

# quarterly

2009.1

GREENPEACE



## Winds of Change

Counting Down to Copenhagen:

Why 2009 is an Historic Year for the Climate

ALSO IN THIS ISSUE: The Greenpeace Science Unit - The Exxon Valdez, 20 Years On

International

# quarterly 2009.1



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Dear Friends,

Welcome to the first edition of The Quarterly for 2009. For those of us in the northern hemisphere, this is the spring edition; an historic spring, for it is the last one any of us shall ever see in which there is still an opportunity to stop human induced climate change reaching escape velocity.

As I am sure many of you know, if we do not achieve an effective agreement at the Copenhagen climate conference this December, there will be almost no chance that we can prevent the world breaking the 2°C limit beyond which, science tells us, our children will face a world in which life will be nastier, shorter and more brutish.

Our children do not deserve that.

One can only watch with amazement at what has already happened in the months and weeks since the beginning of the year; and hope and despair have been uneasy bedfellows throughout this time.

On the one hand, the US Presidential Elections appeared to have ushered in a new hope that the most powerful nation on Earth will now take seriously its own role and responsibilities in addressing the climate crisis. On the other hand, the pillars of industry and banking have been shaken to the core, and the world faces an economic crisis of staggering proportions. One cannot help but observe how the economy and our ecology have become inextricably intertwined, too.

Science is showing that climate change is accelerating. The current recession is painful but it will end: our polluted climate may be about to pass beyond the point of no return. There must be no compromise on the science at Copenhagen.

The science cannot be changed; this means that the politics must!

When I attended the World Economic Forum in Davos in January, the mood was less upbeat than in previous years. And yet, those same politicians who said that dealing with climate change was too expensive, or that renewable energy was not yet affordable, have shown no qualms about spending vast sums almost beyond imagination on bailing out failing banks. Greenpeace has been quick to point out the inequality in governments' approaches to the different crises facing them: 'if the world were a bank, they would have bailed it out.'

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# introduction by gerd leipold executive director, greenpeace international

The new recession is a familiar form of crisis for world leaders to tackle. They will look into history and draw on the hard lessons of the past, and they will fashion their responses for today. But, they would do well to look to the bigger crisis looming ahead: the climate crisis.

The climate crisis if left unchecked and unaddressed, at a minimum, will make poverty permanent in the developing world and strangle growth in the developed. It raises the prospect of mass extinction, mass starvation and mass migration within the lifetime of our children.

Our children do not deserve that.

World leaders must work towards a financial recovery that is not just rapid, but also sustainable in the truest sense. The US, the EU and other 'rich' nations need to commit to greening their economies and eliminating the subsidies and other economic incentives that contribute to climate change. Other countries must do all they can to leapfrog dirty carbon-based development and shift to a sustainable energy future. Doing so will cut emissions, boost economies, and pave the way for a successful Climate Summit in Copenhagen.

Developed countries must agree to aggressive greenhouse gas emissions reductions at Copenhagen, they must put money on the table to help the developed world adapt to climate impacts and to mitigate future emission growth. They must also provide money for forest protection, preserving the tropical rainforests is a simple way to tackle one-fifth of the global warming problem.

In this issue of The Quarterly, you can read of the closing stages of Greenpeace's 2008 'Quit Coal' tour, which ranged across the globe from Southeast Asia to the Mediterranean and Europe, leading up to the climate negotiations that took place in Poznan last December. These negotiations served as a prelude to those that will take place this year; and we explain what a good deal for Copenhagen must look like. There is advice on how you can make your own, invaluable contribution to using 'smart power' in the comfort of your own homes.

December 2009 is close and getting closer - and there is a whole 'alphabet soup' of impressively-named international meetings en route; Greenpeace wants world leaders to take personal responsibility for the talks leading up to the climate summit in Copenhagen. We want them to sign up to attend the summit and to guarantee a good deal for the climate and for current and future generations.

Can our children act this year to stop climate change? No they can't. Can we?

Yes, we can!

Gerd Leipold,  
Executive Director, Greenpeace International



Hundreds of Greenpeace activists from across Europe blocked the exits of the Brussels building where EU finance ministers were discussing funding for developing nations to tackle climate change. Activists displayed banners in several languages asking EU politicians to "Save the Climate" and "Bail out the Planet". The Greenpeace activists 'sealed' the building and called on ministers not to come out without money on the table to tackle climate change, rather than to continue dishing out billions of taxpayers' money for failed banks and car manufacturers. Police moved in and made a number of arrests.



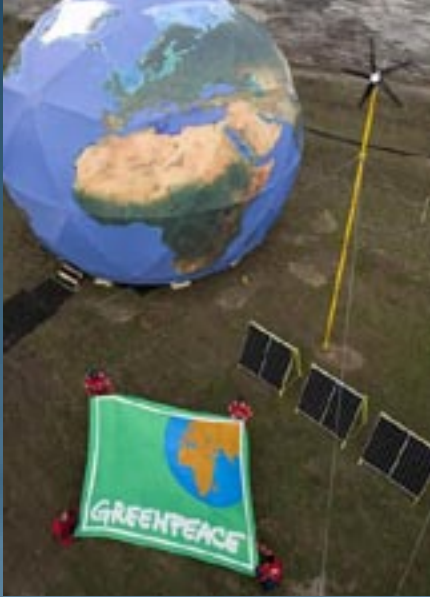
In March, Greenpeace China launched Climate Countdown, projecting a message on the Yong Ding Gate that read 'Time is Running Out to Stop Global Warming'. We called on the Chinese government for strong climate rescue actions, and for the President of China, Hu Jintao, to personally attend the Copenhagen Climate Summit and work with world's leaders to come up with a binding treaty to stop global warming.



Activists unfurled a banner under the Rio-Niterói Bridge with the message 'World Leaders: Climate and People First!' in Guanabara Bay, Rio de Janeiro. We were sending a clear message to the leaders of the 20 richest nations in the world (G20) who were gathering in London to discuss the global economic crisis.



# catalysing an energy [r]evolution the climate rescue station



Greenpeace campaigners and press officers from 15 different countries visited the Climate Rescue Station to tell the story of how coal is affecting the entire planet. Among them was Lisa Vickers, from Greenpeace International's Communications team. Lisa recounts for us here her visit to the Station – and recalls how, through the cold, the mud and the smoke belching from the coal-fired power-plants – hope still manages to shine through...

## Climate Rescue Station

As part of our global 'Quit Coal' campaign, Greenpeace set up a 'Climate Rescue Station' on the edge of a vast open-pit coal mine in Konin, Poland in late November. Kick-starting our campaign against coal in Poland, it marked the final and most important stage of our Quit Coal Tour, which had taken us from Oceania and Southeast Asia to Europe and the Mediterranean; crucial UN climate negotiations were taking place in Poznan, Poland in December.



I joined the Climate Rescue Station as a blogger and activist - consisting of a camp set around a four-storey-tall globe, the Rescue Station was to be the focal point highlighting the true cost of coal in the lead up to the UN negotiations in Poznan - and it quickly became a popular talking point amongst the delegates. A bright blue speck perched on a man-made cliff next to the state-owned lignite (brown coal) mine, our 'miniature Earth' had been placed there to show that if we back away from coal and the precipice it is driving us towards, there is still time to save the climate.

I arrived just as winter was bearing down on Poland - the very first thing I noticed about the country was how very cold it was! I'd come prepared - with hat, scarf, gloves and about a million layers of clothing - but I never truly felt warm from the moment I stepped off the train. The idea of climate change really seemed quite appealing here - if it were not for the fact that it brings with it a barrage of catastrophic impacts that will affect every single one of us, I could have quickly become convinced that global warming was actually a good thing! But with global warming looming as the greatest single threat humanity has ever faced - and with coal being the single greatest cause of this - I was ready to jump into action against dirty coal despite the freezing temperatures. And I hadn't been at the Rescue Station for much more than five minutes before I was being herded into preparations for an action the following day.

As the sun rose the next morning, 22 of us (including activists from Poland, Germany, Hungary, Romania, Austria, the Czech Republic, Switzerland, the Netherlands, Belgium and the UK) launched ropes over the cliff-edge on the side of the mine opposite the Climate Rescue Station. It was a long way down; I hadn't expected it to be so steep and so high but, before I let my nerves get the better of me, I pushed my feet into the muddy slope, grabbed the rope and somehow managed to end up at the bottom of an almost vertical cliff that must have been at least 30 metres high. As soon as I let go of the rope and turned around I got both my feet stuck in thick sloppy mud up to my knees! Every time I had one foot free I couldn't find a better place to put it, apart from into even more deep goeey mud. My heart began racing and I had almost resigned myself to being stuck there forever - or until a security guard or the police pulled me out again - when luckily Mieke, a Belgian activist, reached out with her hand and helped pull me out onto some more stable ground. I was free!

Despite some security workers trying to pull us away, we had all managed to slide down and make our way towards the centre of the open mine. We wrote 'STOP' on top of the coal with white chalk powder because we think it's crazy that the Polish government is expanding this mine (and is also building a new one!). But it's not just Poland killing the climate with coal - it's countries across the

globe, from New Zealand to Thailand, from China to the Netherlands, and all over the USA. New coal-fired power plants are being built and new mines are opening up almost in spite of the fact that everyone is talking about climate change and the urgent need to reduce CO<sub>2</sub> emissions.

As some of the activists were being pushed and pulled around by the workers I saw our photographer struggling to keep his camera. Seconds later, a bulldozer started driving towards us at some speed. It ploughed through our chalk letters, began reversing into us, and then drove forwards again towards other activists who were just trying to hold up banners. But, once the workers realised that we were not trying to interfere with their work, and that our protest was not against them but their government, they realised that their aggressiveness towards us was misplaced - one even held a banner with me and began teaching me Polish!

The police eventually took us away in vans to Konin. While peaceful activists were driven to the police station at high speed with sirens blaring, politicians remained asleep at the wheel - driving the world towards a climate crisis. Before we were all released again, I was charged with 'violating the domestic peace'. How very ironic - the coal industry is much more guilty than I am of doing that; global warming is literally forcing people out of their homes.

The next action in Konin involved the occupation of a coal-fired power station smokestack by several of our climbers for three days. It was very hectic - we were dealing with herds of journalists from all over the world. Many came from Poznan, wanting to use the occupied smokestack and our Rescue Station as backdrops for their reports on the climate talks. As the climbers, still on the smokestack, settled into their sleeping bags for a third night, we projected messages directly onto the power plant - calling on the Polish government and the rest of the world to 'Quit Coal' and to start an 'Energy [R]evolution NOW!'. In temperatures below freezing, the climbers only managed to catch a few hours of sleep as carbon dioxide and a cocktail of other toxic gases poured out into the atmosphere above their heads.

