

Out of red, into the green
After the credit crunch: a more sustainable future?

A public lecture given by
Lord Chris Smith of Finsbury
Chairman of the Environment Agency

Royal Society of Arts – Wednesday 11 February 2009

The economic and environmental challenges

1. The two greatest passions of my political life have been the environment and the arts; and it is therefore somehow fitting that I should be able to give this, my first major lecture as Chairman of the Environment Agency, here at the RSA. Building on some of the recent work the RSA and others have done, I hope to touch on three major themes: the seriousness of the economic and environmental challenges that we currently face; the role that Government – and indeed the Environment Agency itself – can and should play in addressing them; and the recognition that the economic turmoil we are going through is an opportunity to change as well as a disaster to be remedied. And I firmly believe that the shift to a low-carbon economy, coupled with a new drive in environmental technology and green jobs, could offer our businesses their best hope of leading the world again.
2. At present, all political attention – understandably – is fixed on the condition of the global economy, the meltdown it's going through, and the need to protect national economies and individual businesses, jobs and livelihoods. Indeed, 2008 was a year of hard truths about our path of economic growth. We had come to believe that it was inviolate, yet we have learned that much of our prosperity was based on a mirage of unsustainable debt, recycled lending, and inflated asset values. We will continue to pay the price, I fear, throughout the year ahead.
3. Yet when we emerge from this economic turmoil what we mustn't do is simply re-establish what went before, and continue with all the old assumptions – about patterns of growth, consumption, and impact – as if nothing had happened. 2009 could, I believe, be the year when we radically change some of our economic and social habits, and make a historic shift towards a more sustainable pattern of human activity and economic interaction.

4. Over the ages, great changes have tended to come out of adversity. The welfare state was after all born out of depression and global conflict. A moment of crisis is precisely the time to think boldly about what it was that precipitated the disaster, and to plan for doing things better in the future. For some years now I've felt that our national politics in Britain has lost the ability to be bold. It has become too "managerial", too absorbed with minor adjustments – tinkering, almost – and too little prepared to set ambitious goals and seek to persuade people to join the journey towards them. We need to recapture some of that spirit, in the same way that politics and political discourse have been triumphantly revived over the past couple of years on the other side of the Atlantic.
5. We do indeed live in extraordinary times. We are in the midst of a major financial crisis; we are on the cusp of a serious energy crisis; and all the while we are stoking the fire of a potentially catastrophic climate crisis. Whilst the causes of each of these crises are – largely – independent, they share a number of common themes. In each there has been a collective denial of the scale of the problem amongst decision-makers, despite growing anxiety and evidence from experts and scientists. Each crisis is global in nature. Some of the answers to each lie in the hands of individuals, some in the hands of nation states, and some require intense collective international action. And in each, it appears that those who suffer the most – the fuel poor, those losing their jobs, those in the developing world at increasing risk of flooding – are not those who created the crisis in the first place.
6. The climate crisis is, I believe, the most serious, the most difficult, and the most intractable. We will – God willing – eventually emerge once again into a more stable economic condition. But climate change will still be with us, the climate crisis won't have gone away, and the clock will be ticking faster.
7. 2008 brought new, increasingly worrying evidence of the seriousness of the climate challenge. Arctic sea ice is declining much more rapidly than we previously thought; many scientists now believe that its complete disappearance in the summer months could happen by 2030, or even earlier. The potential rise in sea level could be up to 1.5 metres by 2100. Global greenhouse gas emissions have been rising at 3% on average per year since 2000; and this at a time when we need to be reducing our emissions, not increasing them. It is I suspect no accident that eleven out of the last twelve years rank amongst the hottest twelve years on record.
8. Already, weather patterns here in Britain are becoming more erratic and unpredictable. At the Environment Agency we are seeing more climate-related extraordinary events. Rain is falling more frequently as a concentrated, geographically focused deluge – bringing with it the threat of serious flooding. There are still people who are in temporary

accommodation following the dramatic floods of Summer 2007. The combination of sea level rise and coastal erosion is already a major issue for low-lying coastal communities. And perversely, there is a serious danger that in some parts of the south and east of England water will become a more scarce resource, with the flow in some rivers predicted to be down by up to 80% in summer months in forty years' time. Our "green and pleasant land" will be at real risk.

9. In other words, the challenge is tougher and more urgent than we once thought. Some of its effects are already with us; others are following not far behind. We cannot ignore any of this. And in a way, the fact that the world is turning its economic system with all its assumptions on its head at the moment gives us an opportunity, not just a potential threat. Not only is the state of the environment dependent on how people and the economy behave, but the wellbeing of people and the economy is bound up with environmental welfare. Only by rebuilding the economy in a way that takes these interrelationships into account can we restore and maintain economic and social prosperity.

