



WWF PHOTOGRAPHY COMPETITION



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Have you captured a British species or a habitat for posterity? We're looking for inspiring images from the UK to help us choose our WWF photographer of the year.

The competition is open to all ages, with a separate category for under 18s.

A panel of experts will judge the entries including WWF's own photographic team and professional photographer Benjamin Ealovega, who has worked with WWF for many years.

The winner of the adult competition will get a day-long photographic tutorial with Benjamin, and will see their picture printed in the next issue of *Action* magazine.

The winner of the under-18s category will receive a free WWF animal adoption box as well as their picture printed in the next issue of *Action*

magazine. Two runners-up in each category will also be sent an animal adoption box of their choice.

All images entered into the competition must be digital and should be a minimum size of 7MB. Deadline for entries is 1 August.

Email your entries to: photocomp-adult@wwf.org.uk or photocomp-junior@wwf.org.uk if you are under 18. Please tell us when, where and why the picture was taken. And remember to include your name, age, address and contact telephone number.

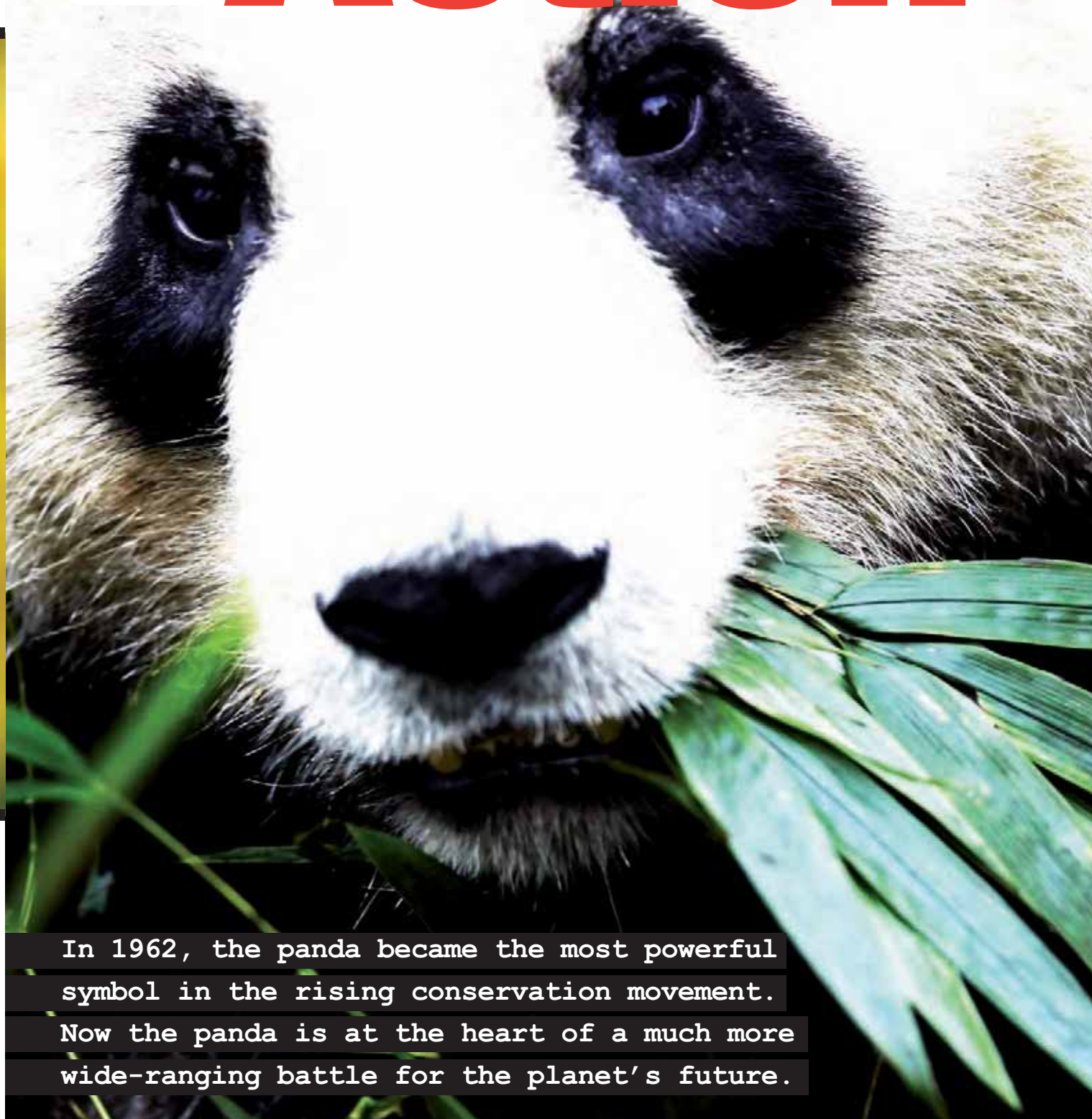
HAPPY SNAPPING!

For more details and full terms and conditions visit wwf.org.uk/photocompetition



Action

Exclusive magazine for WWF members ISSUE 9 June-Sept 2008



In 1962, the panda became the most powerful symbol in the rising conservation movement. Now the panda is at the heart of a much more wide-ranging battle for the planet's future.

China: crisis or cure? Special issue

To contact us about changing your address details, direct debit, or for any other assistance, call our **Supporter Relations team** on **01483 426333** or email **supporterrelations@wwf.org.uk**

Welcome



This summer, the Olympic flame will arrive in China's capital city, Beijing, to mark the opening of the 2008 Games.

The torch has had a difficult journey, as protestors around the world have used it to shine a light on China's human rights issues, especially in Tibet. China's environmental record is also under the spotlight – not least in Beijing itself, as the city makes every effort to clean up its polluted atmosphere ahead of the opening

ceremony. But when the athletes have packed up and gone home, the real competition continues fiercer than ever: the struggle between the needs of China's human population, its surging economy (fuelled largely by western demand for cheap goods) and the fragile environment that's straining to support both.

It's such a huge and vital issue that we had no hesitation in making this a special edition of *WWF Action*, looking long and hard at China and WWF's work there.

I hope that you'll put the magazine down feeling better informed and, perhaps, a shade more optimistic than before. The best place to start is the brilliant overview of the country, its challenges and its myths by *The Guardian's* east Asia correspondent, Jonathan Watts (page 10).

We really do understand the region's problems. WWF's links with China date back to the early 1980s, when we became the first international conservation organisation to be invited into the country. One aim was to help recover ailing populations of the giant panda, and in unison with the Chinese government, we have since helped stabilise their numbers. Read about this feat of teamwork and cooperation on page 14.

Our work to tackle the multitude of environmental threats now extends much further than the panda. Read about how WWF has helped put green issues and sustainable living at the forefront of the agenda – both in the classroom and beyond – in our education feature on page 18.

As Jonathan Watts points out, it's all too easy to use China as an excuse to do nothing in our own lives. And while it's true that China is the crucial battleground in our fight to save the planet, the global struggle really does begin in our own backyards.

David Nussbaum
chief executive

It's all too easy to use China as an excuse to do nothing in our own lives



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More than a symbol



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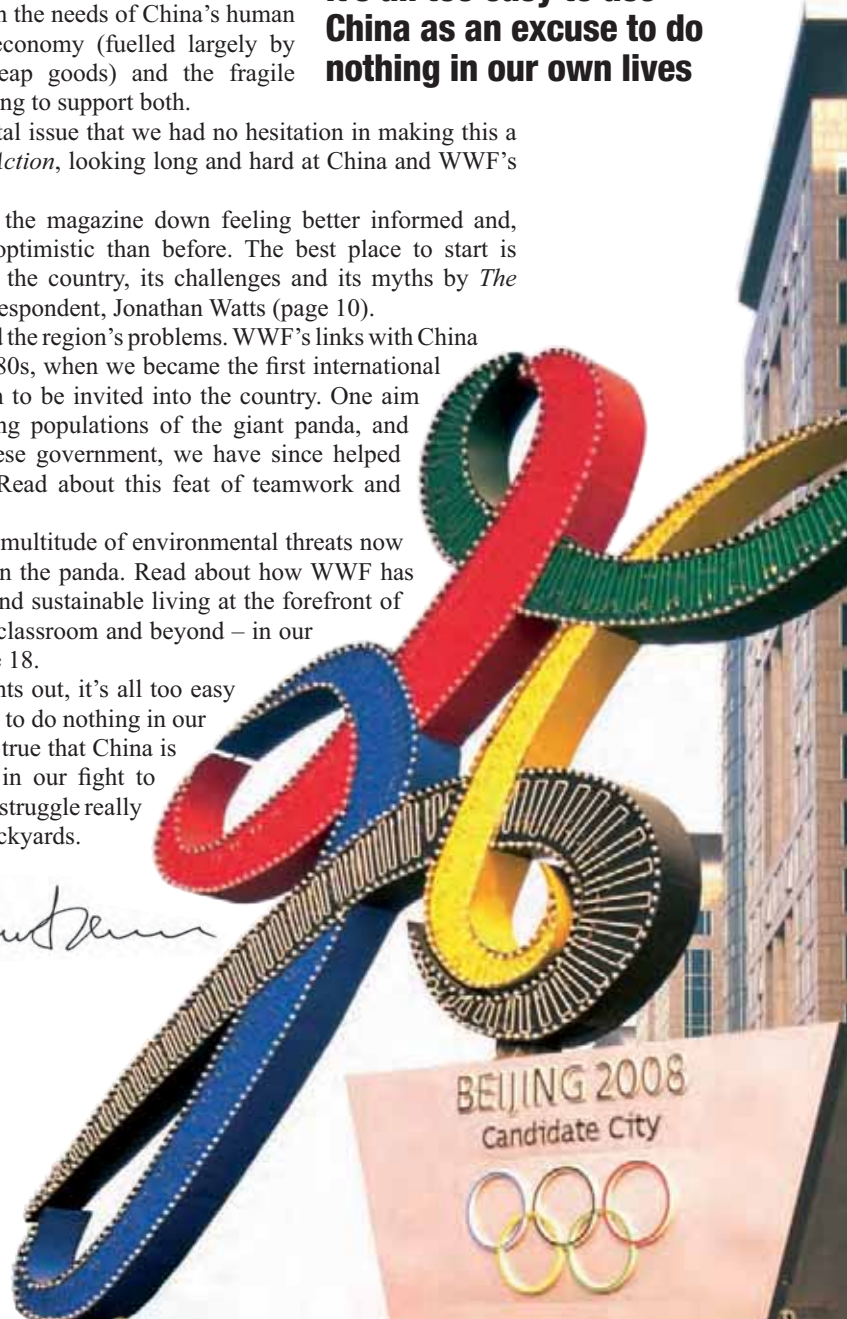
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WWF Action magazine is printed on paper that is 100% recycled and recyclable.