Our coal campaign will continue throughout the 2009 in many countries and we'll be pulling out all the stops in the fight against climate chaos. But I have one last - and lasting memory - of my stay in Poznan. One night, we launched floating lanterns into the night sky over the coal mine. Little, biodegradable, flame-lit balloons, each one carrying our personal messages as they drifted up and over the Climate Rescue Station like gigantic fireflies. I stood shivering, watching my lantern get smaller and smaller until I couldn't see it anymore...

But then I had my chance to make a wish...



## Lisa Vickers

In 2004, Lisa Vickers signed up to the Greenpeace website as a 'cyberactivist' and won a competition to volunteer in China during the 'Rice is Life' tour. Since then, she has been blogging regularly about Greenpeace, and now works as an online communications specialist with Greenpeace International in Amsterdam.

Originally from Bermuda, she studied the island's fragile ecology for several years. Bermuda is frequently in the direct path of hurricanes, and Lisa became increasingly worried about the impact of more frequent and stronger storms and increasing water temperatures resulting from climate change. "One of my more selfish reasons for wanting to stop climate change is to protect the beautiful marine and terrestrial environment that I have become so deeply attached to in Bermuda."



# catalysing an energy [r]evolution the path to poznan



**From the coal mine in Konin, the Climate Rescue Station travelled to Poznan, where it continued to highlight the urgency of addressing climate change. Greenpeace International's Jessica Miller was in Poznan, and she takes up the story...**



## Concert for the Climate

Poznan in Poland played host to climate talks in December 2008, in the lead up to the COP 14 climate talks to be held in Copenhagen, Denmark, later this year. Over 8,000 delegates attended from all over the world.

The Climate Rescue Station was relocated from Konin to Poznan's Plac Wolności (Freedom Square). During its stay here, it played host to a 'Concert for the Climate' featuring the Britten Sinfonia and the talented young Finnish violinist, Pekka Kuusisto. The concert was opened with messages from Bianca Jagger and Executive Secretary of the UNFCCC, Yvo de Boer. Bianca Jagger's message was clear: she talked about the need for action by industrialised nations and called for an energy revolution. Shortly after, Yvo de Boer addressed the growing crowd from the stage in the Climate Rescue Station. He spoke about the work that Greenpeace has done to raise awareness on climate change. He also called for a continuation of that work and a need for everyone to look towards solutions.

For the last 14 years, the government leaders have been meeting to discuss climate change at the United Nations Convention on Climate Change (UNFCCC.) Two years ago in Bali, governments pledged to nail down an international agreement to tackle climate change by the 2009 UNFCCC. One year on from Bali, temperature increases, global emissions rises, and loss of ice at both the Arctic and Antarctic had all overshot scientists' worst case scenarios.

Progress on climate action over the last year was slow at best, so what was originally an extremely ambitious programme was under even more pressure to deliver at next year's meeting. All eyes turned to Poznan, Poland in December 2008, as government leaders gathered together to develop a detailed work plan to get the job done.

I joined a Greenpeace delegation of policy experts and campaigners attending the UNFCCC – not only to bring back the story of what happened at this year's negotiations, but to bring your messages and photos to the UNFCCC; we invited you to join activists around the world by uploading your photo to be projected at the meeting, reminding government leaders that the 'World is Watching'. More than 17,000 of you took action to let them know that it was time to get serious, and UN Secretary-General Ban Ki-moon reminded delegates of this himself when he opened the high-level segment of the UN Climate Change Conference.

There were hard-hitting actions throughout Europe as the 'Quit Coal' tour progressed through Denmark and Poland. In Germany, 29 of our activists protested at the open-pit lignite mine, Jaenschwalde in Lausitz, against further use of this climate destabilising fuel. French activists plastered Paris with posters - parodying the two-toned Obama posters appearing all over the US at that time - encouraging President Sarkozy to commit to a 30% reduction in greenhouse gas emissions by 2020 with Obama's same 'Yes you can!' message. While activists were scaling a smokestack at the massive coal-fired power station only an hour-and-a-half away from Poznan, other activists in inflatable boats moved into the coal terminal of the Enstedværket power plant in Aabenraa, Denmark - here, a team of ten occupied a crane while others protested Denmark's coal-powered energy policy from the water.

The Climate Rescue Station moved right into the centre of town in Poznan as thousands participated in the Global Day of Action midway through the negotiations. Greenpeace volunteers in 23 countries from Australia to Italy to Mexico to the Philippines to Turkey to the US joined or led a series of protests, demonstrations and outreach events to ensure that Ministers arriving in Poznan would listen to the will of their citizens, and get serious about climate action. The message was clear: in order to save the climate, the world has to quit coal, commit to starting an Energy [R]evolution and stop destroying our forests.



Poland, Global Day of Action

Here's a simple breakdown to what we'd been hoping for in Poznan:

- A 'shared vision' for the future. Not a 'wouldn't it be nice' kind of vision, but a 'safe healthy planet' kind of vision – and an action plan to achieve it. As the Japanese proverb goes, a vision without action is just a daydream.
- Draft negotiating text on the table - make good on the promises that were made to all of us at last year's meeting in Bali. We were promised a completed plan by Copenhagen in December 2009 - if this was ever going to happen then our leaders needed to start getting serious about it.
- A detailed work plan - if an action plan is going to be successful, then there needs to be a work plan! Our leaders needed to agree to the next steps to be taken and a timeline for the action plan.
- An agreement from developed countries on big cuts in greenhouse gases. These must be at the upper end of a 25-40% range that IPCC scientists identified last year as the targets with the best chance of keeping global temperature increase below 2°C.

So, did we get what we hoped for?

We were disappointed with the lack of progress made at the UN climate negotiations - together with a depressingly diluted EU climate package. But at least the pressure we all (and I mean everyone who sent a message, signed a petition, uploaded a photo for Greenpeace or any organisation) generated was enough to stop things from going backwards! It's obvious that decision-makers know the world is watching.

We have shown coal to be the biggest roadblock to saving the climate, and put the industry on the defensive; preventing key plants from being built, improving government legislation, gaining government commitments, winning legal support for our position and leading the fight against the 'clean coal' myth.

The road towards the next UN climate meeting in Copenhagen next year is going to be a long one - but we'll be campaigning for an Energy [R]evolution and we're going to need your help to make it successful!



### Jessica Miller

Jessica first became involved with Greenpeace as part of the activist network in New York City in January 2002 and spent 6 years working for Greenpeace USA before moving to the online communications team at Greenpeace International. When she isn't at her desk in Amsterdam, you can sometimes find her training activists in NVDA (non-violent direct action), climbing and driving boats.



### Polish Polar Bears

Among the attendees at the Poznan climate talks were some homeless polar bears, who appeared in various places around the city while the meeting took place.

The change they were looking for wasn't to be found in people's pockets; symbolic of the climate change threat to both the environment and to biodiversity, they were urging leaders to think about the damage being wreaked by global warming, and to make those changes that could begin to save the climate.

Polar bears popped up in Bali during UN climate talks in December 2007, and here they were again in Poland in 2008. Perhaps these bears will be bearing witness to climate change in Copenhagen, too, before the year is out...



# catalysing an energy [r]evolution counting down to copenhagen

With the Climate Rescue Station dismantled for now, and delegates heading home, Cindy Baxter takes up the story... and contemplates the road to Copenhagen that lies ahead...



Cindy Baxter

*'It's incredibly frustrating knowing that if the world had taken proper action way back in the early '90s, we'd be in a much better place today. The climate science is getting very scary and reminds us, weekly, how urgent the issue has become. The good news is that so many more people are engaged today, so we have a chance of stopping at least some of it. It IS possible to get there, but I know that making sure we do will keep me occupied for the rest of my working life.'*

Cindy Baxter is a New Zealander who began working on climate change in 1988, joining Greenpeace in 1991. She is particularly obsessed with the long-running, big business-funded campaign to undermine climate science, and exposed ExxonMobil's funding of the climate sceptic industry, through the Greenpeace website [www.exxonsecrets.org](http://www.exxonsecrets.org), launched in 2004, which she's still involved with.

She is currently leading Greenpeace's communications work around this year's long list of international negotiations to strengthen international climate action, which conclude at December's Climate Summit in Copenhagen.

As we wearily left Poznan after the climate talks, our photo of a homeless polar bear hitching a ride to Copenhagen was winging its way around the world's media. He'd given up on hoping that the meeting would make any progress and was now pinning his hopes on this year's December climate summit in Copenhagen. And he was right. The last vestiges of the Bush climate-wrecking ball continued to the end.

Now we're in 2009, and looking at what we need to achieve this year for the climate. It's all just a little bit daunting – that's if you just look at the impacts.

The climate science is getting increasingly urgent and the impacts are starting to kick in. The world has witnessed this year's first victims of climate change – at the time of writing, it was being predicted that the final death toll from the horrific Australian bushfires would reach 300. Scientists are telling us that a massive ice shelf is likely to break off in the Antarctic – either in a few weeks' time or before the year's end. We're all looking to the Arctic to see if the summer ice-melt will beat another record this year. And meanwhile, the economic crisis continues...

This year is crunch year for the climate. The climate summit in December is our best chance to get this right – for governments to agree a deal which really tackles climate change.

But there is a massive difference between Poznan and the ongoing climate negotiations this year. President Obama. This is the man who has promised to take on climate change and bring one of the world's largest emitters of CO<sub>2</sub> back into the international talks. Obama cannot only take steps on the home front, he must also take leadership on the global stage. He can – and must – help rebuild trust in the developing world, the trust that George W. Bush has spent eight years damaging.

China is the other largest emitter, and a huge influence in the developing world, especially on the climate issue. If President Obama and Chinese President Hu Jintao, when they meet in April, can agree to work together on shifting economic growth to a low-carbon pathway and taking on climate together, this would provide the leadership we've been waiting for. They can take that through to the G8 meeting in July, and to their negotiators in the climate talks.

For me, 2009 looks like a year of sitting in endless UN meetings, working to pressure the negotiators to do the right thing, talking to media and working with Greenpeacers, our ships, our supporters - and other environmental organisations right around the world. This is the year where I don't get to spend time in my garden; where my friends and family will have to get used to not seeing me; where every ounce of my energy is going to be spent on getting the best possible deal for the climate. I'll be permanently somewhere else - but for the best reasons. It is possible - so much more possible now than it has ever been. Both exciting and daunting at the same time.

