Chapter 6

Liberalism, Environmentalism and Green Politics

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Conventional political theory tends to see liberalism as inherently inimical to green politics. Liberalism, on a view often taken for granted at least on the left, is taken to prioritise the satisfaction of individual human desires over all else, which not only means giving individuals priority over collectivities such as classes, nations and states, but also giving them priority over the natural environment. On this conventional view, green politics is holistic, seeing humans as part of nature, whereas liberal politics is particularistic, treating humans as fundamentally separate, not only from one another, but also from the natural world.

The conventional view, however, is plainly wrong. In the English-speaking world (with the possible exception of Australia), political parties that identify themselves as 'liberal' are more likely than parties of the right or left to promote policies aimed at environmental protection, and far more likely to promote radical action on problems such as climate change.

Parties of the right, such as the British Conservative Party, have long been close to economic interests that feel threatened by environmental politics, a position that reasserts itself as soon as environmental policies start to bite. Leftist parties, especially those close to the trade unions such as the British Labour Party, are often also captured by producer lobbies connected to polluting industries. Liberal parties tend to be free of such interests and have thus been able to move easily in the direction of environmentalism. Admittedly, one finds a much lower level of commitment to environmentalism in some of the more business-oriented liberal parties – the German FDP, for example, or the Dutch VVD – but social liberal parties display a clear preference for green policies.

Part of the reason for the failure of conventional political theory to explain the reality of liberal politics' engagement with environmentalism is an attempt, often an ideologically motivated attempt, to equate mainstream liberalism with the academic left's favourite bogeyman, 'neoliberalism' – that

combination of market fundamentalism and prison-building promoted by political leaders as 'liberal' as Augusto Pinochet and George W. Bush. The insinuation is that all liberals, whatever they might say, prioritise individual material well-being over all else, recognise no collective responsibilities and promote competition as a good in itself regardless of its consequences. The accusation only has to be stated explicitly for its absurdity to become clear. In Britain, to drive the point home, it was not liberals who embodied 'neoliberalism', but Margaret Thatcher and Tony Blair (the former through conviction, the latter through his usual mixture of random following of fashion and fear of the media) – although, to confuse the position even further, both those prime ministers combined neoliberal views with more commitment to the environment than was usual in their own parties.

Another part of the explanation of the conventional view, however, is a broader failure by liberals to explain to non-liberals why the purposes liberalism pursues include protection of the environment. Liberals have developed explanations of how their core beliefs are compatible with environmentalism, but they have not gone on to explain how anti-environmental stances are *incompatible* with liberalism.

Liberalism compatible with environmental protection

The compatibility of liberalism and environmental protection is easy to show. Because liberalism, unlike libertarianism, treats the delimitation of property rights as a potential instrument of public policy and not as a sacrosanct pre-political totem, it can easily incorporate, for example, the environmentalist principle, suggested by Marcel Wissenburg, that resources should not be destroyed without adequate replacement.[1] Environmental harm also often involves physical injury to individual people and thus frequently counts as 'assignable' harm for the purposes of John Stuart Mill's harm principle, which permits (but does not require) state action to prevent such harm.[2]

Libertarianism not compatible with environmental protection

One might add that libertarianism does have difficulties explaining how it might be compatible with environmentalism. Libertarians need to explain how environmental issues can be resolved solely by the delimitation of property rights. That might be possible where the problems are quite small – where one person is polluting the property of another and the dispute can be resolved by declaring one side or the other to have the superior right. But where the proportion of human activity causing environmental damage is very high, and the size of the potential damage very great, as in the effects of

climate change, the property rights approach collapses. It is difficult to maintain that the state is merely protecting existing rights if it intervenes to tell a very high proportion of the population that they may not use their property as they want. But not to do so would risk destruction on such a vast scale that the state would be failing to protect property in a different way.

No wonder libertarians often resolve this contradiction by asserting that the climate change problem does not exist, and by treating environmentalism as nothing more than the latest excuse of statists to regulate and interfere. Of course, they might not be wrong about that last point – the motivation of some 'Red-Greens' does seem to include the desire to justify greater state control of economic life in an era in which socialist arguments based on efficiency have been discredited. But libertarians are wrong to think that the only justifications for environmental regulation are socialistic.

Beyond liberal compatibility with environmentalism

The question is, therefore: how can liberals maintain that environmentalism is not just compatible with liberalism but *required* by it? On the face of it, that is a difficult task. Liberals have a whole armoury of principles to help them decide whether the state is permitted to act – Mill's harm principle not least among them – but it has very few principles that help them to decide whether the state has a duty to act.

The European Court of Human Rights has developed the idea that states have positive duties to protect the rights of citizens, including several in the environmental field, such as duties to provide information about environmental hazards, but it has failed to provide any coherent theory of when and why such duties should arise. The clearest such positive obligation is the duty to take steps to protect the life of citizens, and one might argue that many environmental threats, up to and including climate change, do ultimately put life at risk. The problem with that argument, however, is how to keep it within reasonable bounds. Does any threat, no matter how small and distant, oblige the state to impose enormous burdens on the current population? No one, except perhaps for a Red-Green looking for new arguments for state intervention, thinks so. The obligation is therefore usually seen as one to take reasonable or proportionate measures, one which liberals might be content to endorse – but this merely postpones the question of what counts as reasonable or proportionate.

