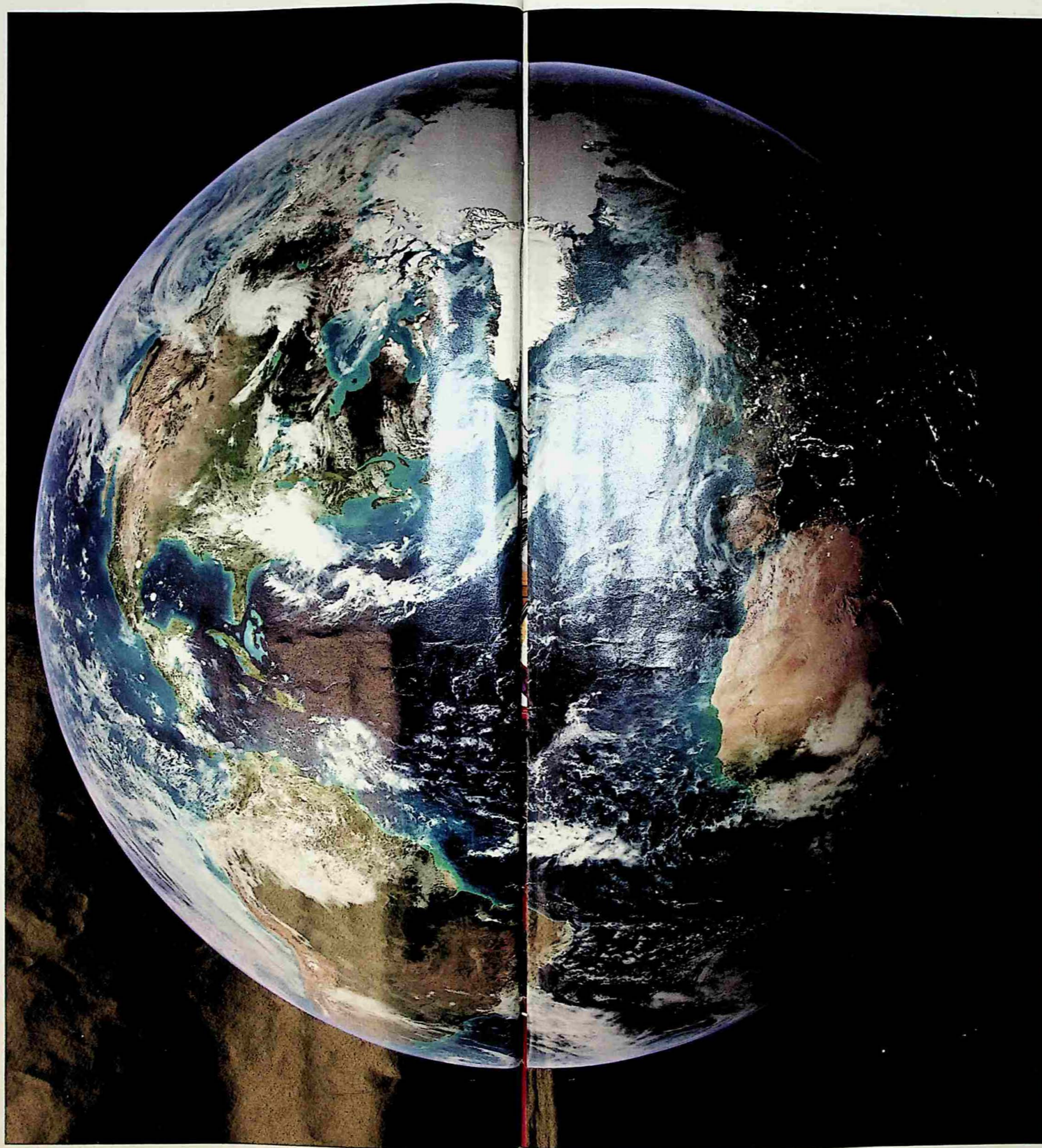


# 50 PEOPLE WHO COULD SAVE THE PLANET

Stranded polar bears, melting glaciers, dried-out rivers and flooding on a horrific scale – these were the iconic images of 2007. So who is most able to stop this destruction of our world? A Guardian panel, taking nominations from key environment figures, met to compile a list of our ultimate green heroes



Last year ended with the incongruous image of 10,000 politicians, businessmen, activists and scientists from 190 countries emitting vast quantities of greenhouse gases as they flew home from Bali clutching the bare bones of a global agreement on climate change. The agreement was to keep on talking to try to reach a deal by 2010. It was a diplomatic triumph, achieved after rows and high dramas, but it leaves all nations a mighty hill to climb. There is no agreement on what emission cuts need to be made by when or by whom, and the US is still deeply reluctant to do anything. It is a roadmap with no signposts.