The task for Government and the Environment Agency

10. This task is so big, so important, and so urgent that it ought to transcend partisanship in politics or indeed between nations. In the lead-up to the crucial international negotiations at Copenhagen towards the end of this year, it is especially important. Copenhagen may in truth be our last and only chance, globally, to get this right. And Britain has to be one of those nations showing a lead, being an example, and helping to create the international consensus about the solutions that will be needed. We will also be hosting the G20 meeting in London this Spring; and we should make sure that financing the transition to a low-carbon economy is firmly on the agenda there – leading into the discussions that will take place a few months later in Copenhagen. The economy – environment link must be made explicit at both gatherings.
11. There are signs that the political culture in Britain now accepts and understands the importance of all this. When I was a frontbench environment spokesman fifteen years ago, I had to struggle to get anyone – in my party or beyond – to take much notice of environmental change at all. Now it is almost universally accepted, in rhetorical terms at least, that the issue is vital, and huge, and requires action. (The exception that proves the rule is the Northern Ireland Environment Minister – yes, Environment Minister – who appears to argue that climate change doesn't exist.) For most, though, the debate is about how, and when, not about whether. But our response needs to be bigger than it has hitherto been.
12. The present Government has made some very welcome progress. They published the Stern Report, which revolutionised the way in which we view

the economic impact of environmental change. They imposed a rather successful landfill tax. They passed the Climate Change Act into law, placing a legal duty on governments into the future to reduce national emissions. They have accepted the essential target of an 80% reduction by 2050. They have included aviation and shipping in the calculation of the target figure. They have created a new Department with an explicit – and very welcome – link between energy policy and action on climate change. They have introduced a range of incentives and schemes, and some funding, for better insulation provision in people's homes. Nowhere near enough, but a start. They've brought in feed-in tariffs for small-scale renewable energy. So they've done some good things, though not yet enough. It's a pity, too, that they made the wrong decision recently on Heathrow.

13. The main Opposition parties have also raised their game. The Conservatives have argued explicitly that a recession is not a time to turn our backs on the environment. They have taken strong positions on Heathrow, on the need for high-speed rail development, and on carbon standards for new power stations. The Liberal Democrats have proposed an alternative way of spending the £12bn VAT cut, based almost entirely on environmental investment.
14. It was notable that when the Climate Change Act finally passed through the House of Commons there were only three votes against it. It is rare for such a fundamental piece of legislation to arrive on the statute book with such overwhelming cross-party support. Could we dare to hope that this same non-partisan approach could be established more generally for the environmental and climate change agenda? How about, as a start, an official mechanism for sharing information and papers between government and opposition parties, on privy council terms, on a regular basis? It's done when the country is preparing for war; given the sheer importance of the issue, can't it be done for the war on climate change? And how about a cross-party delegation at Copenhagen, to demonstrate the national commitment that transcends any single government or parliament?
15. So what can and should Government do in the immediate term? The first and most obvious answer to the question is that it – and the broader public sector - should be leading by example. All public buildings should be fitted with solar or photovoltaic panels. New buildings should be fitted with ground-source pumps. Public land should be used, where possible, for wind power generation. Every new public building should meet the highest possible standards for energy and water efficiency, becoming a showcase of good practice for other local businesses and organisations to follow. Government and public bodies should be switching their fleet vehicles to those with low-emission and hybrid engines, and reducing mileage wherever possible. Video-conferencing should be used more

frequently. And I would like to see every government department and public-sector organisation required to publish an Environmental Responsibility Report alongside its budget each year.