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Front cover photograph
© Kitch Bain / Alamy

Mapping progress

Thanks to you, where there's WWF there's hope



CUBA

Lifeline for turtles

Marine turtles in the Caribbean have been thrown a lifeline after the Cuban government banned all hunting of these species.

The critically-endangered hawksbill turtle, whose numbers have declined by 80% over the last century, will benefit, as will the endangered green and loggerhead turtles. Cuba has previously maintained a legal fishery of 500 hawksbills each

year, with the valuable shells being traded internationally.

The decision is the result of joint efforts by WWF and the Cuban Ministry of Fisheries. "This far-sighted decision represents an outstanding outcome for Cuba, for the wider Caribbean, and for conservation," says Dr Susan Lieberman, director of WWF's International Species Programme.

www.wwf.org.uk/turtlelifeline

Updated news from around the world can be found on our website every day – www.wwf.org.uk/news

UK

Green palm oil hits UK

Sustainable palm oil is due to arrive on the UK's supermarket shelves this summer.

The substance is used in a variety of everyday products, including biscuits, crisps and toothpaste. As reported in February's edition of *WWF Action*, consumer demand for palm oil is driving the orang-utans of Borneo and Sumatra towards extinction, as some companies clear their forest habitat for plantations.

Certified Sustainable Palm Oil will soon be available to manufacturers and retailers and auditing will be carried out to ensure that palm oil is only sourced from well-managed plantations. To qualify, companies have to follow strict environmental standards set by the Round Table on Sustainable Palm Oil, such as not clearing land that is home to valuable wildlife or is important to local people.

www.rspo.org

SOUTHERN AFRICA



Rhino surge

Populations of both black and white rhinos are rising after a decade of conservation efforts by WWF.

Since the onset of the African Rhino Project in 1997, white rhinos have increased by 70%, while populations of black rhino have risen by 40%. There are now nearly 6,000 more white rhinos (classed as endangered by the World Conservation Union), while there are 1,400 more of the critically endangered black rhino.

WWF is working to increase at least five key rhino populations and sub-populations still further. We also aim to establish at least two new populations in designated areas, while striving to stamp out the illegal trade in rhino horn.

www.wwf.org.uk/africanrhinos

RUSSIA / CHINA

Wildlife traders stung

An illegal wildlife trading ring caught trafficking tiger skins and other animal parts faces severe penalties after a major six-month operation by WWF and partner, TRAFFIC.

Seized goods included four tiger skins, more than 60 kilos of tiger bones, 900 bear paws and 531 saiga (antelope) horns – worth a combined total of roughly £100,000. The key perpetrators are expected to be jailed.

Authorities worked in unison with WWF and TRAFFIC, our wildlife trade monitoring network, to bring the smugglers to justice. Tactics included intelligence gathering, cross-border coordination and a series of raids.

www.wwf.org.uk/smugglers



UNITED ARAB EMIRATES

City of ideals

A global exemplar of One Planet Living principles is being built in a joint effort between WWF and the Abu Dhabi government.

Masdar City will become one of the world's leading 'green communities' – producing zero carbon, zero waste and being entirely car-free. It will be developed in accordance with WWF and BioRegional's One Planet Living ethos, based on 10 principles of sustainable living.

WWF and BioRegional have worked with leading architect Lord Norman Foster and the project's developers to write the city's sustainability plan. In addition to building green housing, the city will also play host to pioneering research into sustainable technologies.

The United Arab Emirates government, which rules Abu Dhabi, has signed a two-year agreement with WWF to monitor and reduce the country's ecological footprint.

www.wwf.org.uk/masdarcity



SAKHALIN

Withdrawal spells victory

The company that owns the controversial Sakhalin II oil and gas project has withdrawn its request for UK government backing.

The successful culmination of four years of campaigning by WWF has resulted in Sakhalin Energy revoking its application for funding. The 800km pipeline puts at risk the only feeding grounds of the remaining 120 western gray whales in the Russian far-east.

WWF now urges other institutions to decline any request of financial backing from the company.

"Sakhalin Energy has tried for four years to get UK and US public finance for this project, but it has failed to meet the various standards required," says James Leaton, oil and gas policy advisor at WWF-UK.

www.wwf.org.uk/sakhalinoil



INDONESIA

Win-win for oranges

Indonesia's new 10-year action plan for conserving orang-utans will also help mitigate climate change, according to WWF.

The implementation of the WWF-supported Orang-utan Conservation Strategy Plan will reduce deforestation, which will also help cut carbon emissions, especially in peat swamp forests. The felling of trees in these areas exposes carbon-rich peat swamps that rely on the healthy forests above them. Once uncovered, the bogs' stores of carbon are released into the atmosphere, speeding up climate change.

Deforestation for timber, pulp and palm oil plantations has made Indonesia a major carbon emitter. It has also eradicated much of the orang-utan's habitat, resulting in the loss of about 50,000 of the apes in the last 35 years.

www.wwf.org.uk/orangplan

Beautiful day?

The face of South East England could change irrevocably within 50 years unless action is taken to stem climate change according to a new report.

Our *Changing Climate, Our Changing Lives*, a Defra*-funded study written by a coalition of organisations including WWF-UK, predicts the consequences of hotter, drier summers, water shortages, flash floods and storms. Focusing on the low-lying South East, it describes how climate change will affect our everyday lives.

The booklet documents the direct impacts of a global temperature rise above 2°C in England, while increasing awareness of climate change and inspiring action to help tackle the worst effects.

Homes and businesses are expected to be at risk from increased episodes of flash flooding and storms, while water is due to become scarce and expensive. Warmer weather could also transform agriculture in the South East, with the introduction of soya, figs, and even olives to the region. Hot spells could bring chaos to the roads as surfaces crack, while train lines may regularly buckle and fracture due to increased heat.

“We are already witnessing changes in our climate,” said WWF-UK’s head

of campaigns, Colin Butfield. “Some of the severe scenarios outlined in the booklet could be lessened, as we still have the power to make changes for the better. The impact of homes on the environment can easily be decreased, for instance, with new developments built to high eco-standards and renewable energy playing an increasing role in providing our energy needs.”

WWF continues to lobby the UK Government to ensure a stringent 80% emissions reduction target is stipulated in the forthcoming Climate Change Bill, and to ensure that aviation and shipping – both major culprits of climate change – are included.

Water is due to become scarce and expensive

To view the full report and a list of solutions to help mitigate climate change, log on to www.tomorrowsengland.net

For a hard-copy of the report, call our Supporter Relations team on 01483 426333

* Department for Environment, Food and Rural Affairs



3 FACTS

1 By 2070, the climate in the South East of England will probably be similar to parts of Portugal.

2 A second Thames barrier, predicted to cost about £20 billion is now being planned to the east of the existing barrier.

3 The number of species on the UK Government’s at-risk list has doubled in the past 10 years, largely due to climate change.

Fuelling disaster for polar bears

Polar bears living off the coast of Alaska face an uncertain future as the US government makes plans to extract oil and gas in the region.

Nearly 30 million acres of sea have been laid open for exploration in the Chukchi Sea, home to one of two populations of polar bears inhabiting US territory. WWF and other environmental groups believe any development may be the last straw for a population already jeopardised by changes in their habitat due to climate change. Walrus, seals, whales and migratory birds also rely on the Chukchi Sea, which separates Alaska from Russia.

Increased ship traffic, noise pollution from seismic testing and aircraft will accompany the offshore development. The Minerals Management Service, the agency approving the sale, admit that there is a 40% chance of an oil



spill – an event which could have fatal consequences for polar bears. Yet Arctic experts believe that existing technologies cannot effectively clear up spills in ice-rich waters.

The US government’s decision to finally list the polar bear on the national Endangered Species Act last month fails to provide adequate protection - exclusion clauses allow oil and gas licensing to continue and prevent action on climate change.

wwf.org.uk/oilauction



Tiger crisis

The most reliable count of tigers ever conducted in India exposes desperately low numbers.

The Indian government recently released the results of its country-

wide Indian Tiger Estimation Survey, showing how a multitude of threats are endangering the survival of its national symbol.

The final results revealed that only around 1,400 wild tigers survive in mainland India. Poaching, driven by a worldwide illegal trade in tiger parts, continues to be a significant threat. Tigers are also at risk from habitat loss due to human development, a reduction in prey, and retaliatory tiger killings by local people.

Aided by this new data, WWF and its partner organisations are uniting with the Indian government to ensure better protection for the tiger and its habitat, with the aim of boosting their numbers in the wild. New projects will drastically reduce the threat from poaching and illegal trade, while stemming the conflict with humans.

“We are committed to taking action before it is too late,” says Diane Walkington, head of species at WWF-UK.

wwf.org.uk/tigercount

Crocodile rock

Deep in the remote forests of Papua New Guinea, WWF’s David Melick encounters deadly crocodiles, venomous snakes and potentially lethal tribal warfare

“It’s like nowhere else on Earth,” says David – who looks after the TransFly eco-region – a vast, low-lying coastal area of grasslands, wetlands and monsoon forest. “It is a land of extremes – one day, someone can come at you with a machete; the next, you may get a warm welcome.” The pitfalls occur when disputes between tribes escalate – and the staff get caught in the crossfire.