Some were optimistic that a start had been made; some said that the earth's ecological situation was in a far more perilous state than had been thought. The iconic images of 2007 – polar bears stranded, glaciers melting in the Himalayas, forests coming down all over Africa and devastating floods and droughts from Bangladesh to Ghana – may be as nothing to what will happen if people do not take immediate action.

But who are the people who can bring about change, the pioneers coming up with radical solutions? We can modify our lifestyles, but that will never be enough. Who are the politicians most able to force society and industry to do things differently? Where are the green shoots that will get us out of the global ecological mess?

To come up with a list of the 50 people most able to prevent the continuing destruction of the planet, we consulted key people in the global environment debate. Our panel included scientists – former World Bank chief scientist and now the British government's scientific adviser on climate change, Bob Watson, Indian physicist and ecologist Vandana Shiva, Kenyan biologist and Nobel prize-winner Wangari Maathai; activists – Guardian columnist George Monbiot and head of Greenpeace International Gerd Leipold; politicians – Green party co-leader and MEP Caroline Lucas, and London mayor Ken Livingstone; sustainable development commissioner for the UK government Jonathon Porritt and novelist Philip Pullman.

Then the Guardian's science, environment and economics correspondents met to add their own

nominations and establish a final 50. Great names were argued over, and unknown ones surfaced. Should Al Gore be on the list? He may have put climate change on the rich countries' agenda, but some felt his solution of trading emissions is not enough and no more than what all major businesses and western governments are now saying. But in the end he squeaked through.

There was also debate over Leonardo DiCaprio. It would be easy to sniff at someone who seemed to have merely pledged to forgo private jets and made a couple of films about the environment, but we felt the Hollywood superstar who has grabbed the green agenda had to be included because of the worldwide influence he is expected to have. Thanks to his massive celebrity status DiCaprio could be a crucial figure in persuading and leading the next generation.

Some people made it to the final 50 not just because of their work but because – like the man who has found a simple way to save energy in a refrigerator, or the boy who collects impressive amounts of money for the protection of tigers – they represented a significant grassroots technological or social movement. And some got on the list because they were considered the driving forces behind the decision-makers. One church leader, for example, made it largely because the world's religions have huge investments and are shifting the political landscape in the US and Europe.

The final list includes an Indian peasant farmer, the world's leading geneticist, German and Chinese politicians, a novelist, a film director, a civil engineer, a seed collector and a scientist who has persuaded an African president to make a tenth of his country a national park. There are 19 nationalities represented. Nearly one in five of those listed comes from the US, and one in three is from a developing country, suggesting that grassroots resourcefulness will be as important as money and technology in the future. Nearly one in three of the people chosen has a scientific background, even if not all practice what they studied. It's not a definitive list and there are no rankings, but these 50 names give a sense of the vast well of people who represent the stirrings of a remarkable scientific and social revolution, and give us hope as we enter 2008. **John Vidal** »



### Terry Tamminen Climate policy adviser

Born in Australia, Terry Tamminen, 57, has been a sheep farmer, a sea captain, a property dealer and, until last year, environmental adviser to California governor Arnold Schwarzenegger. Largely because of Tamminen's influence, Arnie greened up, passed a raft of groundbreaking environmental laws, put pressure on polluting industries and is now politically popular. The world's seventh largest economy now has targets and timetables to shame nearly every country in the world – a 25% cut in emissions by 2020 – and is hailed as a beacon of eco responsibility.

Tamminen has moved on to run the state's climate plan and is working with other US states and cities to create a de facto national climate change policy, and in so doing forcing President Bush's hand. Tamminen argues that the 5% of the world population who live in the US are responsible not for 25% of the world's climate emissions, as the textbooks say, but for at least 50% of them if you include the energy needed to power the Chinese factories that are churning out plastic toys and other mass consumer goods for the voracious US market.