16. In the Environment Agency, we've been doing our bit in recent years. After the first year of our five-year strategy (from 2006) we have reduced our own carbon footprint by 9.6%. We've radically reduced the car mileage travelled by our staff. We've recently embarked on a project with Partnership for Renewables which could deliver 80 wind turbines on Environment Agency land. And our new headquarters building in Bristol is being built to the most sustainable and efficient standards anywhere. But we need to do more than this, in fulfilling our primary role which is at the point where environmental change and people's lives meet. We have to become an enabler organisation, making it easier for others to make the right environmental choices: whether it's ensuring that micro-hydro power generation schemes can go ahead in the right places, or waste-to-energy schemes, or anaerobic digestion projects, or permits for the impact of greener buildings on the environment. Increasingly, we have to see ourselves as a facilitator as well as a regulator.
17. All of this complements, of course, the work we do as an Agency week in, week out – as deliverer, regulator and adviser as well as facilitator of change. Many people will be familiar with the work we do to protect communities from flooding by building defences and issuing warnings. In fact, hundreds of our staff worked through the night on Monday to ensure the safety of communities across the South of England. We'll need to do more of this in future as climate change makes these events more common. And we will continue to work with business to reduce emissions, with farmers to protect biodiversity, with water companies to safeguard water supplies, with waste operators to prevent pollution, and with many others in the common endeavour of protecting and enhancing our environment. We approach these hugely important tasks with enthusiasm.
18. Not only should the Government be doing things itself in the short term, but it must also be acting as a catalyst for much wider change. And with the search for ways of providing an additional stimulus to the economy in the forthcoming Budget, there's a golden opportunity to do so. They could start by developing a full-scale, comprehensive, nationally publicised programme to fit better insulation and provide improved energy efficiency to people's homes. We've had some scattered initiatives to date, but no sense of a full-scale national endeavour. When the change was made, years ago, to natural gas in the home, there was a team of people who called door to door, making changes, fitting new meters and valves, and explaining what was happening. Everyone knew about it, everyone made sure they participated, and a remarkably smooth and successful transformation was achieved. We need the same approach. Surely it

can't be beyond our organisational capacity as a nation to do the same for energy efficiency now?

19. But we have to do it by making it as easy as possible for citizens to take up the efficiency offer. By doing something as basic and simple as having someone knock on the door, spend half an hour providing free advice about what can be done to help, and then offering to make all the arrangements to have it done. No hassle, no complexity, no daunting forms, and I suspect a huge take-up.
20. Tomorrow, the Government will publish a consultation paper on expanding the efforts to encourage energy efficiency in the home. The signs are that the ambition of these plans will be significant. But the investment, both from the public purse and through obligations on utilities, has to match that ambition. And good, friendly support mechanisms for householders must be part of the package.
21. This investment in energy efficiency would not only create good-quality jobs for the currently depressed construction sector, but would help our economy and society to become more resilient to future energy price rises. The current reduction in global oil and gas prices is masking the volatility and huge price spikes that we saw before the downturn. That volatility will return, and we must be better prepared for the next time.
22. And while we're at it, can Government also make it much easier for households to get access to photovoltaic panel technology, and wind turbine technology, for their own homes? Feed-in tariffs are an important part of the picture, but how about a one-stop-shop clearing house for arranging and organising the work, run by each local authority or a cluster of local authorities, to enable householders to get it done with a minimum of fuss and effort? And how about interest-free loans to assist those households who might find it difficult to pay up-front? How about priority access to the electricity grid for household renewables, as happened in Germany? This resulted in far higher take-up by households than here, and we should learn from the incentives and procedures they put in place.
23. One of the great tragedies of the past twenty years has been that some of these early forms of renewable technology – wind turbines, and solar and photovoltaic panels – have been seized on and developed by other countries, and not by firms based here in Britain. Does this, though, have to be a permanent state of affairs? As we increasingly ratchet up the demand for these forms of energy generation, isn't there a strong case for trying to develop a large-scale manufacturing capacity here? There are some small investments being made, struggling against mega-competition from Denmark and Germany and elsewhere – Sharp have a site making photovoltaic panels in Wales, and the Danish firm Vestas has set up wind turbine manufacturing in the Isle of Wight – but these are isolated

examples. Surely this should be a case of genuine opportunity that could be unlocked by investment from the Regional Development Agencies? Has any serious research yet been done about what, and how long, it would take to set up some real British capacity?

An opportunity for change

24. There have been many calls in recent weeks – including from myself – for a “Green New Deal” as a central part of the economic recovery package that is being put in place to beat the credit crunch. Nick Stern, for example, said at the recent Davos summit that the world needed to invest \$400 billion in low-carbon technologies and infrastructure over the next two years. President Obama has placed green technology and renewable energy at the core of his proposals for a major public-works stimulus to the US economy: making the argument on energy-security and environmental and economic grounds. There is good precedent for this. Franklin Roosevelt planted hundreds of thousands of trees as part of the New Deal public-works programme – and in the process helped to stabilise the shifting soils of the dustbowl lands that had created such agricultural poverty over earlier decades. He built dams and channelled water and irrigated new pastures. He understood precisely how the deployment of publicly-led investment could help to transform the relationship between the land and the people who could derive work and benefit from it. Barack Obama recognises this too, for energy as well as for land.
25. The centrality of green initiatives to the Obama rescue package is highlighted by estimates from the Climate Change Centre of Excellence at HSBC, comparing the green percentage content of stimulus packages on a country by country basis. The initial analysis shows that green investments represented only 2% of the Bush Stabilization Act measures; they represent 16% of the Obama proposals. The comparative figures for the other highly-performing countries are 34% for China, 19% for Germany, 10% for Spain, and 69% for South Korea. The equivalent figure for the UK is 7%. This is disappointing for the UK. It represents some good specific initiatives, but it has tended to be in bits and pieces. There is as yet no sense of an overall, coherent, planned, national strategy to see green investment as central to the recovery. There should be. And surely the forthcoming Budget – together with the publication of the low-carbon industrial strategy – is precisely the place to do it.
26. At the heart of any such green investment strategy must be nothing less than the complete transformation of energy generation in Britain. If we are to have the remotest chance of meeting our 80% reduction target by 2050, we have to have more or less de-carbonised our electricity production completely by 2030. And in order to do so, we have to ensure that carbon is removed from fossil-fuel-burning processes (more of this in a moment). We have to include new nuclear generation within the overall mix –and

