, and especially in Africa – is ‘Contraction and Convergence’ (C&C), developed and promoted by Aubrey Meyer of the Global Commons Institute. The key elements of C&C are that greenhouse gas (GHG) emissions should be subject to an annual global cap; that the cap should contract (‘contraction’); that GHG emission rights be allocated to countries on the basis of their populations (‘convergence’); and that these ‘rights’ should be tradeable.

There is much to recommend C&C. It is global in scope. The principle of a declining cap in global GHG emissions is unarguable. However, the allocation of rights to governments based on population size represents a missed opportunity. The sale of surplus rights would provide governments of poor countries with a new source of income, certainly not a bad thing in itself. However, this money would then not be used where it is most desperately needed – to attack the causes and consequences of climate change.

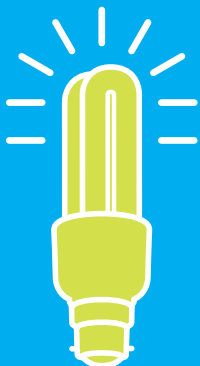
C&C also adheres to the ‘country-based’ system embodied in Kyoto 1, in which GHG

emissions are controlled at point of emission. This is an error: in today’s globalised economy, in which energy and energy embodied in products are freely traded across national boundaries, the country-based approach does not fit and requires the support of a huge, expensive and unreliable carbon accounting exercise. And the points of GHG emission are so numerous and diverse as to challenge the very notion of controllability.

The Kyoto 2 approach therefore adopts in its entirety the ‘contraction’ element of C&C. However, it proposes that GHGs should be controlled not at the point of emission but of production – and in the case of fossil fuel emissions, at the point of production of the fossil fuels themselves. Emission rights would consequently need to be secured by the likes of oil companies, coal mining companies and companies producing industrial GHGs. Most fossil fuels and industrial greenhouse gases come from a small number of large producers, so this would greatly reduce monitoring and compliance overheads.

Kyoto 2 also proposes that GHG emission rights should not be given away, but sold to the highest bidders at a global auction, using the ‘ascending clock’ system (in which the price is gradually raised until there is no excess demand) to secure the highest commonly-agreed price; and that the funds so raised – of the order of \$500-\$1,000 billion per year – be applied to solving the problems of climate change. Funds of this order are desperately needed to transform the global economy, dramatically raising the efficiency with which we use energy and developing new low-carbon energy sources; and to help countries adapt to climate change that is already unavoidable.

This would help to meet some of Stern’s main objectives: ‘Creating a broadly similar carbon price signal around the world, and using carbon finance to accelerate action in developing



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countries, are urgent priorities for international cooperation ... Scaling up flows of carbon finance to developing countries to support effective policies and programmes for reducing emissions would accelerate the transition to a low-carbon economy.'

It is hard to see how else such funds could be raised. The Climate Adaptation Fund created by Kyoto 1 contains only some \$3 million, raised from a small levy on investments in its Clean Development Mechanism. At the recent Nairobi meeting of the United Nations Framework Convention on Climate Change (UNFCCC), the fund was relaunched and member states promised an additional \$1 billion over the next few years. Compare this to the World Bank's estimates that protecting development projects alone from climate change impacts will cost around \$100 billion a year.

By contrast, Kyoto 2 could raise hundreds of billions of dollars per year, to spend, for example, on relocating cities and essential infrastructure at risk from sea level rise, or on creating alternative livelihoods for farmers and pastoralists whose survival is threatened by drought. And there would still be funds remaining to spend on other essential climate-related projects such as low-carbon energy research and installing renewable heating and electricity generation capacity.

A further use to which the funds raised might be put is to buy out fossil fuel deposits in the ground, and leave them there. Countries with big fossil fuel resources, especially those with high carbon fuels such as coal, might oppose Kyoto 2 because it would reduce their incomes. One way to overcome such objections would be to buy out their fossil fuels – so providing an alternative source of revenue, and saving the trouble, expense and other environmental impacts of opening new mines or oil wells.

With forest and swamp destruction contributing some 18 per cent of the world's GHG emissions, there is also a huge need to reward countries endowed with substantial forests for preserving them and the carbon they embody, and this would be another excellent way to use the funds raised by the rights auction. For example, the UNFCCC could enter into 'rental' agreements whereby forest-rich countries agreed to protect and enhance their forest estate.

Such financial inducements would help to reverse the existing situation whereby we implore poor forest-rich countries to look after their forests, while at the same time demanding debt repayments and exports of

timber, beef, soya beans and palm oil.

Again, this would deliver one of Stern's aspirations: 'Emissions from deforestation are very significant ... greater than [those] produced by the global transport sector. Action to preserve the remaining areas of natural forest is needed urgently. Large-scale pilot schemes are required to explore effective approaches to combining national action and international support ... those countries should receive strong help from the international community, which benefits from their actions to reduce deforestation.'

The Kyoto 2 framework would also address the extra GHG emissions, beyond those of fossil fuel use, from cement manufacture, aluminium smelting and aviation. At present, aviation pays for none of its contribution to global warming, being specifically excluded from Kyoto 1. However, due to the additional radiative forcing of stratospheric aircraft exhaust due to oxides of nitrogen, steam and particulates, aviation contributes about three times as much warming as the carbon dioxide it emits. Airlines should pay their fair share, and the easiest way to do this would be to make them buy sufficient rights to cover these additional emissions.

Cement kilns also produce additional carbon dioxide beyond that of the fossil fuels they burn, as a result of converting calcium carbonate to calcium oxide, doubling their global warming impact. And aluminium smelting produces perfluorocarbon (PFC) gases as a by-product of electrolysis. Their very high global warming potential (6,500 to 9,200 times more powerful than CO₂) means they are responsible for just under half of the industry's GHG emissions. Other such industrial gases include sulphur hexafluoride (22,200 times more powerful than CO₂, it is used as an electrical insulator and to protect magnesium from oxidation) and the HFCs widely used in refrigeration and mobile air-conditioning (even though perfectly adequate substitutes exist, such as the Greenfreeze technology supported by Greenpeace).

To conclude, I believe that Kyoto 2 offers the kind of flexible, encompassing framework for global action and cooperation on climate change that Sir Nicholas Stern was reaching for, delivering the key objectives set out in his report in a way that is fair, equitable, practical and economically efficient.

Oliver Tickell is freelance journalist and environmental campaigner and author of the Kyoto 2 concept. For more information: www.kyoto2.org or go to The Ecologist website, www.theecologist.org, and join the Kyoto 2 debate

“There is also a huge need to reward countries endowed with substantial forests for preserving them and the carbon they embody”

I would turn the lights out

That's what I would do *if I were* energy minister, says the former environment minister

BY MICHAEL MEACHER

The issue is very stark, but also very clear. The industrialised countries (specifically the 35 Annex I countries of the Kyoto Protocol) are currently well off track to meet their Kyoto commitments. Spain, Portugal, Greece and Canada are way over target, the US and Australia have reneged and their emissions are soaring massively over Kyoto limits, and China, India and Brazil have not yet signed up to targets and their emissions are rising very fast, driven by frenetic growth. Given this record, the chances of the world cutting its greenhouse gas (GHG) emissions by 60 per cent by 2050 (which scientists earlier said was necessary) – when, on present performance, global emissions will probably increase by 75 per cent by that date – must be next to nil.

Moreover, even this seemingly unreachable 60 per cent cut by 2050 is still nowhere near enough. The latest science indicates that a cut of no less than 90 per cent is necessary by the much earlier date of 2030 if we are to keep carbon concentrations in the atmosphere below 430 parts per million. The significance of this threshold is that above this level we may not be able to prevent some of the potentially catastrophic feedback processes from kicking in: such as the dieback of the Amazon rainforest, the release of billions of tons of methane hydrates from the ocean floor, or the collapse of the Greenland and Antarctica ice sheets. After that, nature takes over and the biosphere becomes the primary producer of carbon. The global warming process takes on a momentum of its own, beyond our control.

So what is to be done? The main problem is the sheer poverty of our imagination. The reaction to the compelling scientific evidence and clinching economic argument of the Stern Review has been breathtaking in its small-mindedness. It has all come down to higher green taxes and a Climate Change Bill in the Queen's Speech. That doesn't even begin to understand the profundity of the threat that faces us. Global warming is caused primarily by the burning of fossil fuels, and pushing up green taxes – plus a Bill with unspecified contents thrown in at the last minute to appease public opinion – will

have no more than a piffling effect.

What we, and the government, need to get our minds round is that we are at war: at war against climate catastrophe, presenting us with a far greater threat towards our survival than 1939; and that the measures adopted must rise to this unprecedented challenge. If GHG emissions are to be cut by 90 per cent by 2030, less than 25 years away, that can only be done by a combination of three radical measures: massive reduction in energy use (large-scale limiting of many current activities); cutting today's prodigious waste of energy (major step-changes in energy efficiency and conservation); and a rapid, urgent switch, as a virtual wartime emergency, from fossil fuels to renewable sources of energy. The scale of change on each of these three counts today is miniscule or non-existent.

The only certain way to achieve these goals is via carbon rationing, both at national and international levels. For the latter, the only realistic and equitable mechanism is the policy of contraction and convergence – radical annual contraction downwards of per capita GHG emissions for the industrialised countries, while per capita GHG emissions for the developing countries converge upwards, until the same global per capita level is reached; after which, that equal per capita global share continues to be cut systematically year by year until a 90 per cent reduction is reached by 2030.

That is the theory. Is it practicable? It is not all hair-shirt. Firstly, the Northern countries would gain from the export markets created by restructuring, while the Southern countries would benefit from the sale of unused carbon allocations under a global carbon reduction trading system. At the same time, the whole world would benefit from slowing the rate of catastrophic damage. Secondly, the revolutionary concept of ecological debt comes into play here, suggesting a fundamental realignment of who owns whom in the international economy. Carbon debt – using up fossil fuels at a far faster rate than per capita entitlement allows, in order disproportionately to increase one's own prosperity at the climate expense of others – implies a huge debt has to be paid back. Monetisation of that North-South liability certainly far exceeds the totality of North-South financial aid, and the practical realisation of this

“What is needed is a mandatory system of personal carbon allowances, which would tackle the half of UK emissions that come from individuals”



could go a long way towards restructuring a grotesquely imbalanced world economy.

So if contraction and convergence is such a fair and rational allocation of available global resources, why hasn't it been adopted, not least by the British Government? The answer is that, in the Blair regime where power and policy-making has been highly centralised around a small clique in No. 10, the idea did not find favour there both because climate change was not, until very recently, a matter of high-level political concern and also no doubt because, even if the idea had ever been seriously considered, the known US repudiation of the idea would have killed it stone dead in Blair's eyes. However, Stern's central argument that not taking action against global warming could be five to 20 times more costly than acting now, blows apart Bush's argument that the US economy cannot afford the cost of adhering to the Kyoto Protocol. In a post-Bush Administration from 2009, I would anticipate that contraction and convergence will come into its own as the dominant global framework for tackling climate change.

How would carbon rationing work nationally? What is needed is a mandatory system of personal carbon allowances, which would tackle the half of UK GHG emissions that derive from decisions made by individuals. These emissions are growing fast because of cheap flights, air conditioning in cars, patio heaters as powerful as household boilers, and digital entertainment and PC equipment that is permanently left on.

Each adult would receive an equal annual allowance, plus a lower share for each child. Whenever an adult bought petrol, paid a utilities bill or boarded a plane, an appropriate amount of the allowance would be deducted on their carbon card, like a parallel currency, according to the known GHG-generating impact of the product or service being bought. Again, as with contraction and convergence quotas, trading of unused allocations could be highly redistributive, rewarding the conscientious and the poor (who probably don't possess a car and don't engage in air travel) at the expense of the wasteful and extravagant (who take half a dozen foreign holidays a year). It could well initiate a new culture. A variety of ways could be devised to help people switch to a low-carbon world – especially the carbon labelling of houses, cars, appliances, lighting systems, and airline tickets, so that people could get the best value for carbon utilised. Energy meters and bills would contain data on carbon emissions, to guide optimal choice. There would no doubt be all

sorts of novel schemes to help the public get the most advantage from a low-carbon existence – such as a Carbon Watchers project for over-users, rather like Weight Watchers for the over-heavy.

Again, it may sound good in theory, but will it work in practice? It is only likely to gain widespread public acceptance if the government gives strong leadership in explaining the scheme – its purpose, why it is so urgently needed, why it is fair to everyone, how it is universal and non-discriminatory, and how it fits into an overall national and international strategy to fight climate change. A totally different approach is required from that which ignominiously failed over the fuel duty escalator policy – which was meant to give motorists the message that driving their car unnecessarily carried environmental externalities in the form of GHG emissions and pollution which needed to be paid for, so as to act as a deterrent. However, the government never explained the logic behind the policy, the driving public thought it was just another stealth tax, and when the truck drivers besieged the oil refineries in September 2000, the public broadly supported them. The government capitulated, the fuel duty escalator was ditched, and there is now no strategy in place to discourage climate-damaging car use (except raising the Vehicle Excise Duty on Chelsea tractors in the last Budget by £1 a week, which for a vehicle costing £20-30,000 is frankly laughable). The whole episode is a classic example of how not to make policy. Has the government learnt the lesson?

Will carbon allowances (or domestic trading quotas) be acceptable? There is a good precedent. People accept severe restrictions in time of war. In 1942, the US limited gasoline to three gallons a week for non-essential vehicles. Germany introduced rationing throughout the war, and Japan from 1941. In the UK, between 1938 and 1944 the use of cars dropped by 95 per cent, whilst the use of public transport increased 13 per cent. Consumption of all goods and services fell 16 per cent, households cut their coal use by 25 per cent, and food consumption fell 11 per cent – though, significantly, health improved, including a dramatic fall in infant mortality.

The real question arising from all this is: can governments persuade their peoples that we face nothing less than a war against climate change, with the need for the same determination and self-sacrifice as was seen 60 years ago? A key part in the government's armoury for rousing public consciousness would be energy rationing.

That's why, as Secretary of State, I would introduce it.

“ The real question arising from all this: can governments persuade their peoples that we face nothing less than a war against climate change? ”

They've sent Helbig after me

A dark tale of how the powers-that-be try to discredit those who oppose their world view

BY FELICITY ARBUTHNOT

Roger Helbig, a man with an unhealthy obsession: he believes that depleted uranium (DU) waste from the nuclear fuel cycle, which is used in munitions and bullets – is safe.

I received an unsolicited email from him, entitled 'The Real Doug Rokke' in response to an article I had written for The Brussels Tribunal.

It read: 'I see that you have been taken in by Doug Rokke, who really does not know much about anything, let alone depleted uranium. It is sad that a Phd has so little real knowledge. I also see you claim to be a journalist. What newspapers, radio stations or TV stations have you actually worked for, or are you like Bob Nichols, a self-described journalist with no actual journalistic experience?'

His tirade continued: 'Rokke's military records and part of his PhD thesis are attached. You will note he has no real expertise in depleted uranium and his claims about the Middle East are pure fantasy, yet you inflame the Arab street with them. You ought to learn more about what is before telling the world all about it.'

I had written in the article: 'Depleted uranium from shells fired by British and American forces during the Balkan wars has found its way into the food chain and has been detected amongst the civilian populations of Kosovo and Bosnia. A study of the local population in three locations in the two Balkan regions has found samples of the highly radioactive particles in the urine of all those tested.'

Helbig had highlighted the excerpt, commenting: 'This is pure bullshit and you know it. Where are the actual test results? I presume you don't choose to read the United Nations Environmental Programme report – it is only about 300 pages, well documented instead of scientific myth!'

Lieutenant Colonel Roger Helbig, USAF, Rtd (it appears) is one of a small Pentagon-inspired group devoted to denigrating and undermining the efforts of those drawing attention to the dangers of DU, which three UN Sub-Committees have designated a weapon of mass destruction.

Rokke is just the latest in a long line of Helbig targets. Journalist Bob Nichols, Project

Censored award winner for his DU coverage, writes, 'Individuals on web sites throughout the United States have complained about the abusive and aggressive actions of an Air Force Lieut. Colonel named Roger Helbig'.

David Lindorff, another award winner and the (UK) Observer's David Rose, have also suffered a barrage of abuse for stories exposing the dangers of DU, which poisons the environment, thus entire food chain regionally where used, for four-and-a-half billion years.

Nichols cites Helbig 'attacking hundreds of sites and harrassing web moderators.' Informative DU sites (such as www.Pandora-project@yahoo.com and www.notinkansas.us – the latter's meticulously researched alerts included the chilling warning of US military in Iraq reagrding bathing in shower water taken from Tigris river: 'GI's Beware Radioactive Showers') are also victims. Researcher, John Ervin, posted on www.apfn.net: 'They've already sent Lt. Colonel Roger Helbig after me.'

Leuren Moret, President of Scientists for Indigenous Peoples and City of Berkeley (Ca) Environmental Commissioner states: 'Helbig has been harassing me nonstop for two to three years.' Moret travels the world warning on the dangers of DU, working with a group of independent scientists (www.radiation.org) and submitted a paper on DU to a UN Sub-Committee, one of the ones which led to DU's designation as a weapon of mass destruction.

The picture Helbig paints of his latest target Rokke is unrecognisable from the truth. Major (Dr) Doug Rokke, Former Director of the US Army Depleted Uranium Project (www.traprockpeace.org), principal author of the Pentagon regulations and procedural guidelines (US Army Regulation 700-48 And US Army PAM 700-48) on the dangers and handling of DU affected areas: tanks, structures, terrain, equipment and personnel, civilian and military.

Rokke, whose team led the (impossible) clean up in Kuwait in 1991 after the first Gulf War, was so horrified by what he found, he finally spoke out – at cost. Sick from DU poisoning himself, he has suffered ongoing 'physical, psychological and economic threats' from Helbig and other US government representatives since.

“ Helbig is one of a small Pentagon-inspired group devoted to denigrating and undermining those drawing attention to the dangers of DU ”

Rokke has crucial, credible, hands-on knowledge, thus, writes David Lindorff, the effort to discredit him, label him 'a fraud', demote him to 'Lt.' by Helbig, has been vicious and tenacious.

This is the same Doug Rokke whose Army evaluation report, dated July 30th 1994, cites the then Captain Rokke as being Project Director and primary technical expert and specialist adviser to US Army major commands, the US Army Chemical School and contractors during training, development and test implementation. In 1995 he was cited for a 'meritorious service' medal, for work on DU. He left the army when none of his health warning reached the troops.

Rokke and another former Pentagon advisor, Dr Asav Durakovic, whose CV and list of peer reviewed papers runs to 52 pages, Canadian expert Professor Hari Sharma (who wrote to NATO and world leaders of the dangers of DU), Dr Garth Nicholson and others have demanded appropriate testing and treatment of all affected – soldiers and civilians – and rigorous DU clean up, where used or tested 'as already required by the US Department of Defence regulations...', states Rokke. The polluter pays. But the cost would be stratospheric; so Helbig's group stalk the internet to insult and intimidate.

'The use of uranium munitions is an act of terror,' Rokke says. In context, the United Kingdom Atomic Energy Authority 'self-initiated' a report for the British government on DU shortly after the 1991 war. If 50 tonnes of the residual DU dust remained, they estimated that there would be in excess of half a million cancer deaths in the region by the year 2000. The Pentagon admits to 325 tonnes remaining and other estimates are as high as 900 tonnes. In 2003 a further two thousand tonne DU burden has been admitted to.

Iraq and the region's cancers have become a tragedy equalling Chernobyl. Oddly, when the US/UK military allowed the looting of every Iraqi State building, all medical records of this unique war crime was destroyed.

Helbig is exercised by a memo from Los Alamos National Laboratories, New Mexico, from a Lt. Colonel Larson to a Major Ziehman. It is dated the day after the 1991 onslaught on Iraq ended (1st March 1991.) Headed 'The Effectiveness of Depleted Uranium Penetrators', it reads: 'There is a relatively small amount of lethality data for uranium penetrators... The recent war has likely multiplied the DU rounds fired at targets by orders of magnitude...

'There has been and continues to be a concern regarding the impact of DU on the

environment. Therefore, if no one makes a case for the effectiveness of DU on the battlefield, DU rounds may become politically unacceptable and thus, be deleted from the arsenal.' Thus, 'we should assure their future existence' otherwise may stand to lose them. He continues, 'I believe we should keep this sensitive issue in mind, when, after action, reports are written.'

US tanks damaged by DU rounds in 1991 were taken to a nuclear decontamination plant at Barnwell, North Carolina, reportedly constructed the previous year solely for this purpose. Those beyond decontamination were buried in specially licensed landfill sites.

In June 1995 the US Army Environmental Policy Institute wrote of DU: 'DU is a radioactive waste and therefore should be deposited in a licensed repository'. The poisoned chalice of breaking the news that Kuwait had been turned in to an unlicensed one, fell to the luckless British Ambassador.

Helbig's email cites the United Nations Environment Agency Report. There were two UNEP Reports on Balkans contamination. The first was cut – under alleged US/UK pressure – from 72 pages, to two. An impeccable source on the second, to which Helbig refers, stated that in spite of considerable obstacles placed in their way, a list of the most contaminated sites to sample was compiled. On arrival, the multinational forces excluded visits to those sites. As Professor Malcolm Hooper, Emeritus Professor of Medicinal Chemistry at Sunderland University (UK) writes in his article 'Most Toxic War in Western Military History', regarding Iraq in 1991: 'at every level, investigation into illness, birth defects, contamination has been blocked and bedevilled by ... a pervasive myopia which sees lack of evidence as proof.'

Last September, Lieutenant Colonel Helbig, of Richardson, California, was in Court. Complex, inter-connected cases, heard also in June and July, due to resume in December, involve Helbig's neighbour, Jamahl Feres, of Syrian origin and his Swiss wife Katherine. They allege suffering three years of harassment including the last year, in which Helbig covered all windows in his house which faced theirs, with Israeli flags. Leuren Moret and Bob Nichol will be witnesses for the Feres's.

It now transpires that Helbig (whose scorn for on-line journalists and journals is boundless) has posted varying rants on www.inthesetimes.com in the name of 'Natalie.' You have been warned.

Felicity Arbuthnot is a freelance journalist

“ If 50 tonnes of residual DU dust remained, they estimated that there would be in excess of half a million cancer deaths in the region ”



Sir David King

The man who changed the world... but can he save it? asks **Jon Hughes**

Sir David King has been Chief Scientific Adviser to the British Government since 2000. In 2002 he changed the world when he declared 'climate change is a greater threat to civilisation than terrorism'. At a stroke, the threat of climate change started to be taken seriously by all but President George Bush. Latterly he played a substantive role in the writing of the *Stern Review on The Economic Impact of Climate Change*, which has debunked the economic argument against taking action, to avert what Sir David now describes as potential climate catastrophe.

So Sir David is a man who undoubtedly takes climate change seriously and is keeping it high on the political agenda, at home and abroad. But on the face of it there are inherent contradictions in Sir David's role. How does fact-based science and politics mix,

and how does wealth creation and science mix? These potential conflicts were highlighted late last year when the government gave the go-ahead for trials of genetically modified potato crops in the UK. Had the science, wealth creation possibilities or politics – or a combination of the three – led to the decision that flies in the face of public opposition?

Similarly, aiming for a 60 per cent cut in greenhouse gas emissions when a great many climate scientists are saying an 85 per cent cut is required to avoid genocide in Africa smacks of political pragmatism, too, rather than science.

We had 30 minutes to discuss these issues when we met at Sir David's office within the Department of Trade and Industry in December, 2006.

JON HUGHES Among the public, your name is synonymous with climate change. But your role as the government's Chief Scientific Adviser is wider than that. Can you explain what your main areas of responsibility are?

SIR DAVID KING Yes, in brief, I cover everything where the knowledge base comes into government-made decisions. So I advise the PM [Tony Blair] on everything from pandemic flu to foot-and-mouth disease outbreaks, to advice on what can be drawn from the science base. I suppose the most important activities I have introduced are foresight activities: where we are looking out to the end of the century for what are the risks on the horizon, what are the opportunities on the horizon and then advising the government on that; on what new processes to pursue and topics to explore, which we run for two/three years, drawing on the full science base. In the UK, an excellent example of that is flood and coastal defence management where the programme took two-and-a-half years to complete. Before our programme, the Government was spending £200 million per year, now it's spending £500 million a

year. What that demonstrates is that as we move through this century, we will have to spend more to defend our environment against the effects of climate change. In the best-case scenario, we have agreed to keep emissions low, in the worst-case scenario, it is let rip... business as usual.

JH The thing that interests me about your role is that when you appeared before the select committee in May 2006, you said that wealth creation was one of your chief roles. How does that work? How, as the government Chief Scientific Adviser, do you marry the two? Do you look at the science and then go that science is valid in terms of science but it is not valid in terms of wealth creation or...?

DK Not at all. I think you're looking for a dichotomy which doesn't exist at all. I have to say that is completely misleading. What I will do is, on the one hand, look at the opportunities for wealth creation arising from our very strong science base.

Let me just give you one example... This looks like a mobile phone, right? Look at the potential of a device like this to be used in the context of disease. If you place a DNA chip on

the end of this phone (the rest of the technology stays the same), it becomes a mobile disease monitor. I've then got this out in the field; whether it's a foot-and-mouth epidemic or whether it's a flu pandemic, I can go around and put this in people's mouths and within two minutes I've identified whether or not they have a disease.

I can pre-programme it to 16 diseases. I can then ping it through a satellite system to the WHO (World Health Organization). On maps there, they begin to see a new epidemic horizon somewhere in the world. So you get movement to that point, to quench the outburst. That's a device of the kind I'm talking about, where it's wealth creation...you could sell millions of these around the world.

When we ran a computer program to assist me with running the foot-and-mouth epidemic, that was on my wish list – there was no such device. You put this into the computer program and instead of costing the country £7 billion, with this device, it will cost £50 million.

So when I say wealth creation – wealth creation from creating a new technological device and managing risks at the same time, there is no conflict. However, if you



look at other wealth-creating opportunities, not all of them have the potential of managing risks as this does.

So when we talk about wealth creation opportunities, we would not always be sure that they are opportunities for managing risk but we would always make sure that these wealth-creating opportunities were opportunities in the real sense of the word, where the welfare of the human population is at stake.