### Capt Paul Watson Marine activist

Paul Watson, 57, is the man Japanese whalers, Canadian seal hunters and illegal fishermen everywhere fear the most. The ultimate direct action man, he co-founded Greenpeace in the 70s and now has two boats that patrol the world's oceans and confront anyone he has evidence of acting criminally. He is regularly denounced by governments as being an ecoterrorist and a pirate after ramming and scuttling whalers, but Watson knows the law of the sea and has never been prosecuted. Now he is opening up a new role for environment groups. Last year the Sea Shepherd Conservation Society became an official law enforcement agency in Ecuador. Sea Shepherd partners the



Ecuador police and can go on official patrols and make arrests in the Galapagos national maritime park. In one month last year he intercepted more than 19,000 shark fins and 92,000 sea cucumbers, and confiscated more than 35 miles of illegal longline. The idea of environmental activists becoming a new green police force may develop in years to come.

### Vicki Buck Entrepreneur

As the world scrambles to find a fuel supply that doesn't exacerbate global warming, New Zealander Vicki Buck,

51, has emerged as the acceptable face of biofuels. She's one-third of Aquaflo, a small company that was one of the first to crack the technology needed to harvest wild algae from sewage ponds, then extract fuel from it suitable for cars and aircraft. Companies from Boeing to Virgin are now beating a path to her Christchurch door. They're excited by the fact that it's theoretically possible to produce 10,000 gallons of algae oil per acre, compared with 680 gallons per acre for palm oil. Moreover, Buck has form: she was mayor of Christchurch, set up top eco-website celsias.com, is a director of NZ Windfarms, and is now working on a start-up to reduce one major cause of climate change: the methane gas emitted from billions of animals which make up 49% of NZ's greenhouse gases – chiefly by changing their diet.



### Elon Musk Entrepreneur

Elon Musk, 36, struck gold with PayPal (a system for paying bills online) during the 90s dotcom boom and the South African wunderkind is now the major investor and chair of the board at Tesla Motors, a Silicon Valley electric car start-up. The company plans to shake up the moribund US auto industry and dramatically curb CO<sub>2</sub> emissions, ripping out the internal combustion engine and the petrol tank, and replacing both with a »



**'The faster industrialised countries cut their emissions, the more willing other countries will be to do their bit'**



## Angela Merkel German chancellor

Angela Merkel, 53, has inherited Tony Blair's mantle as the politician forcing climate change the hardest on to the world stage, and she is a formidable advocate. The only major player left who helped hammer out the original global warming agreement at Kyoto in 1997, she is one of the very few with a grasp of what it means if humanity fails.

But it's what Germany does at home that gives Merkel authority. A quantum chemistry researcher brought up by a Lutheran pastor in communist East Germany, she was made German environment minister in 1994. The country now leads the world in turning away from coal and oil, and setting the highest targets for renewables and emission cuts.

She's not so popular with Greens, who accuse her of being a lackey to nuclear power and a friend of Bush, but they accept that she gets things done. Ten years ago, she shocked people when she said Germany should aim to raise the proportion of its electricity generated from renewable energy to 50% by 2050. It's now 12% – compare Britain's 3% – and is on track to be 20% in 12 years' time. She asked Germans to believe her when she said renewables would provide more jobs. There are now nearly 250,000 people working in the sector. And at the UN meeting at Bali last month, she told the EU it had to stick together and be ambitious. It led the fight against President Bush.

The speed at which Germany under Merkel is pursuing climate change policies is embarrassing the UK and other countries, which talk up the need for action, but deliver little. The UK aims to cut emissions by 60% by 2050 and argues that it needs nuclear power to do so. Germany, meanwhile, wants 40% cuts within 13 years without resort to nuclear power – something far harder.

"The faster industrialised countries cut their emissions, the more willing other countries will be to do their bit," Merkel says. "An intelligent and fair regulation of CO<sub>2</sub> reductions is in everyone's best interests."