Crocodiles harbour no fear of humans in PNG

Establishing mutual trust is the key to making progress: 97% of the land in Papua New Guinea (PNG) is owned by local communities.

Tribal diplomacy aside, David and his team also have to contend with dangerous wildlife. Crocodiles harbour no fear of humans in PNG

– largely due to its remoteness – and have been known to stalk out staff members as potential prey. One novel method used to fight back is ‘Aversion Training’ – playing them loud rock music while shining lights in their eyes. Luckily, crocodiles are not party animals. They are usually deterred from re-entering populated areas.

Snakes also pose a grave threat. Papuan Blacks and Taipans are amongst the world’s most deadly snakes, and poor access to anti-venom and medical treatment means most bites are fatal.

Combine this with the prevalence of disease, poor sanitation and health, the ongoing belief in witchcraft and antiquated boats with a tendency to ‘flip over’ at any moment, and you’ve got yourself a pretty formidable set of obstacles.

Occupational hazards aside, the WWF team has helped secure locally managed wildlife areas and is now establishing a single conservation vision for the TransFly region. “It’s often dangerous, but I would not swap its wild, unpredictable vibe for anything.”

For more details about the TransFly, go to wwf.org.uk/transfly



David Melick being inducted as an ‘Elder of the Burning Spear’ by a clan leader in the TransFly.

How we make ourselves heard above the noise

David Nussbaum, WWF-UK's chief executive, describes how WWF wields its influence in the world of politics



One of my key tasks at WWF is to help develop our relationships across the political spectrum. We aim to influence all parties' policies so they achieve the best possible results for the environment. My approach is to keep things constructive and friendly, but to challenge those in power if we think they've got things badly wrong.

I shared a platform with Gordon Brown when he gave his first major speech on the environment. It was particularly pleasing to see the WWF panda behind the Prime Minister's shoulder; and hosting this event provided a great opportunity to show that WWF is an organisation that government can work with. What's more, it allowed us to make comments and suggestions on things we hoped he would, or wouldn't, say.

Another opportunity arose at Kew Gardens, where I was invited to respond to Environment Secretary Hilary Benn's introduction of the Climate Change Bill – Kew's position under a flight path to Heathrow provided an aural reminder every couple of minutes which I used to press home why WWF is calling for emissions

My approach is to keep things constructive and friendly, but to challenge those in power if we think they've got things badly wrong

from aviation to be included in the Bill. I think using a little bit of humour but having some hard-hitting arguments to support it is a good recipe for getting action.

A lot of opportunities for myself and my colleagues to influence politicians crop up at Party Conferences, or in meetings with politicians' special advisers. I even found myself at a book launch recently, highlighting to the Conservative John Redwood the

market value of connecting home renewable energy generators, such as solar panels or little wind turbines, to the National Grid. Such are the chances to try to influence political opinion – but these encounters also help WWF get a vital sense of the direction in which political parties' manifestos are likely to develop.

And when we need to, we'll take a tougher stance. We've just taken legal action against an arm of government – the Export Credits Guarantee Department – which was set to support a huge oil and gas development in Sakhalin, an island in the far east of Russia. Our action has resulted in the withdrawal of the application for support of this project, which threatens western gray whales with extinction.

Visit wwf.org.uk/sakhalinoil for more information.

We hope the outcome will make the ECGD and other potential funders more cautious about supporting developments that have huge environmental impacts. So our balancing act of being friendly and critical is achieving some vital results.



Behind the green door

The British house is a major source of CO₂ emissions. Can WWF's One Planet Homes campaign make us take the problem seriously?

Think climate change and what comes to mind? Coal-fired power stations belching plumes of smoke? Bumper-to-bumper cars in huge traffic jams? Or four walls, a roof and windows?

The domestic housing sector accounts for 27% of the UK's total carbon emissions and yet many of the UK's 25 million existing homes are still poorly insulated and energy-inefficient. With this in mind, and as part of our wider One Planet Future campaign, WWF is working to ensure that home is where the priority is for policy makers.

WWF has been driving progress in new-build environmental standards with its One Million Sustainable Homes campaign. The organisation is now turning its attention to the UK's existing homes, which account for 99% of the total stock. March saw the publication of *How Low?*, a report showing that with the right policies and greater financial investment by the Government now, it is possible to reach an 80% reduction in carbon emissions by 2050.

Transforming the UK's existing stock into low-carbon homes is an urgent challenge that the Government needs to address. WWF believes that any carbon-cutting strategy is futile without tackling our homes – so we have made a series of clear recommendations. These include the need for incentives to persuade people to eco-proof their homes.

The current state of British housing is a pretty sorry one. Last year the Government introduced Energy Performance Certificates

(EPCs) as a requirement for any homeowner selling their property. This initiative, supported by WWF, measures a home's energy efficiency on a scale of A-G. The most efficient homes are in band A, but research shows that the *average* EPC rating in England and Wales is an energy-guzzling E grade.

With EPCs in place as a useful guide for homeowners, the next step is to provide the public with effective incentives – in addition to the financial benefits from lower bills. These could include council tax rebates, cutting VAT on the refurbishment of existing properties, and a stamp duty rebate on energy efficiency measures made within a year of moving into a property.

Simon McWhirter, One Planet Homes campaigner at WWF-UK says: "The 26 million plus existing homes in the UK are the low hanging fruit in terms of achieving the deep cuts we need in carbon emissions. We can all play a part in understanding and reducing our energy use in the home, but if we are to reach our climate change targets, it is essential that the Government provides more incentives to help homeowners take action."

WWF believes that any carbon-cutting strategy is futile without tackling our homes

Take Action

- 1 Read a summary of WWF's *How Low?* report at wwf.org.uk/howlowsurvey
- 2 Find out more about WWF's One Planet Homes Campaign at wwf.org.uk/oneplanethomes
- 3 Visit wwf.org.uk/getonboard for details of the latest actions you can take in the mission to tackle climate change

3 FACTS

1 27% (153 million tonnes) of carbon dioxide (CO₂) in 2005 came from the energy we use to heat, light and power our homes.

2 The average household could save around two tonnes of carbon dioxide a year by making their home energy efficient.

3 The average household emits over six tonnes of carbon dioxide every year.

We are all Chinese now

China's environmental crisis is everyone's problem – so what are we doing to help them achieve a new 'eco-civilisation'? **Jonathan Watts** reports



Jonathan Watts is The Guardian's correspondent in China

Of all the excuses for inaction on climate change, there is none as pervasive or pernicious as the China Syndrome. That is the belief that the world's most populous nation is wrecking the global environment so thoroughly that everyone else is powerless. You hear the argument time and again. It usually begins with one of those jaw-dropping mega-statistics that make everywhere and everyone else feel small. "China is building one new coal-fired power station a week," or "this year China will add the equivalent of the entire British power supply to its national grid," or "all the new electricity capacity of the three gorges dam will be used up just by the new air conditioners bought in China this year."

Western consumers are saving money at the expense of the environment on the other side of the world

These phrases are usually followed by a resigned shrug, a weak, defeatist smile or a cop-out conclusion – "so whatever we do in Europe will make no difference."

That defeatism is wrong on three counts. First, it fails to account for the increasing effort that Beijing is making to improve its environment. Second, it conveniently ignores the fact that western consumption is responsible for much of China's demand for energy. And third, it does not recognise the positive role that Britain and other industrialised nations can play in setting an example.

That is not to say all is rosy in the far east. Far from it. The environmental problems here are not just enormous, they are potentially devastating to China and the world.

Nobody knows that better than the residents of Beijing, who breathe some of the foulest air on the planet. Satellite data from the European Space

Agency indicates that the Chinese capital and neighbouring areas have the world's worst levels of sulphur dioxide pollution, after a 50% increase in emissions in the past 10 years. According to the government, two-thirds of China's 595 cities now have unhealthy air. The Chinese Academy on Environmental Planning estimates that 100 million people live in cities where the pollution reaches "very dangerous" levels.

The water situation is even worse. According to an environment agency report last year, more than a quarter of the seven main river systems were so polluted the water was unfit for human use. Last May, blue-green algae blooms choked Lake Taihu – China's third biggest source of freshwater – forcing five million people to use bottled water for drinking and bathing. Soon after, local media were reporting algae outbreaks across the country. In every case, pollution – either from factories, fertilizer or untreated sewage – was to blame.

Even the mighty Yangtze – the third longest river in the world – is suffering. Last year, the water depth in stretches of the central reaches near Wuhan fell to their lowest levels since 1866, disrupting drinking supplies, stranding ships and posing a threat to some of the world's most endangered species, such as the finless porpoise, Chinese sturgeon and Siberian crane. Over-fishing, fast-growing river traffic, hydro-electric plants and the siting of 9,000 chemical plants along the Yangtze and its tributaries are the culprits.

So are we. The outside world must take a share of the blame. Foreign companies source materials from poorly regulated Chinese companies because they are cheap. Western consumers are saving money at the expense of the environment on the other side of the world.

The problems of its breakneck growth are being felt far beyond the country's borders.

In 2005, alarms were raised in Russia after a toxic spill downstream in the Songhua river forced millions of people in Harbin to do without tap water for several days. Other

exported environmental problems include the ravaging of the Amazon to make way for soya fields aimed at Chinese markets, the shrinkage of Indonesian rainforests to provide timber for Chinese furniture and flooring, or the sand and pollution clouds that blow from northern China across Korea, Japan and all the way to the United States.

In terms of greenhouse gas output, the impact of China's development is even more widely felt. According to the Netherlands Environment Assessment Agency, China overtook the US last year as the biggest emitter of carbon in the world. Other forecasts say that won't happen for another year or two. But the trend is clear. For the next few decades, China will be pumping out more of the gases that accelerate climate change than any other country. The economy is racing along at a growth rate of more than 10% per year and it is carbon that is powering the engine. China depends on coal to generate three-quarters of its electricity. Even so, China is far less of an eco-villain than most other developed nations. When you take into account its vast population, the carbon footprint of the average Chinese citizen is less than a fifth of that of an American, and just over a third of a European's. The problem is that it is growing faster than either.