We also must deal with what I think underlies your slightly hostile question, which is, if we are going to manage the impacts of climate change over the next 30 to 40 years – which are in the pipeline whatever we do on carbon dioxide emissions – we are going to need the wealth that we generate to manage that process.

The Thames Barrier doesn't come free of charge. If we are going to work in the African continent, as we are – because we are now spending roughly £1.2 billion per year in the African continent; that's a massive increase – we can only do that because we have generated the wealth. We are using our science and technology to ensure that we can continue to do that.

JH The reason behind that question is that if you're in control of around £3 billion a year to invest on certain research and development...

DK May I just rephrase that. £3.4 billion per year comes into this office. And the only control this office has is in the proportion that goes into the arts and humanities, engineering and so forth. But there is certainly no engagement with the process by which those monies are then submitted out to awardees. There is another budget, which is around £2.5 billion per year, which I certainly oversee, which goes into government to manage the knowledge-based system –

research and development across government departments. That has to be fit for purpose; that is, where a government department is preparing itself for all sorts of eventualities. So, for example, if we have a foot-and-mouth outbreak, we have to have the laboratories to run the tests.

JH I understand. If we can move on. The latest science-based decision involved GM potatoes, allowing trials to go ahead, and you are on the record as being in support of GM technology, seeing it as a potential wealth creator...

DK Just so that I can put that into my own words. What I did was create a GM science group, which I chaired. We met for a year. All of our meetings were in the open; a number of people attended those meetings; I think we met for about 100 hours; we had a full range of scientists drawn from the community of science on there. In addition we had scientists from NGOs [non-governmental organisations]. The production of that report determined government policy towards GM and I'm saying all of this because we had full buy-in from all the members of that committee.

If you read that report, I think you will see that what we are saying is, GM is a new technology, along with a whole range of technologies that have been devised by mankind to develop new kinds of products.

Those technologies are responsible for the green revolution that has occurred in developing countries and that has brought down mortality rates by a massive amount. In India, for example, the Green Revolution improved with the use of GM technology – you will see that. The point we make is that because this is a new technology, because this is a new process, we have to see that the regulatory process is up to the new technology. So any product stemming from that new technology has to be very carefully

tested. So we don't just reject technology: as always, we examine the product. So I don't accept or reject a green light for all GM – absolutely not. What I am saying is we need proper regulatory process to then look at the process of regulation. So, if we find, as with the case of GM potatoes, that all of the tests are satisfied, then we continue.

That's a bit difficult for someone to take, who's got a black-and-white attitude towards a particular technology. But then, I am always answering the questions! What's your opinion on radiation technology in the development of new crops?

JH You're asking me? I haven't got long enough with you to go down that road.

DK The point I'm making is, why did you pick on GM?

JH This is a contemporaneous issue...

DK So is radiation technology...

JH I think the public at this time are more aware of GM technology than radiation technologies... We will include that in the piece, that more people need to be more aware of radiation technology. But we need to move on.

Referring to GM, I'd like to briefly look at the precautionary principle. We can agree on the definition, that 'when there is reasonable suspicion of harm, lack of scientific certainty or consensus must not be used to postpone preventative action.' Now you don't like the word 'principle': you told the select committee it will cause inertia in scientific research and development. My understanding of science is that the ultimate aim for a scientist is to prove the unknown part of a problem. There are so many unknowns with GM, that if, say, you've got terminator technology, it could escape, it will have impacts on biodiversity...



When the Egyptians ground powder to put on their faces, that was nanotechnology. What are we creating this fear about?

DK Read our review. Certainly all of the NGO representatives on my panel were satisfied.

JH In terms of the precautionary principle, you don't like the word 'principle', preferring 'approach'. Can you explain more about why?

DK A precautionary approach is an approach where if you're going to cross the road, you look both ways and then look again in the first direction and then cross the road, looking all the time. That's what we teach children in the message to cross the road. Now, what is the principle that underlies that?

I'm a scientist, I can keep the word 'principle' for scientific facts that I know hold a scientific equation. $F=ma$ [a formula combining Newton's second and third laws of motion: *Force equals mass x acceleration*] operates for all particles. Now what is different about the precautionary 'approach' to crossing the road and the precautionary 'principle' that you should use when crossing the road? I don't understand it. The precautionary approach simply means, of course, my function in advising government is to manage risk; you can never manage risk to zero on everything – absolutely not.

JH Just one last question on GM. If you have assessed the risk 10 to 15 to 20 years down the line, have you assessed the opportunity cost of not doing it? It might be more beneficial not to introduce such crops into the UK.

DK Of course, that is part of the risk analysis.

JH Within the risk analysis, do you consider keeping the UK GM-free and look at whether the opportunity cost along the line will be far more beneficial to do so? Would that be part of the equation?

DK What do you mean by GM-free?

JH Free from genetically modified crops.

DK But every crop has been genetically modified since 5,000 years ago. We genetically modify crops by breeding.

JH That is a far different thing.

DK It's not far different from a lot of techniques that have been used over the past 200 years. You're focusing on one technique; I'm saying, look at the products – and that's what we're doing; we're looking at the products and we're saying, 'actually, there is nothing in this product that is...' You're asking about the unknown. So, for example, the worry would be that you've got a product that is going to generate a protein that is going to poison some proportion of the population; so what we do is scan for all of the proteins that are produced. And that's part of the regulatory system.

JH The point I'm making is...

DK What we need to be careful of is that we don't just use a blanket position that becomes meaningless. And frankly, when you just say 'release of GM commercial crops', it is so meaningless – we have been modifying crops for such a long time. What I'm saying is, the technological method for releasing the product is important in the sense that I have to make sure that regulation keeps up with it.

JH In terms of GM and nanotechnology, how can you regulate nanotechnology?

DK How have we ever regulated technology? Since the Egyptians started making face powder, that's nanotechnology. There is nothing new about nanoparticles except that scientists have learnt how to quantify them. We're now in a good position with

nanoparticles because we can examine them in fine detail. When the Egyptians ground powder to put on their faces, that was nanotechnology. Every time you breathe in, how many nanoparticles do you breathe in? They're in the air.

So again, what are we creating this fear about when you say nanoparticles? They're nothing new.

JH I'm not talking about everything. Pollution in the atmosphere...

DK In London, we used to have smog generated by the nanoparticles of carbon, produced by coal fires, that caused precipitation of water, and that creates smog. So we stopped the burning of coal and, bingo, that stopped smog. So we have in the past learnt how to regulate nanoparticles. Those nanoparticles were also very bad for human beings.

Silicosis in mines is an impact of nanoparticles: they cause massive problems for people, inhaling small particles is a massive problem. We know that. Cigarettes – for God's sake, don't smoke cigarettes – because you're inhaling nanoparticles.

JH But in terms of nanotechnology, the talk is of using 'living organisms' in electrical circuits in the home. Now we can't possibly know the outcome and impact of that.

DK Why not?

JH If we look back to 40 years ago, if industry had chosen bromide compounds rather than CFCs, we would have been in real trouble...

DK But what if we go back to the point where vaccines were developed and we had listened to the people who say or were saying 'don't try those things, they might kill the population'. We have managed to eliminate a whole range of diseases using



vaccines. But if you look back at that period, you see that every NGO objected.

JH But some people would say that while vaccines have eliminated some diseases, as a result you have created others...

DK Get real. Come on. Are you actually going to argue that people today are suffering from diseases in the way that they were before vaccines were developed? Because that is a nonsense, an absolute nonsense. We are still vaccinating our entire population. We have managed in Africa to roll out vaccinations against polio and we have virtually eliminated polio around the world. Don't tell me that that is ...

JH I can't go there; we only have a few minutes left. Now, the Stern Review... we can agree on Sir Nicholas's figures? (See box.)

DK Yes, I supplied the science.

JH I'm presuming that climate change is such an important issue, that I would be right in saying that every piece of work governed by your department is now measured against what is required by climate change?

DK I think that it is the biggest problem facing us in the 21st century. It is the biggest challenge our civilisation has ever had to face up to.

JH In 2002, you said climate change posed a bigger threat than terrorism and it would require something in the region of a 60 per cent cut in emissions...

DK In 2003, the British government published a white paper that said we would reduce our CO₂ emissions by 60 per cent by 2050. What is important about that is that we were the first government to make a unilateral declaration. We have got bogged down in negotiations with countries around the world, including the US. In order to break that deadlock, we decided as a government to simply unilaterally do what we thought was necessary to be done. The government will demonstrate in the White

Paper next year how we are going to achieve a 60 per cent reduction by 2050. However, if by, say, 2020, we have international agreement on action and the action requires a further cut in carbon dioxide emissions and all countries are agreed on that, we will be in a position to do that.

JH Based on all the science which was included in the Stern report, the science in the IPPR report (*Meeting The Climate Challenge; recommendations of the International Climate Change Taskforce*)...

DK Based on the science that I promulgated and pressed for. For example, the science of the Exeter meeting which was driven by myself. More familiar with it than I suspect you are. So what is the question?

JH The critical question seems to me that a lot of scientists think that it requires an 80 to 85 per cent cut in greenhouse gas emissions and you need to start working on it now; and as a scientist studying the same data...

DK Please don't come to me and tell me I am a scientist. I am *the* scientist who will give you, if you like, a lecture on climate change and I will tell you what the outcomes will be, and I will tell George Monbiot as well, who doesn't understand half of it.

But let me just say this... Supposing I said to you, as I have said in an article in *The Guardian*, it would be much fairer if we had stopped at 300 ppm. 383ppm – which is where we are today – is giving rise to, and will continue to give rise to, dangerous climate change impacts around the world. That's where we are today. So when someone says to me today, 'Shouldn't we be reducing by 80 per cent?', I have many, many questions to ask about that. Who do you mean by 'we'? Do you mean the entire world, including Africa; or do you just mean the developed world; or do you just mean Britain? Britain produces two per cent of the world's carbon dioxide. What do you mean by that? Why are you pointing the finger at me?

I consider it to be an unnecessary question

because Britain is leading the way internationally as a result of the moves I pressed for back in 2002. We are leading the way. If we can get the international agreement of all the leading countries to reduce emissions by 60 per cent by 2050, we will have made a substantial step forward. If we then find, as we did with CFCs, that we have to ratchet the process up and head towards an 80 per cent reduction, then, believe me, the British government is going to be in the vanguard. There is little point in discussing 60 per cent versus 80 per cent until we have at least international agreement on the first step.

JH What I'm...

DK You and Monbiot...

JH ...trying to figure is, if the scientific community is saying...

DK What you and Monbiot are asking...

JH Really, I'm not playing Monbiot's tune...

DK Let me just tell you this. You are chasing a question that is non-scientific. What I'm saying is, I'd rather we weren't here today. I'd rather we hadn't used so much fossil fuels that we had already created dangerous climate change. I'd rather we weren't.

Now, in the practical world, we are advising governments on action, we are reducing our emissions by more than any country in the world. Now we need to take our partners and the rest of the world with us. That's where the priority is. And I wish I could get the support of *The Ecologist* on that.

JH You will get the support of *The Ecologist* and we are aware that you are the man who changed the world. The confusion arises when the government and you say climate change requires we cut GHG emissions by 60 to 65 per cent, but a substantial body of scientists is saying it has got to be 80 to 85 per cent, or it is genocide in Africa and we're risking very real



I am the scientist who will tell you what the outcomes (of climate change) will be, and I will tell George Monbiot as well

problems. The question is, which is it? What does the science say the cut should be?

DK I'm sorry, the climate change scientists are not saying it's got to be 85 per cent or there's going to be this. Can I just explain the misunderstanding around the figures?

[Sir David is passed a note]

DK I'm sorry, I have to go. But first, this is a critically important point. The community that says we have to reduce by 85 per cent – and you're saying that isn't Monbiot, funny that – the scientific community are saying what should we avoid happening that is going to be catastrophic; I'm not going to say dangerous. Sea levels are rising, climates are getting warmer. What is going to be catastrophic that we should use as a symbol of what shouldn't happen and they're all zeroing in on Greenland.

If we lose all the ice in Greenland, sea level goes up 6.5 metres, 80 per cent of our global cities will go underwater, there is something to avoid. What is the point, in terms of carbon dioxide, at which we irreversibly start losing Greenland ice? If you can tell me that, that's more than any other scientist in the world can. There's no scientist who is saying they know what the level is. We're all trying to look at it in terms of probability distributions. So that we know, at 450ppm in the atmosphere of total greenhouse gas, it's quite possible that we will be past the point of melting Greenland ice. But it's quite possible that we will have saved Greenland this year...

JH Are we not past it now? Figures have been passed to me that say the rate of melt this year is going to be revealed to be a tenfold increase on what was expected.

DK Well, I can tell you what the rate of Greenland melt is, from the latest 10-year satellite data. The melt rate is between 100 and 240 cubic kilometres of ice.

JH Which is far greater than it has been.

DK The previous expectation was 80. So not 10 times, let us be precise! It is melting faster than we anticipated.

JH Is it tipping?

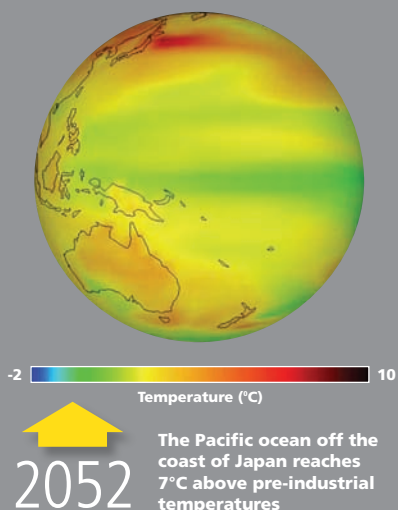
DK We don't know. That's the problem. The scientists are working hard. There are at least 3,000 scientists working on the problem of climate change and to suggest there is a consensus opinion of 80 per cent reduction is simply untrue.

JH One last question. El Niño is here, yes? We see El Niño brewing here in 2052, don't we (see box), and the heating up of the ocean by 6-7°C. But this is what I understand the Americans have measured now. Basically, what I am asking is, are we further down this road than we previously thought?

DK Once again, you have to look at the probability curve distribution and unfortunately they are quite broad. In other words, the best state of the science, which is what I fed into the Stern report, is to produce a probability distribution curve. We can't say anything more than this is the most probable with all of the information that we have. But the breadth of that information, the uncertainty is quite wide.

[At which point, Sir David put on his jacket, shook hands and left for his next appointment.]

EL NINO



The El Niño image (the red area) from the Hadley Centre referred to in the interview. US satellites have recorded this event happening now.

STERN FIGURES

The science in the Stern Review Into the economic impact of climate change showed that any rise of CO₂ in the atmosphere above 450 parts per million would have potentially catastrophic consequences, causing the average global temperature to rise by 2°C. At this point we would be at the mercy of climate change, with Africa and the Indian sub-continent facing 'genocide'. To stabilise at this level the Stern review says would require global CO₂ emissions to peak in the next decade and reduce by 70 per cent by 2050 – a target that was rejected on economic grounds.

Happiness is...



being en vogue

By Bill McKibben

Climate change isn't just a **threat**. It's an opportunity for us to live **happier, more fulfilling** lives. The fossil fuel age changed **every detail** of western human life – **where** we lived, **how** we travelled (and how much), **what** we ate, **how** our economies worked. But there were two changes in particular that it wrought – **huge changes**. Changes so huge they redefine the meaning of huge.

One is **physical** – the sudden onset of a rapid warming that will change the **very geography** of the planet in almost unbelievable fashion over the next century. We live on a different earth already, and it is going to get worse **fast. Way worse.**

The other is **psychological** – cheap fossil fuel tipped the balance in the modern mind between self as individual and self as member of community. It made us **different** people.

Worse people.

And so here's the **good news** – **fighting either** problem means **fighting them both**. We've been **backed into a corner**, and the **only way out** is the right way... ►

LET'S LOOK AT the physical problem first. In the last three years or so, the environmental movement has been busy morphing into the global warming movement. And with good reason. For a long time, environmentalists have been declaring that unless we change our course, Something Bad will happen. Now we know what. The earth is warming – indeed, it's warming more rapidly, and with far more devastating effect, than we would have guessed just a few years ago.

I wrote the first book for a general audience about climate change back in 1989; at the time, we thought the phenomenon would be epochal (I called my account *The End of Nature*), but we also thought it would be relatively linear, a gradually heating planet with gradually rising seas. Most scientists guessed that both negative and positive feedback effects would appear – for instance, we'd see more clouds, which would help cool the earth and keep the temperature rise at least a little under control. But those ameliorating effects haven't shown up; instead, we've seen – as documented in

each issue of *Nature* – yet more evidence of just how badly we've unhinged the basic physical systems of our home planet. To wit:

▶ Soils, as they've warmed, have become more microbially active, leading to higher rates of decay, and hence giving off more carbon dioxide. The classic study was done in the UK, and it showed that the flux out of the soils is roughly equal to everything Britain has done since 1990 to reduce carbon emissions.

▶ Everything frozen on earth is now melting, and melting very quickly. Arctic sea ice has failed to fully re-freeze for the past two winters – the first time anything like that has been observed. If you look at the earth from a satellite, it looks remarkably different than it did a decade or two ago – those Apollo shots of our lonely blue/white orb in the darkness of space are now more blue and less white.

▶ Hot ocean water is leading – much faster than anyone would have predicted a decade ago – to more massive storms. In 2005, Hurricane Wilma set the Atlantic record for the lowest barometric pressure

ever recorded in the hemisphere.

All of which leads scientists to a new kind of despair. In the winter of 2006, James Lovelock famously announced that we had already passed the point of no return – billions would perish, while a remnant of civilisation might survive if wise leaders led them north towards the pole. Less feverishly, but at least as ominously, the planet's foremost climate scientist, America's James Hansen, defied a White House gag order in the winter of 2005 to declare that unless we started putting less carbon into the atmosphere in the next ten years, we'd soon inhabit a 'totally different planet'. He seemed most spooked by new data from Greenland showing ice sheets breaking up at a faster-than-expected rate, and thus threatening to raise sea levels by many metres. Ten years. And that was a year ago.

So the Something Bad is here. And it's

Studies show that if you join a church choir or a football fan club or any other league of fellow humans, the chance that you will die in the next year drops by half

big – as big or bigger than the effects of a thermonuclear exchange. What we need to note is where it came from.

Environmentalists have spent most of their time working on the periphery of our economic life: we stuck filters on smokestacks and filters on effluent pipes and filters on car exhausts. The theory was that our basic scheme of life – getting more money than buying more stuff – worked pretty well, it just needed some filtering.

It turns out that idea was wrong. The basic scheme of things was the problem. There's no filter you can stick on a car that will keep it from emitting carbon dioxide. What you need is, for instance, a train. Or a bicycle. Which is to say, a different basic scheme. We can change all our light bulbs for low-energy light bulbs (and we should), but if we don't change the set of attitudes that produces tomatoes in January, or a Ryanair flight across the globe whenever we're chilly, and two people to a house – well, that nifty light bulb will be shining on a 'totally different planet'. The best guess? Stabilising climate at current levels

of disruption would require an immediate, worldwide, 70 per cent reduction in carbon emissions. That's a lot of light bulbs.

There's a reason, of course, why environmentalists have concentrated on light bulbs and filters. It's easy, at least relatively. It doesn't require engaging in discussion about the bigger questions about how we live, and we haven't wanted to engage with those because we assumed we'd lose any argument. Assumed that people liked the way they lived so much they couldn't imagine changing it. Indeed, that's been the biggest operating assumption of our time, the thought that underlay the career of Tony Blair or Bill ('It's the economy, stupid') Clinton. All change needed to come around the edges – we were so deeply enmeshed in the rhythms of consumer culture that challenging it in any real way seemed anathema. You could really see

this attitude at work in the negotiations around the World Trade Organization. Relentless expansion of the international economy was the central business at hand – labour and environmental

concerns could be discussed, but as 'side agreements'. We were, literally, in the margins; the economic worldview loomed so large that all else was in its shadow.

BUT THAT'S BEGUN to change – or soon will. Or could, anyway, if environmentalism begins to transform itself from a fixation on filters and light bulbs to a new fixation – on human satisfaction.

For a very long time, 'happiness' has been considered a soft topic, something that hippies and sandal-wearers bothered themselves with and the actual world ignored as it went about the important business of More. In the past decade, however, economists, aided by psychologists and sociologists, have begun to question some of their assumptions. In the old view, you measured happiness by what people bought – under the principle of utility maximisation, your credit card statement held the answer to what satisfied you. *Ipsa facto*.

But some academics began wondering: why



*Happiness is...
the open road*

not ask people if they were happy? The first problem was, would their answers be meaningful? An immense amount of research went into trying to answer this question – people undergoing colonoscopies were prodded about the precise level of pain they were feeling, researchers looked at ‘biases in recall of menstrual symptoms’ or ‘fearlessness and courage in novice paratroopers undergoing training’. Some of the early papers had a distinctly academic ring: ‘The Importance of Taking Part in Daily Life’, for instance. (Or the discovery by another analyst that ‘there is no context in which cutting oneself shaving will be a pleasant experience’.)

Eventually, however, the various researchers (led in some ways by Princeton’s Daniel Kahneman, who won the 2002 Nobel Prize in Economics – despite not being an economist – for his work on this and other problems) converged on the idea that people really could decide whether they were happy or not. British economist Richard Layard, who has written a great deal about this work, says: ‘We now know that what people say about how they feel corresponds closely to the actual levels of activity in different parts of the brain, which can be measured in standard scientific ways.’ People who call themselves happy also seem happier to their

If more is better, then environmentalism is a lost cause. There aren’t enough Powerpoint slides of calving icebergs...

friends, live healthier lives, and so forth.

Which allows you to start doing something interesting. It allows you to start reversing two centuries of reductionism. Instead of asking: ‘What did you buy?’, you can ask someone: ‘Is your life good?’ And once you’ve asked that, you’re in position to ask the most subversive question there could be: ‘Is “more” better?’

Because if more really is better, then environmentalism is a lost cause. There aren’t enough Powerpoint slides of calving icebergs to turn things around.

But if more isn’t necessarily better, then there are possibilities.



AND SO HERE’S the bottom line. We’ve become significantly richer, but not significantly happier. In a sense, you could say that the years since the Second World War have been a loosely controlled experiment designed to answer this precise question.

The environmentalist Alan Durning found that compared to 1950, the average American family now owns twice as many cars, uses 21 times as much plastic, and travels 25 times farther by air. Gross domestic product per capita has tripled since 1950 in the US. We obviously eat more calories. And yet – the satisfaction meter seems not to have

budged. More Americans say their marriages are unhappy, their jobs are hideous, and that they don’t like the place where they live. The number who, all things considered, say they are ‘very happy’ with their lives has slid steadily over that period. During the rapid economic boom of the Clinton years, the decline in satisfaction seemed, if anything, to accelerate – for instance, a report from the National Opinion Research Center showed increasing numbers of relationships breaking up. As one journalist summarised the findings, ‘there’s more misery in people’s lives today’.

As always, the United States leads the



Happiness is... bagging a bargain

PHOTOGRAPH © CORBIS

way, but the rest of the world doesn't trail terribly far behind. In the United Kingdom, per capita gross domestic product grew 66 per cent between 1973 and 2001 and yet people's satisfaction with their lives changed not a whit. Nor did it budge in Japan, despite a fivefold increase in income in the postwar years.

Depression has risen steadily across the advanced world. As the British researcher Richard Douthwaite noted, the doubling of UK income corresponded with rises in everything from crime to divorce. Which doesn't necessarily mean that getting richer caused these problems, but it surely didn't

alleviate them. Taken as a whole, we got both more stuff and less happiness.

Why did this happen? Though the study of satisfaction is in fact an infant science, the data suggests powerfully that what modern westerners lack is community—we've lost the connections to other people that as evolved primates we need in order to thrive. In the US, for instance, studies show that if you find one of the tens of millions of Americans who doesn't belong to anything and convince them to join a church choir or a baseball fan club or any other league of fellow humans, their mortality risk – the chance that they will

die in the next year – drops by half. That's not a very subtle effect. People have many fewer friends on average than they did a generation ago, and they visit with those friends – and with family and neighbours—considerably less often. We have, in effect, privatised our lives; an emergent species, the hyper-individual, is on the ascendant.

And here's what's interesting. It's fossil fuel that let that happen, just as surely as it's fossil fuel that's melting the ice caps. In America, for instance, cheap gas meant building suburbs – in 1920, Americans lived, on average, about ten persons to an acre. By the year 2000, new subdivisions averaged two people per acre. And once you've moved out to the edge, cheap electricity and heating oil lead people to build with ever-greater grandiosity. The average new home in America has doubled in size since 1970 – there are entire suburbs that look like they were built for entry-level monarchs, every home with turrets.

But it's not just big cars and big houses. As Felicity Lawrence and Joanna Blythman have shown in their reporting on the transformation of European agriculture, it's also our most basic habits. Forget about relying on your neighbours – the farmer, the butcher, the baker – for your food. Why not, since it's always summer somewhere, simply order takeout from across the globe every single night? Supermarkets, says Blythman, peddle the dream that it is 'feasible, and indeed reasonable, for the UK shopper to expect virtually every horticultural product on the planet every day.' But you can only get Californian lettuce to London if you're willing to spend 100 calories of fossil energy for every calorie of food. And, so far, we are willing – refrigerated air transport is the fastest growing sector of the food economy.

Think I'm overstating the case? Consider the greatest television phenomenon of our time, the show *Survivor*, which touched off the wave of 'reality' television. It operates from the premise that, even in an emergency, the obvious goal is to end up alone on the island, to manipulate and scheme until everyone else disappears and leaves you by yourself with your money. The Soviets and the Chinese failed in their 20th-century efforts to build the New Man. But we've evolved one in the West, a hardy hyper-individualist. Margaret Thatcher at the zenith of her power once said, 'there is no such thing as "society"'. There are

individual men and women and there are families'. The only problem is, the individuals aren't all that happy and they're starting to get kind of hot.