It's heady stuff for the world's energy watchers. German energy efficiency is to be improved by 3%

a year for 20 years. The country expects to use 10% less electricity within a decade; all power stations are to be modernised; there's £30bn for more renewables; railways will be further subsidised to lure people out of their cars and away from aeroplanes; plans for more wind turbines, photovoltaic electricity and biofuels will all be fast-forwarded; there is £1,500m to reduce CO<sub>2</sub> in existing buildings; and the solar market is growing by 40% a year. Few doubt that Germany is on track to achieve one of the greatest transformations in any country's use of power.

Merkel is matter of fact about the costs. One leading thinktank recently calculated that climate change would cost Germany nearly £100bn a year by the middle of the century, so stumping up £4bn over the next few years to avoid that is cheap, she reckons.

"The costs of reducing emissions should be seen as a sound investment," Merkel says. "Unabated climate change will slash prosperity by between 5% and 25%. Rigorous climate protection will cost only 1% of this prosperity and makes economic sense."

She is lucky in that Germany has a secret weapon in the battle against global warming: called the Renewable Energy Sources Act, it sets minimum prices for generating electricity. Anyone generating electricity from renewables now gets a guaranteed payment of up to three to four times the market rate, guaranteed for 20 years. This has not just kick-started the whole German renewable industry beyond its wildest imaginings, it also reduces the pay-back time on such technologies and offers a high return on investment. The idea has since been adopted in many other countries, and was picked up by the Conservatives in Britain in mid-December.

Germany is far from green. It has immense ecological problems and is still the world's sixth greatest polluter, but for now it has gone renewable-mad with farmers, householders and businesses competing with each other to profit the most. If under Merkel Germany doesn't meet UN and EU targets, then it's nowhere will. »

### Madhav Subrmanian Schoolboy

Madhav Subrmanian is the next generation's face of conservation, a 12-year-old Indian boy who goes round Mumbai collecting money for tiger conservation. With his friends Kirat Singh, Sahir Doshi and Suraj Bishnoi, he set up Kids For Tigers which works in hundreds of schools. He writes poems, sings on the streets, sells merchandise and has collected Rs500,000 (£6,500) in two years. Conservation awareness is growing in middle-class India, largely through young activists like him.



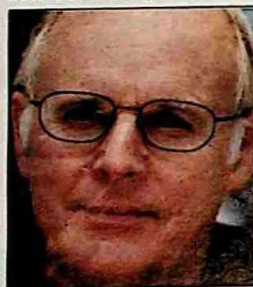
### Marina Silva Politician

Marina Silva, 49, is Brazil's environment minister. The daughter of a Brazilian rubber tapper, spent her childhood collecting rubber from the Amazon forest and demonstrating against the destruction wrought by illegal loggers. In one of the great political journeys, she rose from being illiterate at 16 to become Brazil's youngest senator, and is now the woman most able to prevent the Amazon's wholesale ruin. Under her watch, deforestation has reduced by nearly 75% and millions of square miles of reserves have been given to traditional communities. Last year 1,500 companies were raided and one million cubic metres of illegally felled timber were confiscated. But the future, says Silva, is perilous. The only way

that long-term loss will be averted is with foreign help. 'We don't want charity, it's a question of ethics of solidarity,' she says.

### Robin Murray Industrial economist

Central government and local authorities in the UK turn to Robin Murray, 67, when they need to reduce waste. The author of three influential books, he came up with the phrase 'zero waste' – the idea that people can mimic biology and produce, consume and recycle everything without throwing anything away. Instead of seeing waste as a problem, he argues that it can become a resource for someone else, and



instead of thinking about recycling, he says it is more sensible to think about design so that products do not need to be recycled – instead they could be used repeatedly or composted. It may need an industrial revolution and a total makeover of the global economy to achieve Murray's truly wasteless society, but zero waste is now the goal of hundreds of local authorities and is

spreading around the world, backed by designers, planners and companies from San Francisco to Wellington in New Zealand.