The good news is that Beijing knows it has a crisis on its hands. Self-concern is the best stimulant. Pan Yue – the deputy head of the environment agency – has warned that China's economic growth will slow soon because the environment can no longer keep pace. Now the Communist authorities have been prodded into action by public protest. Last year, Zhou Shengxian, the head of China's environmental agency, blamed the rising number of riots, protests and petitions across the country on anger at pollution. At the last count (more than two years ago), the government reported 60,000 demonstrations per year, many of them against power and chemical plants. Politically, the most important occurred last May in Xiamen, Fujian province, when thousands took to the streets and forced the local government to suspend plans for a petrochemical plant.

With encouragement from the environment agency – and, it is said, prime minister Wen Jiabao – the domestic media is increasingly assertive in its coverage of environmental issues.

Here is another hopeful sign. Five years ago, green campaigners were considered a threat to a government fixated with economic growth. In 2002, there were fewer than 50 registered green NGOs in the country. Today there are almost 3,000. China has passed progressive legislation and set ambitious environmental goals in pursuit

of what president Hu Jintao's calls a "new eco-civilisation". So far, however, it has refused to accept binding targets for emissions. Local governments frequently ignore environmental directives in favour of economic growth – and the promotions, jobs and bribes it brings. With no free media, no independent courts and no electoral accountability, there is little incentive for them to do otherwise.

Under current plans, the government aims for a 20% improvement in energy efficiency by 2010 and more than doubling the use of renewable energy by 2020. It also aims to cut pollution by 10% in the current five year plan. But progress is already far behind schedule. Plans for a "green-GDP" measure that would incorporate long-term environmental costs into economic growth calculations were quietly shelved. Environmental lobbyists still see signs of hope, such as the ban on flimsy plastic bags earlier this year, which went further than anything done by the US, the UK and many other developed nations.

Nowhere is there a more urgent need to change – and a willingness to embrace new ideas

The super-statistics remain terrifying. Here's another: if China developed the same appetite as the USA, it would chew its way through 80% of the world's meat production and two-thirds of the global grain harvest. But the crisis is also a source of hope. Nowhere is there a more urgent need to change – and a willingness to embrace new ideas. Despite its closed political system, China is incredibly receptive to new and foreign concepts. In the past 30 years, people's lives have undergone such a huge transformation that individuals have to be flexible in their thinking. Modern history has taught them that if you are dogmatic, you will not survive. In many ways, China resembles a giant experiment in progress. It is frightening and exciting. The results are still not clear. Though the current trends are ominous, China could yet turn green. But first it needs the outside world to recognise that it is part of the problem and to offer financial and technical help, constructive criticism and positive encouragement. ■

5 FACTS

- 1 China has the most rapidly growing economy in the world at a rate of over 10% per annum.
- 2 It is predicted that China will be the world's largest exporter by 2010.
- 3 China has the world's largest population and the second largest ecological footprint by country, but per capita, their environmental footprint is the same as people living in Botswana.
- 4 The carbon footprint of the average Chinese citizen is just over a third of a European's.
- 5 China is the world's second largest wood importer (after the US), though it is estimated that 70% of China's timber imports are re-exported as manufactured goods.

Battle map

Eastern China: The land shown here is where our environmental future could well be decided. Like all battlegrounds, there are defeats and victories – and many conflicts still to be resolved. And as we show, WWF is a key protagonist in the fight for the future of China – and the world



Baoding joined WWF's Low Carbon City Initiative in January 2008. The city is the renewable energy capital of China, and the initiative will stimulate increased investment in renewable energy and energy efficiency technologies for both local and export markets.

Beijing. This Olympics year sees the Chinese government's first National Action Plan on Climate Change. The target: a cut in energy consumption by 20% per unit of GDP by 2010. WWF has launched an extensive campaign called '20 ways to 20%', to help China achieve its target.

Linfen is has been dubbed the world's most polluted city. It lies at the heart of a 12-mile industrial belt, and has ranked bottom of the World Bank's air quality ratings since 2002.

Heilongjiang province. Here in north-east China, WWF supported the creation of 24 protected reserves in the forests and wetlands between 2002 and 2005. The parks, which are home to China's last few surviving tigers, currently cover 1.8 million hectares, with the government's pledge of a further one million hectares by 2010.

The Yangtze River: One of the world's largest and longest rivers. Since the 1980s, its water has become polluted and the fertile floodplain intensively farmed and overdeveloped. However, with substantial financial support from HSBC, WWF has helped coordinate the government to start managing the river sustainably from source to sea.

The Minshan, Qionglai, Liangshan, Qinling, Xiangling, Daxiangling and Xiaoxiangling Mountains are home to the majority of the world's surviving giant panda population (see page 14).

Shanghai is one of the world's busiest ports, and the entry point for much of China's imported goods, including timber. Since the Chinese government imposed a logging ban in 1998, demand for timber has been increasingly met by imports, in turn exerting enormous pressure on the forests of south-east Asia, eastern Russia and Africa, often in the form of illegal logging. However, 70% of Chinese timber imports are then exported.

Chongqing in central China is the fastest-growing urban centre on the planet. In 2006 the population was estimated at 31 million – that's already over half of the UK's population.

More than a symbol



For over 40 years, the panda has epitomised WWF's environmental cause. But what is the real story behind China's – and the world's – conservation icon? **Paul Cottam** discovers a tale of triumph and cooperation against the odds.

In the second century AD, the Chinese emperor's garden in the then capital Xian harboured a secret. Living among 40 other rare species from across the 'middle kingdom' was a bear with a white face and oval, black eye patches. So treasured was the creature that its very existence was shielded from the outside world.

WWF became the first international conservation organisation to be invited into China

Today, the image of the panda is clearly as powerful as it was in the time of the ruling Qinling Dynasty – albeit a great deal more ubiquitous. It wasn't until the late nineteenth century that the secret of the giant panda spread to the West, and it became more than an exotic curiosity. By adopting the animal as its emblem in 1960, the newly-formed World Wildlife Fund ensured that the panda would forever be identified with the fight to preserve wildlife and habitat. The WWF logo has transcended language barriers and inspired supporters. In China, it has been dubbed the

'unofficial' national symbol to rival the oriental dragon, representing a symbol of hope for the Chinese people.

As the fame of the panda spread, so its numbers dwindled. While pandas once roamed the entirety of southern and eastern China and neighbouring Myanmar and Vietnam, it is now restricted to just three provinces at the top of the Yangtze River Basin.

While WWF had always known about the plight of the panda, governmental restrictions in China made it all but impossible to gain access. But with the relaxation of controls in 1978, WWF became the first international conservation organisation to be invited into the country. We knew that to address the needs of the beleaguered panda, we and the Chinese authorities had to understand how pandas lived in the wild. At the time, several theories about dwindling panda populations abounded, but nothing had been proven. The mammologist Dr George Schaller joined WWF staff and Chinese scientists to solve the mystery of the giant panda once and for all; the results have formed the basis of panda conservation ever since.

Schaller's findings were a breakthrough: he found that pandas were closely related to bears and had the digestive system of a carnivore, but

had adapted to a vegetarian diet that depended almost exclusively on bamboo as a food source. It was not just the discovery of a vegetarian bear that shocked: studies revealed that the panda's genetics made it hard to digest bamboo, meaning the animal had to eat huge amounts for up to 14 hours a day.

"Schaller's research was a milestone," said Diane Walkington, head of species at WWF-UK. "It told us some important facts about what environment the pandas needed to survive, and thus how we were to set about protecting them.

"Time was running out for the panda, but we now had the access and the resources we needed to embark on a strategy that would ensure the pandas' survival."

Corridors are paramount to ensuring healthy panda populations become stable and grow

For some, the key to securing the panda's future is to roll out captive breeding programmes. But the solution is not as straightforward as it appears: to date, there has been no successful reintroduction of captive pandas into the wild. Last year, the first captive-bred panda to be released into the wild was killed by a rival male; males are particularly competitive during the mating season. Supporters of captive breeding

programmes trumpet the success of numbers – over 34 cubs were born in 2006 alone. But for WWF, the imperative is to conserve the 1,600 pandas that already exist in their natural habitat. "It is not simply a numbers game," explains Diane. "Wild pandas need to be able to feed and reproduce properly, but too many populations are still isolated, meaning they have nowhere to go when their food runs out or when they need to find a mate."

With the panda's population unstable, ambitious plans were afoot to shield the remaining population from further threats. In 1992, WWF and the Chinese authorities launched what has been hailed by conservationists as the finest hour for the endangered bear. The National Conservation Plan for the Giant Panda and its Habitat sought to establish a multitude of extra, protective reserves and reconnect disparate populations which had been separated by human activity. Panda 'corridors' were created – vital areas of bamboo and other vegetation which linked populations of pandas that had been cut off by human developments. Rising human pressures had divided the panda into 18 separate sub-populations, split by developments such as roads and agricultural plantations.

"Corridors are paramount to ensuring healthy panda populations become stable and grow," explains Diane. "These connecting routes are vital for the gene pool – without them, pandas face the risk of deformities and health defects because of inbreeding within their own groups. Not only that,

Wild pandas once roamed all of southern and eastern China, as well as neighbouring Vietnam and Myanmar.



Left to right: 1979: WWF's founder, Sir Peter Scott, (sitting) admires a giant panda in Beijing zoo; lush bamboo; researcher studying natural bamboo die-back; pandas live mainly on the ground but have the ability to climb trees; eco-lodge in Wanglang Nature Reserve.

but these critical links give the panda the ability to adapt to changes in their environment.”

One obstacle facing the panda continues to be natural bamboo die-back, where huge areas of the plant periodically die in a certain region. Unfortunately, human settlements are blocking the panda's ability to migrate to other areas where bamboo is plentiful. Without the corridors, they are stranded and vulnerable to starvation.