IN A NEW world like this, we need a new environmentalism. It begins with, say, a carrot. Slightly gnarled, perhaps – not a 'baby carrot' lathed to millimetric precision and entombed in a plastic sack, but a real one. Or a potato. Or even a parsnip. The winter before last, I decided on an experiment. Could I make it through the winter in our northern valley eating only the food that came from the fields around me? I wasn't sure – winter's long here (though not as long as it once was, sigh) and an awful lot of our agricultural infrastructure has disappeared. (America now has more prisoners than farmers.) But it turned out that in fact there were enough old farmers hanging on, and enough new ones starting up, to make it a delicious eight months. Root vegetables, but also every kind of cheese and yogurt. Apples from the county's lovely orchards, stored properly for the winter and pressed weekly for cider (even though, in the local supermarket, all the apples were arriving from China and South Africa). Even good

If only buying a Heineken could make you part of a world that worked for you – then we'd be fine



*Happiness is...
socialising*

beer from our local brewery, made with wheat from a neighbour's field.

And it wasn't just the food that was so satisfying. It was the network of new friends – the orchardist, the guy who grew 40 kinds of potatoes on three acres, the fellow raising fallow deer on an old cow pasture. Yes, all this took more time – but the time was the benefit. I felt more connected instead of less.

It turns out that I'm not alone. A pair of sociologists recently followed shoppers as they made their rounds, first at the supermarket and then at the local farmers' market. Everyone knows the supermarket experience – light trance, quick tour of the

same stations of the culinary cross, back out to the parking lot. At the farmers' market, people had 10 times as many conversations as they had at the supermarket – an order of magnitude more community. Something like an order of magnitude less energy used, too. That's an environmentalism that might start adding up to the scale of change that the planet requires, and that we require. And you don't need to stop with food – you can do the same analysis with energy, with wood, even with entertainment. Why does music, like milk, need to be downloaded from some distant location? Why can't your neighbours make it with you? That's why

it's good news when British officials report a resurgence of live music in pubs and clubs, and touring jam bands – descendants of the wandering bards – are making more money in America than the MTV stars.

In a weird way, the marketers had figured out all of this years ago, long before the academics and the politicians. Hence advertisements gradually went from being straightforward (this car has more cylinders) to being straightforwardly devious (buy this car and have sex with this girl) to being incredibly bent: buy this car or beer or cosmetic and you will have the community that you crave. If only it were



true – if only buying a Heineken could make you part of a world that worked for you – then we'd be fine. But since it's not true, then it's up to the rest of us to make good on the promise.

Environmentalists, in other words, need to build a world where that kind of satisfaction really is possible. A world where we rely on each other for something real again. The kind of world, not incidentally, that needs less coal and gas and oil to make it run.

In autumn 2005, the New Economics Foundation released a truly mind-blowing study, which attempted to rank the

nations of the world by how much human satisfaction they'd achieved, with how little environmental devastation. Most of the headlines about the study focused on the abysmal rankings of the richest nations (the US was 150th and 178th). But just as interesting was the group that did best: regardless of income, the citizens of island nations were counted as both happier and less spendthrift. Which makes sense. No man is an island, and on an island he's more likely to figure that out. It's a finding every bit as important as the news about Greenland's melting glaciers.

We know, after the long experience of the

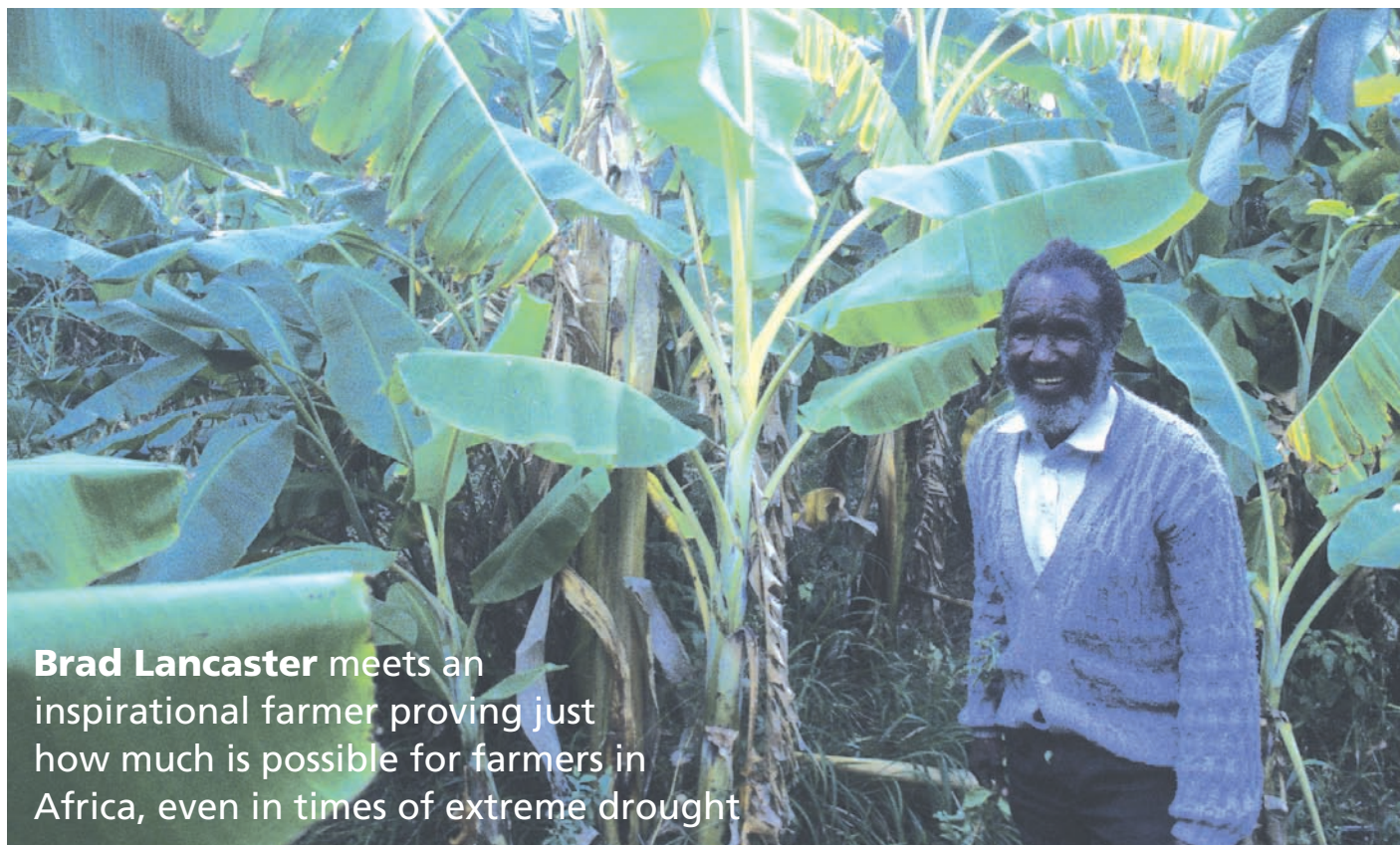
20th century, all the things that don't work for human satisfaction (centrally planned economies, endlessly repeated ideologies, ever more accumulation). We know, from what the scientists now tell us weekly, what doesn't work for the planet (burning hydrocarbons). Environmentalism is now the art of putting those two sets of facts together.

Nothing more, but nothing less.

Bill McKibben is the author of *The End of Nature* and *Enough: Genetic Engineering and the End of Human Nature*. He is a scholar in residence at Middlebury College and lives with his family in the Adirondack

PHOTOGRAPH © CORBIS

The Man Who FARMS WATER



Brad Lancaster meets an inspirational farmer proving just how much is possible for farmers in Africa, even in times of extreme drought

During an extended trip through southern Africa in the summer of 1995, I had the privilege of meeting a true ecological visionary. His name is Mr Zephaniah Phiri Maseko, but to the Permaculture Trust of Botswana (who directed me to him), as well as to hundreds of people throughout the region, he is known more generally as ‘the man who farms water’.

As a longtime student of sustainability and rainwater harvesting, I’ve found an abundance of simple, inspiring, and highly effective strategies practised in areas having far fewer available resources than the United States. On this trip I’d been through the arid and temperate regions of South Africa, Botswana, and Zimbabwe, with the goal

of observing at first hand, proven strategies for sustainable living that I might be able to bring home and adapt to the similar climates of the southwest USA.

Gazing out of the window of a colourful old bus roaring through the countryside

‘My wells are those of an unselfish man. The water comes and goes as it pleases, for you see, in my land it is everywhere’

of southern Zimbabwe, I was struck by both the beauty of the land and its similarities to my home: rolling hills of yellow grass on red earth, broken up by small thickets of twisting, umbrella-like trees. Almost nine hours later, we crested a pass of low-lying semi-desert vegetation; below us spread a vast, dry prairie veldt

capped with barren outcroppings of granite. Trees were sparse. A brilliant expanse of blue sky stretched overhead, reminiscent of the sky above the open grasslands of southeastern Arizona. The bus crept slowly downhill and stopped in

Zvishavane, a small rural town in a province of the same name.

The local director of CARE International escorted me to a row of

single-storey houses. One of these was the simple office of the Zvishavane Water Resources Project, and there on the porch sat the water farmer himself, reading the Bible. As my ride came to a stop he sprang up, beaming. Here at last was Mr Zephaniah Phiri Maseko. When he learned how far I had travelled to meet

him, he burst into wonderful laughter. He explained that lately, visitors from all over the globe seemed to be dropping in about once a week. Then he jumped in his jeep and we drove off together over worn, eroded dirt roads toward his farm. An endless stream of humour, poetic analogies and stories poured out of him. The best story of all was his own.

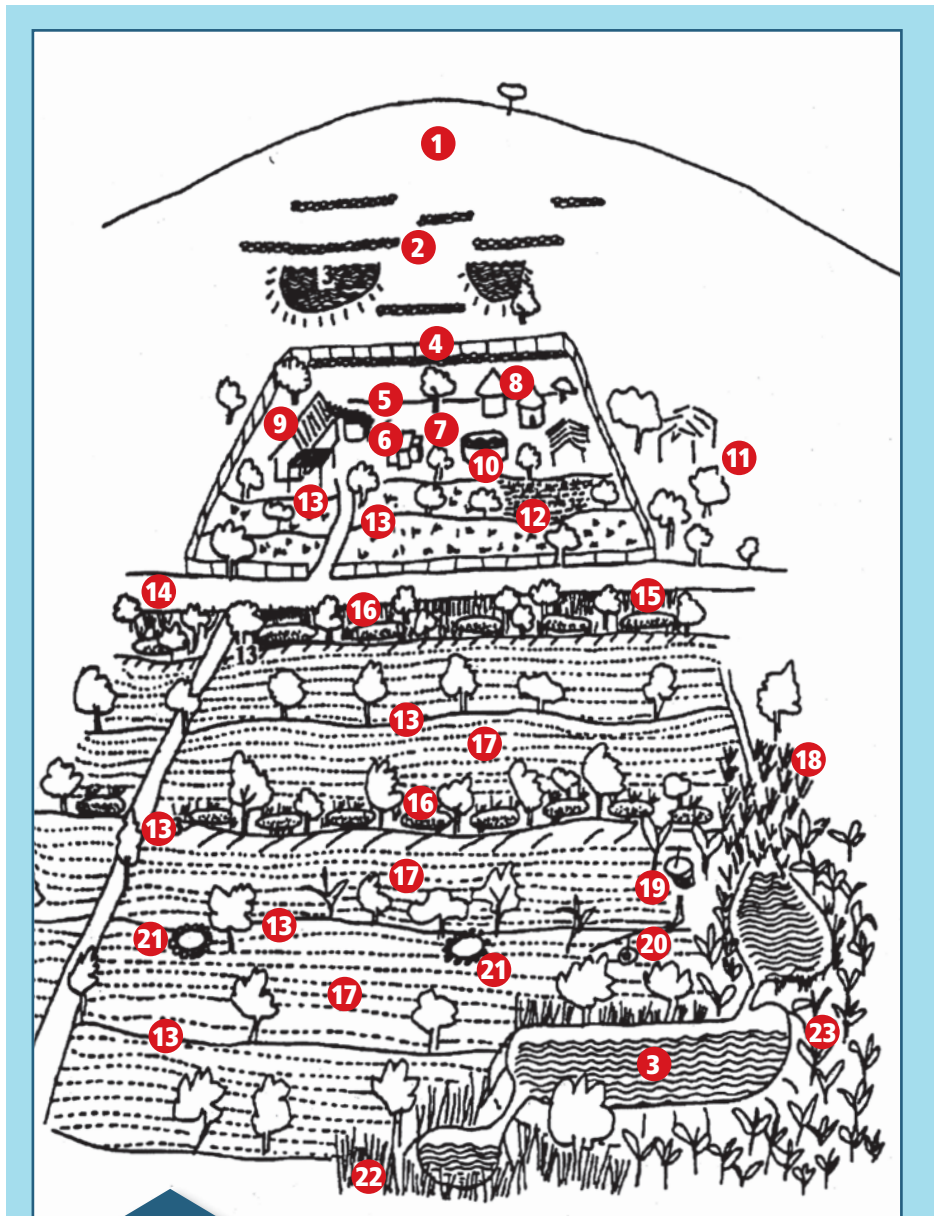
The Garden of Eden, Mark II

In 1964, Phiri was fired from his job on the railway for being politically active against the white-minority-led Rhodesian government. The government told him that he would never work again. With a family of eight to support, Phiri turned to the only two things he had – an overgrazed and eroding 7.4-acre (three-hectare) family landholding, and the Bible.

He put the Scriptures to use as a kind of gardening manual. Reading Genesis, Phiri was struck by the realisation that everything Adam and Eve needed was provided in the Garden of Eden. ‘So,’ he thought, ‘I must create my own Garden of Eden.’ Gifted also with a firm grasp of geography, however, he realised that Adam and Eve had had the benefit of the Tigris and Euphrates Rivers in their region, while he didn’t have even an ephemeral creek. ‘So,’ he thought, ‘I must also create my own rivers.’

The family farm is located on the north-northeast-facing slope of a hill providing good winter sun to the site (important in the southern hemisphere). The top of the hill is a large exposed granite dome from which stormwater runoff once freely and erosively flowed. The average annual rainfall in the region is just over 22 inches (570mm). However, as Phiri points out, this average is based on extremes. Many years are drought years, when the land is lucky to receive 12 inches (304mm) of rain. When Phiri began farming, it was very difficult to grow crops successfully, let alone make a profit. There were frequent droughts and he had no money for deep wells, pumps, fuel and other equipment needed for groundwater irrigation.

Along with everyone else in the area, Phiri was dependent on the rains for water. Storms always brought him outside to observe how water flowed across his land. He noticed that moisture lingered longer in small depressions and in the



PHIRI’S EDEN: WHERE INSPIRATION, EFFORT AND PROVISION MEET

- 1 Granite dome
- 2 Unmortared stone walls
- 3 Reservoir
- 4 Fence with unmortared stone wall
- 5 Swale/terrace
- 6 Outdoor washbasin
- 7 Chickens and turkeys run freely in courtyard
- 8 Traditional round houses with thatched roofs
- 9 Main house with vine-covered cistern and ramada
- 10 Open ferro-cement cistern
- 11 Kraal – cattle and goats
- 12 Courtyard garden
- 13 Swale
- 14 Dirt road
- 15 Thatch grass and thick vegetation
- 16 Fruition pit in large swale
- 17 Crops
- 18 Dense grasses
- 19 Well with hand pump
- 20 Donkey pump
- 21 Open unmortared wells
- 22 Reeds and sugar cane
- 23 Dense banana grove

(Illustration by Silvia Rayces from a drawing by Ben Lancaster)



Left: Phiri in a 'check dam', one of numerous water-catching structures he has built. Right: Operating the donkey-pump.



upslope of rocks and plants than it did in areas where sheet flow went unchecked. He was struck by a realisation: he could mimic and enhance areas of his land where this was occurring.

Thus began Phiri's self-education and work in rainwater harvesting, or 'water farming'. Thirty years later, this humble, hard-working African farmer has managed to create a sustainable system that now provides all the water needs of his land and farm – which has thrived as a result – and his household, from rainfall alone.

Check dams – and 'immigration centre'

'You start catchment upstream, before the old deep gullies form downstream,' said Phiri. Beginning at the top of the watershed, he built unmortared stone walls at random intervals on contour (along lines of equal elevation). These 'check dam walls' slow or 'check' the flow of storm runoff and disperse the water as it moves through winding paths between the stones. Runoff is then more easily managed because it never gets a chance to build up to more destructive volumes and velocities. Controlled runoff from the granite dome is then directed to unlined reservoirs just below.

The larger of the two reservoirs is what Phiri calls (with a characteristic flair for metaphor) his 'immigration centre'. 'It is here that I welcome the water to my farm and then direct it to where it will live in the soil,' he told me. The water is directed into the soil as quickly as possible. The reservoirs are located at the highest point

in the landscape where soil begins to cover the granite bedrock.

Above the reservoirs, the slope is steep, with very little soil. At and below the reservoir, the slope is gentle and soil has accumulated. 'The soil is like a tin,' Phiri explains. 'The tin should hold all water. Gullies and erosion are like holes in the tin that allow water and organic matter to escape. These must be plugged.'

Phiri's 'immigration centre' is also a water gauge. He now knows from his long experience that if it fills three times in a season, enough rain will have infiltrated the soil of his entire farm to support the bulk of his vegetation for two years.

The reservoirs occasionally fill with sand carried in the runoff water. This is used for mixing concrete, or for reinforcing the mass of the reservoir wall. Gravity brings this resource to Phiri free of charge.

Overflow from the smaller reservoir is directed, via a short pipe, to an above-ground ferro-cement (steel-reinforced concrete) cistern that feeds the family's courtyard garden in dry spells. The family has another cistern, shaded and cooled by a lush, food-producing passion vine. This cistern collects water from the roof of the house for potable use inside.

Aside from these two cisterns, all the water-harvesting structures on the farm enable water to infiltrate directly into the soil. Nothing is wasted. Even all the grey water (used wash water) from an outdoor washbasin is drained to a covered, unmortared, stone-lined, underground cistern where the water is percolated into

the soil and made available to the roots of surrounding plants.

Across the farm's entire watershed, from top to bottom, numerous water-harvesting structures act as nets that collect the flow of surface runoff and quickly infiltrate the water into the soil before it can evaporate. These include check dams, vegetation planted on contour, terraces, berm 'n' basins (dug out basins and earthen or vegetated berms laid out on contour), and infiltration basins (basins without berms). All these handmade structures catch and put to use water that was once lost to a government-built drainage system.

Many years before, the government of Zimbabwe had built large drainage swales throughout the region. Unlike water-harvesting swales or berm 'n' basins, these ditches were not placed across the slopes on contour (to retain water), but instead were built so they would drain water off the land. Vast amounts of unhindered monsoon runoff were caught by the drainage swale, carried away to a central drainage, and shot out to the distant floodplain. The erosion problem was addressed, but drought intensified because the area was being robbed of its sole source of water.

From conception to fruition

Phiri turned things around by digging a series of large 'fruition pits' (basins about 12 feet long, by three to six feet wide, by four to six feet deep) in the bottoms of all the government drainage

swales on his land. Now, when it rains, the pits fill with water and the overflow successively fills one pit after another across his property. Long after the rain stops, water remains in the fruition pits, percolating into the soil.

The fruit of Phiri's fruition pits takes the form of thatch grasses, fruit trees and timber trees, which are planted in and around the pits. This vegetation provides building materials, cash crops, food, erosion control, shade, and windbreaks. All are watered strictly by rain and the rising groundwater table underground.

Growing steadily stronger

Phiri explained that he dug fruition pits to 'plant' the water so it could germinate elsewhere. 'I have taught the trees my system,' he told me. 'They understand my language. I put them here and tell them, "Look, the water is there. Now, go and get it".' A basin or berm for holding water may be constructed around or beside the trees, but Phiri always places such earthworks at some distance from them, so their roots are encouraged to reach out and grow strong as they seek water.

A truly diverse mix of open-pollinated crops – such as basketry reeds, squash, corn, peppers, eggplant, tomatoes, lettuce, spinach, peas, garlic, onion, beans, passion fruit, mango, guava, and paw paws; along with such indigenous crops and trees as matobve, muchakata, munyii, and mutamba – are planted between the swales and contour berms. This diversity gives his family food security; if some crops fail due to drought, disease or pests, others will survive.

Rather than using hybrid and genetically modified (GMO) seed, Phiri uses open-pollinated varieties to create superior seed stock as he collects, selects and plants seed grown in his own garden. By propagating seed from plants that have prospered off the sporadic rainfall and unique growing conditions of his site, each season his seed becomes better suited to his land and climate. This is another form of water conservation – Phiri is helping his seeds to adapt to living off less water, instead of adapting his farm management to import more water.

Living fertiliser factories pepper the

farm, in the form of nitrogen-fixing plants. One example, the edible, leguminous pigeon pea, is also used for animal fodder and mulch. Phiri has found that soils amended with local organic matter and nitrogen-fixing plants infiltrate and hold water much better than those amended with synthetic fertilisers. As he says, 'You apply fertiliser one year but not the next, and the plants die. Apply manure once and plant nitrogen-fixing plants, and the plants continue to do well year after year. Synthetically-fertilised soil is bitter.'

The abundant food and fruit Phiri produces is anything but bitter. He's been generous with his abundance, giving away a diverse array of trees to anyone who wants them. Unfortunately, as Phiri points out, the majority of the trees he gives away die when people don't implement rainwater-harvesting techniques before planting. 'The land must harvest water

'The land must harvest water to give to the trees,' says Phiri, 'so before you plant trees you must plant water'

to give to the trees, so before you plant trees you must plant water.'

The soil is Phiri's catchment tank, and it is vast. In times of drought, his neighbours' wells go dry, even those that are deeper than his. Yet, Phiri says, 'My wells always have water.' This is due not only to the particular hydrologic/geologic conditions of his site, but also because he is putting more water into the soil than he takes out.

Except for one well, which is lined and has a hand pump for household water use, all are open and lined with unmortared stone. 'These wells,' explains Phiri, 'are those of an unselfish man. The water comes and goes as it pleases, for you see, in my land it is everywhere.' During severe drought, Phiri uses a donkey-driven pump to draw from these wells to water annual crops in nearby fields.

A lush wetland lies below the wells at the lowest point of Phiri's property. Here, three rich aquaculture reservoirs are surrounded by a vibrant soil-stabilising grove of bananas, sugar cane, reeds and grasses. The fish are harvested for food and their manure enriches the water used to irrigate the vegetation. The taller

vegetation creates a windbreak around the ponds, reducing water loss to evaporation. The dense, lower-growing grasses filter incoming runoff water.

Rhyming with nature

For years, Phiri was an object of scorn in Zvishavane, standing in opposition to international aid and government programmes that pushed groundwater extraction and export crops.

Phiri's response – aside from proving his critics wrong with the success of his farm – was to create the Zvishavane Water Resources Project, a non-governmental organisation. The organisation is having a dramatic effect. He influenced CARE International in his region to shift much of its work from giving away imported food to helping people implement his methods, and growing their own food.

When I asked Phiri about the three decades it took him to get his land and his vision to the place it is today, he answered, 'It's a slow process, but that's life. Slowly implement these projects, and as you begin to rhyme with nature, soon

other lives will start to rhyme with yours.'

We walked back up toward the house – and stopped midway. Phiri's eyes were sparkling as he pointed across the fence. His neighbour was in the government's diversion swale, digging fruition pits on the adjoining property. 'Look,' cried my guide, 'now he is starting to rhyme!'

As an educator in the field of sustainable living, Phiri is an ongoing inspiration. His work and his perspective enabled me to understand what we can accomplish if we choose to live as stewards of the land by truly walking the talk. Phiri shows how water scarcity can be turned to water abundance – by planting the rain both in the soil and in the minds of the people.

Brad Lancaster is the author of *Rainwater Harvesting for Drylands*, available from www.HarvestingRainwater.com

GOING FURTHER

If you would like to support the work of this grassroots project, write to:
Mr Zephaniah Phiri Maseko, ZWRP,
P.O. Box 118, Zvishavane, Zimbabwe.



The Great Garden Grab

You may see your garden as a spare room or a place to be in touch with nature, but changes to planning rules mean it is likely to attract higher council tax if it hasn't already been snapped up by a developer. **Jack Shamash** reports

You probably haven't noticed, but there's a bulldozer standing at the ready at your garden gate, poised to take everything you treasure away from you. For centuries, domestic gardens have been a valued part of the family landscape. A bit of green space for those lucky enough to own them and an irreplaceable habitat for animals, birds and insects in the urban environment. To buy a house with a garden is also, for many, an investment in something tangible and solid: land.

However, Britain's gardens are on the endangered list, due to a mixture of greed and the cowardice of a Government unwilling to stand up against the homebuilding lobby of developers, large builders, banks and estate agents.

Over the past decade the demand for land has increased so dramatically that, quietly and without much fanfare, every tiny plot of land has been reclassified as a development opportunity. Adding insult to injury, the Government has allowed the protection once offered by planning laws to be eroded to such a degree that it is becoming almost impossible for private homeowners to prevent developers from taking their land away from them.

The principle is not new: large gardens have long been targets. In the past, stately homes and prestigious villas were completely pulled down so the plot

could be divided into smaller parcels and used to build a large number of flats or small houses. Alternatively, a process known to planners as 'infilling' was used, where the original buildings were left standing, but new homes were built on the surrounding gardens. Now, because of new Government rules, no garden – no matter how small – can be considered safe from developers.

For those who can get hold of small parcels of land, there are huge profits to be made. According to the Halifax price index, house prices in Greater London, for example, have nearly tripled in the past 16 years; they increased by more than 80 per cent in the past six years alone. And this pattern, with regional fluctuations, has been roughly followed across the country.

But the potential profits from squeezing large buildings into small locations are even greater than these figures suggest. This is because it is the price of land, rather than the cost of the actual bricks and mortar, that has been rising so sharply.

It is relatively easy to see how much of the value of a property is due to the land cost and how much to the cost of building. The Royal Institution of Chartered Surveyors runs a building cost information service, which gives estimates for the actual building costs

of various kinds of building of various sizes in different locations. It shows that the cost of building has roughly doubled within the past 16 years, which alone doesn't explain house price inflation.

To take the example of a small two-bedroom flat in north London; around 16 years ago the value would have been in the region of £100,000. The rebuilding cost would have been in the region of £45,000 and the land cost £55,000. Today, the same flat would be worth around £300,000. Of this, the rebuilding cost would be £90,000 while the land value would be £210,000. In other words, since 1991 the value of prime building land has almost quadrupled.