### Laurie David Activist

Laurie David, 49, is a powerhouse with some heavy-hitting connections even by Hollywood standards. Whether spreading the word about global warming on Oprah, writing a children's bestseller on the subject, producing Al Gore's breakthrough film, *An Inconvenient Truth*, or making the HBO documentary *Too Hot Not To Handle*, which shows what lies in store for the US if it does not reverse its policies on climate change, David has become a showbiz standard-bearer. She has reached across the US political chasm by co-founding the Stop Global Warming Virtual March with Robert Kennedy Jr and Senator John McCain, though her critics say her lifestyle leaves a hefty carbon footprint.

### Patriarch Bartholomew Leader of the Orthodox Church

Patriarch Bartholomew I, Archbishop of Constantinople and New Rome, is the spiritual leader of 300 million Orthodox Christians around the world. He's also extremely green, each year taking church leaders of all denominations to areas of the world beset with environmental problems – including the Amazon, the Arctic and the Danube. After announcing, on an island in the Aegean,»



### Leonardo DiCaprio Actor

Icebergs are becoming a recurring theme in the life of 33-year-old Leonardo DiCaprio. First, his acting career went stellar after playing the lead in *Titanic*. Now it is dramatic footage of icebergs and polar bears, both threatened by climate change, that is a striking feature of his documentary *The 11th Hour* (released in the UK next month), a powerful call to arms for our species to protect the environment a great deal better.

Combining the diametrically

opposed worlds of the A-list Hollywood star and the impassioned environmentalist is a fraught, sometimes contradictory process, but DiCaprio has pulled it off, becoming one of the world's most high-profile campaigners.

His primary aim, he says, is to raise awareness, not to preach: "It's not about imposing a certain belief system or a way of life on people in any economic background. It's about just being aware of this issue – that's the most important

thing – and really trying to say, 'Next time I vote, next time I buy something, I'm just going to be aware of what's really going on.'"

The first campaigning steps were taken a decade ago after he found himself the target of angry environmentalists. During the filming of *The Beach*, the bestselling novel about backpackers seeking a shangri-la off the Thai coast, the production team was accused of damaging a pristine beach in a national marine park – in an

attempt to make it look even more "perfect" for the cameras, some palm trees were temporarily planted and sand dunes moved. Despite the authorities giving the film-makers permission, their actions made headlines around the world.

Evidently stung by the criticism, in 1998 DiCaprio established the Leonardo DiCaprio Foundation, which has since collaborated with the likes of the International Fund for Animal Welfare, Oceana, the Natural Resources Defence Council and the

Dian Fossey Foundation to raise awareness, particularly among children, of environmental issues.

In 2000, he was the US chair of Earth Day, the annual celebration of the environment. "Enough is enough," he told the crowd in Washington DC. "We must set an example now and move environmentalism from being the philosophy of a passionate minority... to a way of life that automatically integrates ecology into governmental policy and normal living standards. We are entering an environmental age whether we like it or not." But it was his Earth Day interview with President Clinton on ABC News that caused the biggest ripples: ABC journalists were said to be furious that a young, heart-throb actor had been allowed to do such an important interview. The final edit of the interview itself was fairly soft in tone, but it did include questions that now seem ahead of their time – namely, about the science of climate change, the lobbying power of Big Oil, ways to decrease the use of SUVs and how vulnerable New Orleans was to sea-level rises. There was even a lengthy exchange about hybrid cars, long before they became the car du jour of Hollywood stars.

As DiCaprio's acting career matured, he continued his parallel life as an environmental activist, speaking at colleges and campaigning on behalf of John Kerry in the 2004 presidential campaign. And for his new documentary, he has mustered the likes of Stephen Hawking, Bill McKibben, David Suzuki, Mikhail Gorbachev and Wangari Maathai (see page 29) to take part. He limits his own appearance in the film – essentially a series of talking heads set against library footage – to that of host and narrator. Since its release in the US last year, it has been dubbed the unofficial sequel to Al Gore's *The Inconvenient Truth*.

"It was a learning process," says DiCaprio, "and I wanted to play the role of investigator – from watching documentaries at a young age, from seeing films on rainforests in Brazil and really appreciating the beauty of our planet, and then learning more and more about human impact and wanting to do something about it."

His next eco-project is already in production – he's a producer for a Discovery Channel show called *Eco-Town*, which records how a Kansas town devastated by a tornado in 2006 attempts to rebuild itself as a "model of green living".»

TOP: GETTY IMAGES; BOTTOM: SHANTON