Since the 1992 plan was mooted, WWF has been working hard to reconnect pandas. In May 2002, our teams helped create five panda corridors in the Qinling Mountains, central China. And in May 2006, WWF was instrumental in reconnecting two panda sub-populations which had been separated for 23 years by the construction of a national highway.

The next step was to help create an unprecedented network of protected areas in collaboration with the Chinese government. So far, a total of 63 panda reserves have been established, which collectively protect an area 1½ times the size of Wales. However, even though this has been an enormous success, these parks provide a home

for little more than half of the wild giant panda population – so, with support from the Chinese government, WWF will continue to expand the number of reserves and improve existing ones.

Panda tourism has proved to be a lucrative and secure way of earning a living for locals

While new corridors and protective reserves gradually safeguarded the panda's habitat, a graver threat emerged: the massively increased demands of China's booming economy. It is the misfortune of the remaining pandas to share their habitat with 500 million people at the top of the mighty Yangtze River Basin. Unfortunately for the panda, the Yangtze is the economic, as well as the geographic heart of China.

It's a struggle for survival that you would expect the panda to lose hands-down – 1,600 pandas competing for resources with half a billion people. But the odds were weighted in the panda's favour in 1998, when the Chinese

government imposed a logging ban. Positive as that might sound, it posed a crucial dilemma for conservationists. While the new laws undoubtedly rescued some pandas from further habitat destruction, it simultaneously crushed the livelihoods of huge numbers of people who depended on timber to make a living.

That's where WWF came in. In parts of the Sichuan Province, southwest China, home to the largest concentration of pandas in the country, we worked with thousands of indigenous people to introduce sustainable ways of getting firewood, and fostered new industries, such as eco-tourism. Panda tourism has proved to be a lucrative and secure way of earning a living for locals, but its growth has had to be monitored. In order to mitigate any negative impacts on wildlife, we have been working hard to develop eco-tourism projects throughout the panda landscape. In Wanglang Nature Reserve in the Minshan Mountains, south-eastern China, a new 'eco lodge' recently became the first certified visitors' centre. The reserve includes no-go zones for visitors, therefore minimising any potential damage.

And our 'community-based' conservation helped provide biogas and fuel-efficient stoves, which have saved local people time and energy by reducing their need to venture into the forest for firewood. Honey bees also have a part to play: bee-keeping now provides a solid income for people in some areas of panda habitat, as reported in a previous issue of *Action*.

Local solutions have a massive impact, but we are all part of a global solution. It has been said that reducing over-consumption in developed countries such as the UK is perhaps the ultimate key to saving the wild giant panda. Scientists are all too aware of the potentially catastrophic impacts the unsustainable use of natural resources and climate change will have on all endangered species, and this is something we can all help to reverse.

When WWF and the Chinese government completed the latest, most comprehensive study of panda numbers in 2004, we had a pleasant surprise. The four-year study revealed that 1,600 pandas existed in the wild, and many declared it a victory for a species which once seemed to be facing extinction. But China is a crowded country developing at a ferocious pace. The panda may be black and white, but the threats to its continued survival are anything but. One thing is guaranteed: the panda will always be an icon of the natural world. Our role is to make sure it remains a living one. ■

For more information on giant pandas, visit www.org.uk/pandaaction

Take Action

Help us raise £250,000 to strengthen the protection of existing panda reserves and create additional protected areas. Visit www.org.uk/pandaappeal to donate or call 08705 668 899

IN BRIEF

- WWF first began working with the giant panda in 1980, becoming the first environmental organisation to be invited into China.
- In 1992, the Chinese government, in conjunction with WWF, launched the National Conservation Plan for the Giant Panda. Vital 'corridors' were created to connect isolated panda habitats, in addition to 63 new protective panda reserves.
- WWF also works with local communities who share the panda's home, providing alternative sources of income that minimise habitat destruction.
- The latest figures reveal there are now 1,600 pandas in the wild.

5 FACTS

- 1 Giant pandas share their habitat with red pandas, takin and golden monkeys.
- 2 Female pandas usually give birth to just one panda, though occasionally they have two.
- 3 There are many theories as to why the panda is black and white. Some believe it intensifies the potency of their 'stare', which is used to ward off unwelcome intruders, but most believe it is so that they blend with their habitat of lightly shaded forest.
- 4 Although pandas are largely vegetarian, they occasionally eat small rodents or musk deer fawns.
- 5 Pandas live up to 25 years in the wild.

Left to right: © WWF-Cannon / WWF INTERNATIONAL; © WWF / CANON; © WWF / GEORGE B. SCHALLER; © HEATHER ANGEL / NATURAL VISIONS; © WWF-CANNON / OLIVIER DOOLE



OUR FUTURE

IN THEIR HANDS

The 220 million children at China's schools and colleges will play a crucial role in the environmental debate. So what are they learning about the challenges facing the planet? **Xiaowei Su**, from WWF-China reports

After a quick breakfast of hot soy milk, fried eggs or *youtiao*, a doughnut-like deep-fried stick of dough, Chinese students make their sleepy way to school by bus, bicycle, or in a parent's car through congested traffic. For almost all students in China, classes begin at 7:30am sharp. Dressed in school uniforms of loose-fitting tracksuits, students work hard to make themselves stand out by carefully selecting their shoes, backpacks and other accessories.

After a long day of learning, students go home at 5.30pm to face a long night of homework. There is little time for TV, play or anything else. The biggest complaint from parents and students alike is that there is too much pressure to do well at school. In 2003, the United Nations Development Program (UNDP) found that in China there are over 116,000 kindergartens with 20 million students, 425,000 primary schools with 116.8 million students, and 79,000 secondary schools with 85.8 million students. If you do the maths, that's a total of over 220 million students.

That is also 220 million citizens who are going to have a big say in whether the planet survives the challenge of climate change in the next century. Influence the Chinese school population for the better and you really can change the world.

So where does environmental education fit in? In the past few decades, the Chinese Ministry of Education has standardised all modern primary and secondary curricula. Daily lessons typically include Chinese, maths, physical education, art, history, science, political study and a foreign language, typically English.

“Compared to five or even ten years ago, kids today are much more aware of what's happening to the earth, the water and the air we breathe”

Nearly ten years ago, WWF began working closely with the Ministry of Education to produce a set of guidelines for environmental education to be integrated into the national curriculum. The Chinese Environmental Education Guidelines were approved in 2003. They ensure that 200 million primary and middle school students every year are taught key concepts such as biological diversity and sustainability.

So are students more eco-smart than five years ago?

Zhang Yi, a Programme Officer for WWF China's Education for Sustainable Development

Programme (ESD) believes they are. “Compared to five or even ten years ago, kids today are much more aware of what’s happening to the earth, the water, and the air we breathe,” he says. “They know the importance of saving water and turning off the lights when you leave the room, much better than their parents do.”

“I have been with WWF for over ten years now working on this programme. And I’ve seen a real sea-change take place in the minds of China’s decision makers, top-down, in how important the Guidelines and environmental education is to them.”

The feedback from teachers and students has been overwhelmingly positive

The Guidelines were a huge achievement for WWF, born out of the Environmental Educators’ Initiative (EEI), a large-scale national teacher training initiative involving China’s top universities, an education publishing company, professors and young aspiring educators. The initiative is at the heart of WWF’s overall Education for Sustainable Development Programme, which works under the guiding principle that change can only take place by informing students about using the world’s resources in a manageable and sustainable way.

“I learned a lot about the city moat. More importantly, I learned how to learn,” says Yin Rui of Dongzhimen Middle School.

Yin Rui’s middle school is part of a group of 13 pilot schools in China’s capital that took part in WWF’s Education Initiative for Water (EIW) – hence his sudden interest in the city moat. Another long-term project under WWF’s education programme, EIW focuses on teaching students about water issues such as shortages and contamination through hands-on projects and community service.

Students like Yin Rui took part in activities such as collecting water samples from various areas of Beijing and conducting lab tests to find out what water pollution is caused by human activity. Other students stepped out of the classroom to conduct surveys in the *hutongs*, the narrow alleys of Beijing’s older neighbourhoods,

to identify the socioeconomic and environmental issues that most concern the people living in these less developed areas.

The students analyse their research and are asked to come up with real-life solutions. The feedback from teachers and students has been overwhelmingly positive. Now the project is being expanded from only a few pilot schools in Beijing to Qinghai a province in northeast China, and the Inner Mongolia Autonomous Region.

But environmental education isn’t only for the young. Mr Liu is 62 and a retired teacher in the western district of Beijing. Everyone calls him ‘Professor’. He and his wife have been living in their two-bedroom apartment for many years now. Their one complaint is that it doesn’t get very much natural light during the day so they’ve always had to keep the lights on in every room.

They are thus particularly mindful about their electricity meter. Mr Liu checks on it often. Mrs Yang turns off the living room light when she goes into the kitchen to cook dinner, and even unplugs the television when she’s finished watching her daytime drama shows. She also has an elaborate system of buckets of water, saved from cleaning vegetables and hand washing, that she then uses to water her plants and flush the toilet. Their neighbours are starting to wonder what’s got into them.

“In three months, I’ve saved 51 kWh. And I’ve saved 5.8 tons of water!” Mr Liu reports with excitement, his eyes lighting up with pride. The total amount of money he has saved is 46.5 RMB, about £3.30. Hardly a large sum. But to him, it’s not about the money. It’s proof that doing things a little differently around the house makes a difference. And he wants to win a big prize.

Mr Liu and Mrs Yang are competing with 39 other families in Beijing and Shanghai to reduce their household electricity and water use to win the much-coveted title of Cool Energy Hero. They are taking part in WWF’s nationwide energy reduction campaign ‘20 Ways to 20%’ which includes families, colleges, primary and middle schools and the online community.

The campaign was inspired by the government’s ambitious first national strategy on climate change and emissions reduction, announced in June of last year, to improve China’s energy efficiency by 20% by 2010.