The difference in price between the building cost and the sales cost is of critical importance to developers. In this case, it means that for every extra flat they can squeeze onto a plot of land, they stand to make an extra £210,000 in profits.

For example, take a developer who buys a plot of land for £1 million. He may have to pay around an extra £300,000 on legal and architect's fees and interest. In other words, his outgoings come to around £1.3 million. If he can use the site to build 10 two-bedroom flats, with a £210,000 profit on each, he will make a total profit of £800,000; £2.1 million less £1.3. If he can use the site to build 20 two-bedroom flats, he will make £4.2 million minus



£1.3 million – a profit of £2.9 million. In other words, if developers can cram flats onto a site, they will make a packet.

These profits only pertain if the blocks of flats are situated in urban or suburban areas where people want to live and are already well-served by local services, public transport, shops and suchlike. But available development land in these areas is scarce. That is, it was scarce until developers were given the green light to view houses with large gardens as sites for redevelopment.

Since 1985, gardens have been regarded as developed or 'brownfield' land, rather than green space. Originally, this designation was simply a statistical device to see how much of Britain's land had been built on; home and garden were viewed as a single entity. Not any more.

In the document Planning Policy Guidance 3, which was issued in 2000, Deputy Prime Minister John Prescott decided that developed, or 'brownfield' land, should be used to create as many new homes as possible – at a stroke, making gardens prime real estate. He set a target for 60 per cent of new housing to be built on brownfield land. Moreover, the guidance introduced new density targets of 30 to 50 dwellings per hectare. In many areas, the only way to achieve these densities would be to build on gardens.

This government planning guidance encourages developers to buy up homes with large gardens, demolish them and either build blocks of flats or use the gardens for infilling. It is very difficult

for councils or local groups to oppose such development, because it falls within government guidelines.

The developers can point out that they are using brownfield land (ie gardens) and are building within the recommended density. This will give them grounds for appeal, if the council rejects the plan. And if, as often happens, the developers win their appeal, the council can be faced with a ruinous legal bill. With the cards stacked against them, many councils will

When the re-evaluation is finally put into effect, it is likely that homes with gardens will attract far higher levels of council tax

approve almost any amount of infilling or replacement building.

In many areas, the effect of this has been to usher in a new building boom, as houses with large gardens are bulldozed to the ground and replaced by high-density blocks of flats.

Greg Clark, Tory MP for Tunbridge Wells, introduced a Private Member's Bill in the last session of Parliament to protect gardens from developments that are 'out of character with the area'. Although the bill was unsuccessful, Mr Clark claims to have had support from beleaguered residents across the country.

Greg Clark explained that in his area, houses with large gardens were being bought up and demolished. As one fell, this occasioned a domino effect. Neighbours then felt pressured to sell

to developers because they were in danger of being trapped in 'canyons', left between the blocks of flats.

'We have a fine collection of Victorian property,' said Clark. 'One by one, each of the houses and their gardens are being filled with blocks of flats.'

Research undertaken by Clark in support of his Bill revealed the extent of the problem. This showed that in six local authority areas – Bradford, Chelmsford, Guilford, Nottingham, Oxford and Tunbridge Wells – 72 per cent of the 'brownfield development' is actually occurring on domestic gardens. Only 28 per cent of the brownfield development involved what many of us may imagine it describes, such as turning disused factories or warehouses into housing.

Shadow Secretary of State for Communities and Local Government, Caroline Spelman, Conservative MP for Meriden, is set to introduce a second Private Member's Bill on this issue in February. This proposes to allow local authorities to set their own housing density targets and give them powers to 'protect gardens and urban green space'.

She explained that this was a serious problem: 'In my area we've seen the demolition of four bungalows being replaced by 42 houses and flats. The council has been powerless to oppose because when the application is appealed to the Secretary of State, permission is granted anyway and the local authority is overruled.'

It is not the planning guidance alone that has allowed developers to call the shots; a whole series of other measures

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have exacerbated the situation.

Under Government guidance issued in 2001, PPG13, local authorities have been told not to worry if there is relatively little car parking available for the residents of any new development. The guidance suggests 'reducing the amount of parking in new development is essential'. The move is shrouded in greenwash, being said to encourage communities where there is less reliance on cars. But, of course, it does nothing of the kind. Residents have the same number of cars as they did in the past. The rule simply means that councils cannot reject schemes on the basis that there is nowhere for residents to park.

In addition, the forthcoming council tax re-evaluation is likely to increase taxes on houses with gardens. The Valuation Office Agency has special codes for homes with gardens, patios and large plots, which will be used to assess the council tax. When the re-evaluation is finally put into effect – it was put on hold before the last election – it is likely that homes with gardens will attract far higher levels of council tax. This could, of course, force many residents to sell up and move on.

Government guidelines on 'social and affordable housing' has served to stimulate the trend for developing small plots. Under Government guidelines, local authorities can insist that a certain percentage of any development is set aside for 'intermediate' or 'social' housing. These quotas only apply to development of more than 15 homes. In other words, developers have an incentive to create small developments – such as knocking down houses with big gardens and replacing them with flats – as this imposes no commitment to create affordable homes, which boosts the profits to be had.

In a more sinister and draconian move, the Government has created a situation where it is even possible that householders could be forced to give up their gardens against their will. Under the Planning and Compulsory Purchase Act 2004, local authorities

and planning boards will be able to acquire land for development 'if they think that it will facilitate the carrying out of development, redevelopment or improvement on or in relation to the land, on condition that such acquisition will be of economic, social or environmental benefit to the area.' In plain English, if a local authority gives its support, a planner could compulsorily purchase any garden, although this has yet to happen.

And the prospects look worse for the future. Academics at the Cambridge

Cramming homes into gardens could be just as ghastly as those schemes of the Sixties, and the results could be just as permanent

University Centre for Urban Studies, who are working on Government-sponsored research, believe that gardens could be the key to solving Britain's housing problems. They propose that back gardens over 30 metres – which is the average size for many Georgian terraces and modern semis – could be sold for new housing, and that this might have to be done 'in the teeth of intense local opposition'.

The latest draft Government policy (Planning Policy Statement 3–Housing), which was issued last year, has recommended developments of even higher densities than those laid out in 2000. It suggests that city centres – including all inner London boroughs – should have 70 dwellings per hectare. Since the slums of the Victorian era were demolished, suburbs have generally had density levels of between 33 and 55 dwellings per hectare.

These recommendations, of course, make it more likely that gardens will be used for development, as the profits for developers increase with increased density levels.

In November last year, local authorities gave their views on the planning guidance. One of their major fears was that 'the approach to residential back gardens could be interpreted as advocating their

development for housing'.

The attempt to 'grab gardens' is proving highly controversial. It is not only Conservative MPs such as Clark and Spelman who are campaigning to bring this issue out into the open; Labour MPs are also expressing concern. Chris Mullin, Labour MP for Sunderland South, said that his party is 'in a state of denial' about what is happening. He said that even in his area, which has large areas of genuine brownfield land where factories have been simply closed down and abandoned, developers prefer to build on large

gardens in relatively affluent suburbs. In addition, developers were hiring helicopters to identify suitable garden sites.

As always in this country, anyone trying to prevent property development is criticised for being a selfish, middle-class NIMBY, trying to prevent working

people from getting on the property ladder. However, there are many genuine reasons for trying to prevent these developments. Ecologically speaking, gardens create a microclimate, making cities warmer in winter and cooler in summer. By absorbing large quantities of rainwater, they prevent flash floods. And they are environmentally important for biodiversity.

A recent report by the Environment Committee of the London Assembly calculated that a fifth of London's land is made up of private gardens and that this contains a huge variety of plants, insects and birds, many of which could not survive in the large public parks. Gardens also play a vital role in the recycling of green waste, through activities such as composting, and reduced water usage through the use of water butts.

Many pressure groups are already aware of the danger. The Royal Society for the Protection of Birds is firmly against the destruction of back gardens, as is Garden Organic (formerly the Henry Doubleday Research Association), which describes gardens as 'ecosystems we cannot afford to lose'.

However, the Commission for Architecture and the Built Environment (CABE), which advises the Government

on building policy, says that there is no real problem. They suggest that building on gardens is perfectly acceptable as long as the standard of architecture is high.

CABE also says that the situation is not really weighted in favour of developers. Matt Bell, CABE's director of campaigns, points out that the vast majority of planning applications are rejected. However, this obscures the reality. Generally, developers will apply for a far higher level of development than they will realistically achieve or want. An initial application may be for 18 flats, a subsequent one for 16 and a third for 14. This process, of submitting a large number of revised plans – and by threatening potentially expensive appeals if the decision is not in their favour – is used to wear down opposition from local people and from planning officers. And if – as the recently released Barker Review of Land Use Planning recommends – the process of planning applications is speeded up, there will be even less opportunity for communities to question how their neighbourhoods are changing.

The Government justifies the easing of planning regulations by saying that there is a requirement for millions of new homes. Using trend surveys, it was calculated in 1991 that by 2016, the UK would require another 4.4 million households to accommodate the population. Today these largely industry-supplied figures are still being used to support the idea that we need a major housebuilding initiative.

However, these figures ignore the fact that the British population is relatively static. What is happening is simply that more people are living as single-person households. The demand for homes could largely be resolved by existing houses being split into flats or by homeowners renting out rooms.

In addition, the Government has failed to look at alternative sources of new homes. For example, the area around London is ringed by seaside towns. However – with the notable exceptions of such places as Brighton and Southend – these are so poorly served by the train network that they are unsuitable for most commuters. Yet, with proper investment in high-speed train links, towns such as Hastings, Bognor, Worthing, Folkestone,

Deal and Margate could become important commuter centres.

Instead, the Government has only two solutions to meet housing demand. It consistently advocates that developers should whittle away at green belt land, which is one of the country's great assets. And it wants councils to give permission for more building on domestic gardens, which can only erode the environment.

Anyone who doubts the effect that planning policy can have, should have a look at the Buchanan Report of 1963, issued by the Ministry of Transport, which examined the problem of traffic in towns.

This hugely influential report, written by a group of leading academics with strings of initials after their names, suggested that Britain's town centres should be largely pulled down and that urban freeways should be driven through them. One of their most appalling suggestions – fortunately never realised – was that almost the whole of Bloomsbury, with its historic Georgian squares and leafy streets, should be replaced with

high-rise flats and underground parking.

The Buchanan report, however well-meaning it might have been, allowed developers to rip the heart out of cities such as Liverpool, Birmingham, Manchester and Glasgow. The Buchanan report concluded: 'Recreating the urban environment in a vigorous and lively way could do more than anything to make Britain the most exciting country in the world, with incalculable results for our welfare and prosperity.' Instead, it created an urban desert, from which many cities have never really recovered.

The Government and its paid academics are now exhibiting the same kind of enthusiasm about cramming homes into gardens. Once again, they are predicting that development will bring about an urban renaissance. Unfortunately, the changes that they envisage could be just as ghastly as those schemes of the Sixties, and the results could be just as permanent.

Jack Shamash is a freelance journalist

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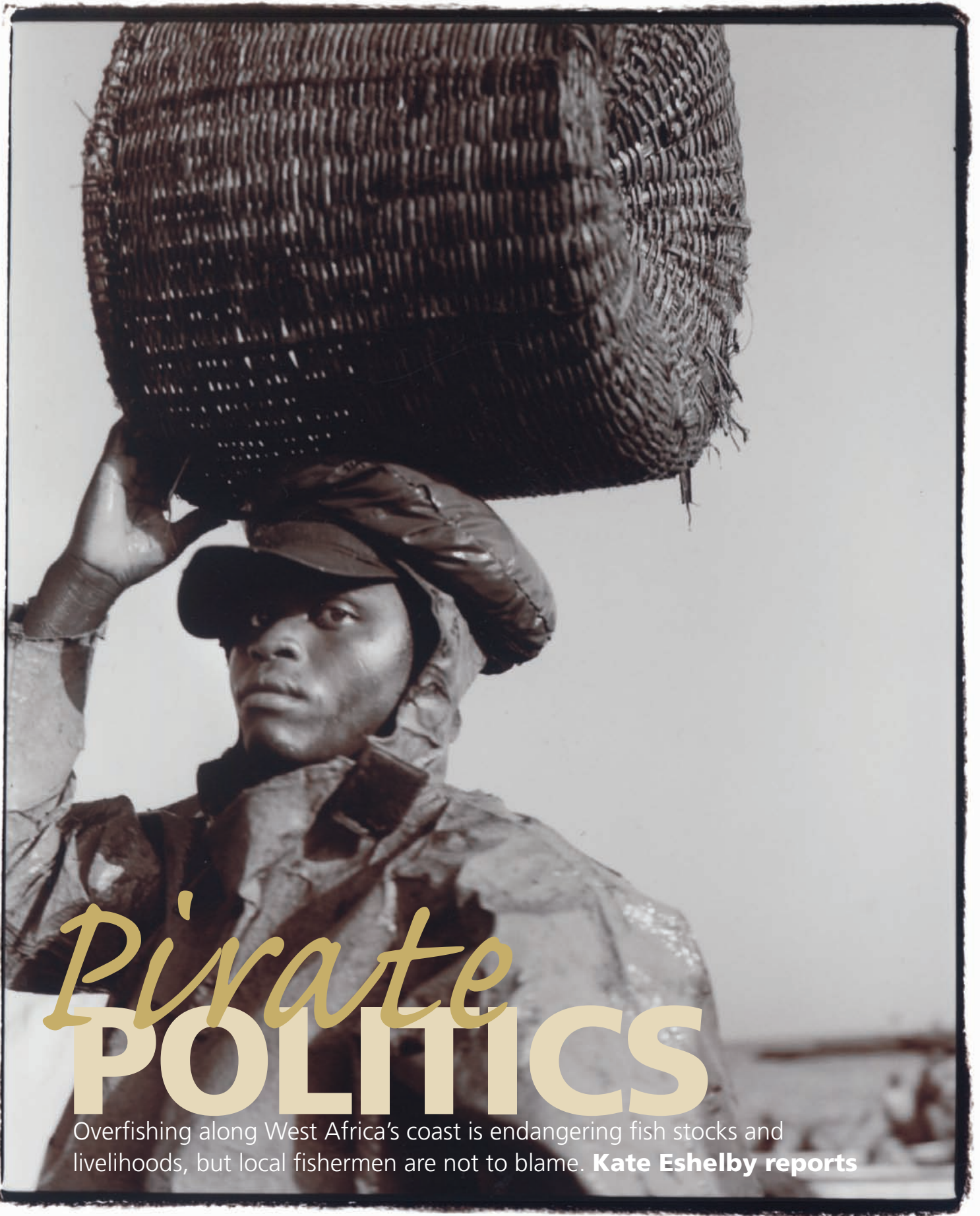
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Private **POLITICS**

Overfishing along West Africa's coast is endangering fish stocks and livelihoods, but local fishermen are not to blame. **Kate Eshelby reports**



Opposite: A fisherman with his catch, Kayar, Senegal. But his traditional way of life is threatened along with the fish, which are being decimated by other countries' overfishing
Left: The harbour at Bissau, capital of Guinea Bissau. Poor countries like this are pressured into unfair fishing agreements

The dramatic decrease in fish off our coasts now really worries us,' Aisha says solemnly. 'Because of overfishing, fishing has become a precarious profession. A future with no fish left is fast becoming a reality.' She is sitting on the beach of Joal, Senegal, among vibrant, primary-coloured pirogues (traditional boats made from carved-out tree trunks), waiting for the fishermen to return with their day's catch. A battered pair of scales rests by her side; she will buy some of the fresh fish and then sell it in local markets.

Along West Africa's coast – covering the countries of Senegal, Mauritania, Gambia, Guinea Bissau, Guinea Conakry, Sierra Leone and Cape Verde – fishing is the main activity, this

being one of the world's most productive fishing areas. But the individual governments of these countries do not have the resources to effectively monitor the waters, so foreign fishing fleets – many of them illegal – are plundering the fish stocks at an alarming rate.

These coastal waters are among the world's richest fishing grounds and support great biodiversity, because winds push the surface water away from the coast and draw up cold, nutrient-rich waters from below. Only one per cent of the world's seas experience this beneficial upswelling – and of the four most nutrient-dense areas, two are found off Africa's west coast. Because of this natural wealth, everyone wants to come and fish in these waters; consequently the

number of fish is depleting fast.

Fish provide a crucial source of food in West Africa and traditional fishing remains a vital occupation. Overfishing therefore threatens the food security and livelihoods of many thousands of people – not only the fishermen, but those who depend on their catch – to say nothing of the wider ecological picture.

In Senegal, 80 per cent of the fishing is done by artisan fishermen, employing 600,000 people who produce 350,000 tonnes of fish a year. Fishing is Senegal's primary source of foreign currency, generating 310 million euros annually. In Guinea Bissau it contributes up to 50 per cent of the government revenue, earning 31 million euros a year.

'Allowing fishing to continue

at its present high levels is risking the destruction of the economic security of some of the world's poorest people,' says Daniel Pauly, director of the Fisheries Centre of British Columbia, who has worked extensively in the region.

But in Senegal and Guinea Bissau, as in the rest of West Africa, too many fishing concessions are given to big industrial trawlers. Their respective governments, however, are more interested in earning money from fishing agreements than in environmental protection. Guinea Bissau, for example, is crippling poor, its economic situation worsened by the recent civil war; it desperately needs the foreign income from selling fishing licences.

The waters around Europe



have already been emptied, so the West African waters are now in hot demand. 'Europe has dealt with its excess fishing and unsustainable demand by exporting the problem to Africa, where fishing vessels can operate with impunity and the minimum of control,' says Steve Trent, executive director of the Environmental Justice Foundation.

Developed countries are paying minimum fees for these rich fishing grounds: unfair agreements are signed, so that West Africa loses its fish for small gains, or compensations

instead of much-needed cash. For example, two years ago China built the House of Parliament in Bissau, Guinea Bissau's capital, in exchange for profitable fishing rights – this was controversial, and many people argued that cash would have been more beneficial. 'It is hypocritical for governments to talk about encouraging aid to Africa, while allowing their food and income to be stolen from their waters, ending up on dinner plates in Europe,' says Willie Mackenzie, Greenpeace Oceans Campaigner.

This year should have been a

critical time: the final round of negotiations for the Fisheries Agreement between Senegal and the EU took place in Dakar in July. No agreement, however, was reached – in theory, the EU boats must leave, but so far there has been no movement, and the likelihood is that further negotiations will take place at a later date.

The Fisheries Agreement between Guinea Bissau and the EU also came to an end this year; their five-year agreement, signed in June 2001, had set quotas that environmentalists said were too high. Yet instead

of reducing the quotas this year, the contract has been extended for another year.

Illegal fishing along Africa's west coast greatly exacerbates the situation. The culprits come from other parts of West Africa or from Europe, and illicit Chinese and Korean boats are proliferating. These unlicensed boats flout the laws and are not being stopped. They go in restricted areas, exceed quotas and use banned methods of fishing. Agreed quotas are already too high, but even these are illegally exceeded. International law forbids



fishing with mono filament nets, yet it is widely practised – especially off this coast – and many trawlers use nets with a smaller mesh than permitted.

‘Illegal boats enter shallow coastal areas that were retained as exclusive fishing zones for traditional fishermen. These protected areas provide vital reproduction and nursery grounds for tomorrow’s fish,’ explains Dr Papa Samba Diouf, Head of the World Wildlife Fund’s (WWF) marine programme in West Africa. ‘Or the big boats stay outside the

12-mile forbidden zone, but ask local fishermen to fish for them in the restricted areas and bring the catch back to them.’

The problem is that fishing in West Africa is largely unregulated, with little or no surveillance. The few surveillance boats that do exist are old and often break down. ‘Fishery laws are worthless if they cannot be enforced,’ says Nelson Dias, head of the Bissau office of the International Conservation Union (IUCN). ‘Our lack of surveillance is a big problem. Guinea Bissau needs a satellite system to ensure that we



Left: A Bijagos man. They use trawler nets that they find to make hammocks, which they hang on their verandas. Top: Unlike the illegal migrant fishermen who are fishing here in large numbers, the Bijagos people use hand nets. Above: End of a day’s work for a Bijagos fisherman



This page, clockwise from right: Fishmongering is a vital business for women who buy fresh fish from the fishermen on the beach, then sell it in local markets. A Bijagos island woman. Relaxing on the veranda of a home in the Bijagos islands

Opposite page: Taking ice blocks out fishing, to preserve the fish once caught



Many artisan fishermen are now forced to find other ways to earn a living – such as using their boats to take illegal immigrants to Spain

can comprehensively monitor all our waters, but we do not have the financial means.'

Recently, Mauritania signed a six-year agreement with the EU, worth 86 million euros per year (the EU's biggest fisheries agreement to date), allowing access for 200 of their boats. However, there is no way for Mauritania to safeguard this agreement, as Dr Tom Pickerell, WWF's Fisheries Policy Officer,

points out. 'The lack of surveillance permits a free-for-all for the EU fleet. This has sparked a debate about whether the EU should overexploit African fisheries now that its own fish stocks are depleted. We have seen small improvements towards sustainability by EU agreements, but there are still huge, gaping holes in the net – if only there were huge holes in the actual nets!'



As commercial fleets empty the seas around them, artisan fishermen in West Africa have to work increasingly hard. Many are already finding that they can no longer survive from fishing alone, and are forced to look for other means.

In Senegal, migration has grown profitable, recently becoming a popular place from which to make the attempted escape to Europe. Many fishermen use their boats to transport illegal immigrants on the treacherous journey across to Spain. 'This year, we've seen a huge increase in people

leaving Senegal's coast, hoping to make a new life in Europe,' says Diébel, a fisherman from Senegal's Saloum Delta. 'In the bigger fishing boats we can fit 60 people lying down and carry them across to Europe. It is a better way to make money than fishing.'

Guinea Bissau is partly protected from the big fishing trawlers by rocks and banks of sand surrounding the Bijagos archipelago, which lies off its coast. As a result, its waters are still bountiful: so unauthorised fishermen are flocking here, often from Senegal, Guinea

Conakry and Sierra Leone. It is also a place where contraband thrives because of its lack of controls; drugs and cigarettes are smuggled through these fishermen's temporary camps and transported in their boats. The migrants cut down the mangroves, using the wood to smoke large quantities of fish, which they sell in their home countries – a double tragedy, because the supposedly protected mangroves provide important breeding grounds for the region's fish.

The migrants come just to make money quickly, with no

thought for their impact on the surrounding ecosystem. In contrast, the Bijagos people have a traditional system of managing resources and a sense of tomorrow's needs; they take from the environment only what they need. The question arises, however, as to how long the Bijagos will keep this attitude with so much outside pressure on their resources.

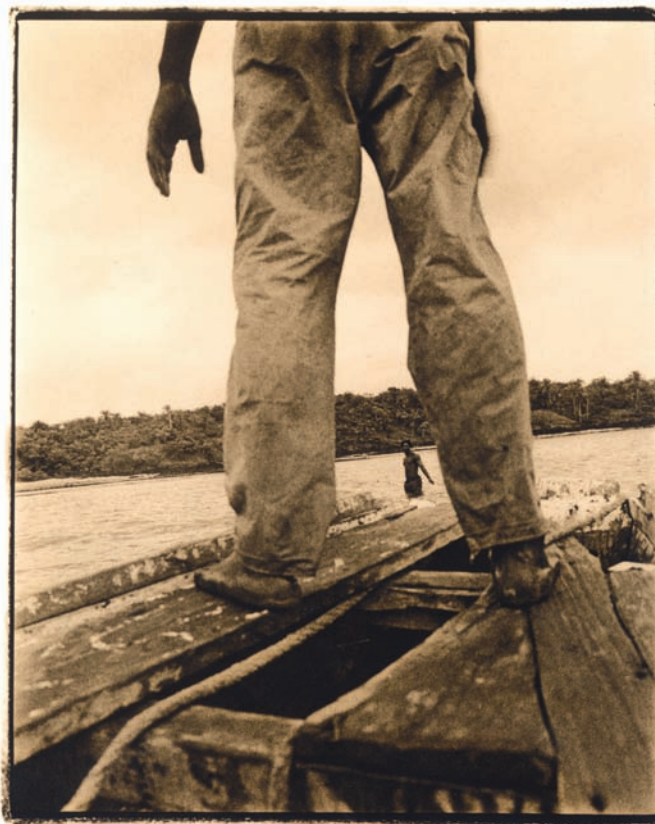
It is evident that unless something is done, all the fish will disappear. More international cooperation is needed to enforce the laws if future fishing plans are to be

INVESTIGATION

sustainable, and more revenue from the fishery agreements needs to be spent on effective surveillance. Agreements should only be signed with countries that have surplus fish – ie, more than the national fishermen can sustainably catch; and quotas should be set, incorporating scientific research, which will prevent damage to future stocks. 'There are many laws which need to be put in place, and adhered to,' says WWF's Dr Papa Samba Diouf emphatically, 'including not catching highly threatened species, or baby fish, and allowing biological rest for set periods of the year, particularly during spawning times, so permitting regeneration.'

As the fishermen land with

their catch, the beach of Joal remains, for the time being, alive with energy. Clad in weather-battered waterproofs and hats, their skin glistening with water, the men charge up the sands, fish tails spilling over the baskets supported on their heads. Piles of fish stand high on the shore. The sea is a mosaic of pirogues, horse-drawn carts collect some of the fish, and other baskets are loaded into lorries packed full of ice. Birds circle the skies, waiting for stray fish. But if the fish stocks are not protected, men too may soon have only strays to catch. 'This is our way of life,' laments Lamine, a 44-year-old traditional fisherman. And once the fish have gone, they are gone forever.'



WHAT CAN I DO?

As the crises of overfishing of our seas deepen, the need for consumer education to increase demand for responsibly produced seafood is becoming more urgent.

Consumers can contribute to the responsible management of fish supplies by demanding that the fish they eat comes from sustainably managed stocks and that the way in which it is caught causes minimum damage to the marine environment.

WHAT SHOULD I ASK?

The three main questions to ask when you buy fish are the following – what is it, where did it come from, and how was it caught. Ask yourself this when looking for fish, ask your fishmonger, and ask the waiter in a restaurant. For too long, we have been timid about asking such questions, but for the good of the planet this has to end.