What is clear to all of us is that we simply can't get the job done on our own. This is the year when the gloves need to come off. Governments won't act if they don't feel the pressure. Everybody needs to mobilise for the climate this year – be it in your local community, writing to your Head of State, going on a march, or taking non-violent direct action. Whatever suits. But sitting back and doing nothing - that's no longer an option!



## checklist for copenhagen: what a GOOD climate deal looks like:

### **Governments must translate their stated concerns about climate change into real action.**

- Industrialised countries must agree to cutting their emissions by 40% by 2020;
- They have to come up with real money to help the developing world make the transition to low carbon economic growth,
- They have to come up with money to help the developing world adapt to the climate impacts they are already facing,
- ...And they have to come up with money to protect the world's tropical forests from deforestation, in a way which recognises the rights of indigenous peoples and biodiversity.
- They must see the economic crisis as an opportunity to reconfigure the way economies grow – both north and south, and resist the pressure from power companies and car manufacturers to continue subsidising carbon intensive projects, instead shifting that investment into clean technologies.





# catalysing an energy [r]evolution take action! get smart!



## The Greenpeace Energy [R]evolution sets out a future scenario to more than halve the world's CO<sub>2</sub> emissions from fossil fuels by 2050, making 30% cuts by 2020.



The Greenpeace Energy [R]evolution sets out a future scenario to more than halve the world's CO<sub>2</sub> emissions from fossil fuels by 2050, making 30% cuts by 2020. This mammoth task needs a big effort on all fronts; a huge renewable energy investment, and ultimately closing nuclear and coal-fired power plants. A somewhat neglected part of the puzzle is the role of electrical efficiency at work and at home. Greenpeace is calling all the various ways of achieving this energy efficiency 'Smart Power'. We're not just talking about individuals' behaviour at home, getting Smart also means tougher standards on new models, constantly improving industry regulations, and banning bad, inefficient products.

With these sorts of statistics, our 'Quit Coal' campaigns can clearly illustrate the cumulative impacts of saving energy.

Smart Power also shows that while nuclear energy is dangerous, expensive, and too slow to combat climate change, it is also completely redundant. The wasted power from inefficiency in just Europe and the US is equivalent to the output from about 724 nuclear power plants. That's more than the number of nuclear plants operating in the world today, including the ones under construction!

### What is smart power?

Can you shrink your power-use to meet a 'budget' of 550 kWh a year? As an example, a single person living alone who meets this budget could have:

- a fridge (A++, approx. 156 litres)
- an oven (55 cm best-practice electric oven)
- a TV (e.g. a best-practice LCD with 66cm diagonal screen width)
- a best-practice radio
- a best-practice CD player
- an efficient laptop computer
- lighting from compact fluorescent lamps
- a best-practice washing machine

Of course, more people in the house means a higher energy budget, with greater efficiency from sharing things like the fridge, TV and washing machine.

This calculation excludes heating and cooling. You can work out how many kWh per year your house consumes by looking at your electricity bills.

### Get smart, close a power plant

To show how efficiency can cut the world's carbon emissions, Greenpeace has calculated how many power plants could be closed down with a range of Smart Power measures. About 61% of the electricity we use is just being thrown away by poor technology and practices. That's two-thirds of the world's power demand that simply doesn't need to be produced in the first place.

This global waste is equivalent to 5 billion, 718 million tones of CO<sub>2</sub> every year; an amount comparable to all the emissions of China or the US. If we could stop all this waste it would be like shutting down 1,635 dirty coal-fired power plants.

Consider standby power: the trickle of electricity that appliances use for the clock or the remote sensor even when they're not in use. Right now, the equivalent of 62 coal-fired power plants is needed to run all the standby power in buildings, globally. Of these, 50 could be shut down just by getting rid of standby or setting strict minimum standards.

### Smart power is fairer

Did you know that the average person in the developed world uses between 1500 and 3400 kWh a year, not counting their heating and cooling load? In the developing world the average is more like 100 to 400 kWh a year.

What we don't often admit is that much of the 'oversupply' in rich nations is just wasted power. So it is possible to get to a fair middle ground, but this would mean dropping electricity use (aside from heating and cooling) to about 550 kWh a person a year.

If we all lived within the 550 kWh a year limit, we would make the developed world's household allocation three to six times smaller, while increasing the allocation to the developing world by one-and-a-half times. But this is only possible with Smart Power.



## Things you can do now: how to have smart power at home

Smart Power doesn't mean freezing in the dark.

Greenpeace has published a handy guide to saving energy at home. The 'How to save the climate' booklet has plenty of tips and tricks for those who want to make personal changes. These days, everyone knows about light bulbs, but some of the things you may not have thought of include:

- Insulating your house. Proper insulation slashes up half a home's energy waste from heating or cooling.
- Letting your computer rest! Shut down when you stop working, and unplug it from the source. And a laptop and flat screen is more efficient than a desktop model
- Fridges are on 24 hours a day. Put your fridge in a cool place - never in the sun or by a heater. Make sure the seals are intact and vents free of dirt. Of course, when it's time to replace, make sure you get the most efficient model available.
- Don't heat or cool more than necessary – 18 to 20 degrees is enough for most living areas – with every degree less of heating in winter you save about 6% on the bill.
- Think: do you really need it? Remember the two aims of Smart Power, to tackle climate change, and distribute the world's resources more equitably.

Download your own booklet full of information like this from: <http://www.greenpeace.org/international/press/reports/how-to-save-the-climate-pers>

Article by Rebecca Short

## greenpeace smart power campaigns

Around the world, we have been winning campaigns to ban inefficient product like light bulbs. This is just the beginning, there's plenty of scope.



### Argentina

Enforced a phase out of incandescent bulbs by 2010, after a Greenpeace campaign.



### Ireland

early movement to ban incandescent bulbs by 2009, providing an example for the whole EU.



### France

Ban the Bulb = No new EPR (European Pressurised Reactor) – this campaign showed efficiency as a solution to building nuclear energy.



As Greenpeace's Science Unit settles in to brand new laboratories at Exeter University, in the UK, Steve Erwood talks with the team who bring Greenpeace its scientific credibility. Come up to the lab, and see what's on the slab...

## Exeter marks the spot

While putting the finishing touches to the last edition of *The Quarterly* towards the end of last year, I found myself talking with Paul Johnston, the head of Greenpeace International's Science Unit, about a completely unrelated topic when Paul suddenly said: 'You know what? You want to do a profile about the Science Unit in your magazine. People would like to read that, and since we're just moving from our old labs to brand new ones it's a good time to do it.'

I offered Paul my apologies – the 'Africa' issue of *The Quarterly* was more-or-less finalised, and besides which I wasn't entirely sure what I could write about the Science Unit. I mean – they're the guys in the white coats, right? They do all the weird and wonderful stuff involving test tubes and microscopes and Bunsen burners (I bet they don't get out much...) and I guess the new laboratories are just the same as the old ones (...actually, how would I know? The Unit's not based in Amsterdam, and I've never even seen the labs for myself). What's more, those guys have been doing their stuff for years already (now, how long exactly has Greenpeace had a Science Unit?), and it must all be pretty

boring... (even though they are all great people, and whenever I saw any of them, they're always telling me fantastic stories...).

It gradually dawned on me that – actually – I didn't know a great amount about the Science Unit or Paul and his colleagues' work. And if I knew so little about it, I could be pretty sure that a great many people wouldn't even realise that Greenpeace had a whole bunch of fully qualified scientists working for it – and highly regarded ones at that; in fact, Paul was named as one of the top 100 green campaigners of all time by the UK's Environmental Agency a couple of years ago. So, yes – Greenpeace does have some guys in white coats – and perhaps it's time to hear a little bit more about them, and why their work is so important to Greenpeace's success...



‘Over the years, I have always felt unbelievably privileged on the occasions when I have sailed on the Greenpeace ships. I have always been a little in awe of the folk who crew these boats, get them from A to B, and their sheer commitment to what they do. So, it was a bit of a surprise, therefore, when – on a sampling trip using a small boat, crewed by no less than two Greenpeace ships’ captains – we ran aground on a ruddy mudbank!’

Paul Johnston



The ‘Greenpeace Research Laboratories’ are based at the University of Exeter in the UK. The Science Unit provides scientific advice and analytical support to Greenpeace offices worldwide and over a wide range of disciplines, including toxicology, organic and inorganic analytical chemistry, biochemistry and terrestrial and marine ecology. The laboratory facilities enable them to carry out research and analysis – particularly, analysis of contaminated materials - in-house. In addition to their research activities, the Greenpeace scientists also actively participate with the University of Exeter, running tutorial courses and supervising final year undergraduate projects within the School of Biosciences.

Having a dedicated Science Unit means that scientific analysis and research can be highly targeted to the specific requirements of Greenpeace campaigns, both in terms of what research is carried out and the speed with which it can be carried out when needed. And, with the move to their new laboratories at the University, the Science Unit staff are highly confident that the quality of their work will get better and better. The new laboratories

are equipped with modern facilities for sample-handling, enabling them to work more efficiently. At the same time, the state-of-the-art analytical equipment will help to strengthen the Science Unit’s credibility in the scientific world, which in turn will bring many benefits for Greenpeace.

The move is especially welcomed by one of Paul’s colleagues, David Santillo: ‘It’s an opportunity to work more comfortably on the many projects that are already lining up for 2009 and beyond, especially in support of the coming Water Project that will run in Argentina, Thailand, India, China and elsewhere. It’s a chance to rationalise and consolidate our equipment and resources, and increase the extent to which we can provide science skillshares and training to our Greenpeace colleagues...and it gives us the possibility, at long last, for the Science Unit to seek formal accreditation for its methods, a development that has been prevented to date by the simple lack of a secure door between our equipment and that of the other researchers here at the University!’

# people and places the greenpeace science unit

The precise origins of the Science Unit become clearer to me when I ask the guys what had brought them to Greenpeace in the first place. Paul's answer is typically straightforward: 'More correctly, what brought Greenpeace to me. It was 1987, and Greenpeace phoned the University of London to ask if there were any scientists available to take part in a 10-week project; I took that call!'

Following that project - an investigation of pipeline discharges that involved a complete circumnavigation of the UK - Paul continued to work with Greenpeace, and the Science Unit evolved from this relationship. It's a development he's understandably proud of: 'With the Science Unit, we've managed to gather together a really talented group of people, and I've watched them work and achieve positive changes all over the world. Over the last 20 years, the Science Unit has been involved in all of Greenpeace's key campaigns - it's so important to Greenpeace to be able to challenge scientific mindsets at the highest levels.'