Mrs Yang has an elaborate system of buckets of water, saved from cleaning vegetables, that she then uses to water her plants

And according to China’s Renewable Energy Law, effective since 2005, 15% of all energy is to come from renewable sources such as wind, solar, and hydropower by 2020.

Although China has rejected mandatory caps on the country’s greenhouse gas emissions, these energy policies are the most aggressive in the world in terms of energy-efficiency targets. Still, China is estimated to become the world’s biggest polluter of greenhouse gases in a few years. Yet, emissions per capita in the country are only a small fraction of those of US or UK citizens. But while individual emissions are small, 25% of China’s total CO₂ emissions are from people living in large cities.

“Changes in individual consumption can make a great difference and that is why WWF put together a list of 20 energy saving tips to guide the public. It includes helpful pointers like switching to LCD energy-efficient light bulbs in your home and office,” said Dermot O’Gorman, WWF China country representative. “We hope that more and more people will get involved to save energy on their own, which will ultimately help relieve the environmental problems caused by global warming.”

The ‘20 Ways to 20%’ campaign kicked off in January of 2007 with the unveiling of a large 7-metre long black balloon attached to the vent-pipe of a passenger car, symbolising the enormous volume of emissions from automobiles on a daily basis. The launch of the Efficiency Games for families and students followed in August with a fun public demonstration using bicycles

and light bulbs. Two bicycles were set up, one connected to a wall of energy-efficient bulbs and the other to incandescent bulbs. Young children and grandmothers alike rode the stationary bikes to light up as many bulbs as they could, realising that it takes much more huffing and puffing to power ordinary bulbs.

With the Olympic countdown now in its final stage, there is much excitement all around China, especially in Beijing. WWF is working on the details of the Efficiency Games award ceremony in Beijing; set to take place right before the 2008 Olympic Games this summer. The ceremony will recognise winners that have taken part in the energy-efficiency competition, including families and students. It looks like Mr Liu and Mrs. Yang are ahead in the race to take home the title of ‘Cool Energy Hero’ but we’ll have to wait until August to find out the winners.

As the ringing of a nearby school bell, signalling the end of another day, drifts through the couple’s apartment window, the retired teacher and his wife look down to watch the students flow out of the gates below. The children chatter away before they go home and settle down to more hard work. Education in China is a round-the-clock process – whatever age you are. The challenge is to make sure the environmental lesson being learned the hard way in the West is taken on board here in the land where it most matters. ■

For more information on the ‘20 Ways to 20%’ campaign visit www.20to20.org



IN BRIEF

- WWF works with the Chinese Ministry of Education to integrate environmental education into all primary and secondary schools’ curricula.
- The Education Initiative for Water helps students in Beijing learn about water through hands-on and real-life problem solving activities.
- The ‘20 Ways to 20%’ campaign educates the public with energy-saving tips, public-awareness campaigns, and the Efficiency Games competition.
- People of all ages in China are becoming increasingly aware of how their lifestyle and actions contribute to environmental and climate changes.

Take Action

If you are a teacher in the UK and would like to find out more about how WWF can help you incorporate sustainability into education, visit www.flearning.org.uk

5 FACTS

1 In 1980 WWF became the first international NGO to be invited by the Chinese government to work in China.

2 Thanks to WWF, environmental education is becoming an integral part of the formal education curriculum for 200 million Chinese children.

3 Chinese universities have become hotbeds of environmental activism with many of the larger universities boasting more than one environmental club.

4 WWF develops resources for primary and middle school teachers to help them integrate education for sustainability into the school curriculum.

5 Beijing will take over 1.4 million vehicles off the roads during the two-week Olympic period to improve air quality and traffic conditions.

Top right © Still Pictures; all others © WWF-China

Meet the neighbours

Our seas are much more diverse and exotic than many of us realise. As WWF pushes for a new Marine Bill, **Paul Cottam** goes on a watery safari



BRITAIN'S BIG SIX

See how many you can spot on your very own British sea safari

With such a wealth of marine life inhabiting UK coastal waters, there has never been a more urgent need to protect our seas from threats such as overfishing and pollution. Yet they are still not getting the protection they deserve: Britain's waters are currently governed by a confusing mix of often contradictory and ancient laws that threaten the very survival of creatures like dolphins, sharks and porpoises. WWF is now pushing for the Government to introduce a new Marine Bill that would help protect the UK's coastal waters and its wildlife under a single law.

Progress is being made. In April 2008 the Government published a draft Marine Bill for

Parliamentary scrutiny; and WWF is now working with MPs and Peers to enhance the bill and to ensure it achieves the best protection for UK waters. We are pushing for a full Marine Bill in the autumn, which can finally be enacted into UK law in 2009.

There have never been more opportunities to explore and enjoy the often surprising variety of our sea life

In the meantime, there have never been more opportunities to explore and enjoy the often surprising variety of our sea life. Marine wildlife watching is a thriving UK industry. To ensure tourism ventures do not interfere with the wildlife, WWF supports a training scheme, called WiSe (Wildlife Safe). It gives operators an understanding of marine fauna and how to keep any disturbance to a minimum. More than 750 boat handlers are now accredited under the WiSe scheme.

Here's a selection of WiSe operators who specialise in marine excursions:

- A** Elemental Tours, Penzance, Cornwall www.elementaltours.co.uk
- B** Fowey Marine Adventures, Fowey, Cornwall www.fma.fowey.com

C Voyages of Discovery, St Justinian, Pembrokeshire www.ramseyisland.co.uk

D A Bay To Remember, Cardigan Bay, west Wales www.baytoremember.co.uk

E Sea Life Surveys, Isle of Mull, Scotland www.sealifesurveys.com

F Hebridean Whale Cruises, Gairloch, Scotland www.hebridean-whale-cruises.co.uk

G Northern Lights Charters, Oban, Scotland www.northernlight-uk.com

H Ecoventures, Cromarty, Scotland www.ecoventures.co.uk

For a full list of WiSe operators visit www.wisescheme.org

1 Seals

Two species of these well-loved marine mammals live on British shores: the grey seal and the common (or harbour) seal. The grey seal is the most numerous, with nearly half of the world's population living off our coastline. Male grey seals are much larger than females, and have broad shoulders and an elongated snout. The females have a thinner snout and a less rounded profile. They vary in colour from dark brown to grey or black with blotches, though females tend to be paler.

Spot them: Farnes Islands, Northumberland; Skomer Island, Pembrokeshire; Donna Nook, Lincolnshire; Seal Island, Penzance; Blakeney Point, Norfolk; western Scotland.

2 Basking sharks

More than 21 different species of the shark occur around the British coast. One of our very notable species is the basking shark – a gentle giant which can measure up to 11 metres long and feeds on tiny animal plankton. Basking sharks have only minute teeth, and filter out their prey as they swim through the sea. Other more seasonal visitors include the blue shark and the short fin mako.

Spot them: Land's End and the Lizard, Cornwall; Isle of Man; Inner Hebrides.

3 Harbour porpoises

Harbour porpoises resemble dolphins, but they are much smaller and have a blunter, more rounded head. They prefer shallower water, hence they are likely to be seen in harbours and bays. The harbour porpoise is the most widespread, commonly seen and studied of all porpoises. They are very shy animals and only show their backs and dorsal fin when surfacing the water. The creatures are often nicknamed puffing pigs because of the sneezing noise they make when they surface the water for air.

Spot them: Moray Firth; Hebrides; Strumble Head, Pembrokeshire; west Wales' coast; west Cornwall.

4 Minke whales

The minke is a type of 'baleen' whale, which feeds by filtering sea water and small fish through a plate of fibrous material in their mouth. They are the smallest type of baleen whale, growing to about 10 metres in length. It is estimated that there are about 800,000 minke whales worldwide. They have a life expectancy of about 20 years in the wild.

Spot them: West and north-east Scotland; Northern Irish coast; north-east England.

5 Killer whales

Killer whales (or orcas), are actually members of the dolphin family, but it is their distinctive black and white markings which make them easily identifiable. Killer whales hunt in family groups of up to 40 individuals. They feed on fish and also prey on marine mammals such as seals. Mothers give birth every three to ten years, after a 17-month pregnancy.

Spot them: Hebrides; Orkney and Shetland islands; Irish Sea.

6 Bottlenose dolphins

The distinctive curved mouth of the bottlenose dolphin – often perceived as a 'smile' – makes them one of the most widely recognised dolphin species. They are also one of the largest, growing to between three and four metres in length. Dolphins search for food by using echo-location, which is similar to a sonar system. They detect prey by producing sounds and listening for the echo, thus helping them to determine precisely where their food source is. Their diet comprises small fish, squid, crabs and the occasional shrimp.

Spot them: Moray Firth; Cardigan Bay; Isle of Purbeck, Dorset.





Greening the office: a practical guide

WWF member Sonja Klug turns her attention from the day-to-day to the 9 to 5

About half of all this country's CO₂ emissions come from the industrial and the commercial sectors, so there is a lot that can and should be done.

With this in mind, I approached the MD of our magazine publishing company, suggesting that we green our offices. She promptly put me in charge of making it happen. I came up with about 40 ideas on how we could be more eco-friendly – from putting wind turbines onto the roof to installing dual-flush toilets (email me if you would like this list).



Sadly, we still haven't got wind turbines on the roof, but give me another six months or so...

We also opted for ISO 14001 accreditation – this meant implementing an environmental management system with documented processes and targets to ensure that the company does what it can to help the environment. A consultant helped with the documentation, and an independent accreditation body undertook the audits. It involves a fair bit of paperwork, but on the upside, with an audit looming, the system was put into action much more thoroughly and quickly than would otherwise have been the case.

We now have an environmental policy, which means that all the paper for our magazines comes from well-managed

forests, we have targets to reduce waste and energy usage, we monitor printers' and suppliers' performance and try to buy eco-friendly office products. We have also started a staff awareness campaign, asking them, for example, to recycle and also to switch off their computers overnight. Sadly, we still haven't got wind turbines on the roof, but give me another six months or so...