The answers you want are simple – is this a fish species whose stock is considered to still be at sustainable levels? Was it caught in waters near where I am buying it (thus ensuring freshness, limited food miles and that I am not, as in the case of UK consumers eating African fish, depriving another person of their local harvest)? And was it caught by

hand – eg using either hand lines or nets?

Only this kind of small-scale fishing is in the long run truly sustainable. If you can't satisfy yourself on the answers to all these questions, you should consider the fish an unsustainable choice, and either eat a different fish, or something else altogether.

WHERE CAN I FIND OUT?

To help inform these choices, the Marine Conservation Society FISHONLINE website can help you to identify which fish are from well-managed sources and caught using methods that minimise damage to marine wildlife and habitat. Go to www.fishonline.org to find out more. Fast becoming a one-stop-shop for consumers concerned about the sustainability of the fish they eat, the website now provides information on almost 150 species.

For those not online, or seeking more information, the Good Fish Guide (first published in 2002 and out of which the fishonline website developed), is the first guide dedicated to educating consumers about how fish is produced and the issues related to fish consumption.

Jeremy Smith

As consumers, we need to do our best to ensure that the fish we buy are from well-managed stocks. The list of fish dwindling in West African waters is long. The following species are critically threatened:

Barracuda
Blue ling
Catfish
Cuttletfish
Grouper
Marlin
Rays
Seabream
Shark
Shrimp
Skate
Snapper
Sole
Swordfish
Tropical prawn
Tuna
Turbot

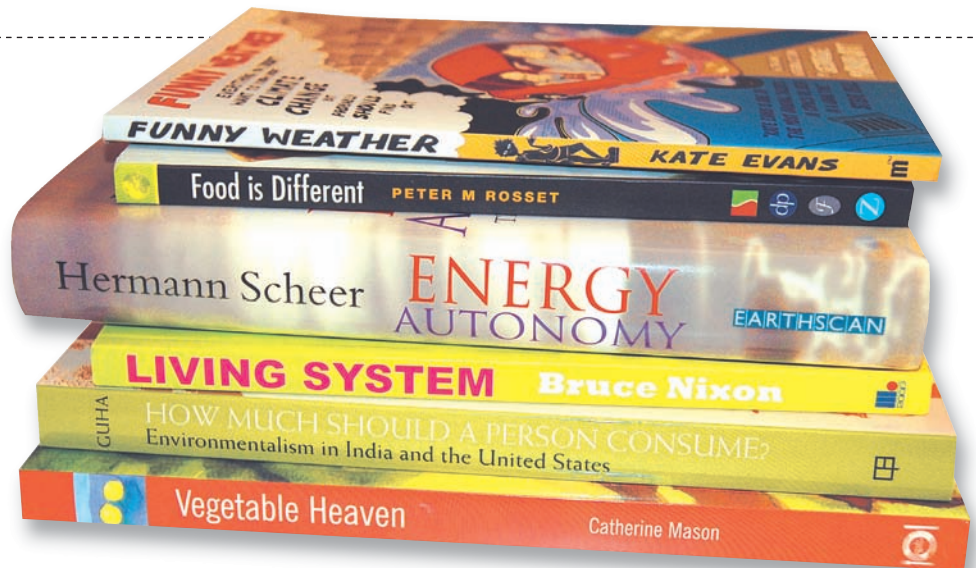
reviews

RECOMMENDED BOOKS

FUNNY WEATHER
EVERYTHING YOU DIDN'T WANT TO KNOW ABOUT CLIMATE CHANGE BUT PROBABLY SHOULD FIND OUT
 Kate Evans,
 Myriad Editions 2006, £6.99

The threats that climate change imposes upon us all are so important that we must use every tool at our disposal to get the message across to those less willing to listen – for this reason alone, Kate Evan's new comic book *Funny Weather* would be a welcome addition. The fact that it is scientifically rigorous, politically and economically literate and astute, and deeply engaging at a human level makes it all the more so. The freedom of association that the cartoons allow Evans, so that she can draw what cannot be photographed or only imagined in words, makes much of the humour in the book work very directly and often painfully. It's one thing to read articles about the iniquities of flying organic green beans to UK supermarkets while Africans starve; it's a different matter to look at a picture of an undernourished Kenyan child offering you a shrink-wrapped package of such vegetables in their skeletal and outstretched hand.

Reviewed by Jeremy Smith



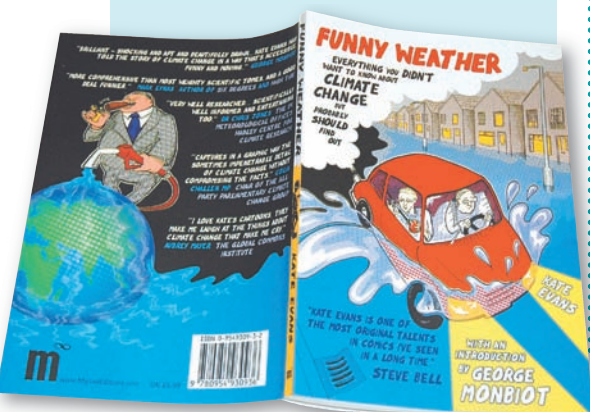
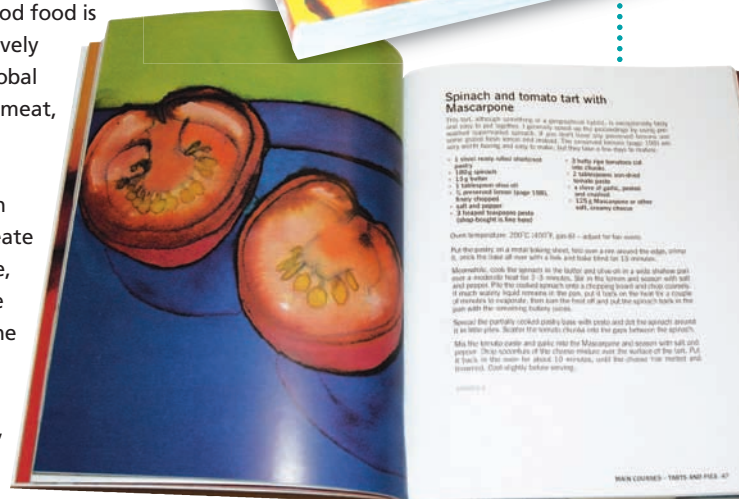
VEGETABLE HEAVEN
SENSATIONAL SEASONAL VEGETARIAN RECIPES

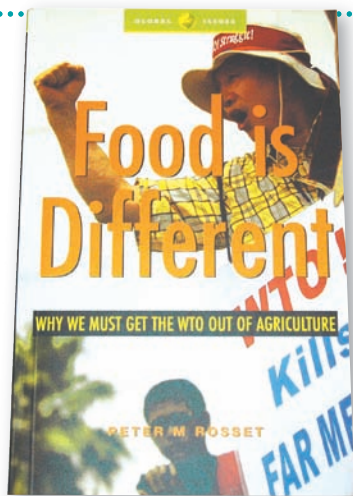
Catherine Mason,
 Grub Street 2006, £12.99

'Good food ravishes the senses,' writes Elda Abramson, whose ravishing ink paintings accompany Mason's recipes. And in the author's heaven-on-earth, 'all food is produced without chemical assistance; good husbandry and best growing practice prevail.' Good food is also a political issue. To massively reduce our own impact on global warming, we should eat less meat, and eat local food. Meat production is very energy-intensive, and when Amazon rainforest is destroyed to create fields to grow food for cattle, whose meat is sent across the world in plastic packaging, the impact is devastating. Eating locally produced food means eating food that is in season, has very few food miles, has not lost nutritional value

from being packaged and shipped long distances, and is helping to sustain a local economy. In such a way, cooking the wonderful recipes in *Vegetable Heaven* is about much more than providing wonderful vegetarian meals – it is making a statement about the world of which you want to be part.

Reviewed by Gail Perkins





FOOD IS DIFFERENT
WHY WE MUST GET THE WTO
OUT OF AGRICULTURE

Peter Rosset, Zed Books 2006, £9.99

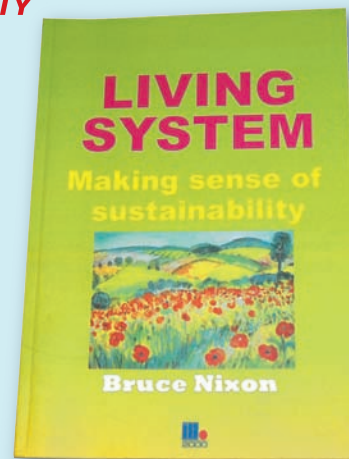
If you want to understand the lies at the root of the free trade agenda, and its main agent, the WTO, look at the global food system. Because it is cheaper to produce food in one country, package it and send it across the world than to grow it locally and consume it locally, we get the former. The WTO's free trade policies ensure this iniquity, keeping environmental and social costs out of the equation. It suits the corporate elite who control what we eat, but drives ever-greater numbers of farmers into poverty or suicide, reduces the quality of the food we eat, and wreaks havoc upon ecosystems. It is essential, argues Rosset in this expertly articulated book, that we start to see food as not just another commodity to be traded at will, but the very lifeblood of what is necessary for healthy people and a healthy society.

Reviewed by Sarah McCarthy

LIVING SYSTEM
MAKING SENSE OF SUSTAINABILITY

Bruce Nixon, 2006, £14.99

Ask people if they believe in sustainability and they will say yes. Ask them if they know what it means and they will quite often say no. In what is almost a miscellany of sustainability, Bruce Nixon explores every aspect of the concept, from the biosphere to economic and social injustice, through to modern politics, gender imbalance and the impact of globalisation. Even sustainability veterans will be able to scrub the compost from their allotment-sore hands and learn something new from this book, and the 75-point sustainable-living checklist with which it ends will give your conscience a stringent workout. Plenty of personal anecdote and a self-proclaimed desire to



'see the good in everyone' makes Nixon's writing accessible and enjoyable, and his conclusions are truly heartwarming.

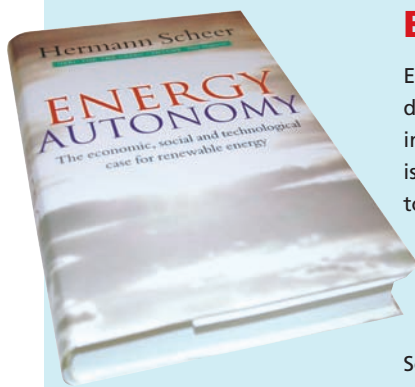
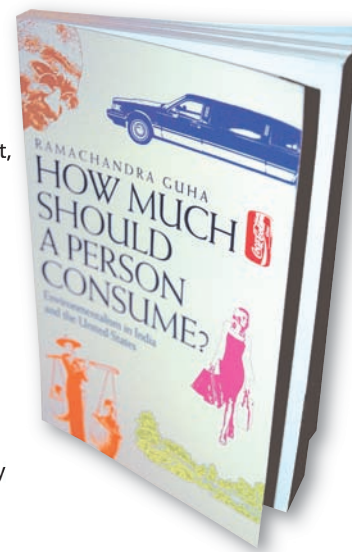
Reviewed by Mark Anslow

HOW MUCH SHOULD A PERSON CONSUME?
ENVIRONMENTALISM IN INDIA
AND THE UNITED STATES

Ramachandra Guha, University of California Press, £13.95

Few book titles can have posed such a pertinent question. Ramachandra Guha is an academic, and this book is the product of two years' research. To his credit, it is immensely readable, and Guha guides the reader through history and theory, politics and geography to a final chapter, which reiterates the book's title. And the answer? Guha does not arrive at a figure, but the real interest lies in his reasoning, which examines how much carbon dioxide the atmosphere and oceans will absorb, how many cars the earth could sustain, and the unequal use of resources across the globe. He concludes with a six-point plan to help India avoid the West's mistakes. This is thorough research and a deeply thought-provoking read.

Reviewed by Mark Anslow



ENERGY AUTONOMY Hermann Scheer, Earthscan, £19.99

Energy autonomy might be described as the holy grail of industrialised nations. America is desperately fermenting grain to achieve it; France's 58 nuclear reactors hum in pursuit of it; and China's coal reserves are shovelled up in homage to it. In his new book, Hermann Scheer, author of *The Solar*

Economy and *A Solar Manifesto*, sets out how it could be done using renewable technologies. He writes with disturbing clarity of a looming 'nuclear future'. He guides us through the complex political intrigues that halt the progress of clean energy. He outlines the social benefits to be gained from renewable

technologies. And he gives us a timescale: two decades, within which mankind has the opportunity to turn the tide of energy production. Fluid and persuasive, with some real solutions, this is a book that you hope is also in the hands of policy-makers.

Reviewed by Mark Anslow

THE DOOMSDAY FUNBOOK

Some of the best quotes from 36 years of *Ecologist* editorials – and the chance (UK only) to own a copy of *The Doomsday Funbook* signed by Edward Goldsmith, absolutely free

Over the past year, we have been reprinting a series of excerpts from *The Doomsday Funbook*, our unique collection of editorials and cartoons from *The Ecologist's* first 36 years. To end this series, here is a selection of the most prescient quotes, plus a few of our favourite cartoons. Seen as a whole, the book represents a history of environmental thought in the UK. Anyone seeking to understand how we have got where we are now, should read this book. Which is why anyone in the UK who subscribes to *The Ecologist* this month can also receive a free copy of *The Doomsday Funbook* signed by the magazine's founder, Edward Goldsmith.

The Cult of Productivity

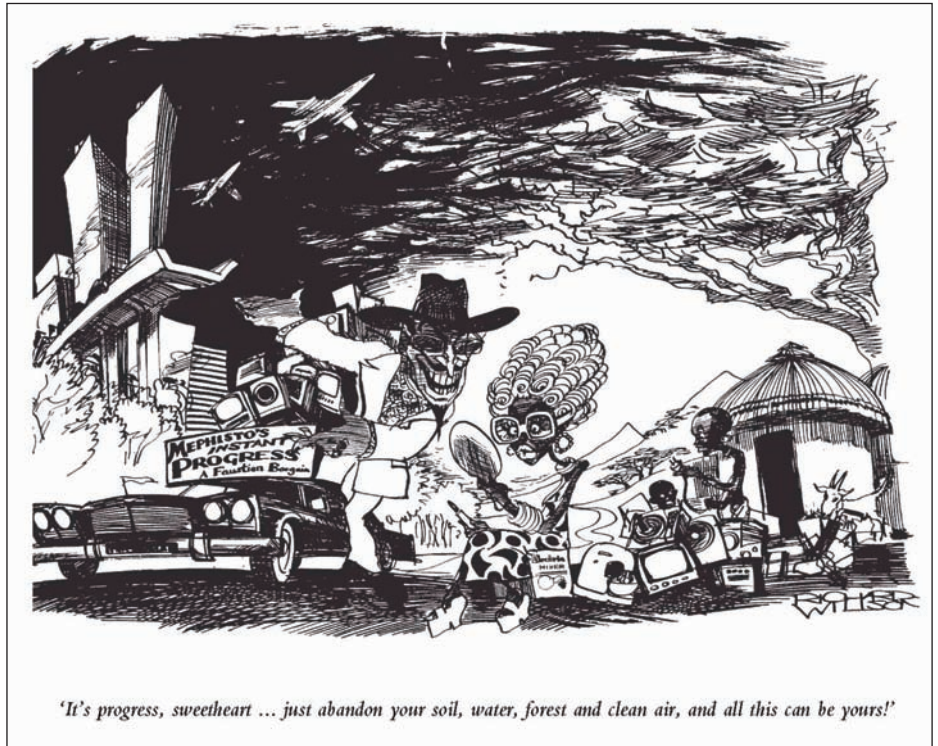
'In other words, the cult of productivity is leading to a reduction in the quality of our food and in the land's long-term food-producing capacity, and causing such serious perturbations in the complex social and ecological systems of which we are part that it may menace the very survival of civilised life.'
Edward Goldsmith, September 1970

The Prostitute Society

'It is time we rethought our values. There should be a limit to the damage we are willing to do to our society and its environment for the sake of a little money. Yet the more we look around us, the more apparent it is that no such limit is likely to be set or even considered. Everything we cherish most is today for sale to the highest bidder. We are only a prostitute society.'
The Editors, December 1970

You've Never Had It So Good

'The nation's health is deteriorating fast. The educational system is breaking down. Crime is reaching epidemic levels, and the prospect of new wars looms more menacingly than ever before. What has the US gained by economic growth? The answer is nothing. What are we to gain, if we move further in



'It's progress, sweetheart ... just abandon your soil, water, forest and clean air, and all this can be yours!'

that direction? The answer is also nothing.'
Edward Goldsmith, November 1973

Pollution by Tourism

'Mass tourism is likely to be one of the first victims of the energy crisis, which will be very good news for the environment, local peoples at popular destinations and their cultural patterns, and probably not really such bad news for would-be tourists.'
Edward Goldsmith, February 1974

The Cure That Kills

'In pre-colonial Africa there was no overpopulation in the sense of food production. The system of land tenure provided each family with the land required to feed its members. Each family also regarded it as its sacred duty to look after its members who were incapable of looking after themselves.

There was no malnutrition, and as there was no paid employment, so there was no unemployment. Indeed, those who suffer most from specific nutritional deficiencies

are those brought most fully into the colonial economy. Those who manage in spite of colonial rule to maintain their traditional pattern of nutrition are generally very healthy and resistant to disease.

Perhaps the most important problem engendered by many years of colonial control and exploitation is the loss of our highly cooperative community life. It is here that the contemporary problems of poverty associated with many of the countries in the Third World have their origin.

The only way to overcome such poverty in the Third World is for it to lessen its dependence on the rich countries and consciously to detach itself from the existing international economic and trading patterns and the so-called "world market", and pursue an independent and separate path of development, one that takes cognisance of its own traditional cultural pattern and ecological realities... not slavishly accept the standards of the rich industrial countries.'

Jimoh Omo-Fadaka, October 1976

THE DOOMSDAY FUNBOOK

Genetic Engineering

'And what right do a handful of scientists have to take it upon themselves to impose on the rest of humanity, risks that could in the worst instances, threaten every living thing? There is only one way to eliminate the possibility of disaster, and that is to outlaw further experiments.'

The Editors, January/February 1979

The Sellafield Discharges

'... we have created a site that will remain dangerously polluted for all time. Gross mismanagement is simply compounding the problem. The nuclear adventure at Sellafield must be brought to an end before another accident subjects us to a dousing of radioactive carcinogens, perhaps next time even worse than Chernobyl. A small crowded island like Britain cannot accept the risk of nuclear power.'

Peter Bunyard, 1986

Tunnel Vision at Twyford Down

'...mainstream groups are reluctant to act as a bridge between NIMBYs and visionaries because they are afraid of being tarred with a radical brush. Yet they are well-placed to forge constructive alliances; they can achieve this by encouraging tolerance and by clearly stating that Not In My Back Yard ultimately means Not On Planet Earth.'

Simon Fairlie, January/February 1993

The Erosion of Democracy in the UK

'We do need reforms to Parliament to make it effective in holding the government to account and to enable backbench MPs to undertake pre-legislative scrutiny of all bills. But we also need substantial decentralisation of power from Westminster. A fully democratic society begins at a local level.'

Andrew Puddephatt, July/August 1997

The Unholy Alliance

'The public is totally unprepared. People are being plunged headlong, against their will, into the brave new genetically engineered world, in which giant, faceless multinational corporations will control every aspect of people's lives, from the food they can eat, to the baby they can conceive and give birth to.'

Dr. Mae Wan Ho, July/August 1997

Childhood as Disease

'...modern science has now decreed that human behaviour is determined by the chemistry of the brain, and that all mental

illness is thereby due to a deficiency of some drug or other – which if not yet discovered, soon will be, assuming enough money is spent on research.'

Dr Edward Hamlyn, September/October 1997

Crime: Masking Its Symptoms

'Crime and the fear of crime are a blight on many lives... and it is in those areas which have borne the brunt of economic decay that crime is an ever-present reality. Real crime control would mean rebuilding family and community life in these areas.

Providing decent schools and recreational facilities. Offering the young a stake in society. Giving them a chance of a proper job – rather than one as a burglar, thief or drug dealer. [In short]... dealing with the real causes of crime, not merely seeking to mask its symptoms.'

Stephen Shaw, 1997

Nuclear Power – A Dead Loss

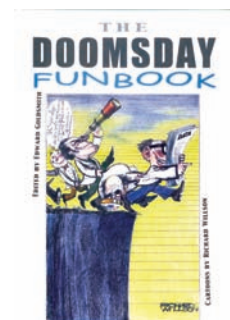
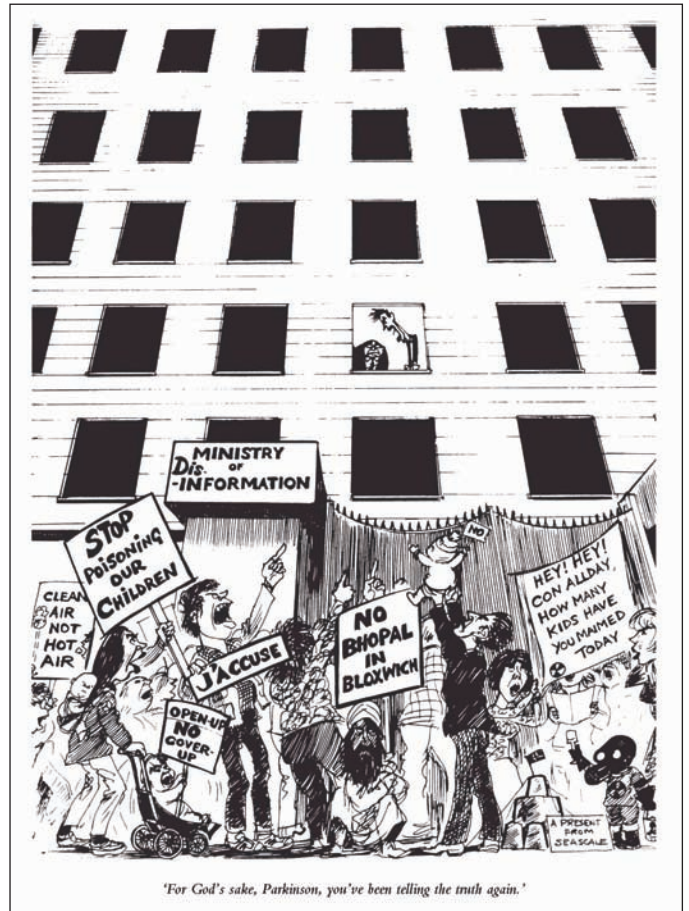
'It is clear on all economic counts that nuclear power is an outdated, expensive and dangerous technology. And with renewables technology speeding ahead, we have never needed it less. As much energy today can be obtained from the silica in plain sand, through the use of photovoltaics, as can ever be obtained from plutonium in a fast-breeding reactor programme.'

Peter Bunyard, November 1999

What Oil Crisis?

'With oil famine, ethical options became the only way forward. Industrial agriculture? Fantasy. The only option for the future is low-energy organic cultivation, bringing redundant farmers and abandoned fields back into production. Globalisation... is no more than a short-lived side effect of cheap oil. In the future, local development is the only practical solution. Nuclear energy? Moonshine.'

David Fleming, November 2001



SPECIAL READER OFFER

THE DOOMSDAY FUNBOOK...

Subscribe to *The Ecologist*

magazine this month (UK only) for £28 and receive a copy of *The Domesday Funbook* signed by *The Ecologist's* founder Edward Goldsmith absolutely free (rrp £9.99)

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GREEN SHOPPING GUIDE



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If you thought climate change was too big a problem for you to tackle – think again. By changing to a supplier that produces electricity from renewable sources you are taking one of the biggest steps you can to help reduce carbon emissions and fight climate change. Switching is easy and takes only a few minutes. And we even match the standard price of each regional supplier. Change to Ecotricity and help change the way electricity is made.

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Last year our wind turbines saved an estimated 32,000 tonnes of CO2 emissions.¹

Over the next twelve months we're planning to more than double our electricity generation with new wind power projects.

ecotricity

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- 70 Wine: Trace Elements** Wines aren't always what the label claims. But as **Monty Waldin** explains, DNA testing is now getting on the case... and sorting out the frauds
- 71 Ecologist Organic and Biodynamic Wine Club** This month's case – 'Dry reds/dry whites' – for only £56. Twelve delicious bottles of organic red and white wine, delivered direct to your door
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If we want to prevent the destruction of this planet, and create local, vibrant communities, we are going to have to stop shopping in supermarkets and multinational chain stores and make every £1 we spend count, by buying from local, independent and ethical producers and retailers

PLUS! ECOLOGIST READER OFFERS

- 82 Free Jute Bag with delicious Loch Fyne seafood
- 90 10% off Isle of Mull Weavers' shawls and wraps
- 92 15% off Pure Nuff Stuff's luxurious skincare products
- 94 No Excuse! Cloth Nappy Trial Pack

Editor's Letter



Does buying organic destroy the rainforest? *The Economist's* 7 December cover story, 'Voting with your trolley', claimed as much. It states that organic farming produces lower yields and that, due to techniques such as crop rotation and composting, farming organic would require a tripling of the area under cultivation to produce the same amount. Hence, less room for rainforest.

This is (to put it politely) tosh. Firstly, rainforest destruction is due to – depending on the country – logging, mining and growing crops such as palm oil and soy beans. It's unclear what kind of farmland crops can be grown in hot and rainy climates. Secondly, a food surplus in many Western countries ends up dumped onto the world market. On a domestic scale, in the UK, a third of our household food goes to waste. Do we need as much food as we produce? Thirdly, it overlooks the fact that modern farming has led to massive soil erosion and infertile land. There is no mention of the millions of hectares of land that have become infertile as global cereal production has tripled in the past 50 years due to the use of synthetic fertilisers.

Accusing right-thinking people of misplaced actions doesn't move anything forward. As mega retailers move into the organic food and clothing markets, it's questionable whether they can maintain the integrity and positive impacts of organic farming – soil fertility, less chemical pollution, enhanced wildlife, farmers as stewards of the land – within their current mass-produced global food production system. The real question is, can big be beautiful? I wish I had the answer.