this means solving the major outstanding dilemma of how to find a safe and secure repository for our high-level and intermediate-level radioactive waste. And we have to make huge strides in our hitherto faltering progress in the development of renewables.

27. Some of the green investments are urgent and immediate. Energy efficiency, combined-heat-and-power, wind and solar and photovoltaic sources, micro-hydro generation, energy from waste, protection of peatlands to prevent carbon dissipation, safeguarding forests, bringing real improvement to our rail networks: the knowledge and the technology is there, the need is there, but the financial parameters and political support and in some cases public subsidy have to make them work. We in the Environment Agency, with our regulating and permitting and advisory roles, need to be helping wherever we can, ensuring that our overall responsibility to safeguard the environment encompasses the climate change imperatives as well as the more specific ecological needs of a locality.
28. Other green initiatives will take longer to come to fruition, and in many cases require more active research before development can take place. But these medium-term and long-term investments are every bit as important for the creation of a low-carbon economy in the future, and we need to get working on them now. We are an island surrounded by tides, yet we have done too little work to date in identifying ways of harnessing tidal power to generate electricity that doesn't in the process cause irreparable environmental damage to habitats or biodiversity. The same is true of wave power. And of some forms of biofuel and biomass, some of which have the potential to be beneficial, and some harmful.
29. And then of course there is carbon capture and storage, CCS for short. This is especially important in order to remove the carbon dioxide from coal-fired power emissions. Coal burning is the dirtiest form of power generation. Around the world, it is also the most reliable, and it is the power source of choice for many developing countries. Being able to remove the carbon dioxide almost entirely from any emissions to the air, and instead to capture it, compress it, and store it underground (or in our case under the North Sea) forever: this gives us the chance to continue to see coal as part of the energy mix going forward, but without the CO₂ impact. The building of a new coal-fired power station without CCS is, I believe, environmentally unsustainable. With CCS, however, coal, oil and gas can continue to play their part in the future energy security of our country. And CCS offers a real opportunity to reduce carbon emissions around the world as well.
30. What we need in the UK is a three-stage process. First, a number of large-scale demonstration projects for CCS in new coal-fired power stations, using different kinds of approach and technology, and put in

place very rapidly over the next few years. Second, a requirement that all new coal-fired power stations will have CCS fully fitted and operational by the early 2020s at the very latest, and all new oil and gas stations by the mid 2020s. (And in this connection, the Environment Agency must recognise CCS as Best Available Technology at the very earliest possible moment. The urgency is great.) And third, the retrofitting of any remaining fossil-fuel power stations by 2030.

31. The problem, of course, is that no-one has yet done CCS on this kind of scale. There have been some small-scale demonstration projects, especially in Germany, but no large-scale, full-power-station schemes, or anything like them. The technology however isn't a mystery. It's all about getting the kit right, and doing it on the right scale. The principles are broadly agreed and in place. And the advantage that could come from being a first-mover on this technology – developing something that could eventually be exported around the world – is substantial. We lost out when wind and solar power started to take off. We held back, and allowed other countries to seize the advantage. Let's not do the same thing now. We have a real opportunity, if we move rapidly to put major demonstration projects in place, to lead the world on this.
32. Very shortly the Government here in the UK will have to make a decision about the proposal from E:ON to build a new coal-fired power station at Kingsnorth; and, as with Heathrow, this has become an iconic issue for environmentalists. Rightly so, given the importance of coal emissions to global warming. Yet surely it represents a real opportunity for the Government. Any go-ahead for Kingsnorth should be strictly conditional on the fitting of a large-scale demonstration CCS project from the outset, with a clear timetable for full CCS as rapidly as possible thereafter, at the latest by the early 2020s. Yes it is true that no-one has done it on this scale yet, but there has to be a first somewhere. Yes it is true that it will be costly, but a combination of government, EU, and private sector contributions ought to make it possible. And yes it is true that we need to develop a number of different models of CCS, in different locations and on different scales, to see which works best. But Kingsnorth would surely be a good place to start.
33. CCS is essential if we are to achieve the carbon-free generation of power, followed by the switch of all ground transport to electricity. Only by making these two step changes will we secure an 80% reduction in emissions over the next forty years. There are some, like Jeremy Clarkson, who argue that a reduction of this kind is not only unnecessary but unachievable. He's wrong on both counts, and in a strange way I'm surprised by his defeatism. A man who so fervently embraces the best in engineering, technology and innovation must surely recognise our potential to lead the world in this important area? His great hero, Brunel, would have understood this. He consistently recognised that the world