I would be lying if I said that it was easy, and I had to delve much deeper into air-conditioning coolant and hazardous waste legislation than I ever thought I would, but, all in all, it was tremendously satisfying – especially because most staff really welcomed it.

After all that effort greening the office, it's time for a working lunch. But how do I know that the food I buy is kind on the environment? I'll be trying to reduce my 'food footprint' in the next issue.

For feedback, comments and tips, email me at sonja.klug@cedarcom.co.uk

Membership manager Leila says: Well done to Sonja for a sterling job in greening her office. As she acknowledges, transforming the workplace from energy-guzzling to environmentally friendly is not always easy – but there are steps that everyone can take. At WWF, we created our own 'eco-proofed' office in Dunkeld, Scotland in 1995. We refurbished the late 18th century house to minimise its ecological footprint, and cut down on waste, energy and water-use. We have compiled some basic information, based on our experiences, to help others plan a green office. Log on to wwf.org.uk/scotland/greenoffice

Member offer
For more tips on turning your office green, order the book *Greening Your Office*, from the WWF shop, and receive 10% off the usual price of £4.95 with your special member discount. Visit wwf.org.uk/shop or call 0870 750 7023 and quote code 20003. Offer ends 30 July 2008.

© Joy Michaud / Sea Spring Photos

A growing trend

Especially for WWF members – inside tips from the River Cottage gardener



As we become savvy to the environmental impact of the food we buy, many of us are turning to self-sufficiency. **Caroline Lowery**, produce gardener at River Cottage, gives her tips on growing your own.

Cultivating your own food reduces the energy-intensive packaging and transport processes, and because you only pick what you need, it helps prevent food waste too. And it's simpler than you think.

Herbs

Basil, parsley, dill, oregano and coriander are easy to grow, and improve many dishes immeasurably. Mint and lemon balm work as refreshing tea infusions, but both herbs have a tendency to dominate a growing area – so put them in solitary containers. Old colanders make great hanging baskets, while old sinks make ideal plant pots.

For more information on herbs, visit www.jekkasherbfarm.co.uk

Salads

Grow 'cut and come again' varieties, to guarantee a constant supply. This means you can keep 'grazing' on the baby leaves instead of waiting until a lettuce grows to full size. Rocket, mizuna, pak choi, mibuna, and mustard leaves are a good place to start. Baby beetroot, radish, carrots and spring onions are also easy to grow. Ready-made salad leaves are available from seed merchants such as Tamar organics (www.tamarorganics.co.uk).

Peas, beans and tomatoes

If you have vertical space, then maybe try a couple of pea or bean plants. Tomatoes, especially the tumbling cherry varieties, look very decorative in hanging baskets. One courgette plant in a large container should keep a constant supply throughout the season; or try a cucumber if you have space. Either start from a seed or buy a plant.



Tomato © Shutterstock / Majeed Borcan

Caroline's tips

- Any plants grown in containers will need plenty of watering, so think about having a water butt installed.
- Try not to get too carried away when sowing (easily done!) but if you do, pickling, freezing or oiling are great ways of preserving extra vegetables.
- Try drying your herbs to maintain a constant supply or freeze them in ice cubes.
- If you've really got the gardening bug why not rent an allotment or join one of the new River Cottage courses on 'green' kitchen gardening. Visit www.rivercottage.net for details.



"For those of you who think you don't have the time, space or temperament

to grow your own vegetables, herbs and fruit, think again. I don't want to persuade you. I want to tempt you"

Hugh Fearnley-Whittingstall

See page 28 to see how you could win a meal for two at River Cottage.

Here comes the eco-bride

With the wedding season upon us, thousands of couples will make their vows, but at what cost to the environment? Paul Cottam speaks to three supporters who have made wedding fever that little bit kinder on the planet

1 Re-dressed for the occasion

WWF supporter Ruth Eyre-Pugh proves that bridal fashion and environmental awareness is a match made in heaven.

Ruth set up her second-hand wedding gown business, *Bridal Re-dress*, with the aim of selling used dresses and donating half of the profits to WWF.

The business venture has been so successful that Ruth and her company are uprooting from Northern Ireland and making a base in Essex for the next phase of trading. Brides who donate gowns receive 40% of the total selling profit, and the dresses are sold at about two-thirds of their original cost. Trading has so far raised £4,000 for charity – a figure she is hoping to triple by opening up shop in the “wedding capital” of the UK.

Customers can expect a choice of over 220 gowns, ranging in price from a budget £100 to a more elaborate £1,400. The fundamental business ethos is about compensating for the Western world’s throwaway culture, as well as generating funds for WWF. “Because you are recycling the dress, you are cutting down on your ecological footprint”.

To find out more, log on to www.bridalre-dress.com, or call Ruth on 07903 320631. Alternatively, email ruth@bridalre-dress.com to arrange your personal consultation.

2 The wedding cycle

A month on a bicycle, seasonal strawberries and recycled oil drums: this happy couple enjoyed a marriage made in sustainability.

It was worth the effort for consumption-conscious Owain and Sabine Nouvet, of South Wales. Their wedding epitomised green values. The couple regularly cycled to local farmers’ markets in the run-up to the ceremony, collecting seasonal food to offer their guests.

On the day itself, they banished energy-guzzling generators for the reception, and instead opted for barbecues made out of recycled oil drums and solar-powered garden lamps to provide lighting. Guests enjoyed strawberries harvested on the day of the wedding with cream from a local dairy farm. Traditional, locally-sourced dishes were accompanied by a menu describing exactly where the food had come from and how it was transported and prepared.

For the happy couple, it was an extension of the way they live their everyday lives. “We did not want to go to the supermarket or get a chicken from who knows where,” says Sabine.

“Having a sustainable wedding is the perfect way to begin a marriage, as it offers so much to the community, both environmentally and socially.”

3 A tale of two turtles

Whether a quaint English affair or an overseas ceremony, tying the knot can always be a greener event.

Conservationist Sally Bailey and her Fijian husband proved this when they forfeited years of wedding tradition to make a symbolic environmental gesture.

In Fiji, islanders occasionally eat turtles at ceremonies such as weddings. Although this has little impact on their overall numbers, Sally and her husband wanted to do something with a positive environmental impact, and decided to tag a pair of turtles instead.

“We explained to the family how important it was for us and why we didn’t want to eat the creatures,” explains Sally. “We all realised that by tagging them, turtles could still be used as part of the ceremony. For us, respect for the turtle was shown through helping to protect them.”

On the big day itself, the couple tagged a pair of green turtles, giving each a

DID YOU KNOW?

- The average cost of a wedding in the UK is now estimated to be over £19,000.
- For just one gold wedding ring, about two tonnes of material is mined. A silver wedding ring uses just a fraction of the energy and resources that gold does.
- Apparently the average UK wedding can produce 14.5 tonnes of CO₂ emissions (150 guests).



Panda appeal

£148,000 raised so far

Thanks to your generosity, we have so far raised a total of £148,000 in our panda appeal. However, WWF needs around £250,000 this year to carry out its vital conservation work to restore panda habitat and expand protected areas.

As reported in our special feature on page 14, pandas remain under threat, with developments such as housing and transport networks eating away at their habitat and breaking up their natural migration corridors. What were once expansive habitats are now fragmented areas where panda populations exist in isolation.

Unless we continue to re-connect and protect what is left of their natural environments, these icons of conservation face a precarious future.

Your donation will help WWF create new panda reserves, while improving the protection that our existing parks offer. Funds will also go towards creating more corridors to reconnect further panda populations, while helping communities to adopt more sustainable livelihoods that do not adversely impact on the species.

You can help our panda appeal reach its target by donating at www.wwf.org.uk/pandaappeal, or calling the donation hotline on 08705 668 899.

Thank you

Win a dinner at River Cottage

River Cottage is offering one lucky WWF member a meal for two at their Friday night event



All images © River Cottage

Hugh Fearnley-Whittingstall's River Cottage is famous for its philosophy of sourcing local, seasonal produce and its high standards of animal welfare. The winners will sample some of the best local produce that Dorset and Devon have to offer.

The evening will start at 7.30pm with a warm welcome from the resident River Cottage team. While you nibble on homemade canapés, your hosts will be on hand to answer any questions and explain exactly where your meal has come from. You will then be served a four-course set menu featuring produce from the River Cottage garden and seasonal ingredients from the highest quality West Country producers.

So if this whets your appetite, log on to www.rivercottage.net/wwf to find out how you and a companion could be enjoying this unique culinary experience.

Please note: The event is held at River Cottage HQ on the Dorset/Devon borders. Hugh does not attend Friday Nights.



Win a home composting kit

In this issue of *WWF Action*, we have three Bokashi composting kits worth £69.50 to give away to our members.

Creating your own compost is great for reducing food waste and the Bokashi system means that you can make rich compost in your kitchen without any nasty smells.

All types of food waste can be added to the Bokashi bucket, such as vegetable peelings, old tea bags, coffee grounds and even meat and fish (which can't be added to most traditional garden composts).

Each time you add your kitchen waste to the bucket, all you need to do is add a sprinkling of the special Bokashi bran, and the micro-organisms contained within it will ferment the waste into compost. A full bucket only takes about 2-3 weeks to form compost.

A nutrient rich liquid is also produced in the process, which can be extracted and diluted to create an environmentally friendly plant fertiliser.

Our Bokashi composting kit includes one pack of Bokashi bran and two composting buckets, so that you can be filling one bucket whilst the other is fermenting.

For your chance to win, write and tell us what percentage of waste in a typical bin can be composted. Is it:

a About 5% b About 20% c About 30%

Send your answer, along with your name, address and telephone number to:

Compost Competition, WWF-UK, Panda House, Weyside Park, Godalming, Surrey GU7 1XR or email compostcomp@wwf.org.uk

Closing date: 30 July 2008

3 months' free breakdown cover



Your green peace of mind

The Environmental Transport Association – the world's only carbon neutral motoring organisation – is offering WWF members 12 months' breakdown cover for the price of nine.