Sincerely,
Matilda Lee
Green Pages Editor
Email: greenpages@theecologist.org



FEBRUARY

Swap seeds, discover loads of potatoes, visit a wetland reserve and a rhubarb forcing shed, make a nest box, relax and be merry at Cheltenham Folk Festival, take part in Fairtrade fortnight... in all, have a fab Feb

28 JAN

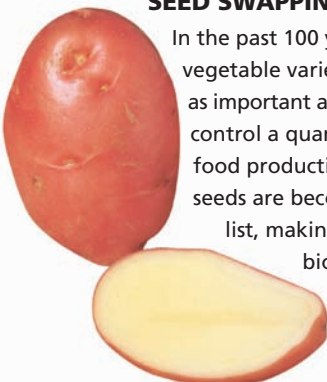
SEED SWAP ON NATIONAL POTATO DAY

Try, buy and learn all about potatoes at 'Potato Day' at Garden Organic Ryton (near Coventry). Growers can choose from up to 100 varieties of seed potatoes and there's a Seed Swap organised by Garden Organic's Heritage Seed Library. Tel: 024 7630 8211; www.gardenorganic.org.uk



SEED SWAPPING

In the past 100 years we have lost 97 per cent of vegetable varieties in the UK. This mass extinction is as important as the loss of species from the rainforests. Just three corporations control a quarter of the world's entire seed market, vying for control of global food production. Farmers are being taken to court for seed saving, and patented seeds are becoming commonplace. Seeds are often taken off the national seed list, making them illegal to sell. Seed saving and swapping is a way to protect biodiversity and contribute to safe, local food production. To find a seed swap near you, visit: HDRA/Heritage Seed Library Catalogue, www.gardenorganic.org.uk; Seedy Sunday, www.seedysunday.org; Dyfi Valley Seed Savers, www.seedsavers.machynlleth.biz



HERB OF THE MONTH ROSEMARY

Bathe, cook and woo your lover with it...

ROSEMARY FOOTBATH

Cold feet? To boost circulation, try Dr Hauschka's Rosemary Bath (www.drhauschka.co.uk) or make a footbath with fresh rosemary sprigs and a few drops of rosemary essential oil in a bowl of hot water.

ROSEMARY ROAST POTATOES

Peel and cut potatoes into chunks, put in a pan of salted cold water; bring to boil. Simmer, covered, for 10 min. Drain; return to pan with a handful of chopped fresh rosemary. Shake together; put in large roasting tin. Drizzle with olive oil and salt. Roast at 200c/gas 6 for 45-50 min until crisp and golden.

SAY IT WITH ROSEMARY

It used to be thought that anyone touching a rosemary bush would be inflamed with love. Well, it's a mild stimulant, invigorating and warming – for kindling an inner fire...?



2 FEB

WORLD WETLANDS DAY

Why not visit one of The Wildlife Trusts' wetland reserves on World Wetlands Day? Britain's wetlands are home to a huge diversity of plants and animals, and play a major role in storing floodwater. This year's theme, *Fish for Tomorrow?*, aims to raise awareness of unsustainable aquaculture practices: 75 per cent of commercially important marine and most inland water fish stocks are currently overfished or being fished at their biological limit. For more information, see www.ramsar.org and www.wildlifetrusts.org

12-18 FEB

FORCED RHUBARB

If you want fresh, British fruit this month, 'forced' rhubarb is about your only option – and it isn't even a fruit, but a vegetable. Grown in warm darkness and harvested by hand in candlelight, this weird, wonderful stuff grows with such power that it makes a popping sound as the pink buds burst. UK forced rhubarb is grown mainly in a small area of West Yorkshire known as the 'Wakefield triangle'. Intrigued? Visit the Wakefield Festival of Food, Drink and Rhubarb, 12-18 Feb, 0845 601 8353. To book a tour of a rhubarb forcing shed, call 0113 2822245.



RECIPE

RHUBARB FOOL

Have a taste of pink decadence with this creamy, delicately flavoured dessert...

What you'll need:

- 1kg/2lb forced rhubarb stalks, chopped
- 300g/11oz sugar
- 300ml/½ pint double cream

Creates six modest yet rich portions.

How to make:

Preheat oven to 180C/350F/gas 4. Place the rhubarb in an ovenproof dish, mix in sugar and cook for 45 minutes until soft and much syrup has been liberated. Strain through a sieve, reserve the syrup, mash well with a fork and leave to cool. When cool (or just warm), stir in cream and serve. (Keep the syrup – a perfect sauce for ice cream or mixing into yoghurt.)

Recipe from *Seasonal Food* by Paul Waddington (www.booksattransworld.co.uk, £10.99)



**14 FEB
VALENTINE'S DAY**

We Brits spend around £503m a year on Valentine gifts – nearly £30 million on flowers, over 50 million of which are roses. Yet most are flown from as far away as Colombia, India, Israel and Kenya, and most will have been grown using chemicals. For greener tokens of love, try...

- A locally grown plant – for a flourishing relationship.
- Wild snowdrops from a local woodland or riverbank.
- For the price of a bunch of six 'Stolen Kisses' Interflora roses (£25), you can save AN ACRE of tropical rainforest – for details, see www.worldlandtrust.org



**14–21 FEB
NATIONAL NEST BOX WEEK**

Natural nest sites are disappearing fast; but since National Nest Box Week was launched in 1997 by the British Trust for Ornithology, keen naturalists have put around six million boxes in gardens across the UK. For info on how to make your own wooden nest box, tel: 0800 072 0130 or see www.jacobijayne.co.uk



**16–18 FEB
CHELTENHAM FOLK FESTIVAL**



Sparked by a new wave of dynamic roots bands, with instruments from flutes to a flat-backed bouzouki, this is British folk at its imaginative best. A great line-up, dancers livening up the streets, and workshops where you can learn an instrument or some dance moves. Tel: 01242 227979; www.cheltenhamfestivals.com



**17–24 FEB
COMMUNITY PUBS WEEK**

At least 26 pubs are closing in Britain each month, most of them 'locals'. Community Pubs Week, organised by the Campaign for Real Ale (CAMRA), is designed to raise the profile and importance of pubs – often at the heart of the community. To find out more, visit www.camra.org.uk

**26 FEB–11 MARCH
FAIRTRADE FORTNIGHT**

Fairtrade gives producers in less-developed countries the chance to build a better future and to compete in global markets. The UK now has 210 Fairtrade Towns, 50 Fairtrade Universities and 3,000 Fairtrade Churches, plus a nationwide Fairtrade at Work Campaign. In Fairtrade Fortnight, thousands of events will be held around the country. To find out more, including how to organise your own event, go to www.fairtrade.org.uk



PICK OF THE MONTH

ECO CHOCOLATE

The artisan chocolatiers behind Hotel Chocolat make 'real' chocolate from pure, authentic ingredients, and their ethical policy is impressive. They buy several tonnes of Fairtrade chocolate each year and fund sustainable aid projects to help cocoa growers and communities in Ghana



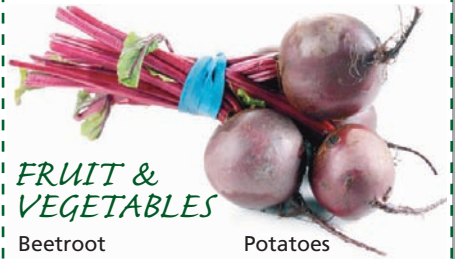
and Grenada. They've even bought an historic cocoa plantation in St Lucia. Visit www.hotelchocolat.co.uk



THE FOOD OF LOVE...
Chocolate has long been known as an aphrodisiac. In 1652, James Wadworth wrote of it: *'Twill make old women Young and fresh; Create new motions of the Flesh And cause them to long for you know what If they but taste of chocolate.'*

**FEBRUARY
FOOD IN SEASON**

FRUIT & VEGETABLES



- | | |
|---------------------|---------------------------|
| Beetroot | Potatoes |
| Brussels sprouts | Purple sprouting broccoli |
| Cabbage | Rhubarb (forced) |
| Cauliflower | Savoy cabbage |
| Celeriac | Shallots |
| Celery | Spinach |
| Chard | Swede |
| Chicory & endive | Turnips |
| Jerusalem artichoke | |
| Kale | |
| Leeks | |
| Lettuce | |
| Parsnip | |

MEAT, POULTRY & GAME

- | | |
|---------|-----------|
| Hare | Mallard |
| Rabbit | Partridge |
| Venison | Pheasant |

FISH

- Mussels
- Oysters
- Scallops

CHEESE

- Blue Wensleydale
- Stilton

ALL VEGETABLE PHOTOGRAPHS © www.thikevegetables.co.uk/mw/mack

LOCAL HERO: *Andrew Pascoe*

Many global fish stocks are on the verge of collapse but, nearer home, Cornish fishermen have found a sustainable way of earning a living. **Carol Trewin** reports



PHOTOGRAPH BY ADAM WOOLFITT

It is 5.30 on a December morning as Andrew Pascoe casts off in Newlyn harbour, West Cornwall. An hour and a half later, as day breaks, his tiny boat reaches the Runnelstone, a popular fishing ground just off Britain's most south-westerly point. For every minute of available light he fishes for sea bass using handlines, so it is seven in the evening and dark when he returns. His tagged sea bass are stored in boxes full of ice, ready to be sold the following morning in Newlyn, England's biggest fish market, where they will command a premium – sold with full provenance, traceability and

showing that they have been caught in a sustainable, dolphin-friendly way.

The 36-year-old has sustainability written through his core like a piece of seaside rock. For this third generation of a Newlyn fishing family, fishing is a way of life. As a young boy there was nothing else he wanted to do and as soon as he could walk, all his spare time was spent messing about in boats and around Newlyn harbour. As one of Cornwall's younger fishermen, Pascoe understands the need for sustainable fishing, to respect and conserve fish stocks and to sell a quality product. Far from the perceived

image of a fisherman who spends weeks at sea indiscriminately trawling the ocean floor, he has spent his life developing a range of methods that suit the seasons and the abundant and diverse range of fish and shellfish found around the Cornish coast. 'Sustainability is the way forward, it has to be, really,' he says.

Cornish fishermen have been fighting numerous battles for many years, including the negative image of deep sea trawling universally applied by the media and green groups to all fishermen – a growing backlash against the environmental damage caused by farmed sea bass, and

that caused by the large French and Spanish pair-trawlers with their destructive by-catch of dolphins and porpoises.

Faced with this, Cornish bass fishermen realised that they were unable to sell their line-caught fish for the premium it deserves. To preserve their future, something had to be done so that people could distinguish their sustainable inshore bass fishery from farmed or trawler-caught fish. The solution was a tagging scheme devised by Andrew Pascoe and Nathan de Rozario, project director of Seafood Cornwall.

'Nathan had seen some tagging for line-caught fish in France while on holiday, then I went over and saw for myself,' Pascoe explains. 'But they didn't have the line-to-plate traceability or the provenance, and we could see that that was what customers wanted – a reassurance about what they are buying.'

Only handline-caught bass can carry the tag, which shows the number of the boat that caught it, guaranteeing that it has been caught by a member of the South West Handline Fishermen's Association (SWHFA). Funding from Seafish, Seafood Cornwall and Business Link paid for the first 10,000 tags and for a simple website explaining how this traditional fishing method works, and giving direct links between tags, fishermen and their boats. A core of

around 10 small boat skippers signed up for a pilot project, and the scheme was launched in November 2005 at the London sushi restaurant, Moshi Moshi.

Traditional handline fishing is one of the oldest and most sustainable ways of fishing for mackerel, pollack and sea bass. Different types of line and hooks are used, according to the species. There is no by-catch and because the fish are caught live, any undersized ones are immediately put back in the water. The fish are quickly sorted, tagged and put into boxes of slush ice, which keeps them in the best possible condition. As this is mainly practised by small, inshore boats, fishing during daylight hours and no more than a mile from the coast, the environmental impact is minimal and the fish quality is superb.

As vice-chairman of the SWHFA, Pascoe had no problem encouraging other members who fished for sea bass of the merits of the scheme. The

Traditional handlining is one of the oldest and most sustainable fishing methods

association was set up more than 20 years ago, initially to support boats handlining for mackerel, and its 50-plus members also handline for sea bass and pollack.

The timing of the new tagging scheme was good, as the Cornish fishing sector was recognising that it could benefit from selling smaller volumes of high quality fish, caught using sustainable fishing methods with a minimal environmental



impact, while ensuring the future viability of fish stocks in the local waters.

'There was a bit of doubt among the fish buyers, merchants and fishermen at the outset, but within a week there was a complete turnaround and the merchants were asking when the next boats were going to land,' de Rozario says. 'The hardcore fishermen who were not on the scheme were getting up to £1 per kilo less for untagged fish. If you're landing 100 kilos a day that's a lot to be losing.'

One year since the scheme was launched there are now 40 boats in the scheme, and earlier this year it was extended to include line-caught pollack. Andrew Pascoe is surprised and pleased that such a simple idea can have made such an improvement to fishermen's incomes: 'Although the catches overall have not been as good as last year, there's been a reasonable amount of bass and the prices have been much higher.'

What he omits to say is that the tagged



Opposite page: Andrew Pascoe leads boats into Newlyn harbour with a catch of handline-caught bass to be tagged
Left: Penberth is one of the few remaining coves that support a tiny fleet of day boats
Above: One of Pascoe's tagged sea bass

GREEN PAGES *Local hero*

bass and pollack have made an unprecedented impact on the auction system. Where once fishermen were price takers, at the mercy of merchants and buyers, now those buyers are clamouring for the line-caught fish, and are forced to pay premium prices to reflect the imbalance between supply and demand.

The Cornish fishing fleet is mostly made up of small vessels, less than 10 metres long. Less than a third of the fleet consists of netters and bigger trawlers. Yet only around 10 per cent of the fishing quota for species caught in the waters around Cornwall (cod, sole, Dover sole, monkfish, hake, plaice, megrim sole, pollack, haddock, ling, coley and langoustines) is allocated to Cornish boats. The remaining quota goes to boats from France, Spain, Ireland, Belgium and the Netherlands – the result of Edward Heath giving away these rights to British fisheries when Britain joined the EU in 1973.

Unlike many of his contemporaries, Andrew Pascoe has two boats. The first is Cynthia, a small 18ft cove boat, open to the elements, which he uses for handlining. The second, the 38ft Lamorna, he owns jointly with his brother James. This boat is used for netting, fishing for crawfish, lobster, monkfish and turbot in the summer, along with handlining for pollack. Later in the year they switch to fishing for tope and ling. The static nets have large mesh sizes that virtually eliminate any by-catch of undersized fish.

'With netting you don't have a by-catch of small immature fish, they're fished in such a way that they do let everything through,' he explains.

The monthly tidal pattern of fast-running spring tides and slower neap tides imposes its own regulation on netters, effectively limiting their ability to fish to two weeks in each month. So for the other two weeks, weather



permitting, he switches to the cove boat.

'That's always the best part. It's more like a hobby, something I enjoy and would do even if I weren't getting paid for it,' says Pascoe. He may make it sound like a pleasant pastime, but every time he goes to sea he is at risk, in what is acknowledged as the world's most dangerous peacetime occupation. Regardless of the size of boat this is a tough profession, mostly cold, nearly always wet, a constant struggle against the sea and the weather.

And despite the success of the tagging scheme, other forces threaten the Cornish fishermen's precarious existence. Under pressure from the angling lobby, the Fisheries Minister, Ben Bradshaw, is planning to introduce a new minimum landing size for sea bass of 40cm – the current national minimum is 36cm, and in Cornwall it is 37cm under a local byelaw set by the regulatory Cornwall Sea Fisheries



Clockwise from above: Nicknamed 'the bass boys', a small group of specialist day boats fish for sea bass off Penberth. Landing of tagged handline-caught bass at Newlyn. Slush ice keeps them in good condition. Pascoe and bass

Handline fishing is mainly practised by small boats no more than a mile from the coast, so the environmental impact is minimal and the fish quality superb



Sustainable fish stocks

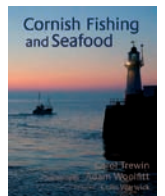
Not all fish stocks are subject to quotas. In Cornwall, more than 40 different types of fish and shellfish are landed daily. To buy fish that has been caught with minimal environmental impact, use a reputable fishmonger and ask for day boat fish – that is, fish caught by boats that are at sea for less than 24 hours. This will be the freshest fish available. Fishmongers can advise on what is in season and at its best, and suggest alternatives to threatened species such as cod. Stocks of pollack, sea bass, lemon sole, squid, mackerel, sardines, red mullet, red gurnard, John Dory and monkfish are all thriving.

sizes, the line-caught tagging scheme appears to have taken on a momentum of its own. More than 90 per cent of Cornish line-caught bass are now tagged, prices this year are 10 to 20 per cent higher than in 2005, and fishermen in Devon and Dorset are interested in joining the scheme. Tagged Cornish sea bass and pollack are increasingly sought after by top chefs in Cornwall, in London – where Cornish fish already has a reputation for its quality – and across the UK. Many of the best fish processors and fishmongers now sell only the tagged fish. Requests for more information come in daily from around the UK.

‘Product quality is just as important as the method of capture as far as we’re concerned, really,’ Pascoe says. ‘I’m not saying everything else is bad but this is the best, you cannot get any better. It’s a Rolls Royce instead of a Ford Mondeo.’

And that perhaps is his next mission: to inspire us to eat fish with a clear conscience, while understanding that fish is no longer a commodity that is as cheap as chips, but deserving of its premium price.

Carol Trewin is the author of *Cornish Fishing and Seafood* (Alison Hodge, £14.95).



Committee. Andrew Pascoe has no argument with the higher sizes, recognising that this will help to protect and ensure healthy stocks in the long term. What makes him angry – and this encapsulates so many of the other issues dogging the Cornish fishing sector – is that this is not an EU-wide decision.

‘I don’t want to stop anyone else making a living,’ he says, ‘but unless these restrictions apply to everyone, you will still have the French and Spanish pair trawlers fishing right up to our 12-mile limit, making big catches of breeding stock and the smaller 36cm fish at the height of the breeding season. We need restrictions if not a ban on these mid-water pair trawlers.’

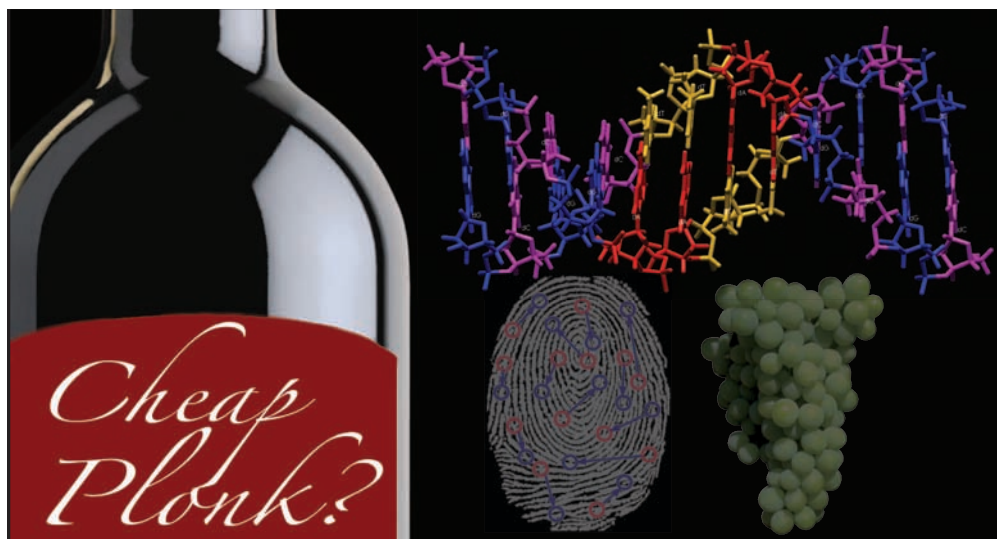
Pair trawling, with its destructive cetacean by-catch, was banned in 2004 for UK boats, but pairs of French and Spanish trawlers carry on regardless outside Britain’s territorial waters. This shows how the

combination of the complex Common Fisheries Policy, run by Brussels bureaucrats, and its rigorous implementation by the UK government, constantly discriminates against Cornish fishermen, who work in what is one of the most highly regulated industries in the world.

Although technically there is a so-called six-mile limit inside which only the British inshore fishing fleet should operate, there are many French and Belgian boats with historic rights that allow them to fish inside that limit. Beyond that and the 12-mile UK territorial waters limit, it is well known that the French and Spanish authorities turn a blind eye to many bad practices – landing ‘black’, or illegal fish that have no quota, using illegal-sized nets, ignoring regulations and so on.

While Pascoe and the Cornish handline fishermen wait to see if Bradshaw will implement the new minimum landing

● For more information about where to buy handline-caught fish, the boats catching tagged sea bass, and the South West Handline Fishermen’s Association, see www.linecaught.org.uk and www.seafoodcornwall.org.uk



WINE

TRACE ELEMENTS

DNA profiling is now part of your business life – at least, if you are a fraudulent winemaker. **MONTY WALDIN** reports

If you are scared by headlines in the redtop tabloids claiming that all British people will eventually have to provide DNA for a huge national computer, think about how the world's least scrupulous winemakers feel as DNA technology catches up with them.

The fact is, wines can now be DNA profiled to see if the liquid in the bottle really is the same as what it is claimed to be on the wine label.

You'd be surprised at how fraudulent the wine industry is. You could never pass off an orange as an apple, or a Mini as a Rolls Royce, but you can easily top up a vat of expensively-labelled but lean-tasting Bordeaux with some lush-tasting, but cheap, plonk from the Med.

Bordeaux chateaux have long been beefing up anaemic wines with cheap Rhône reds (a practice begun a couple of centuries ago). Then France's appellation contrôlée law – drawn up in the 1930s – outlawed cross-blending of wines from different regions.

But the practice goes on: there are always red-faced wine producers waiting at France's magistrates' courts to plead guilty to cross-blending.

In one recent case, a famous

Beaujolais producer admitted illegal cross-blending of expensive Beaujolais grapes with ones producing cheaper plonk, but claimed his winemaker made a mistake through 'exhaustion'. Other classic excuses include attaching the wrong hoses and pump to the wrong fermentation tank at the wrong time, or having stuck the wrong identification label on a tank just as the wine inspectors come round.

But I know countless winemakers who, off the record, admit to bending the rules. They say they do it because there is no health risk in mixing, say, plonk from Sicily, sold for the equivalent of less than £1 per litre, with a wine from a prestigious region such as Piemonte or Tuscany, that will sell for nearly £100 a bottle.

Besides, they say, people happily pay exorbitant sums for designer clothes, watches or cars whose intrinsic worth is a fraction of the retail price – so why not wine too? After all, they claim, the alcoholic effect is the same whether the wine is cheap or expensive.

I would argue differently. I'd much rather drink cheap plonk from a sunny but chemical-free vineyard in Sicily than an expensive fizz from Champagne, which has the world's

most polluted vineyard soils.

But the cheats say that people like soft-tasting reds that can be drunk immediately – so helping a wine along by softening it up does no harm.

On one level, you can see their point. Top reds from places like Bordeaux, Piemonte and Tuscany are made from grape varieties such as Cabernet, Nebbiolo and Sangiovese, which taste raspingly acid and hard unless given several years or more of bottle age. So, the argument goes, illegal blending-in of softer (albeit much cheaper) wines is really doing the consumer a favour by making the wine more drinkable, sooner.

This may explain why many big winemakers have holiday homes in vineyard regions producing the cheapest plonk on the planet. They earn extra money as consultants by trawling the world's least glamorous regions – such as Mediterranean France (around Narbonne and Montpellier), southern Italy (Puglia, Sicily and Basilicata), and Sardinia – in search of blending material.

Now for that technology. DNA profiling of wine is something we are going to hear much more of, because it will show, scientifically, exactly what grape varieties any particular batch of wine has been made from – such as pricy Chardonnay or plonky Ugni Blanc; and even where it was fermented – in the exquisite cellar of a Renaissance château, or in a cheap-as-chips wine cooperative on the outskirts of a southern Italian slum.

Producers of wines from organically grown grapes have less to fear from DNA profilers, because it is much harder (although not impossible) to cross-blend organic grapes or wines. This is because the organic control bodies are much stricter at following the paper trail of grapes or wine produced by organic vineyards.

What organic control bodies don't do is tell you whether a wine labelled 'made from organically grown grapes' tastes good or not. But then, nor does France's appellation contrôlée law: it just says where the grapes came from.

Or, should we say, where they were supposed to have come from.

To order a copy of Monty's new book *Tuscany* at the special price of £9.75 (RRP £12.99) including post and packing, please call 01903 828503 and quote the code MB14.



Tasting Notes

Dry red – BORDEAUX

La Coccinelle, Côtes de Bourg

'Coccinelle' is French for ladybird. Ladybirds are important natural predators of mites. Rather than spraying mites off with chemical, the owners of Chateau La Grolet, allow natural grasses to grow in their vines to provide a habitat for the ladybirds. This red has lovely freshness and balance and is good to serve with food. It will keep for a few days too, once opened.



Dry red – SPAIN

Aroa – Tempranillo

Red wine from Spain's Navarra region often offers more consistent quality – and pricing – than the more famous neighbour, Rioja. This nicely weighted red is made from Spain's Tempranillo grape, which is a bit like France's Merlot but not so tannic. Soft, and juicy enough to quaff on its own, and unpretentious enough to be drunk with sticky fingers when picking at barbecue food.



Dry red – SOUTHERN FRANCE

Domaine Majelus – Merlot

This comes from the award-winning Domaine de Brau estate (featured in a previous issue of *The Ecologist's* wine club). This is an example of a French Merlot which is smooth enough for everyday drinking, but with enough firmness and substance that will allow you to cellar it until Christmas 2007 if you like.

ecologist

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- ✓ Excellent value

WINE CLUB CASE 6: *Dry reds/whites*

See left for full tasting notes

- 1) La Coccinelle de la Grolet, Côtes de Bourg (x2)
- 2) Aroa, Tempranillo (x2)
- 3) Domaine de Majelus, Merlot (x2)

Full tasting notes in March issue

- 4) Domain Pech-Roc, Sauvignon Blanc (x2)
- 5) Camino Los Robles, Airén (x2)
- 6) Can Vendrell, Chardonnay/Xarel.lo (x2)

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DRY WHITES

Domain Pech-Roc, Sauvignon Blanc

Ripe grapefruit and wild flower herbaceousness in a dry, well-structured Sauvignon with welcome zing.