## Paul Johnston

Paul set up the Greenpeace Research Laboratories at London's Queen Mary College in 1987, and has continued as the principal science since the group relocated to the University of Exeter in 1992. He obtained a PhD in 1984 from the University of London on selenium toxicity in aquatic invertebrates. Paul now has over twenty years' experience in providing scientific advice and expertise to Greenpeace offices all over the world.

Iryna Labunska, an environmental chemist and radiation safety advisor, also joined Greenpeace's growing scientific community in the very early days: 'I joined with a great enthusiasm, because the work allowed me to use my knowledge and expertise to help protect the environment from ongoing contamination. Also, the position gave me the possibility to present my findings independently and at all political levels.'

I ask Iryna which project she's worked on has made her the proudest. 'It's difficult for me to choose, really, because so many projects I've been involved with have made me proud and rewarded me in one way or another. But, one of the most recent projects that really touched my heart was the project on the 20th anniversary of the Chernobyl catastrophe.'



## Iryna Labunska

Iryna graduated from Kiev State University in 1980 with a Masters degree in chemistry. In 1991, following research into chemical reaction kinetics at the Ukrainian Academy of Science, Iryna began to work with the Kiev Laboratory of Greenpeace, which she managed from 1993 until joining the group at Exeter in 1995. The main focus of her work is to provide scientific advice and analytical support to the toxics and nuclear campaigns.

A veteran of 15 years service, David Santillo saw the Science Unit as an 'opportunity to use my scientific background and skills to the benefit of our environment, and the chance to get involved in a broad range of contemporary issues at the interface between science and policy. Rather than spending another three years staring down a microscope counting plankton, or spending six months a year working from a converted whaling station in South Georgia'. David, a marine and freshwater biologist and environmental chemist, has provided scientific advice and analytical support across many Greenpeace campaigns over the years, with a particular focus on the oceans and toxics campaigns, but increasingly on climate and energy issues.

'Science is one critical part of the way in which we understand the world around us and how it responds to the ever-growing impacts of human activities,' David explains. 'Having a dedicated Science Unit helps Greenpeace to engage at a technical level in a wide variety of debates, developments and policy discussions, to contribute unique data and critical analyses to those processes, and to underpin its campaign objectives and activities with compelling evidence. Scientific credibility is clearly important to Greenpeace, and ensuring the quality of scientific output from all levels of the organisation is a key function of the Science Unit.'



## David Santillo

David obtained a degree in marine and freshwater biology in 1989 and a PhD in marine microbial ecology in 1993, both from the University of London, before continuing with postdoctoral research into nutrient pollution in the Adriatic Sea. A senior scientist, David joined the Greenpeace Research Laboratories in 1994 and now has more than 10 years' experience in organic analytical chemistry and development of policies for environmental protection.

With what he describes as 'a passion for science and a strong desire to work in a positive context', Kevin Brigden started out as a volunteer, then returned in 2000 (after a 2-year break) as a member of staff. With a background in chemistry, Kevin specialises in toxic chemicals, with a focus on heavy metals: 'That's mercury, lead, etc., not loud rock music,' he's quick to point out.

Kevin's proud of both the analytical work the Science Unit carries out, and the political aspects it involves. 'I've been involved in analytical research programmes that highlight the contamination of the environment by hazardous chemicals as a result of the inappropriate recycling and disposal of waste electronic equipment; we've been able to demonstrate these impacts in China, in Russia, in India, in Ghana. The research has had an influence on manufacturers and on national and regional regulations on the use of hazardous chemicals and the way in which electronic devices are dealt with at the end of their useful lives. I've personally been able to input on scientific and technical aspects of developing regulations – such as the recently agreed United Nations Environment Programme's international treaty on mercury.'

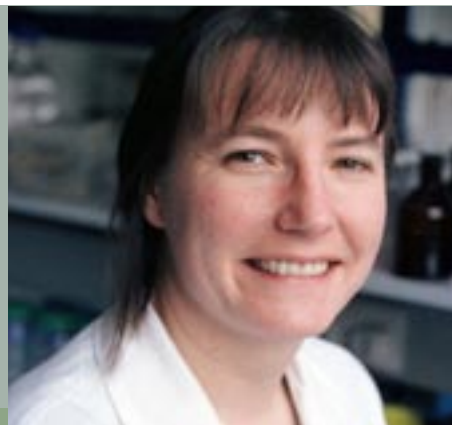


## Kevin Brigden

Kevin gained a degree in chemistry from the University of Sheffield, followed by a PhD in synthetic organic chemistry from the University of Sydney in 1996. He worked as an analytical chemist and scientific advisor for a company supplying essential oils and conducted research into the feasibility of non-wood-based paper production before joining the Greenpeace Research Laboratories in 2000.

Janet Cotter trained for several years as an environmental scientist, but in 2000 was looking to apply her skills outside of academia. She'd already been a Greenpeace supporter for a number of years, occasionally being involved with UK local groups. When the Science Unit was looking for scientists to help with, among other things, the new challenges of genetically-engineered crops, Janet applied and the rest was history. 'I hadn't done a job like it before, and thought I would try it for a couple of years to see if I liked it. That was over 8 years ago, and I've never looked back. Every day is different, and you never know quite what to expect when you walk in the office in the morning. Our campaigners face many technical issues and need scientific explanations that non-scientists can understand but which remain accurate – for example, when they're explaining the dangers to wildlife of GE insect-resistant crops to a government minister or a journalist – now, that's a challenge!'

For Janet, one of her biggest successes was the case of GE papaya contamination in Thailand. Greenpeace had taken samples of papaya fruit – a mainstay of Thai cuisine – that tested positive for GE contamination by an independent lab. But, when Greenpeace took action against the contamination, our activists were arrested. 'The Thai authorities did not believe the results,' says Janet. 'I spent ten days in Thailand at various meetings of government officials and scientists. Eventually, they believed us enough to take their own samples, and all of these tested positive for GE contamination. The government acted to quickly test and destroy any papaya trees that were contaminated in order to contain the GE pollution, and the charges against our activists were dropped. Thai papaya was saved!'



## Janet Cotter

Janet was awarded a degree in geology and geochemistry from Manchester University in 1987 and a PhD in soil science from Imperial College, University of London, in 1991. She worked as a NERC postdoctoral fellow at Manchester University and as a lecturer in plant and soil science at Aberdeen University before joining Greenpeace as a senior scientist to support the Ancient Forests and Genetic Engineering campaigns. Janet now has several years of experience in providing Greenpeace with scientific advice and technical support on genetically-modified organisms.

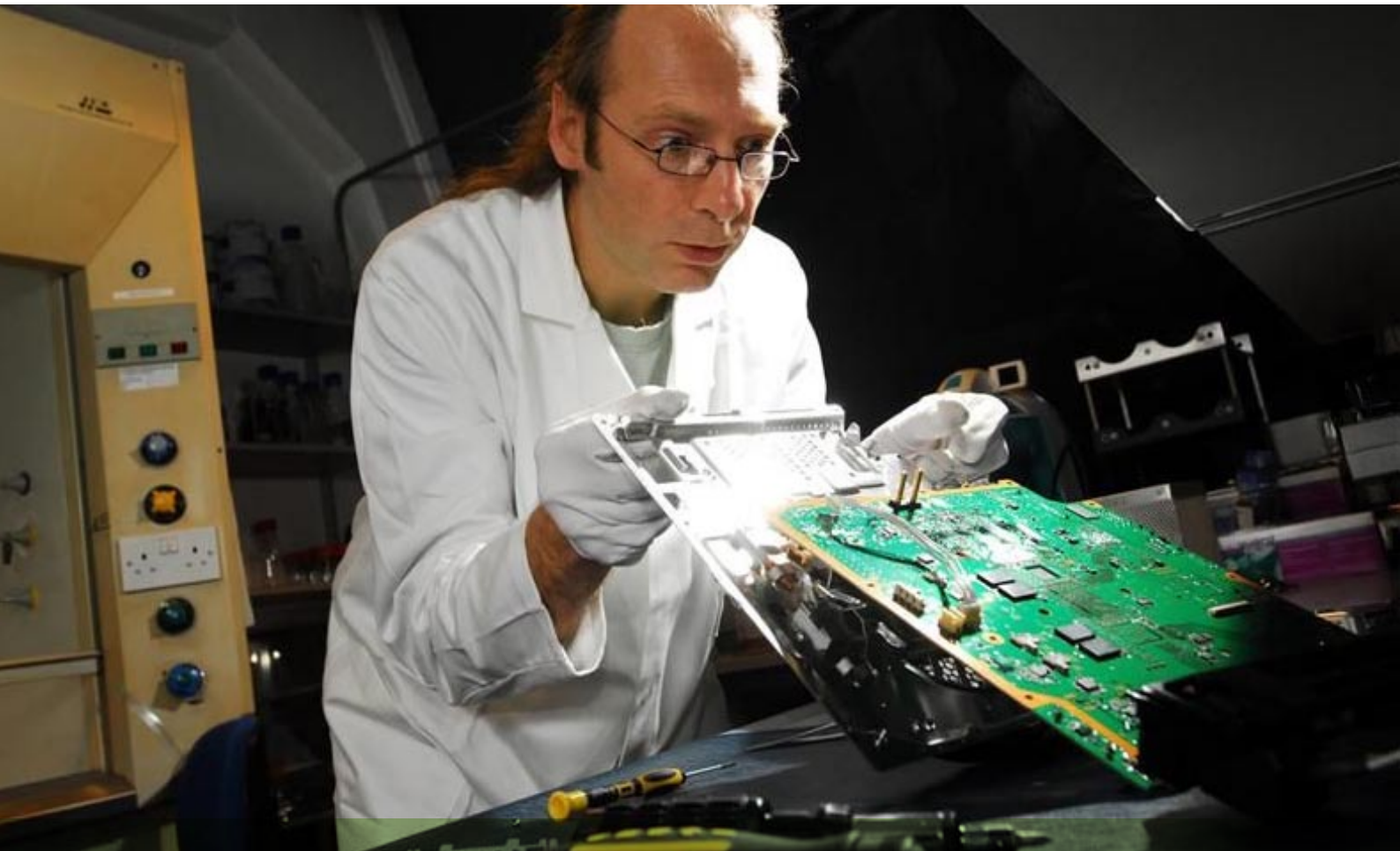
The newest addition to the team is Reyes Tirado, a plant ecologist working around agriculture issues, from water pollution from agrochemicals to how farming can help in the fight against climate change. The Science Unit was the first job Reyes ever applied for, and she sees it as a unique opportunity to combine her scientific background with environmental activism. 'A dedicated Science Unit is a sign of the importance that Greenpeace, as an environmental NGO, gives to scientific research,' says Reyes. 'It shows a vision of science working for the environment.'