was changing, relished the challenges, and brought the finest engineers, designers and manufacturers together to meet them. We have the opportunity to do the same on climate change.

34. One of the major constraints faced by some of these low-carbon industries is the need for (and absence of) specific skills. Many of these can be learned quickly, and with sectors like construction, car manufacturing, offshore engineering, and marketing all suffering particularly through the recession, switching skills into work on energy efficiency and renewables and their promotion ought to be possible. And perhaps it will be no bad thing if the best and brightest graduates cease to be quite so enamoured of lining up for traineeships in financial services and instead turn their ambitions towards engineering and science.
35. There is also a key role here for the education system in schools to play a part. Most young people understand far more about the future environmental needs of the planet than the rest of us do. It's their future, after all. But giving them the tools, of knowledge and awareness and understanding about the issues, the problems, the impacts and the possible solutions, is something we need to highlight within our schools. There is welcome work under way already on this. Within the national curriculum, 11 to 14 year olds study resource planning and management and environmental change as part of the geography curriculum, and renewable energy as part of the science curriculum. But I'm sure there is scope to do more, to highlight the importance of these issues, to use case studies both local and international to help understanding, and to place the science and the impact of climate change as much at the heart of the school week as the other fundamentals of language, literacy, numeracy and the broader field of physics, chemistry and biology.
36. Above all, though, we need to have a grown-up discussion, all of us, including the politicians, about what a low-carbon economy and society might really look like. And I wonder if the Credit Crunch and all the rethinking, questioning, and uncertainty that it brings, might be able to prompt just such a public discourse.
37. There's a tendency amongst some within the "green movement" to talk only of doom and gloom. To paint a picture of rising sea-levels and disappearing forests and growing deserts and violent storms and food and water scarcity and destroyed biodiversity and wars over environmental territory, and to tell us all that we're going to hell in a handcart unless we all turn into green hippies and live off the land. The problem is, it simply isn't going to happen; people won't want to live their lives like this. It's difficult enough to convince people to do something, however small, to help to avoid a disaster that is waiting to happen but hasn't happened yet. To do so on the back of an unrelievedly doom-laden analysis isn't going to persuade very many people. We need to learn the classic lesson that

Barack Obama has re-taught us: tell it as it is, yes, but give a sense of hope that things could be made to be different. And that all we need is the will to do it.

38. What's more, in relation to environmental change, we've done it before. The past fifteen years have seen an 80% reduction in sulphur dioxide emissions. The hole in the ozone layer has been repaired. The threat of acid rain has retreated. It's all happened because of human endeavour, incentives, and regulation. And in the process we've demonstrated that it is possible to change environmentally-destructive behaviour for the better. We need to apply the same dedication, now, to the issue of climate change.
39. So, give everyone the facts, yes. Give them hope too. And then go beyond that, and give them the opportunity to shape the debate and discussion about what we want society to look like in forty years' time. Until last year, we tended to assume that the key to perpetual economic progress was ever-increasing consumption, and indeed that part of the cure for our economic ills is to re-start the consumption motor. Could we, though, envisage a time when we think more of the balance between consumption and consolidation and – dare we think it – sharing; when we try to find our way to a new economics that factors in the needs of future as well as current generations; when we try to place a real value on the resources that we use up, and the waste we generate, and the impact on the rather fragile world around us without which we couldn't do anything; and when we see wisdom in some rather old concepts like husbandry and stewardship and well-being? These aren't easy things to shout about and inspire people with. It means appealing to something more than the automatic immediate aspirations people have. It doesn't mean abandoning the sense of reaching for the best that life can offer. But it does mean having the maturity to discuss and decide, seriously, what the shape of "the best" might be. Surely it must be the case – in the shadow of economic crisis – that the right time to have this discussion, to make this change, is here and now.
40. As George Bernard Shaw used to say, "Some men see things as they are and say why; I dream things that never were, and say why not".

ENDS