Camino Los Robles, Airén

This Airén has been cool fermented to make a crisp, fresh white with clean melon and citrus flavours.

Can Vendrell, Chardonnay/Xarel.lo

A cool-climate Chardonnay, underpinned by the zingy acidity of the Xarel.lo. A clean, fresh palate with hints of tropical fruits.



GREEN FINGERS

Paul Kingsnorth gets to grips with gardening in tiny spaces – and finds that you can grow an amazing variety of food

My first attempt at growing my own food was small-scale and short-lived. Ten years ago I was living in a flat in London with a couple of friends. We had no garden or roof-terrace or anything upmarket like that. We had a flat, with five rooms and four windows. Even though I couldn't cook, and certainly couldn't grow food, I took it upon myself to get a couple of window boxes for this flat, and to use them to grow herbs. Herbs, I thought, were a bit more manly than flowers, and if I grew them I would have to do something with them, which would force me to learn to cook. They would also smell nice. Why not?

It was a nice idea, and one which utterly failed. A few weeks later, with my small, cold herbs still squinting in the springtime of their life, my friends and I held a house party. The next morning, I awoke with a splitting headache to discover that neither of my window boxes had survived the night. Both were three storeys down, in several pieces, one on the pavement and the other in the garden of the ground floor flat. Due to the nature of the party, nobody could remember who was responsible.

That was the end of my food-growing experiments for quite some time. But I wish I'd persevered, because I was on to something. You see, contrary to popular mythology, you don't need a lot of land to grow your own food. In fact, you don't need any.

I've been writing about allotments in this slot for the past year. I love allotments, and



Window boxes and the like needn't be just for flowers. Why not plant some herbs?

mine supplies me with a lot of what I eat. But, as some of you have told me, not everyone can get access to one, and not everyone has time even if they can. So I'm going to cast my net wider in my mission to help everyone to grow their own food. The thing is, you see, it's actually a lot easier, cheaper and perhaps more enjoyable than a lot of people think. And I'm going to prove it.

Let's start small. Say, for instance, you're in the position described earlier. Say you live in a flat, without a garden, and you don't have an allotment. You have some windowsills and, if you're lucky, a fire

escape, but you don't want this lack of land to stop you from growing your own food. Where do you start?

The first, easiest and most obvious possibility is those window-box herbs. Everyone has windows, and most of them have outside sills big enough for the kind of window box you can get for a fiver at the garden centre. For a few more quid you can get yourself a bag of (peat-free) compost and some herb plants. Choose whatever you might use, or whatever you like the smell of – rosemary, parsley, thyme, bay, coriander and basil would be a good basic selection. Take them home, plant them and put them on the sill – south-facing, if possible, to soak up the sun. Remember to water them and – well, that's it. In a few months, you'll have fragrant windowsills and more interesting dinners.

But this is only the start, for it's not just





If your windowsill gets a lot of sun, you could grow dwarf tomatoes

herbs that will grow happily in window boxes. What about something a bit more ambitious – tomatoes, for example? If the compost is deep enough in the box and your windowsill gets a lot of sun, then it should be possible. Choose a dwarf, outdoor variety, and away you go. You'll be surprised how much fruit a small area can produce. Grow some basil on another sill and, hey presto – instant salad.

The more you think about it, the more possibilities unfold. How about spring onions? These are small and easy enough to grow in a window box or large pot. Or what about radishes, beetroot, garlic or even a line of lettuce? I've never tried these in a window box myself, but I know it's possible (if you have, please let me know the results!). You could even try some fruit – buy some small strawberry plants from your garden centre and you've got a dessert to follow your home-grown salad.

All this is before we even



get to the other side of the glass – the inside of your flat – which, given enough sun, can act as a mini-greenhouse. Even if you don't have windowsills on the outside you're bound to have one inside, and this can be a haven for food plants too. I know for a fact that chilli peppers will grow riotously behind a well-lit window. So should capsicum peppers.

Sprouting seeds can be grown in a spare space on the kitchen draining board. Buy, or make yourself a seed-sprouter (see right) – you can use an old jam jar – and you've got immediate, easy and cheap access to a variety of healthy, vitamin-rich sprouts. Then there's mustard and cress, grown on pieces of wet kitchen paper. Remember that from school? Well, it still works. Save any plastic punnets you buy fruit or veg in, or old margarine tubs, and sprout your seeds on the damp paper in these.

In other words, however limited your space is, you've got options. Growing your own food doesn't have to be a chore, an all-year operation, or even a reason to leave your house. As much as anything it's a state of mind – a desire to give it a go and see what happens. Now you know you can do it anywhere, there are no excuses! What are you waiting for?

Email me: paul@paulkingsnorth.net

Useful resources

- The excellent Self sufficient-ish website (www.selfsufficientish.com) has sections on growing food for flat-dwellers and container-growing, among many other inspiring and quirky ideas.



- The Organic Gardening Catalogue (www.organiccatalog.com) is an easy and accessible place to buy everything from seeds to tools – all delivered to your home. It also has a section on sprouting your own seeds.



- Recommended: *The Window-Box Allotment: A beginner's guide to container gardening* by Penelope Bennett (Ebury Press), which is out of print but widely available.





READ THE LABEL

A FINAL WORD



The Ecologist's year-long Read the Label campaign comes to an end this month. **Pat Thomas** looks back on its impact and looks forward to a healthier and more beautiful 2007

The interest in and demand for natural and organic beauty products has grown tremendously in the past few years. A recent survey in the US, for instance, found that around 90 per cent of women want to use natural and organic bodycare products. Unfortunately, fewer than half of these women could actually define what 'natural' and 'organic' meant.

That's not surprising. A product need only contain one per cent of natural ingredients to be called 'natural'. A label can claim to have organic ingredients, yet still contain a range of synthetic industrial chemicals that are not good for your skin and have been linked with longer-term health problems.

When words like 'natural' and 'organic' and concepts like 'harmless luxury' are co-opted as sales devices, they can lose their meaning. Our Read the Label (RTL) campaign has tried to bring meaning back to these concepts by making readers aware of what is in the products they buy.

To us at *The Ecologist* it is apparent that when cosmetic manufacturers use palm oil in its products they are as guilty as junk food manufacturers of furthering the destruction of the forest habitats of orang-utans and tigers. When manufacturers rely on petrochemicals to produce cheap chemicals for beauty products they are as responsible for the depletion of a non-renewable resource as a major oil company.

Consider also: studies show that your skin can absorb up to 60 per cent of anything you put on it. Some estimates suggest that women absorb around 2kg of chemicals through toiletries and cosmetics

every year. When you absorb something through your skin, it bypasses the body's normal metabolic pathways – it doesn't get broken down or neutralised. Thus, when manufacturers use carcinogens in products, they are as guilty of damaging human health as the operators of incinerators.

By raising such issues, RTL has sparked off a wider dialogue between our readers and bodycare product manufacturers. This is not always welcomed. Questions like 'Is this safe?', 'Why aren't you using a more natural ingredient?' and 'How can you call your product natural when it clearly isn't?'

A product need only contain one per cent of natural ingredients to be called 'natural'

are often fobbed off with excuses and the attitude that such issues are too complicated for the average person to understand.

Many of you have been frustrated by the answers you have received, such as: *'All the ingredients we use are approved by the European cosmetic regulations'* – **Tesco** *'Parabens are approved for use as a preservative across the globe'* – **The Body Shop**

Almost every manufacturer has fallen back on the excuse that it is allowed, by law, to use certain known toxic ingredients.

As the market for natural bodycare gets larger and more sophisticated, it will become even more important that consumers read labels and scrutinise claims. We should all question the corporate schizophrenia that calls a product 'natural' yet continues to add toxic ingredients and bombard consumers with baseless claims of unnatural

anti-ageing effects, and to rely on new and largely unproven ingredients to drive sales.

In addition, every time we see a claim for ingredients derived from, say, rainforest plants, we need to ask whether it is ethical to buy a product made from ingredients that have been shipped (or flown) halfway across the globe, grown in less-developed countries by small farmers who might be better off growing food for their families. We should also be much more demanding about truly recyclable (preferably glass) packaging for our natural cosmetics.

In this regard, 2007 could be an interesting year. Many supermarkets and high-end manufacturers are planning new ranges of luxury 'natural' and 'organic' bodycare products. Will these

also make vacuous promises of temporary quick fixes? Will they be truly organic or just contain a few organic ingredients amongst a raft of carcinogens and neurotoxins? The answer depends in part on the people who buy these products, their willingness to speak up when they know they are being greenwashed, and their refusal to part with their hard-earned cash for products that do not meet a higher standard of safety and honesty.

We would like to thank all our readers who have taken part in this campaign and sent us copies of their letters to, and replies from, manufacturers. Although the campaign is ending, we hope you will never stop asking more of your bodycare products.

Read the **LETTERS**

Below are a few small representative samples of some of the letters we have received from manufacturers during the past few months, along with Pat's replies

'The list of "bad" fragrance chemicals contains a large number of chemical names that are actually naturally present as constituents of the essential oils in the second "good" list. The 7th Amendment to the EU Cosmetics Directive states that there are 16 naturally occurring fragrance constituents that must be listed on the label because of their allergenic potential (a disputed point but nevertheless still the law). This means that, for example, any product that contains geranium essential oil must list geraniol on the ingredients list even though it is not added separately, but is merely present as a natural component of the essential oil.'



– Neal's Yard

There is no doubt that the fragrance chemicals singled out by the EU's Scientific Committee on Cosmetics and Non-Food Products (SCCNFP) are of concern for their allergenic potential. There is also no doubt that some are present in natural essential oils. The difference

is that in the matrix of an essential oil there exist substances, some of which have been identified and some of which we have yet to identify, which act as co-factors to mitigate potential allergic reactions. These co-factors are not present when a substance, such as limonene, is extracted and used singly or when it is synthesised in the lab.

The SCCNFP guidelines were drawn up because of the high incidence of reported allergic reactions to these substances. Since 95 per cent of fragrances used in consumer products are synthetic in origin, it is safe to assume that these allergic reactions were largely due to the synthetic forms. It is the SCCNFP, not *The Ecologist*, that has refused to draw the distinction between natural and synthetic substances, though it seems clear that they are not identical.

The way labelling laws stand currently, there is no way for a consumer to tell which fragrances are 'natural' and which ones are not, unless the manufacturer volunteers this information or the consumer knows which ingredients to look for ((usually listed in their Latin names – see RTL Sep 2006). Otherwise it is reasonable to assume that if one sees these potential allergens listed on the label of a fragranced product, the fragrance is synthetic and the potential for an allergic reaction is increased.

'I notice that the article suggests soap as an alternative to detergents, although it is certainly harsher to the skin than some surfactants, as well as being derived from tallow (taken from boiled animal carcasses)...'
– King of Shaves



Changing the subject is a common tactic used by manufacturers when faced with criticisms of their products. The insinuation that soap is some kind of homogenous substance purely derived from boiled animal carcasses is nonsense. Some soaps are made from surfactants and detergents derived from animal fat, but the popularity of this ingredient is waning in favour of vegetable-based detergents/surfactants.

As for the irritation factor, it is not the soap but the rinsing or lack of it, which can cause skin irritation. Detergents are formulated to rinse more quickly in hard-water areas, as we said in the original article on detergents. In soft-water areas, soap and detergents perform equally well.

The detergent sodium lauryl sulphate (SLS) is one of the harshest detergents there is – which is why scientists use it in skin

irritation studies as a kind of benchmark. If the tested substance is less irritating to skin than SLS, it is considered safe.

'The ingredients octyl methoxycinnamate (OMC) and homomethyl salicylate (HMS) have not been proven to have any estrogenic effects.'
– Newways

This is simply not true. Laboratory test have consistently shown that both of these chemicals have an oestrogenic effect. Newways also suggested that these chemicals are not well absorbed. But sunscreen formulations often contain penetration enhancers that are not used in tests of the pure chemicals and which can drive the ingredient deeper into the skin.

In one 2004 human study reported in the *Journal of Investigative Dermatology*, not only was OMC absorbed into the body during the two-week trial, but it had a more marked hormone-disrupting effect in men.

Such excuses also obscure the fact that skin application is not the only way in which we absorb oestrogenic sunscreen chemicals. Once washed down the drain they get into the water supply, are not removed by water treatment procedures and can then be returned to us via our drinking water.

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GREEN SHOES



Feet Doctors

Photographs KATE MOUNT
Text MATILDA LEE

Three-quarters of women have shoes that don't fit properly. As we squeeze into our fashionable footwear, we're doing more than glamorising bunions; we're perpetuating an idea that being stylish has to be painful. The women of Totnes-based Green Shoes are out to break this mould.

For the past 25 years, Green Shoes – so named after its lush West Country base – has been reviving the art of handcrafting bespoke shoes. Their designs fit lifestyles rather than follow fashions. Founder Alison Hastie

started out using leather cast-offs from Somerset-based Clarks' shoes in a rented £4-a-week workshop. Today there are three full-time shoemakers, between them producing 25 to 30 pairs of shoes each week.

'Ideally, all our shoes would be made from organic leather, but going about this isn't very straightforward. It would mean starting our whole business from scratch,' Alison says. Green Shoes introduced a vegan shoe range in the mid-1990s, to give customers a choice, but, Alison adds, 'our leather is a by-product of the

meat trade. If we didn't use it, it would go to landfill.' Because their shoes are made by hand, the use of solvent-based glues is kept to a minimum and they use veg-tanned leather (using tannins from oak bark) instead of chrome-tanned leather wherever possible.

Each of the shoemakers was taken on with virtually no experience but did a two-to three-year apprenticeship to learn all the steps in the shoemaking process. Leather-cutting takes the most skill, because different parts of the hide correspond to the

supple or tight parts of a shoe.

Amidst rolls of coloured leather, jars of eyelets, buckles and grinding thread and three old Singer sewing machines, Alison and Steph Crutchley, who joined in 1991, keep working as we talk. 'The skill level is difficult to control on a large scale,' Steph says as she cuts leather. 'That's why we never franchised,' Alison adds. A sewing machine hums in the background.

Alison says their shoes look better with age and, with resoling, there's no reason why a pair can't last for decades.



Facing page: the Green Shoes team, from left to right: Leah Kirby, Becky Marshall, Polly Agar, Pat Saunders, Steph Crutchley and Alison Hastie.

This page, clockwise from top left: half a cowhide makes around three pairs of boots; Alison sewing appliqué onto Buttercup sandals; men's Field (£110), Tavistock (£145) and Belstone boots (£145); 'lasting' a shoe to give it shape; three lasts; glueing shoe pieces to pigskin lining.

GREEN PAGES *Eco-Clothing*



Clockwise from top left: Gold leather necklaces, £25 each or £60 for set of three. Model wears red leather cuff bracelet, £15, and Iris knee boots, £245. **Left to right:** Iris knee boots, £245; Bracken boots, £145; Poppy boots, £245. Gold leather necklace, £25, and cuff bracelet, £15. Lovage sandals, £55.

Green Shoes come in four widths and in full and half sizes. To order a bespoke shoe, visit their shop or send in a drawing of your feet. Contact details: tel: 01364 644 036; www.greenshoes.co.uk



DRESSING FOR *Romance*

Wondering what you might wear on Valentine's Day?

Eithne Farry has several provocative suggestions...

Everyone likes to make a good impression. And on 14 February, if you're in a relationship – or hoping to be – the clothing choice can present a dilemma. What note to strike? Romantic, ironic, debonair, devil-may-care, hopeful? But there's a short cut to feeling and, hopefully, looking good... by going down the reuse, restyle, recycle, recreate route. It makes environmental sense and, with the right attitude, getting the clothes together can even be (whisper it) FUN.

A word of sartorial caution, though. If the Valentine's Day outing is only the first or second meeting, avoid anything that even vaguely hints at a bridal gown or marital morning suit, no matter how formal the date. I am all for dressing up and for being romantically optimistic, but some looks can scupper even the most promising of propositions. Instead:

1. Get out the sewing machine

Revive lost arts. Make your date a corsage, a shoe bag with their name in chain stitch, a heart mobile, or crochet a scarf. But if you're superstitious, don't knit them a jumper – a bad luck garment. By the time you reach the collar, you'll have split up.

2. Invest in some charity shop chic

One of my favourite options – which, if you hit a fine seam of donated clothing, can result in a very elegant outfit for not

very much money. But it's a chance: you may have to invest a lot of time trawling through rails and rails of pretty ordinary stuff to come up with something stylish, and even then you might not succeed. That said, I rarely go away empty-handed. I am always tempted by fancy-dress style clothing – stuff that looks as if I could wear it as an extra on a film about Victorian showgirls, or Seventies' space aliens.

So maybe you could consider the theme date route. Eighties' rock star? Cowboy chic? *Strictly Come Dancing* contestants? Your outfits must be second-hand, and the date should be in a matching venue: bowling alley, barn dance, fairground with carousel... It's not the traditional dinner à deux, but it could be fun. If that doesn't appeal, and a thrifty suit or a second-hand-rose evening dress have proved impossible to find, take heart. There will usually be plenty of nice ties in stock, and handbags, and sparkly trinkets in the glass case near the till.

3. Get dressed up at a dress agency

Unlike charity shops, which rely on donations, dress agencies are selective about what they sell. The clothes tend to be very good quality, often designer label and consequently much more expensive. That said, they'd still be considerably cheaper than a swish boutique or posh department store. Canny shoppers visit often, get to know the owner, and pick up very exclusive cast-offs. Christa Weil,

author of *It's Vintage Darling* (Hodder, £14.99) quotes Catherine Milinaire and Carol Troy of Cheap Chic fame: 'It feels good to wear expensive clothes, especially when someone else paid for them first time around.'

4. Get kitted out in vintage

People who feel slightly squeamish about ordinary old clothes often fall head over heels with vintage. Apply that logic to Valentine's Day. Wear vintage and a similarly smitten situation could occur between you and your Valentine's date. Even if Cupid's dart misses its mark there's still nothing nicer than imaging that you're the star in your very own nostalgic costume drama – think afternoon Earl Grey in a Thirties' tea gown, or a seaside promenade in a nipped-in-waist cotton frock from the Fifties. Even if my social calendar lacks a suitable occasion, I never forgo a visit to a vintage fair or retro shop.

Vintage seems to attract passionate people. The stallholders and shop owners are often dressed in period pieces and are knowledgeable about the history, allure and fine detailing of the apparel they sell. I've had many enthusiastic conversations about couture, fabric, details – a rhinestone button on a cardigan, a velvet collar on a wool coat. How often do you find that passion on the homogenous high street? And given the quality of the tailoring and the garment's originality, you'll cut a dash on your date. Plus, you'll own a little bit of history, and you can ponder on the secret story of these clothes that have survived wear, tear and time.

5. Abandon clothes

Very environmentally sound but a look only to be embraced by the very brave, very foolhardy or very toned. Although if it's a blind date, well, you'll have no trouble recognising each other.

Photograph taken at Absolute Vintage
– visit www.absolutevintage.co.uk





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HOW? Supplying the current (and expected increased) energy demand in the UK, while keeping prices for energy low, is IMPOSSIBLE. We either confront this and start to adapt, or we stick our heads in the sand and moan about the inexorable rise in our energy bills. Each one of us, starting at home and then moving out into our local communities and workplaces, needs to:

- 1 **SWITCH** our energy SUPPLY to ECOTRICITY
- 2 **REDUCE** our energy DEMAND
- 3 **LOCALISE** our energy SUPPLY... individually, and in our communities.

We can't wait for politicians to act, and can't rely on an energy market that profits from rising energy prices and increasing demand. This is why *The Ecologist* and Ecotricity have teamed up to ease your transition from expensive, centrally supplied energy to clean, locally supplied energy at home (and at work). Our combined research and practical expertise will ensure that the options we recommend for reducing demand and generating your own supply will work without costing you a fortune.

ECO-POWER CAMPAIGN SWITCH TO ECOTRICITY

No matter where you live, you can switch your electricity supply to Ecotricity. And we'd encourage you to do so...

WHY ECOTRICITY?

Since it was founded in 1995, Ecotricity has built 26.3MW of new wind turbine capacity, and currently supplies enough electricity to power around 19,000 homes. It retains ownership of every wind turbine it erects, ensuring:

- Total community support for each turbine
- Optimal siting – minimal environmental/community impact
- Best turbine technology on the market – to minimise its operating costs and noise impact
- Long-term commitment to wind energy and the community the wind turbine supplies

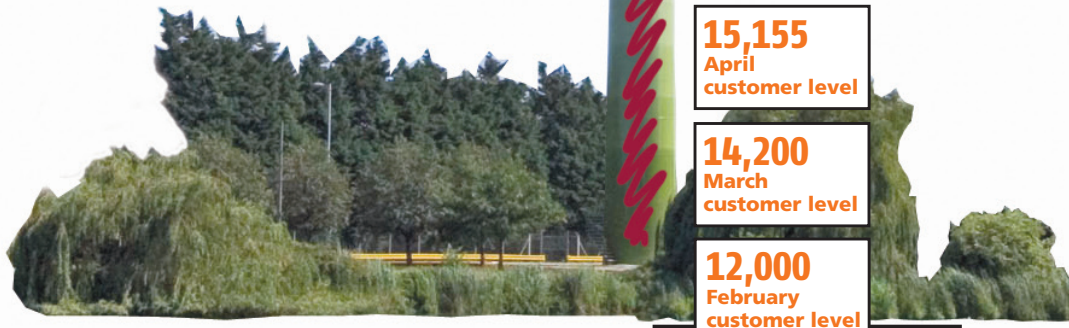
Ecotricity refuses to invest in non-renewable energy sources, eg coal, gas or nuclear power.

WHY SWITCH NOW?

For 2007, Ecotricity has approval to build 27 new turbines, totalling 30MW of clean energy – enough to power 20,000 more homes. All it needs is as many of us to buy our electricity through the company – thereby giving it the financial leverage to put this additional renewable capacity in place. Together we can fill the gap threatened by nuclear and coal decommissioning while the grey suits in Westminster fiddle.

Switch your electricity to Ecotricity today and get a FREE annual subscription to the ecologist. Sign up today and quote 'Eco Offer2' to get this great offer.

To make the switch, call free on 08000 326 100 Mon to Fri 8.30am–5:30pm or visit www.ecotricity.com/ecologist
Terms and conditions apply.



37,000
TARGET

23,196
Current
Customer level

22,544
November
Customer level

21,447
October
Customer level

20,333
September
Customer level

19,103
August
Customer level

18,009
July
Customer level

17,074
June
Customer level

16,003
May
Customer level

15,155
April
customer level

14,200
March
customer level

12,000
February
customer level



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SUPERIOR WOOD PRODUCTS

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Eco friendly oils.
100% sustainable timbers

home cleaning without home pollution

Earth Friendly Products give you 100% natural cleaning. Available from independent health food shops, Selfridges and mail order.

For more information visit www.earthfriendlyproducts.co.uk or tel 01892 61687

EARTH FRIENDLY PRODUCTS

The filter system with the lowest environmental footprint

SIMPLY WATER
clean, pure water filter systems

Removes/reduces bacteria, parasites, chemicals, metals dirt & sediment, foul tastes & odours

Tel: 00353 1 492 0414

Go to: www.simplywater.com/uk for valuable bonuses now!

Uses **NATURAL FILTERING MATERIAL** only

SWITCH your electricity to ecotricity today and get an annual subscription to the Ecologist (worth £35) delivered to your door...
...absolutely free.

Call free on **08000 326 100** quoting 'EcoOffer2'

or visit www.ecotricity.com/ecologist

TERMS & CONDITIONS APPLY

HOME ENERGY ELECTRICITY

- RENEWABLE ENERGY TECHNOLOGIES**
(wind, hydro, solar PV)
- Dulus Ltd**
www.renewable-resources.com
- HiTech Energy Ltd**
www.hitechenergy.co.uk
- British Eco**
www.britisheco.com
- LIGHT BULBS**
- Energy Saving World**
www.energysavingworld.co.uk

- Energy Savers Direct**
www.energysavers-direct.com
- Nigel's Eco Store**
www.theinsightecostore.com
- SUPPLIERS**
- Ecotricity**
www.ecotricity.co.uk

GROUND SOURCE HEAT PUMPS

- Conservation Engineering Ltd**
www.heating-designs.co.uk
- Eco Heat Pumps**

www.ecoheatpumps.co.uk

Geothermal Heating International

- www.geoheat.co.uk
- Green Systems**
www.greensystems.net
- Groenholland UK Ltd**
www.groenholland.com
- Ice energy**
www.iceenergy.co.uk
- Kensa Engineering Ltd**
www.kensaengineering.com
- Powertech Solar**
www.powertech-solar.com

INSULATION Second Nature

www.secondnatureuk.com

SOLAR WATER PANELS

- Solar Twin**
www.solartwin.com
- British Eco**
www.britisheco.com
- Power Tech Solar**
www.powertech-solar.com

CLOTHING

**SAVE
10%
ON SHAWLS
& WRAPS**

MADE IN SCOTLAND



SHAWLS (worth £75) NOW ONLY £67.50
WRAPS (worth £65) NOW ONLY £58.50

The pioneering Isle of Mull Weavers produce clothing that is sustainable, high quality and unique. They use the wool of native Hebridean sheep, which they separate into black, grey and peat brown. For extra colour (cream, fawn and grey) they weave in wool from native Shetland sheep.

Wool is either organic or, at minimum, no chemicals have been used on the sheep 6 weeks prior to shearing. For years, Isle of Mull Weavers have been working towards making the whole process organic: sheepbreeder, scourer,

spinner, weaver, finisher. Two years ago, when they first knocked on doors and asked for 'organic wool', they were laughed at.

But these days, big players in the wool industry are taking an interest. As the demand for sustainably-made clothes increases, it's seen as an exciting opportunity. The Weavers pay £1 for a kilo of wool, compared to the Wool Board's 3p a kilo, putting the value back into British wool and giving producers new hope.



TO ORDER: Phone 01681700265 or go to www.isleofmullweavers.co.uk (promotional code EC03070001). Offer valid until 28 Feb 2007.