Reyes is certainly enjoying her work, two-and-a-half years in. 'I love doing field work around the world, for example water sampling in Asia last year. I get to meet people in their daily life, like rice farmers in the Punjab in India, or in Thailand, who warmly open their homes for us and want us to learn about their work and life. It feels meaningful to me to work on issues that are perhaps viewed as passé by 'cutting-edge' science – such as water pollution from fertilisers – but that are still very relevant for people's lives in some places. And, working for the Science Unit gives me the opportunity to keep up-to-date with the cutting-edge science too; Greenpeace's work is so diverse, I'm always researching and learning about new issues, and that's what's so great about my job!'



## Reyes Tirado

Reyes graduated from Seville University in 1997 and did her PhD research on plant ecology in the Estación Experimental de Zonas Áridas (CSIC) in Almería, Spain, getting her doctorate in 2003. She continued her research as a Fulbright postdoc at Stanford and Berkeley Universities in California from 2003 to 2006, studying fire and plant-plant interactions. She joined the Science Unit in 2006, where she is providing support in various projects concerning terrestrial ecosystems and helping to shape the Sustainable Agriculture campaign.



## Weird Science

**'I hope very much to see the end of the nuclear era, with immediate cessation of dangerous radiological waste build-up around the globe and the opening of broad opportunities for implementation of renewable energy sources and energy efficient technologies.'**

Iryna Labunska

At this point, however, I must remember that I've also mentioned to Quarterly readers that my Science Unit colleagues have kept me entertained over the years with stories of their more amusing, risqué, offbeat and downright odd assignments. Some of these may not be entirely fit for public consumption, but what tidbits are our scientists willing to share?

For David, it's almost certainly the experience of providing scientific support to the Water Campaign run by Greenpeace in the mid-90s. 'A project that entailed not only explaining the complexities of pollution and algal blooms to large groups of schoolchildren on a pleasure-boat converted into a Greenpeace ship, but also engaging in the practicalities of pig-farming, negotiating a truce between the long-warring factions of trout and pike anglers,

fielding questions from island hermits about the ever-changing colours of the clouds and – of course – pushing a float in Limerick's St Patrick's Day parade.'

David says no more than that, and Kevin is equally oblique about his attempts to milk a cow living in a field next to a waste incinerator, in order to analyse its milk for hazardous chemicals. Paul, meanwhile, reminds me of an expedition to take smoke samples from the top of a factory chimney in the UK to prove that the owners were emitting radioactivity. To do this, Greenpeace had used a model helicopter that had previously seen service in one of the James Bond films, but the company owning the factory were unimpressed. Says Paul: 'They immediately tried to have us all arrested ... for stealing their smoke!!!'

The 'job' also brings with it moments of emotional confrontation and personal danger, however. For Kevin, visiting the site of the Bhopal disaster in India (where one of the world's worst chemical disasters to date took place at a Union Carbide factory in 1984), to demonstrate the extensive contamination remaining there 15 years later, was 'eerie and chilling'. And Iryna will never forget working in Argentina on the Riachuelo River project in the late 90s. She'd already been showered under the fallout of industrial wastewater and suffered from a terrible stomach bug when she was nearly killed by armed robbers while sampling in the poorer part of Buenos Aires; she owes her escape to the quick-thinking of her driver.



Mo Oram

Mo Oram has arguably the most important job of all in the Science Unit. She's the person who makes sure that things arrive on time, get delivered on time and that the bills get paid on time. She also makes valuable input to the practical work in the lab. In short, without her contribution the work of the Unit would quickly grind to a halt.

Mo has been central to the Science Unit's recent move, organising the space so that the office was ready to occupy straight away, and keeping a tight control on the expenditures on the new lab so that it was completed on time and on budget.

In what little spare time that she does have after work, Mo can often be found in local music venues - where her singing and song-writing talents complete her considerable array of skills - or in the university library, pursuing her degree studies.



**Many of the global problems we face - like climate change, ozone depletion, and the spread of hormone disrupting chemicals - can only be detected and understood through science.**

Greenpeace commissions many scientific research reports and investigations to support our campaigns, and we also use science to seek solutions and provide alternatives.

In recent years, the Science Unit has published the following discussion papers, technical briefings and reports:

- The report 'Oceans in Peril: Protecting Marine Biodiversity', exploring the various threats facing marine life and making the case for an ecosystem approach, including the establishment of marine reserves; a simplified version was published as a Worldwatch Institute Report;
- A major report on hazardous wastes discharged from factories manufacturing and assembling electronic components for computers in Thailand, China, Mexico and the Philippines;
- A landmark report on the status and hazards of nuclear technology development in the Middle East;

**It has also carried out research and provided in the following areas:**

- A major sampling programme to study groundwater contamination from intensive agriculture in India, Thailand and the Philippines; river and wastewater sampling in Spain for evidence of ongoing mercury contamination;
- Processing the many samples of floating plastic debris collected by the Esperanza during the global Defending Our Oceans tour;
- Analysing the presence of hazardous chemicals in laptop computers, revealing in some cases substantial quantities of a type of brominated flame retardant that would be overlooked by conventional testing;
- Advice to the European Food Standards Agency (EFSA) on GE potato crops;
- Consultation on the regulation of nanotechnology in Europe.

## Scientific Consensus

They may have different reasons for coming to Greenpeace, and many different experiences thereafter, but there is one thing that truly unites the merry band in Exeter. And that's their hopes and aspirations - from the scientific perspective - for the future.

Their hope is that we will realise we live on a planet with finite resources and so develop our technology accordingly. 'In times of climate change there's an increasing risk that scientific complexity and uncertainty will be under-represented in order to justify wholly irresponsible schemes aimed at 'engineering' ecosystems to 'fix' the climate,'

warns David Santillo. 'False hopes start to appear, but these will do nothing to tackle greenhouse gas emissions at source and could even make matters worse.' What the Greenpeace Science Unit wants to see is that the understanding of science - especially science that considers people, uncertainties and ethics as part of the mainstream scientific process - continues to grow among the public and the decision-makers, and guides them in taking the necessary decisions and making the necessary changes to allow for a sustainable future for the human race and the planet on which we all depend.



## Indonesia, 2004: an earthquake has hit, and Greenpeace's Rainbow Warrior is on the scene, helping the relief efforts. Steve Erwood talks to the Captain, Derek Nicholls...

On 26 December, 2004, the entire planet vibrated - an earthquake with a magnitude of between 9.1 and 9.3, and with an epicentre off the west coast of Sumatra, Indonesia, became the second largest earthquake ever recorded on a seismograph, and was one of the deadliest natural disasters in recorded history. It triggered a series of devastating tsunami along coastlines bordering the Indian Ocean, and more than 225,000 people were killed in 11 countries, with coastal communities inundated by waves up to 30 metres high.

Among the countries worst hit by the 'Asian Tsunami' was Indonesia, with Sumatra - and, in particular, the territory of Aceh - being one of the areas most severely affected, and also the most logistically difficult for aid organisations to reach. With poor infrastructure and damaged airports to contend with, bringing disaster relief by boat to the communities on the west coast of Sumatra became vital. Our flagship the Rainbow Warrior and its crew of 19, helped the medical aid organisation, Médecins Sans Frontières (MSF) to transport much-needed equipment, food, fuel, medical supplies and MSF medical staff to Aceh.

Among that crew, and including its captain at the time, were four New Zealanders, who were recently awarded the New Zealand Special Service Medal (Asian Tsunami), which recognises New Zealanders who were involved in the rescue, relief and rehabilitation efforts. Fortunately for me, the captain - Derek Nicholls - is currently in Amsterdam, working with the Ships Unit here in the office before going back to captain the Rainbow Warrior in June of this year. So I have an ideal opportunity to talk with Derek about his time with Greenpeace, and about his memories of the tsunami relief work.

Derek first captained for Greenpeace in 1995, having previously been a captain on commercial ships. Sailing ever since he left school at the age of 14, he had also spent some time as a fisherman - but one day, he realised that the fish were simply disappearing from the oceans and that he was part of that process. Via a friend, he finally became involved with Greenpeace when the new Rainbow Warrior made its first visit to New Zealand in 1989, following the bombing of the first Rainbow Warrior in Auckland only four years before.

'We sailed to American Samoa, where we installed buoys for yachts to anchor on, instead of them destroying the coral reefs. My first real 'campaign' with Greenpeace, though, was the following year when we took action against driftnets in the Northwest Pacific,' Derek explains. 'But the real highlight for me was the Muroroa campaigns, where Greenpeace protested French nuclear testing. I ended up as a 'guest' of the French navy so often during those times that I was on first name terms with most of them!'

Perhaps surprisingly, Derek's favourite of all the Greenpeace ships isn't the Rainbow Warrior but the now-retired MV Greenpeace. 'She was a great little ship,' he says with affection. 'Cantankerous and difficult to handle, but once you got to know her she did exactly as you asked her. A real friend.'

In the closing days of 2004, while Derek was waiting to begin his next stint as captain, he received a telephone call from the Ships Unit at Greenpeace International in Amsterdam, asking him if he could join the Rainbow Warrior as soon as possible. He went straight to the ship, and soon it set off for Medan, in Sumatra, to load supplies before heading to the northern tip of the island. The Rainbow Warrior stopped its planned Greenpeace work, and the crew volunteered to do their part for the relief efforts.

'Together with MSF, we were the first NGO to go in,' Derek recalls. 'We'd been fully briefed about what we might expect to find when we got there, but obviously we were still all wondering just what it was exactly we were going to see.'

The first we noticed of the devastation as we sailed in was the fishing boats – hundreds of them, just all over the place. This part of Sumatra was home to large fishing communities, and now most of the fishermen were just simply gone – they had been out at sea when the tsunami hit. Even ships the same size as the Rainbow Warrior had been literally picked up by the sea and deposited 20 or 30 metres above the high-tide mark. Oil storage tanks that normally would have been found all over the port were now dotting the hilltops, alongside beautiful mosques that, thanks to their solid foundations, had managed to survive the worst.'

The devastation was such that the Rainbow Warrior literally had to inch itself into port; half of the wharf had been destroyed. 'When we arrived, the harbourmaster helped us as much as he could – even though he'd just lost his wife and children. Everywhere, people were walking around, completely stunned, they'd all lost huge numbers of family members. But already, the clearing-up had begun. They were truly impressive people, struggling against terrible odds yet rising to meet the challenges they were faced with.'

Derek had travelled to Banda Aceh, the territory's capital, to arrange the entry admission – 'even despite it all, bureaucracy was still firmly in place' – and saw even more devastation further inland. It was, he says, a numbing experience, but 'nature takes over, and you do what you have to do.'