Founded in 1990, the Environmental Transport Association aims to raise awareness of the impact of excessive car use and help individuals and organisations to make positive changes in their travel habits.

As a not-for-profit organisation, your money goes back into providing you with the best service and investing in the best future for the planet. As well



as encouraging responsible driving to reduce carbon, the ETA helps motorists to neutralise the effect of their motoring by offsetting their emissions.

With 85% of vehicles repaired at the roadside, a national network of 1,700 repair and rescue agents and an average call out time of just 40 minutes, the ETA breakdown cover is a fantastic choice for the greener motorist.

If you want to join the drive for greener driving, then call the ETA on 0800 212 810 and quote 1318 6000 to get your three months free cover.



Bag a bargain for peat's sake

Buy three 15 litre bags of compost for £7.20

If the vegetable growing advice from River Cottage has inspired you to don your wellies and get planting, then you might be interested in taking up our special offer on peat-free compost.

Compost is great for helping our gardens bloom, but unfortunately most commercially available composts contain peat extracted from valuable wetland habitats. In Britain almost 95% of peat bogs have been damaged or destroyed since the widespread use of peat in horticulture.

Thankfully, gardening without peat is becoming increasingly popular and the WWF shop is very happy to be able to offer you a totally peat-free compost made from coir, the fibrous layer surrounding the hard shell of coconuts.

The compost comes as a vacuum-packed block which will expand to five times its volume when water is added. Its superior water retention makes it ideal for indoor and outdoor plants, hanging baskets, containers and dressing flower or vegetable beds.

With your special member discount, we are offering you the chance to buy three 15 litre bags for £7.20 instead of the usual cost of £10.50.

To place your order visit www.wwf.org.uk/shop or call 0870 7507023 and quote code 20003.

Offer ends 30th July 2008.



Letters

We're always interested to hear your views, so why not send us a letter? Write to *WWF Action*, Panda House, Weyside Park, Godalming, Surrey GU7 1XR or email action@wwf.org.uk

Herd instinct

I was dismayed to read in the February edition of *WWF Action* your article entitled *Plane Truths*. In it, the damage caused by animal production was diminished in comparison to aviation (partly by just referring to cows and ignoring other livestock).

WWF should be actively encouraging more people to reduce (and ideally eliminate) meat and dairy foods from their diet as a matter of urgency. As a recent UN report confirmed, animal rearing for meat and dairy production around the world is responsible for more greenhouse gas emissions (18%) than the entirety of global transport emissions.

This is before you take into account the other problems associated with animal rearing: land desertification/deforestation, water wastage, river pollution, inefficient use of limited resources and, last but not least, ethical considerations. In addition, more and more studies are being published every day confirming the health benefits of eliminating meat and dairy products from your diet.

Mr B Sharma, Surrey

Leila says: WWF agrees that controlling your consumption of meat and dairy is an effective way to reduce your ecological

footprint (log on to wwf.org.uk/footprint for more).

We do not believe it is WWF's role to ask everyone to turn vegetarian. However, we do work with suppliers and supermarkets to reduce the environmental impact of the food chain, because that's where we think we can have the greatest effect.

Asking people to consider how much they fly and then use alternative modes of transport is a key part of our wider campaign to reduce the UK's carbon dioxide emissions. Aviation is a rapidly growing industry and carbon dioxide emissions from this sector are rising fast. Furthermore, the additional non-CO₂ effects of planes at high altitude mean that UK aviation contributed approximately 13% of the UK's climate impact in 2005.

Blame game

Come on WWF! Wake up to the fact that, even if the total carbon emissions of the UK were eliminated, it would have absolutely no impact on global warming. For goodness sake, use what influence you have and put the blame where it really lies, with the heavy industries of the US, China and India – stop 're-arranging the deckchairs on the Titanic' by working on the Climate Change Bill.

Karen Yorke, Powys

Leila says: Increasing emissions from emerging economies such as China and India are indeed worrying. However, it's very important to remember that developed countries – such as the UK (and as you rightly point out, the US) are largely responsible for the greenhouse gases that have already been pumped into the atmosphere since the industrial revolution. Our historic contribution to climate change massively outweighs the current contribution of these rapidly industrialising countries. And as such we have a moral obligation to reduce our emissions first and foremost before we can expect developing countries to follow suit. Indeed one could argue that a substantial proportion of their emissions results from making products demanded by Europe and the US.

A robust UK Climate Change Bill could set an important precedent for other countries to follow and would send a message of hope to developing countries that we are taking our debt to the planet seriously.

Log on to wwf.org.uk/getonboard for more.

Correction In the Feb 08 issue of *WWF Action* we incorrectly labelled a caption in the feature entitled 'The green flag of the new Europe'. We said that residents were protesting against EU plans to construct a motorway through the Rospuda valley, where in fact residents were protesting against Polish government plans to construct a motorway through the area.



The winner of prize crossword 9 will win this beautiful book, *Panda*, by award-winning photographer Heather Angel, published by David & Charles Ltd. For further information visit www.heatherangel.co.uk

Ingenious!

Action readers share their green tips

You rose to the green challenge when we asked you for your top tips for eco living in our Ecover competition. Here are some of your suggestions.

Our central heating is only on for a short time in the morning, late afternoon and early evening. If I'm chilly during the day, I take a break and warm up by winding my wind-up radio vigorously!
Alix Cockcroft, Cheshire

If you're doing DIY, ask around friends and set up a 'power tool pool' to share tools between you. Most power tools spend their life gathering dust in a shed. **Susan Poupard, London**

We have used our old car tyres to build a rockery, rather than use rockery stone. Our 'rubbery' soon became a feature of our garden – once the plants have had the chance to grow and the tyres became hidden. **John Horton, Stevenage**



Toilet rolls are very useful. In winter, tightly stuff them with old receipts and corks and they make marvellous fuel for the wood burner. In the summer, fill them with soil, and use them to bring on your vegetable seeds. **Ben Collins, Norfolk**

Cut up old margarine or yoghurt pots to make plants labels and use the wider pots as seed trays – you will need to pierce some holes in the bottom to prevent waterlogging. **Ann Taylor, Dorset**

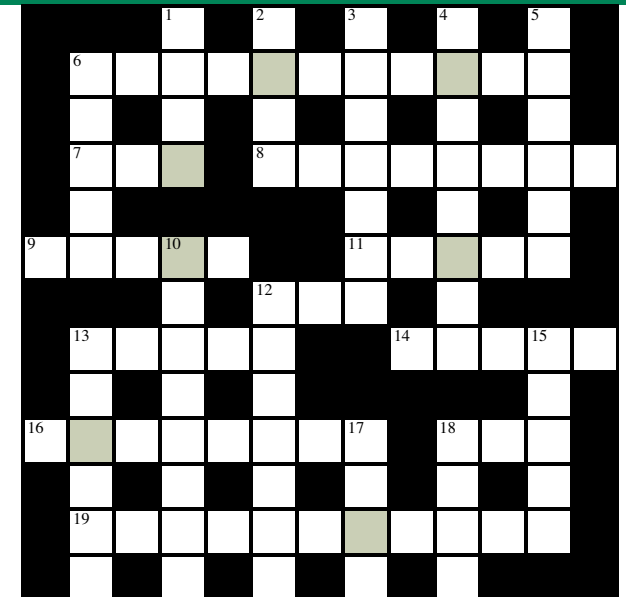
When cooking in smaller sized saucepans, I put a hob kettle on top of the pan instead of a lid to create 'free' hot water. I use this for washing up or put it in a thermos flask, where it stays hot for 24 hours plus! **Stephen Dransfield, Devon**



We recently made a draft excluder for our front door using the material of an old pillow cover. It works a treat. **Mandy Searles, Essex**



Fill hollowed-out grapefruit or melon skins with beer or fruit juice and place them around the garden as a natural way to kill slugs. When the skins rot, they can be dug into the soil. **Lesley Binney, Devon**



Prize crossword 9: June 2008

After solving the crossword, take each letter from the shaded squares (going from left to right and top to bottom) to spell out the prize word.

Clues Across

- 6 Critically endangered Pacific whale with a population a little over 100 (7,4)
- 7 How many distinct species (excluding subspecies) of gorilla are there? (3)
- 8 Ecological marine disaster which can take years to clean up (3,5)
- 9 Gamba __, destructive weed (nicknamed 'the green bulldozer') banned in Western Australia (5)
- 11 The illegal wildlife trade strips tigers and leopards, among others, of them (5)
- 12 Which tree belongs to the *Fraxinus* genus? (3)
- 13 Biofuel demand has been a factor in the soaring prices of this food crop (5)
- 14 A wintry forecast for the owl? (5)
- 16 The Day After __, global warming disaster film from 2004 (8)
- 18 'Natural' fossil fuel (3)
- 19 It describes resources which do not become exhausted (11)

Clues Down

- 1 European capital where Al Gore received the Nobel prize for his work on climate change awareness (4)
- 2 The ideal target for carbon emissions (4)
- 3 __ Nature, the government's former conservation watchdog (7)
- 4 Mount St Helens was responsible for this natural disaster in 1980 (8)
- 5 Employs pedal power in the name of environmentally-friendly travel (6)
- 6 Precious resource not necessarily on tap for many in the Third World (5)
- 10 The Knysna is an endangered species of what? (8)
- 12 San __ Fault, it's associated with California earthquakes (7)
- 13 A bird such as the ptarmigan or capercaillie (6)
- 15 Recycling plays a big part in reducing it (5)
- 17 __ farm, a producer of clean renewable electricity (4)
- 18 A desert that gives its name to a subspecies of brown bear (4)

Name (Mr/Mrs/Miss/Ms) _____

Address _____

Daytime telephone _____

The prize word is _____

Please return, by 30 July 2008, to: *WWF Action* crossword, Panda House, Weyside Park, Godalming, Surrey GU7 1XR or email your answer to crossword@wwf.org.uk