CLOTHING DESIGNERS

- Adili**
www.adili.com
- Ciel**
www.ciel.ltd.uk
- ClothWORKS**
www.clothworks.co.uk
- Ecobtq**
www.ecobtq.com
- Enamore**
www.enamore.co.uk
- Junky Styling**
www.junkystyling.co.uk

MEN & WOMEN'S CASUALWEAR

- Bishopston Trad. Comp**
www.bishopstontrading.co.uk
- Ecotopia**
www.ecotopia.co.uk
- Green Fibres**
www.greenfibres.co.uk
- Howies**
www.howies.co.uk
- Inbi Hemp**
www.inbi-hemp.co.uk
- Natural Collection**
www.naturalcollection.com

www.pakucho.co.uk

Autumn Special 10% off & free postage

For advice on advertising to **ecologist** readers to sell fairly-traded fashion, please call Bish on 020 7422 8100.

PLAY FAIR

THE ULTIMATE ETHICAL SHOE - FAIRLY TRADED TRAINERS WITH SUSTAINABLY TAPPED NATURAL RUBBER. FAIR TRADE PREMIUM PAID ON EACH PAIR PRODUCED.

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FSC Trademark
© Forest Stewardship Council A.C.
LATEX

CALL: 0870 766 5196
OR VISIT
WWW.FAIRDEALTRADING.COM

ETHLETIC ★

Pakucho

www.pakucho.co.uk

People Tree

www.ptree.co.uk

Schmidt Natural Clothing

www.naturalclothing.co.uk

Seasalt

www.seasaltorganic.co.uk

Terramar

www.terramar.co.uk

The Green Apple

www.the-green-apple.co.uk

SLOGAN T-SHIRTS

Equop

www.equop.com

Funky Gandhi

www.funkygandhi.com

Icons Incorporated

www.icons-incorporated.com

Pakucho

www.pakucho.co.uk

Soliloquy Clothing

www.soliloquyclothing.com

THTC

www.thtc.co.uk

Tonic T-Shirts

www.tonictshirts.com

LINGERIE

Greenknickers

www.greenknickers.org

Buttress and Snatch

www.buttressandsnatch.co.uk

ORGANIC JEANS

Bishopston Trading Company

www.bishopstontrading.co.uk

Del Forte Denim

www.adili.com

Edu

www.edun.ie

Greenfibres

www.greenfibres.co.uk



ECOLOGIST ACTION DIY STYLE

Get your local tailor working! Buy organic and naturally dyed fabrics from the companies listed below, and have bespoke eco-clothes made in the style you want, with a perfect fit.

COTTON

Aurora Silk

www.aurorasilk.com

Green Fibres

www.greenfibres.co.uk

Peru Naturex

www.perunaturex.com

Howies

www.howies.co.uk

Hug

www.hug.co.uk

Kuyichi

www.kuyichi.com

Loomstate

www.loomstate.org

SHOES

Beyond skin

www.beyondskin.co.uk

Birkenstock

www.birkenstock.com

Black Spot Sneakers

www.adbusters.org

Fair Deal Trading

www.fairdealtrading.co.uk

Freerangers

www.freerangers.co.uk

Green Shoes

www.greenshoes.co.uk

Terraplana

www.terraplana.com

The Natural Shoe Store

www.thenaturalshoestore.com

Vegetarian Shoes

www.vegetarian-shoes.co.uk

SPORTSWEAR

Epona

www.eponasport.com

Gossypium

www.gossypium.co.uk

Zoozoo2

www.zoozoo2.com

ACCESSORIES

Design Africa

www.artworksforafrica.com

Ganesha

www.ganesha.co.uk

Matt and Nat

www.mattandnat.com

Terramar organics

- fair trade, organic clothing
- printed tees
- hoodies
- kids tops
- womens wear
- wholesale
- custom printing

email info@terramar.co.uk
or call 07999 613982
for a FREE brochure

online at www.terramar.co.uk

our stock includes & certified clothing

The Wet Felting Company

Handmade, 100%wool, Bespoke Slippers
Adult and Children Sizes
30 eco-friendly colours
Locally sourced Chemical free fleeces
Can be repaired and re-soled
Choose a design or design your own!

For more details or to order call: 01822 841 636
or email: claire@wetfeltingcompany.co.uk
www.wetfeltingcompany.co.uk

natural clothing Ltd
Organic, beautiful,
and FairTrade
certified

mailorder catalogue 0845 345 0498

- Organic underwear & sleepwear for children & adults
- Organic blankets, bedlinens, towels & soft toys
- Allergy & eczema

The **ecologist** offers producers of organic and ethically produced goods and services an audience of 400,000 potential new customers. To advertise, call Zayda on 020 7422 8110.

Just Bazaar
The Fair Trade Shop

www.justbazaar.co.uk

Contemporary Fair Trade products for you, your home, your children or as a unique gift.

Piece Hall, Halifax | 01422 364005 | BAFTS Member

cebra
fair trade designer handbags
www.cebraonline.com
t. 020 7870 6437

DON'T PANIC – IT'S ORGANIC

Natural bodycare and cosmetic products are just as effective as their conventional counterparts but, because they don't rely on plastics, synthetic colours and chemical preservatives, you will find that their range, application and usage can be different. Here's what to bear in mind when using natural products:

Natural cosmetics

- Lip glosses are safer than lipsticks because they contain less potentially-toxic colour, but they won't last as long, because they don't contain plastics and film formers.
- Mascaras won't dry as quickly, lengthen or be waterproof like conventional mascaras because they don't contain synthetic fibres or ingredients such as plastics.
- Eyeshadows will come in a more limited range of 'earth' colours because they will be based on a palette of mineral and plant dyes.
- Choose cream blush instead of powder blushers, to avoid potentially cancer-causing talc.
- Avoid sparkly make-up, which can contain ecologically unsound mica.

Natural bodycare products

- Choose moisturisers based on single oils (plant or animal based) rather than complex mixtures of oil, water, preservatives and film-forming ingredients. These may feel more oily on your skin at first but will be fully absorbed fairly quickly.
- Natural toothpastes should be fluoride-free and won't foam as much as conventional ones because they won't contain detergents such as sodium lauryl sulphate.

**15%
OFF ALL
PURCHASES**



**PURE NUFF STUFF
HAND MADE NATURAL SKINCARE**

Founded in 2000, Pure Nuff Stuff has grown from a cottage industry into a thriving internet business based within their own retail shop (the stunning Egyptian House in Penzance) offering a wide range of hand-made, chemical-free skincare products.

Visit www.purenuffstuff.co.uk to see the full range of skincare and cosmetics: scubs, salts, washes, gels, oils, body butters, hair wax, shaving soap, natural deodorant, bronzing lotion, blusher... A natural emporium of pure stuff. Nuff said.

To order, tel: 01736 366008, quoting 'ecologist 404039'. Offer valid until end of April 2007.

BODYCARE ESSENTIALS

ASPIRE TO LESS – *The best way to ensure healthy skin is to maintain a healthy diet, get enough sleep and keep stress levels low. If you do buy products for your face or body, try to make sure they are based on natural ingredients. The companies listed below carry products that have not been tested on animals; they contain no parabens, no petrochemicals and no synthetic ingredients.*

Akamuti

www.akamuti.co.uk

Barefoot Botanicals

www.barefoot-botanicals.com

Earthbound Organics

www.earthbound.co.uk

Ecotopia

www.ecotopia.co.uk

Essential Care

www.essential-care.co.uk

Jo Wood Organics

www.jowoodorganics.com

Life Giving Organics

www.LifeGivingOrganics.com

My Being Well

www.mybeingwell.com

The Organic Pharmacy

www.theorganicpharmacy.com

Pure Nuff Stuff

www.purenuffstuff.co.uk

Pure Skin Care

www.pureskincare.co.uk

ECOTIP

ECO HONEY CONDITIONER

A leave-on conditioner for fantastically soft hair. Mix 5 tbsp of honey and 2-3 tbsp of olive oil together. Work a little at a time through dry hair until completely coated. Cover hair with a shower cap (or plastic carrier bag) and leave for 30 minutes. To wash out: work shampoo through your hair before wetting, and then lather well. You may need to repeat the washing process if the hair still feels oily. Recipe from www.purenuffstuff.co.uk

HEALTH & HOMEOPATHY

Ainsworths

www.ainsworths.com

Helios Homeopathic Pharmacy

www.helios.co.uk

Optima

www.optimahealthcare.co.uk

Pure Potions

www.purepotions.co.uk

Revital

www.revital.com

The Organic Health Shop

www.baughdell.co.uk

PERFUME

Aromasciences

www.aromasciences.com

Ascent

www.hayspace.co.uk

Dolma

www.veganvillage.co.uk/dolma

Primavera

www.primavera.co.uk

DON'T KNOW YOUR GLYCERYL LAURATE FROM YOUR DECYL GLUCOSE?

Find out what the words in your bodycare products really mean....

THE 'BEHIND THE LABEL' SERIES IS NOW ONLINE!
Go to www.theecologist.org/behind_the_label.asp

Past features by **Ecologist** Health Editor Pat Thomas include:

Clearasil deep cleansing 3 in 1 wash

Nivea moisturiser

Clairel Nice 'n Easy Hair Dye

Radox Herbal Bath with Juniper

Oil of Olay



ECOLOGIST ACTION MAKE YOUR OWN

Everyone's skin is different, so why not make your own bodycare products and cosmetics at home to suit your needs? The websites listed below will help guide you through ingredients that work for your skin and hair type, and offer a range of ideas for customising your favourite natural scents.

Aromatic

www.aromatic.co.uk

Bay House Aromatics

www.bay-house.co.uk

Cosmetics at Home

www.cosmeticsathome.co.uk

New Directions

www.newdirectionsuk.com

The Soap Tub

www.meltsandpoursupplies.com

mybeingwell
naturally organic

Say it with our 'Roses' this Valentine's Day!

mother earth
Roses & Roses
Hand and Nail Cream
A hydrating, nourishing cream
for dry skin. 100% natural.
Hand made with rose absolute
& premium essential oils and
Nail Rose Flower Remedy.

www.mybeingwell.com
T +44 (0)1326 377555 sales@mybeingwell.com

detoxify & rejuvenate your mind, body & spirit

AYURVĒ

...brings to you a range of natural & chemical free Ayurvedic Health and Beauty products.

ideal gifts for friends and family

100% natural products

Visit us to learn more about Ayurveda and to shop from our extensive catalogue.
www.ayurve.co.uk

AKAMUTI

Natural, Organic & Ethical Skincare

Our people & planet friendly range includes: Fair trade Shea Butter & African Black Soap, Mum & Babycare, Face & Body Moisturisers & much more!

- no petroleum bases or parabens
- no artificial or synthetic ingredients
- 100% natural

Shop Online: www.akamuti.co.uk
Mail Order/Trade: 0845 4589242 (lo-call)

onevillage.com One place, many ideas

What's in a bar of soap?

Instead of the latest chemical compounds, choose natural NEEM: 4x125g bars neem soap, only £10 (with free delivery) when you order online from ONEVILLAGE.COM

Of send £10 to ONE VILLAGE CHARLBURY OX7 3SQ 01608 811811

ORGANIC & NATURAL
Products of Unrivalled Purity

World's first internationally certified organic skin, hair, body, cosmetic, oral and health products

To be sure a product is certified organic, look for the logo! ACO - BFA - USDA - IFOAM

To view products and order, please visit: www.LifeGivingOrganics.com
Telephone enquiries: FREECALL 0800 074 8703

www.earthbound.co.uk

Organic Skin care
Suitable for all skin types
Tel: 01597 851157

THE MISSION

The amount of baby gear we purchase in the name of 'good' parenting – nappies, wipes, bottles, car seats, pushchairs, clothes, shoes, toys and other nursery items – is staggering. Given the ongoing expense of raising a child and the heavy competition that exists between different manufacturers for parents' custom, it's little wonder that many of the most common baby and child accessories have been made in sweatshops using chemicals that harm both our children's health and the environment.

THIS IS NOT ACCEPTABLE

We challenge the **BABY & CHILD** industry to make products with:

- No potential carcinogens, neurotoxins and reproductive toxins
- No artificial additives, colourings or perfumes
- No petrochemicals
- No synthetic fibres
- Minimal packaging
- Organic ingredients
- Stop marketing to children under 16 years old.

What we can do as consumers

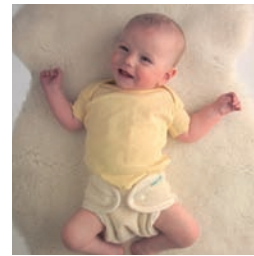
- Read and understand the label
- Buy fewer products
- Buy reusable products, eg cloth nappies
- Make our own, eg food
- Challenge stockists to sell safer products
- Support the small, independent and ethical producers and retailers in these listings.



1 Lay open baby-shaped cotton nappy



2 Place flushable liner on top for easy removal of poo



3 Close using adjustable poppers



4 Add the waterproof wrap

THE **ecologist** PRESENTS ITS NO EXCUSE! CLOTH NAPPY TRIAL PACK

Why use disposables when cloth nappies are easy to use, easy to clean and best for your baby? These ones are: **SOFT** Even after washing; **SECURE** Cinched legs prevent leaking; **BREATHABLE** Keeps bottoms cool and dry; **ECONOMICAL** Saves money over your child's time in nappies.



£26 25% OFF THE RRP (INC VAT)

Your trial pack includes:

- 3 leading brands of cloth nappies: Motherease, Tots Bots and Popolino
- 1 pack of flushable and bio-degradable liners
- 1 waterproof outer wrap

SIMPLY CALL
01582 520037
Mon to Fri 9.30am to 5.30pm
quoting: **Cloth Nappy Trial Pack**

BABY SLINGS

THE BENEFITS

Slings offer emotional and physical benefits for both parents and babies. Jean Liedloff, author of *The Continuum Effect*, says that babies benefit enormously from being carried next to living bodies as much as possible. For example:

Emotional

- In a sling, a baby can hear their parent's heartbeat and voice and smell their scent and, very importantly, feel emotionally secure.
- Naturally rocked as their parents move about, babies in slings are easily comforted.
- Slings allow parents to respond instantly to their babies' needs.
- It's easier to breastfeed babies in slings.

Physical

- Slings help babies maintain constant body temperature.

- They take the strain out of parents carrying babies in their arms: slings offer back/and or hip support.

Convenience

- In urban areas, slings are much more convenient than prams for navigating the doors, stairs and tight spaces of public transport.
- Hands-free slings, in contrast to holding babies using one arm and their hips, allow parents the use of both arms.

TYPES OF SLING

Vertical or hands-free sling

www.freerangekids.co.uk

Horizontal or side sling

www.birhandbaby.co.uk

www.kari-me.co.uk

DIY slings

For step-by-step instructions:

www.bigmamaslings.co.uk/make-sling.htm



BABY ESSENTIALS

Includes bedding, breastfeeding equipment, maternity clothing, nappies (both cloth and eco disposable), nursery furniture, slings, skin and bodycare, toys and games.

Born

www.borndirect.com

Ecotopia

www.ecotopia.co.uk

Green Baby

www.greenbaby.co.uk

Greenfibres

www.greenfibres.co.uk

Hejhog

www.hejhog.co.uk

Little Green Earthlets

www.earthlets.co.uk

Natural Collection

www.naturalcollection.com

Natural Nursery

www.naturalnursery.co.uk

See Saw

www.seesawnappies.co.uk

Smile Child

www.smilechild.co.uk

CLOTHING

Aravore

www.aravore-babies.co.uk

Baby Organics

www.babyorganics.co.uk

Belle & Dean

www.belleanddean.co.uk

Bishopston Trading Company

www.bishopstontrading.co.uk

Gossypium

www.gossypium.co.uk

Huggababy

www.huggababy.co.uk

Natural Child

www.naturalchild.com

Schmidt Natural Clothing

www.naturalclothing.co.uk

CLOTH NAPPIES

Sam I am

www.nappies.net

Snazzypants

www.snazzypants.co.uk

The Nappy Lady

www.thenappylady.co.uk

TOYS & GAMES

Arujo

www.arujo.co.uk

Escor Toys

www.escortoys.com

Gaia Distribution

www.gaiadistribution.com

Holz Toys

www.holz-toys.co.uk

Lanka Kade

www.lankakade.co.uk

Myriad

www.myriadonline.co.uk

Toyworm

www.toyworm.co.uk

eKernel

Natural choices for you and your baby

Natural Toiletries
Washable Nappies
Organic Cotton Clothes
Slings and Carriers
Wooden Toys
Books and much more

www.ekernel.co.uk
Tel: 0845 402 4032



We sell a WIDE range of Organic Cotton Nappies, Wool wraps and Lanolin wool cure, plus liners, boosters, re-useable wipes including gentle essential oil soaps.

Available online 24/7 or you can call us on 01522 778926 if you prefer to speak to a human!

Look at our potty training section to see how we take the pain out and make it fun.

SKIN & BODYCARE

Burt's Bees

www.myburtsbees.co.uk

Earth Friendly Baby

www.earth-friendly-baby.co.uk

Earth Mama Angel Baby

www.earthmamaangelbaby.com

Earthbound

www.earthbound.co.uk

Weleda

www.weleda.co.uk

Save the Planet,
Save Money,
Save Baby's Bottoms
Use Reusables

Ecologi kids
Eco logic for our kids.
Advice, information and supplies.
www.ecologikids.com +353 (0)86 822 8254
Dublin, Ireland

Specializing in:
* Organic Reusable Nappy Systems
* Breastfeeding Accessories
* Fair Trade Toys
* Natural Mum Accessories
* Organic Baby Wear

Saving the Planet One Nappy At a Time
* We are online but value the personal touch - we have a team of Nappy Advisors for personal consultations nationwide

hejhog
natural and organic

free colour catalogue call 0845 606 6487
www.hejhog.co.uk

seesaw
toys nappies clothes potions

seesawnappies.co.uk

Natural Connection

Cosy and cuddly soft baby slings
Exclusive handmade designs
The best branded slings
Fairly traded dolls, mobiles & pram strings
Babylegs - legwarmers for precious legs
Handknitted baby hats
Soapnuts for lovely laundry

www.naturalconnection.co.uk

**The Natural Nursery
for ethical families**

Organic cotton clothing
Cloth & eco-nappies
Gentle toiletries
Maternity wear
Breastfeeding aids
Slings and baby hammocks
Fairly traded toys
Beautiful books
Treats for daddies too!

Visit our Bristol shop or for a free catalogue call 0117 966 8483
www.naturalnursery.co.uk

 **WEDDINGS**

DRESSES

Wholly Jo's

www.wholly-jo.co.uk

HONEYMOONS

Responsible Travel

www.responsibletravel.com

LISTS

Green Fibres

www.greenfibres.co.uk

RINGS

Cred Jewellery

www.cred.tv

Eco-Friendly Shop

Organic, Fairtrade, Recycled

Gifts & Products

www.ecofriendlyshop.co.uk

01458 860830

Ethical Wedding Rings

www.silverchilli.com

VENUES AND CATERING

Fallow Fields

www.fallowfields.com

Penrhos Court

www.penrhos.co.uk

Montezumas

www.montezumas.co.uk



OFFICE RESOURCES

CARTRIDGES

Action Aid recycling

www.actionaidrecycling.org.uk

COFFEE AND TEA AND MILK

Fair-trade

www.fairtrade.org.uk

PAPER

Evolve

www.evolve-papers.com

STATIONARY

Ecotopia

www.ecotopia.co.uk

Remarkable

www.remarkable.co.uk

TELEPHONE & INTERNET

Green Isp

www.greenisp.net

The Phone Co-op

www.thephone.coop

WATER

Aquatic

www.aquaiduk.co.uk



CAREERS

Charity Action Recruitment

www.c-a-r.org.uk

Charity Connections

www.charityconnections.co.uk

Charity job

www.charityjob.co.uk

Countryside Jobs Service

www.countryside-jobs.com

Eden Recruitment

www.edenrecruitment.co.uk

Ends Environmental Job Search

www.ends.co.uk/jobs/about.htm

Environment Job

www.environmentjob.co.uk

Evergreen Resources

www.evergreen.org.uk

Execucare

www.execucare.com

Getalife

www.prospects.ac.uk

One World

www.oneworld.net

The Ethical Careers Service

www.peopleandplanet.org/ethicalcareers



FUNERALS

COFFINS

Nigel's Eco Store

www.theinsightecostore.com

The Sawd Partnership

www.bamboocoffins.co.uk

Somerset Willow

www.somersetwillow.co.uk

FLOWERS

Green Fuse

www.greenfuse.co.uk

Red Hen

www.redhens.co.uk

FUNERAL SERVICES

Family Care Funeral Services

www.ecofunerals.co.uk

Natural Endings

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Natural Death Centre

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CASSANDRA

Don't wait for Dave or Tony to give you a hug. If you are dissatisfied with your leaders, take control of your own lives

What is a 'Neighbourhoodie'? Answer: a person who is a member of a new political movement, one that has no headquarters, and makes no attempt to create a mass following, but instead is comprised of members of a neighbourhood.

Neighbourhood Democracy Network is a network of local people in different small localities seeking to create a local nucleus that will form a local government to govern local affairs.

These (mostly young) people realise that the way the world is going, they have no future; that a combination of the global arms trade, the high-powered attempts by Brussels-based boardroom capitalism to destroy democracy, the promotion of consumerism as a dominant social goal, the factors of global warming, the run-down of essential resources such as oil, the expansion of supermarkets at the expense of local farmers and of local vitality and identity, to say nothing of the disintegration of local community life, can only result in some sort of social collapse involving mass starvation, mass epidemics and mass conflict. That is, unless we achieve a radical change of direction at many levels.

So their idea is a wholly new political initiative: government from the ground up, not from the top down. Local government by local people to control local affairs. Not government of the people, nor (supposedly) for the people, (we have already had enough of that), but government by the people.

Quite mad, impractical and unrealistic, of course, but in a world where madness reigns, they are a gleam of sanity that may yet change things decisively.

How?

Since our problems arise from excessive concentrations of power – economic, political and social, power beyond human

control, beyond our control; and since it is this power, often running amok, which is causing wars and ecological devastation, destroying any prospect of a sane civilised future, attempts to check it by forming yet another giant organisation is simply to spread the disease of giantism.

Indeed, giantism is public enemy number one of the human race. The giant global arms trade has made the world one gigantic war zone, giant schools are creating a new class of semi-literate unemployables, a giant health service is closing local hospitals, a giant postal service is closing more and more local post offices, and giant supermarkets are bankrupting our local farmers and driving local family-owned shops out of business.

So why not opt for smallness? A scale within which human identity, instead

Neighbourhoodies refuse to accept that centralised government and boardrooms should decide everything; power, they insist, must be brought under local control

of being told by a recorded voice which button to press, has significance, meaning and moral consequence? A scale where we can control them, not them us.

So the Neighbourhoodies are pushing for local power. It is uphill work, and the chief obstacle is not only the consumerist values promoted by media power but the spirit of passivity and fatalistic indifference that powerlessness is apt to breed. After all, most people have never known any other form of government, so tend to accept that centralised government and boardroom enterprise should determine everything just as naturally as a goldfish accepts the water in which it swims.

Neighbourhoodies refuse to accept this and the doom-laden destiny it has created; they insist that the many forms of power that today ordain our affairs



must be brought under control – mostly local control. Their objectives embrace not only local control of local affairs; they call for Britain to abandon the Brussels boardroom, tax-funded attempts to destroy our sovereignty, and to confine the national government at Westminster to strictly national affairs.

They argue the need for a new language of politics, where the local in local hands has the same prominence and significance as the national. But please note, there is no attempt being made to establish any sort of uniform national plan.

Just as every person is different, so is

every neighbourhood; so every neighbourhood should work out its own targets for self-government and strategies for reaching them. They realise that democracy, the noblest concept in human history, is eating its

own tail when it tries to be prescriptive.

To be true to itself, democracy must be thought-provoking, with an organic structure in which power is made safe by being dispersed and shared in numerous small communities, whether rural villages or urban wards. These are the blood cells of civilisation, and their re-empowerment can have the collective effect of inspiring people to manage their own local affairs, to live creative, responsible and fulfilling lives; and to restore the old protocols, traditions, customs and dignities of local civic activity so that people can play their full part in truly adult, shared political involvement, and where the baby of freedom is no longer in danger of being drowned in the bathwater of bureaucracy.

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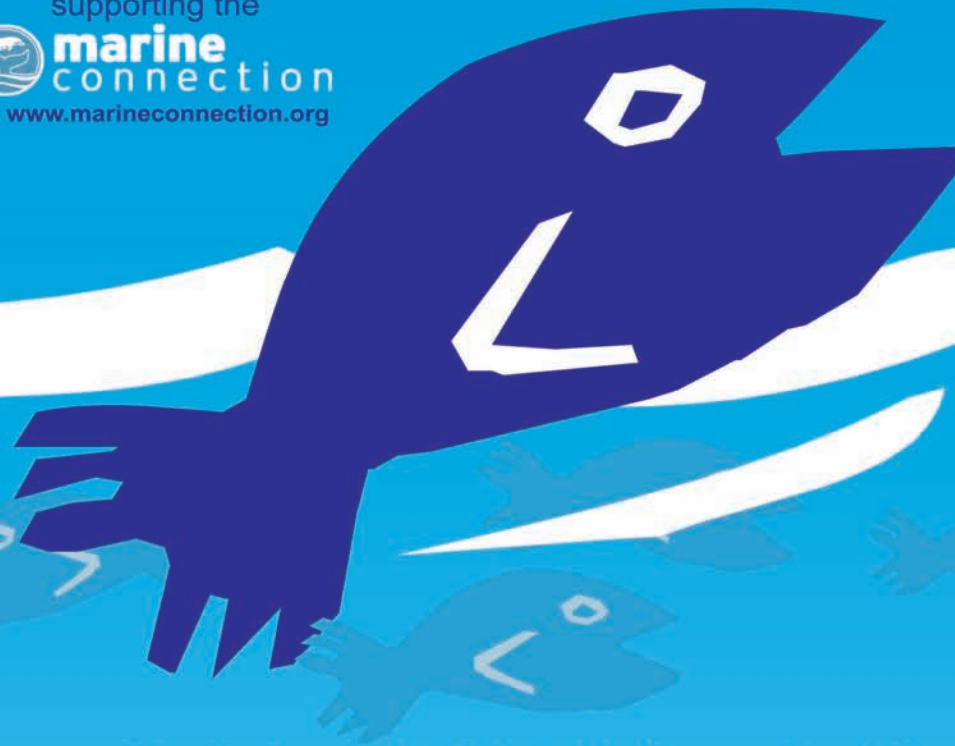
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