The crew spent 6 weeks travelling back and forth to bring aid to the stricken region. From there, they went on to Korea, and found themselves working alongside another organisation, KFEM (Korean Friends of the Earth), but this time under more familiar circumstances; Greenpeace was working to protect the whales. With KFEM, we aimed to inform the Korean public and government that whales in Korean waters are some of the most threatened in the world and, like all whales, in need of urgent protection.

I return to the matter of Derek's Special Service Medal. He doesn't have his with him in Amsterdam, of course – it's safe back at home with his wife and children. Alongside Derek, the award was also bestowed upon the ship's doctor Lesley Simkiss, bosun Phil Lloyd, and logistics coordinator Rob Taylor. 'I thought Rob was joking at first, when he said we were all going to get a medal,' laughs Derek. 'You just do what you have to do, you don't expect people to start giving you medals for it.'

I wish Derek well for his next journey – among other things, the Rainbow Warrior will continue with work around marine reserves in the Mediterranean this summer. But, before we part, I ask him one final question about his time in Indonesia, and true to the spirit of a Greenpeace captain he gives precisely the answer I already expect: 'I wouldn't hesitate for a second to do it all again if it was necessary.'



## New Zealand Special Services Medal

(asian tsunami)

The New Zealand Special Services Medal (Asian Tsunami) was created in December 2005 to recognise New Zealanders who participated in the rescue, relief and rehabilitation efforts in areas devastated by the earthquake off the coast of Sumatra and the resulting tsunami of December 2004, and recognises the extreme and hazardous circumstances encountered in its wake.

The medal has been awarded to over 90 New Zealand Police personnel, over 60 New Zealand Defence Force medical and infantry personnel, 40 Habitat For Humanity New Zealand volunteers, 23 New Zealand civilians who operated with the New Zealand Police Disaster Victim Identification teams, 18 New Zealand Red Cross personnel, 14 Operation Phoenix volunteers, eight World Vision New Zealand volunteers, seven Ministry of Foreign Affairs and Trade staff, four Oxfam New Zealand volunteers, one New Zealand Customs Service officer and one New Zealander working for Save the Children Sri Lanka.

# people and places alaska, 1989: spilling oil on troubled waters



## Mel Duchin

Mel Duchin is a campaigner for Greenpeace USA in its office in Anchorage, Alaska. She has worked with Greenpeace for over 20 years.

It's been 20 years since the Exxon Valdez spilled 11 million gallons of crude oil into Alaska's Prince William Sound on March 24, 1989. Greenpeace USA's climate and energy campaigner and Alaskan resident Mel Duchin looks back at **one of the largest ecological disasters the world has seen...**



**A sea otter recovering at a rehabilitation centre in Valdez, after the Exxon Valdez oil spill. Thousands of animals died immediately; between 250,000 and 500,000 seabirds, at least 1,000 sea otters, 300 harbour seals, 250 bald eagles, and 22 orcas, as well as the destruction of billions of salmon and herring eggs.**

The spill fouled hundreds of miles of coastline, killed thousands of otters, hundreds of thousands of birds, and untold numbers of fish and other wildlife. It devastated the lives of subsistence and fishing communities that relied on the waters and wildlife of Prince William Sound for their survival. It was, those communities say, 'the day the water died'. For the last two decades, Alaskans have fought to hold Exxon accountable for the spill while people around the world watched Exxon do all it can to avoid taking responsibility for the harm and suffering it caused.

In 1991 – just two years later - the spill was officially declared 'cleaned up'. Exxon emphatically states that Prince William Sound is 'healthy, robust and thriving'. Prince William Sound is near my home in Anchorage, and I can speak as an eyewitness: neither assertion is true. The Exxon Valdez spill is a slow-motion disaster that continues to this day. Look closely enough and you will see an environment still contaminated with oil, wildlife populations still in decline, lives and livelihoods still affected by the spill.

I've kayaked through Prince William Sound and seen the 'bathtub ring' of Exxon Valdez oil that still marks the high-tide line. I've dug a little way down on rocky beaches and shorelines to find lingering puddles of oil. The Exxon Valdez spill remains big news in Alaska. Media coverage documents an ecosystem that has not recovered from the spill and heart-wrenching stories of so many people who still deal with the aftermath of what the spill has done to their lives, waiting for the healing to happen and for justice to finally take hold.

It's clear that the only way we can prevent the type of disaster we still see in Prince William Sound 20 years after the Exxon Valdez spill is to prevent spills from happening in the first place. And the only way to guarantee that is by not drilling for or transporting oil. Unfortunately, at every step of the lifecycle of oil - from exploration and drilling to transportation and burning, oil and toxic chemicals are routinely released into the environment. People are shocked when I tell them that the Prudhoe Bay oil field on the north coast and the Trans-Alaska Pipeline - the 800-mile pipeline that transports Alaska crude from Prudhoe Bay to the south where its loaded onto supertankers like the Exxon Valdez – experience, on average, at least one spill every day. These spills vary in size, but every one deposits oil into the fragile Alaska environment.

But even in a perfect world where not one drop of oil is spilled during drilling or transportation, that oil still winds up having a devastating impact on the environment, for it is the burning of oil



## lessons of the exxon valdez

There are so many lessons from the Exxon Valdez oil spill. The one that jumps first to my mind is that the term 'oil spill clean-up' is an oxymoron. Under perfect conditions with calm seas, seasonable temperatures, sunshine, no wind and oil spill response equipment at the ready, only 15% of spilled oil is actually removed from the environment. We rarely have calm seas and sunny skies in Alaska, but even if we did, is 15% of spilled oil removed from the environment really what a sensible person considers 'cleaned up'? Furthermore, study after study has shown that the oil that remains persists in the environment for decades, its pernicious effects lingering and multiplying day after day, year after year.

The second lesson is that multinational corporations have a competitive edge when it comes to resources and time. They'll hunker down for the long haul and stall or appeal every verdict or legal twist and turn that doesn't go their way. Their strategy is to outlast and outspend people seeking justice and a modicum of recompense for what they've been through. We've seen this throughout modern history with tobacco, chemical and oil companies. One-fifth of the plaintiffs who sought damages for the Exxon Valdez spill passed away before the case finally went to the US Supreme Court. These are battles of attrition that are almost always won by the corporation.

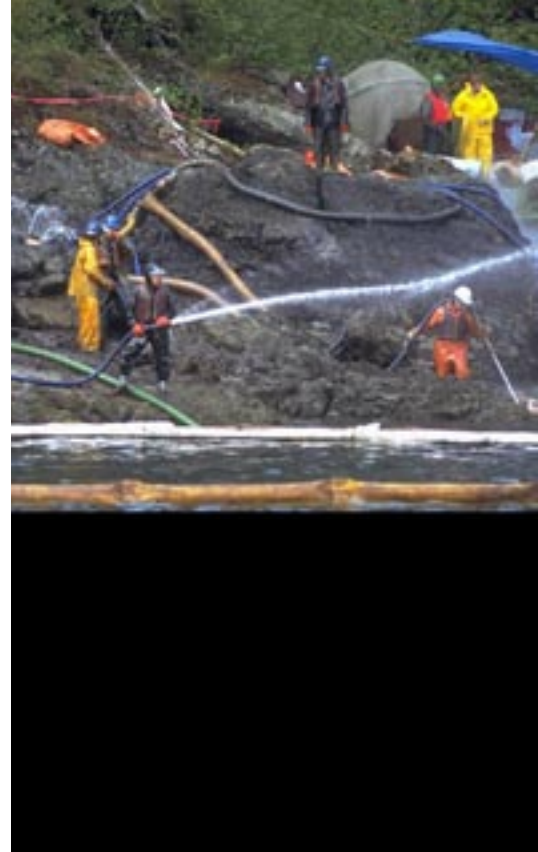
– and coal, and other fossil fuels – that is the primary contributor to climate change. Ironically, some of the impacts of climate change may make future spills more likely. When the Exxon Valdez ran aground in March of 1989, it was attempting to avoid icebergs that calved from the nearby Columbia Glacier and drifted into the shipping lane. All of the world's glaciers are retreating due to global warming and the Columbia Glacier is one of the fastest, which means it's discharging icebergs at a breakneck pace. At least one scientist in Alaska has connected the dots and said climate change very likely contributed to the Exxon Valdez spill by causing the Columbia Glacier to calve many more icebergs into Prince William Sound.

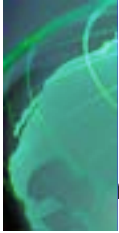
And just as climate change may well have been a factor in causing the Exxon Valdez spill, so too there is a strong danger that it will result in oil being spilled in the Arctic Ocean. Climate change is causing the sea ice that blankets the Arctic Ocean to shrink and recede faster than ever predicted, and as the ice disappears, the concept of drilling for oil in the Arctic Ocean shifts from pipe dream to reality. The rapid melting of sea ice has already sparked a race between northern nations -- the US, Canada, Russia, Norway and Denmark -- to stake territorial claims to the massive reserves of oil and gas that lie below the Arctic Ocean seabed.

If nations and oil companies are allowed to stampede north to drill for oil in the Arctic Ocean, the world will surely witness oil spills large and small in a place that is home to polar bears, whales, walrus and seals, as well as indigenous peoples who have relied on the ice and the ecosystem it underpins for millennia. Imagine the Arctic Ocean dotted by oil platforms and cross-hatched by pipelines, its waters plied by supertankers and barges. Then remember the Exxon Valdez and imagine how much more difficult it will be to respond to an oil spill in Arctic waters hundreds of miles from any land in some of the harshest conditions the earth has to offer.

Exxon, now ExxonMobil, reported the largest profit in history in 2008 – USD 45 billion - even as the global economy plunged. It is the heedless pursuit of profit above all else that endangers the land, sea, atmosphere and all the living beings that depend on them.

As the sea ice continues to melt, we have a duty to protect the Arctic Ocean from the type of lasting, systemic damage that is still taking place 20 years after the Exxon Valdez oil spill. Let's keep the Arctic Ocean off limits from oil drilling, oil spills and oil companies that refuse to take responsibility for their actions. If we are to protect the climate from more warming and protect the Arctic from oil spills, then the oil must remain in the ground.





# news from around the world

## the tennessee coal spills - 'black eyes' for the clean coal lobby



### Jo Kuper

From assistant cook on the Esperanza, to communications coordinator of the recent Mediterranean and European quit coal ship tour, Jo has worked in various guises for Greenpeace for nearly 5 years. She is currently a writer with Greenpeace International's Communications Department.

*"The Tennessee disaster shows once again the true costs of using coal. This outdated, unnecessary and filthy source of energy is the biggest contributor to the climate crisis. And we don't need it. With clean energy able to provide six times more energy than the world currently uses, there can be no more excuses for not quitting coal."*



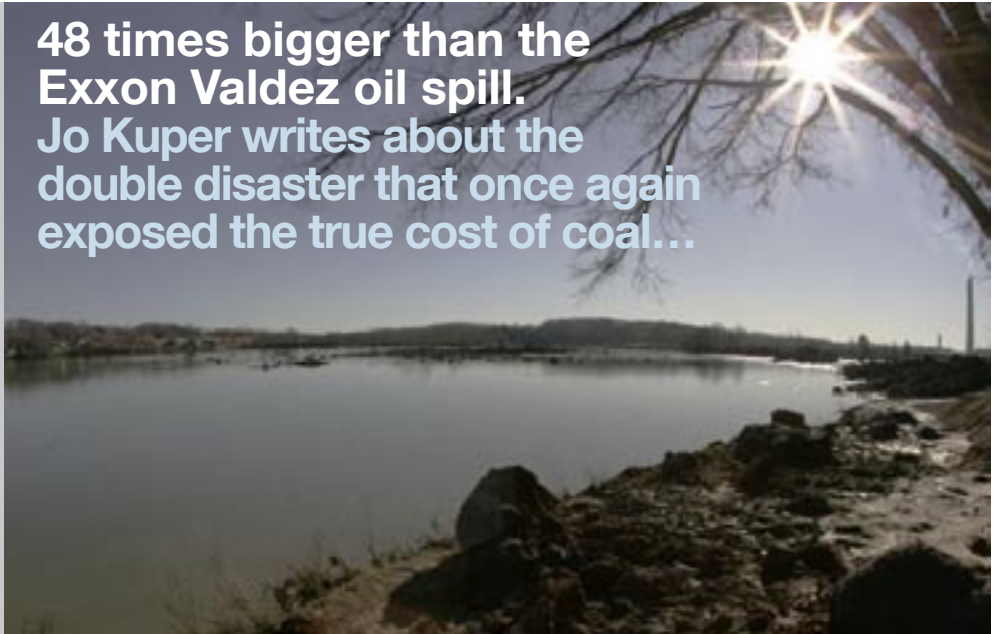
### Coal Ash

Coal ash, a by-product of burning coal, contains significant amounts of carcinogens and retains the heavy metal present in coal in far higher concentrations. The toxic sludge contained such delights as cadmium, mercury, lead, chromium, arsenic and benzene to name a few.

Shockingly, the response of the local authorities was to utterly downplay the dangers and to advise people to boil their water. That would be good advice if boiling water offered protection from arsenic and lead. But it doesn't.

US Environmental Protection Agency (EPA) tests have found that water samples near the Kingston spill contain arsenic, known to promote cancer, at more than 100 times the acceptable level.

## 48 times bigger than the Exxon Valdez oil spill. Jo Kuper writes about the double disaster that once again exposed the true cost of coal...



48 times bigger than the 1989 Exxon Valdez oil spill, the toxic sludge that spilled out of the storage pool at the 50-year old Kingston Fossil coal-fired power plant in Tennessee, USA, muddied rivers and streams, and before long dead fish were found downstream. It didn't stop there.

Described by US broadcaster MSNBC as 'a black eye for the clean coal lobby' the Kingston disaster on 22 December released over a billion gallons of toxic coal ash sludge into the Emory and Clinch Rivers, tributaries of the Tennessee River, which supplies drinking water to millions of people. Less than three weeks later, there was another coal ash spill from the Widows Creek Fossil Plant in Alabama, which lies on the same river. This spill was reported to contain even more toxic chemicals than the one at Kingston. Both coal plants are operated by the Tennessee Valley Authority (TVA).

Local environmental groups and residents quickly stated their intent to sue the TVA under the US Clean Water Act and other statutes. In addition, the US Senate Environment and Public Works committee held a hearing to explore tighter regulation of coal ash to prevent these disasters in the future. Members of Congress served by TVA have said the spill stands to affect coal-fired generation across the US.

Both disasters were indeed a 'black eye' for the clean coal lobby; highlighting coal ash as yet another example of why 'clean coal' is a contradiction in terms. Some coal plants claiming to be 'clean' may be controlling air pollution better, but it's not as though their toxic residues no longer exist - it's just that now they become solid by-products, such as fly ash, 'stored' in unlined ponds or pits near the plants. With more than 1,300 dumps across the US, production of these "post combustion" wastes has dramatically increased in

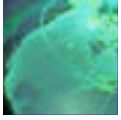
recent years. Yet, the US government has failed to properly regulate coal ash.

Sadly, ash is just one part of coal's filthy legacy. Our 'True Cost of Coal' report showed that just some of the damages caused by coal cost the world €360 billion in 2007. Many of coal's impacts simply can't be assigned monetary values at all, yet we all pay the price. From mining to combustion (burning) to waste, coal leaves a trail of destruction in its wake. Coal is the single greatest contributor to the greatest crisis facing our planet - climate change - but it is also responsible for air pollution, contaminated water and reduced crop yields; for the blowing-up of mountains and the drying-up of lakes; for human rights abuses and the forced displacement of communities; and illnesses and people's deaths.

**"Greenpeace could not have staged a bigger anti-coal demonstration than what you unintentionally put on"**

*Representative Jim Cooper, a Tennessee Democrat, to the Tennessee Valley Authority.*

And that's all before you consider its impacts on our climate; coal is by far the worst polluting of all fossil fuels. We can save the climate but only if we quit coal. Our Energy [R]evolution blueprint shows how renewable energy, combined with greater energy efficiency, can cut global CO<sub>2</sub> emissions by 50%, and deliver half the world's energy needs by 2050. So what's the excuse for continuing to burn coal? That's right, there isn't one.



# news from around the world

## hope rises in the pacific



**In an historic move last December, Greenpeace - together with the Pacific Island Countries - managed to convince the fishing nations to agree to closing two huge areas of international waters to all tuna purse-seining from 2010 onwards. This is good news for tuna, and Greenpeace International's oceans campaigner Sari Tolvanen explains why...**

As someone who comes from Finland, I sometimes get asked how on Earth did I end up working in the Pacific defending the planet's last abundant tuna stocks and the livelihoods and food security of the over 20 Island Nations. Aside from the fact that you often find yourself in faraway places while working with Greenpeace, Finland - as well as most other countries in the world - is, in fact, part of the problem that is going on in the Pacific. We all love eating tuna and we want it cheap.

The Pacific Ocean now provides over 50% of the world's tuna. As stocks in the Atlantic and Indian Ocean have declined, the hungry tuna fleets have set their sights in the Pacific with increasing catches of tuna year after year. The main bulk of the catch is canned and sold cheaply to the US and European markets, with higher-value bigeye and yellowfin tuna mainly ending up at the Sashimi market in Japan and other places where this fashionable Japanese food culture has hit the high streets. Out of this 3 billion dollar industry the Pacific Island Countries only receive a 6% of the value, meaning the tuna is being unfairly stolen from a region that is struggling to make ends meet.

Our oceans and fish stocks are not able to cope with the ever rising demand for healthy seafood options that advertisers and diet specialist are recommending us all to eat. Scientists have been warning since 2001 that the current fishing levels in the Pacific are no longer sustainable and unless urgent reductions in catch level are taken, two of the tuna stocks - bigeye and yellowfin - are in danger of disappearing. Although other stocks still remain relatively healthy, the industry is also threatening the well-being of other marine life with hundreds of thousands of sharks and turtles caught and killed by the use of indiscriminate fishing methods each year.

Greenpeace Australia-Pacific and our offices based in market countries have been campaigning to save the world's favourite fish since 2003. In order for the Pacific Island countries to save the tuna from overfishing and to maximise the livelihoods and economic benefits they have to work together. Consumers and retailers in market countries also have a role to play, by selling only tuna products that come from sustainable and fair fisheries. It finally appears that the wants and needs of the Pacific Islanders and those of conscientious consumers in the West are starting to create some change too; in a historic move last December, Greenpeace together with the Pacific Island Countries managed to convince the fishing nations to agree to closing two huge areas of international waters to all tuna purse-seining from 2010 onwards. Greenpeace has been calling on these 'pirate parking zones' to be made into marine reserves, closed to all fishing, since 2005. We also spent 10 weeks defending these areas from fishing activities in 2008.

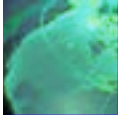
There is much more work to be done to ensure that all three high seas pockets become marine reserves in international waters where all marine life is protected from harmful activities, and to ensure that the Pacific Islanders can have a prosperous future based on sustainable tuna fishing activities in their waters. To achieve this, we will need to see action from Finland to Fiji and tuna lovers the world over. They should be rejecting bad tuna and demanding that what they buy does not sacrifice the future our biggest and most abundant ocean, nor the future of the people who have been there since way before the industrial fishing fleets of the rich North set their sights on it.

You can read more about our work at:  
[www.greenpeace.org/international/seafood/](http://www.greenpeace.org/international/seafood/)



### Sari Tolvanen

A marine biologist and a commercial diver by education, Sari Tolvanen became frustrated by studying the impacts of bottom trawling on marine life and decided to take on a more active role in ensuring healthy oceans for the future. She already knew that she wanted to join Greenpeace at the age of 13; thirteen years later, in 2003, she became an oceans campaigner with Greenpeace Nordic. Today, working with Greenpeace International, she is always keen to dive into any challenge to defend our oceans. She has a feisty Nordic spirit and is driven by the urgent need to rescue marine life of all kinds - even the ugly ones!



# news from around the world

## FRANCE / FINLAND



Greenpeace condemned the announcement made by French President Nicolas Sarkozy in January that a new European Pressurised Reactor (EPR) is to be built in Penly, France. We also uncovered evidence that nuclear waste from the EPRs will be up to seven times more hazardous than waste produced by existing nuclear reactors, increasing costs and the danger to health and the environment. The alarming evidence was buried in the environmental impact assessment report from Posiva, the company responsible for managing waste at the world's first EPR under construction at Olkiluoto in Finland, and in EU-funded research.

## UNITED KINGDOM



Together with Oscar-winning actress Emma Thompson, comedian Alistair McGowan and prospective UK Conservative parliamentary candidate Zac Goldsmith, Greenpeace UK bought a piece of land right in the middle of the area now doomed by the expansion of Heathrow Airport, near London. The UK government has given the go-ahead to a new runway and airport terminal that poses a serious threat to the fight against climate change – at full capacity, an expanded Heathrow Airport would become the biggest single source of carbon emissions in the UK. The runway is by no means inevitable, and as legal owners of the plot of land, Greenpeace UK will take the opportunity to oppose airport expansion at every stage in the planning process.

## ICELAND



When the Icelandic government resigned in January, following widespread protests over its handling of the financial crisis, the outgoing Fisheries Minister suddenly announced a massive increase – up to 100 minke whales and 150 fin whales, annually – in Iceland's whaling quota. Under pressure from the tourist industry and other domestic opponents of whaling, the new interim government overturned the decision but let the expanded quota stand for the upcoming whaling season. Greenpeace has gathered a list of more than 100,000 people who have promised to visit Iceland if the government declares an end to whaling – a potential value of more than USD 115 million in tourist income against a whaling industry that was never worth more than USD 4 million even in its heyday, proving once again that Iceland's whales are worth far more alive than dead.

## INDONESIA



40 Greenpeace activists and local community representatives chained themselves to the gates of the Cilacap coal plant to block the transport of coal on Central Java's south coast. Denouncing the Indonesian Minister of Energy's decision to build 35 coal plants in the next 2 years, Greenpeace was calling upon Indonesia to choose clean renewable energy instead of dirty coal power. The direct action coincided with the launch of the Indonesian version of the 'True Cost of Coal', the landmark report that details the external costs – which include respiratory diseases, mining accidents, acid rain, smog pollution, reduced agricultural yields and climate change – to local communities and to the global climate of continued dependence on the dirtiest and most polluting of fuels.

## NIGERIA



Following a 3-year undercover investigation, carried out with the help of Sky Television, we showed – once again – that electronic waste still isn't being responsibly recycled as it's supposed to be. Acting on a tip-off, we took an unfixable TV, fitted it with a tracking device and took it to the UK's Hampshire County Council for recycling. The Council's 'recycling' company, BJ Electronics, passed it on as 'second-hand' goods and it was shipped off to Nigeria to be sold or scrapped and dumped. At no point, before being crammed into a container with similar TVs and shipped, was it tested to see if it worked. It is illegal to export broken electronic goods under EU legislation.



## JAPAN

The first formal court hearing in preparation for the trial of two Greenpeace activists took place in Aomori, Japan, in February. Junichi Sato and Toru Suzuki are being prosecuted, and risk up to 10 years in jail if convicted, after they exposed a major corruption scandal surrounding the Japanese government-sponsored whaling programme. From deliveries of 1000 origami whales in Stockholm, Sweden, to giant wooden handcuffs in Hong Kong and caged prisoners in Turkey, activists from around the world visited Japanese embassies and consulates calling for justice.



## INDIA

How many light bulbs can 1 billion people change? About 400 million wasteful incandescent bulbs, in India's case. In February, India put in place a market mechanism that will phase out incandescent bulbs making way for a cleaner energy future. The Bachat Lamp Yojana programme will replace 400 million incandescent bulbs with CFLs by 2012, saving about 55 million tonnes of CO<sub>2</sub> every year. Greenpeace has been campaigning for the phase-out of incandescent bulbs in several countries and this decision puts India in the company of others leading on light bulbs legislation, including Australia, Ireland and Argentina.



## NETHERLANDS

Dutch electronics giant Philips announced a change in its recycling policy, taking responsibility for the cost of recycling its own products. Philips confirmed that the costs would no longer be paid directly by its customers through an additional fixed fee, but instead come closer to being part of the overall product price. Philips had been the biggest obstacle in the electronics industry to tackling the growing problems of e-waste, and Greenpeace has been calling on them since 2007 to stop actively opposing laws that would oblige electronics producers to accept financial responsibility for the recycling of its products. After several actions and 47,000 messages from our supporters, the company agreed to our demands – a big step forward, making Philips a new green leader in the electronics sector.



## FRANCE

Greenpeace demanded an immediate stop to all shipments of plutonium Mixed-Oxide (MOX) fuel, following Areva's announcement in March of the largest ever MOX shipment's route from France to Japan. About 1.8 tonnes of plutonium in MOX fuel -enough to make 225 nuclear weapons - will travel to Japan via the Cape of Good Hope and the south-west Pacific Ocean. It is due to arrive in Japanese waters by late May. This shipment represents an immediate risk of contamination to coastal communities along the route should anything go wrong. The shipment is vulnerable to accident and terrorist attack and stands as a reminder to all governments along the route of the unacceptable risks nuclear energy poses to the world.



## BELGIUM

Hundreds of Greenpeace activists from across Europe blocked the exits of the Brussels building where finance ministers were discussing funding for developing nations to tackle climate change. Decisions being made at this the meeting will directly influence Europe's position at the UN climate summit in December 2009. The activists sealed the building and refused to let the politicians leave until they committed to 'Save the Climate' and 'Bail out the Planet'. Swarms of uniformed officers, riot police and plain-clothed cops descended on the activists as a line of black armored vehicles, police vans and busses moved in to block the public view of the activist-guarded doors. Three hundred and forty Greenpeace activists were arrested.



# things you can do: with your will, the world can become a better place



We first started working to stop the destruction of the Canadian rainforest in 1997. The Canadian province of British Columbia finally protected the extraordinarily beautiful 'Great Bear Rainforest'. Today, more than one-third of the largest intact area of temperate rainforest left in the world is legally off-limits to logging.

## We are custodians of the planet for but a moment in time. We inherit the Earth from our ancestors and in turn hand it to future generations. Greenpeace exists because this fragile Earth deserves a voice.

It needs solutions. It needs change. It needs action. If you want future generations to have a green and peaceful life on our Earth - act now. A bequest to Greenpeace is a powerful way to touch the future: It will honour your memory, perpetuate your ideals, and serve for generations to come to protect this fragile planet and all who call it home.

Your Will is probably one of the most important documents you will ever prepare.

A Will gives you the opportunity to decide where your assets and possessions go and how they are to be used. Most significantly, a Will protects your family and your loved ones – it removes unnecessary distress, expense and legal problems, at a time when it can be most damaging.

But we believe your Will can do even more – it can also be your legacy, passing on not only physical assets, but also your values and ideals. A bequest is as simple as it is powerful; with a few words in your Will, you can continue to be an advocate for a green and peaceful future beyond your lifetime.

A bequest is gift nominated in your Will to one or more non profit organisations. Your bequest can take any (or a combination) of the following forms:

- An outright gift of cash.
- A percentage of the overall value of your estate.
- A gift of real estate.\*
- An investment (artwork, jewellery, stocks etc).\*

\* These items may be sold.

Greenpeace is an independent campaigning organisation. We do not accept money from governments, corporations or political parties. That's why our financial supporters are our lifeblood. Your ongoing support plays a vital role in creating change, protecting the environment and forcing solutions that are essential to a green and peaceful future.

The fight against environmental abuse will continue long after you and I are around to give it voice. But you can take a step now that will secure a better planet for the children of today and tomorrow - leave a gift to Greenpeace, leave a gift for the future.

If you would like more information about leaving a bequest to Greenpeace International in your Will, or if we can be of any assistance with regards to your estate plan, please do not hesitate to contact us, or visit our website at:

[www.greenpeace.org/international/legacy](http://www.greenpeace.org/international/legacy)

Tamar Matalon  
Greenpeace International  
Ottho Heldringstraat 5  
1066 AZ Amsterdam, The Netherlands  
+31 20 7182000  
[legacies.int@greenpeace.org](mailto:legacies.int@greenpeace.org)

Thank you for your support.

# the greenpeace ships saving the planet... NOW



The Rainbow Warrior and the Esperanza have spent most of the past three months undergoing scheduled maintenance.

Meanwhile, the Arctic Sunrise travelled from Africa – where she had been present at the opening of Greenpeace Africa's Democratic Republic of Congo office – to Brazil, where it embarked on a tour of the country to warn against the impacts of climate change and highlight the important role Brazil can play in fighting it.

Sailing through heavy rains into the port of Manaus, the Arctic Sunrise received a warm and energetic welcome from local partners, state government representatives and media who are lending their support to our campaign. The 'Save the Planet: NOW' tour will focus on solutions to deforestation and climate change, together with an end to nuclear energy in Brazil. It will also highlight the positive impacts that healthy forests, oceans and renewable energy in Brazil can have on the global community.

With this year's crucial UN meeting on climate change in Copenhagen on the horizon – come December the international community will have to start its blueprint for the next phase of the Kyoto Protocol, it is now or never, as the Arctic Sunrise helps spread the urgency of the problem and the need for governments to act on climate change.

We'll bring you more news of the 'Save the Planet: NOW' tour in the next issue of **The Quarterly**.



## Dear Supporter

We hope you've enjoyed this edition of The Quarterly.

At the start of 2009, there were approximately 2.9 million Greenpeace supporters worldwide. We want to get know some of the faces behind these numbers better, and put our supporters in the spotlight. If you have an interesting story to tell us and would like to be featured in an upcoming issue, or on the Greenpeace website, please send us a short paragraph about yourself and tell us why you support Greenpeace.

As always, we welcome all and any feedback, suggestions or other comments you would like to share; we want to bring you the very best in The Quarterly, so please tell us what you enjoy, and what you would like to see more of

You can write to us directly at the following addresses:  
karen.gallagher@greenpeace.org  
steve.erwood@greenpeace.org



For those of you who would prefer to give your feedback by post, then please use the following address:  
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Karen Gallagher / Steve Erwood  
Greenpeace International,  
Ottho Heldringstraat 5,  
1066AZ Amsterdam,  
The Netherlands.

Thank you for your support,  
and for your help.

Until next time,  
best wishes *Karen and Steve*

There are many ways of helping Greenpeace - but some of them you can do from the comfort of your own home...



All of our money comes from individual support. Your donation will help us to end illegal and destructive logging of the world's ancient forests, defend the world's oceans by working for global marine reserves and continue to promote clean, efficient and renewable energy to help stop catastrophic climate change.

## I would like to make a donation to help Greenpeace campaigns

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Quarterly 2009.1

Editors: Steve Erwood, Karen Gallagher

Contributors: Cindy Baxter, Mel Duchin, Jo Kuper, Jessica Miller, Rebecca Short, Sari Tolvanen, Lisa Vickers. With special thanks to Derek Nicholls, the Greenpeace Science Unit, Muriel Bonnardin and Tamar Matallon, Mike Townsley, Martin Lloyd

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t. +31 20 718 2000  
f. +31 20 718 2002

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

For more information, please contact:  
supporter.services.int@greenpeace.org

**Greenpeace is an independent global campaigning organisation that acts to change attitudes and behaviour, to protect and conserve the environment and to promote peace.**

**28 offices in over 40 countries – across Europe, the Americas, Asia, the Pacific and Africa...Greenpeace; truly global**

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