The central difficulty with the concept of reasonable or proportionate measures is what do we count as the gains and losses from intervention? Greens claim that the problem with liberalism is that it values personal freedom so

highly that it can only use the satisfaction of individuals' subjective desires in deciding what is reasonable or proportionate. According to Greens, especially those of the deep Green variety, one has to count in the value of nature itself, regardless of human preferences, to arrive at a proper valuation of the environment. Moreover, Greens claim that the origins of ecological crisis lie in humans' untrammelled desires to consume, so that there is no long-term solution without acting to limit those desires – a course of action that liberals, committed to the idea of personal freedom, will be unable to endorse. From a deep Green perspective, liberalism cannot help but count as 'anthropocentric' – that is, it holds that nature has value only in so far as it has value for us as humans. Even the fact that liberals tend to speak not of 'nature' but of the 'environment', which is to say that which surrounds humans, confirms that orientation. Environmentalism, on this view, is not enough. One has to see humans ecologically, as part of nature, not separate from it.

There is something in this. Liberals *are* anthropocentric. Their first and last concern is with human freedom. But, contrary to what Greens claim, they are not committed to an unconsidered, subjective, market-based view of value. There might be a historical connection between liberalism and utilitarianism, but the intellectual connection is long broken. Liberalism, or at least modern social liberalism, is committed instead to promoting democratic processes of discussion through which groups of people can come to views not only about what they happen collectively to want at any one time (a process of merely adding up desires on the basis of one person, one vote, in parallel to the market's one monetary unit, one vote), but also, and crucially, through which they can discuss and decide about what they *ought* to want.

Indeed, one of the central points of having democratic institutions is that by discussing decisions on the basis of political equality, we can come to new, more comprehensive and more considered views of what we want. Those processes of discussion provide an opportunity for the inclusion of views of value that go beyond immediate desires. That opportunity does not extend to allowing the state to take a comprehensive view of what counts as good for individuals to want in their individual lives, but it does allow for views to be put forward about the value of, for example, ecosystem services that go further than the value that individuals would put on them before the discussion started.

Thus, when liberals make judgments about what counts as proportionate and reasonable intervention for the purposes of a positive duty to act, they take into account not just what level of environmental protection citizens happen to want at the time. They also take into account what can be persuasively argued for in the course of democratic debate.

Preventing a catastrophic conflict between environmental degradation and democracy

The challenge of liberals back to Greens is a fundamental one about democracy. What happens if democratic discussion of what we ought collectively to want fails to come up with the valuation of the environment, or nature, that Greens propose? Does the Green commitment to the objective value of nature and their objection to what people currently want imply a belief in the overthrow of democracy itself? If it does, then we have identified an important difference between the two views. If not, we have identified limits to Green rhetoric about the objective value of nature and the need for a revolution in what people want.

It is possible, however, to construct scenarios in which the only way to preserve humanity at all is to adopt totalitarian methods. There are scenarios about out-of-control climate change, for example, that have that characteristic. Surely, Greens might say, it would be worth a period of totalitarianism, even a long one, to maintain the possibility of human life itself. But Marcel Wissenburg is right that, faced with a choice between a global totalitarian eco-state and a 'global Manhattan' (an unsustainable liberal mega-city), liberals would always choose global Manhattan.[3] Greens then respond, what if the choice is between *imminent* environmental apocalypse and totalitarianism? Would not survival trump all else? But for liberals, that choice itself is an apocalypse. A society faced with the choice between life and what makes life worth living is already intolerable.

The lesson of such scenarios for liberals is that it is important to work constantly to ensure that we never face such a choice, which means working constantly for an 'eco-Manhattan'. That is, the need to protect the environment so that we do not end up with a choice between survival and totalitarianism is itself an argument that environmental protection is not only compatible with liberalism but required by it. Environmental degradation that threatens human welfare so much that only illiberal political measures can save humanity from serious harm or even destruction is itself a fundamental threat to the freedom liberalism seeks to protect and promote. Only by working to prevent environmental degradation can we prevent the development of a situation in which environmental degradation threatens freedom.

Capacity to develop a plan of life

Liberalism recognises the value of the environment in another way that goes beyond immediate desires. If one asks what the individuality liberalism values consists of, the answer is not the capacity of people to desire things but

their capacity to plan their own lives in ways that make sense to them. The existence of an acceptable environment is a condition of that capacity. At its most extreme, a global environment incompatible with human life or seriously damaging to human health defeats all plans of life. Even if the effects are more local, so that in principle those affected can move away (examples might include urban air pollution or the regional effects of climate change), the degree of disruption both to those directly affected and to those affected by the consequent movements of population will often be so great that their choices, or their 'capabilities', to use Amartya Sen's term, will be severely curtailed.

Admittedly, the standard of environmental acceptability liberalism uses is a human standard – what permits us to function as humans – not a standard set from what we might imagine is the point of view of the universe. It follows that there will be differences of view and divergences of interest about what degree of environmental protection is necessary. But those differences and divergences give rise to political problems of precisely the kind liberalism has been grappling with at a theoretical level for the past half-century, at least since the publication of Rawls' *A Theory of Justice*. Debate continues around the right way to deal with them. In particular, disagreement continues about the best way to reconcile the interests of current and future generations. As economists discovered when some of them tried to define as purely technical the issue of whether the Stern Report was right to count future humans as having the same value as existing humans,[4] these issues are ethical and political, not algebraic. But these debates can be conceived of as debates within liberalism, not debates about liberalism.

Equality

A third set of arguments that connect liberalism with the environment concern equality. Some forms of equality are inherent in all forms of liberalism – for example, equality before the law and equality of rights of political participation. Some forms of liberalism, however, take the commitment to equality further. What I have elsewhere called 'minimalist social liberalism' concerns itself with how inequalities of income and wealth might adversely affect political equality, worrying about not only the effects of money on political campaigning and on control over the means of expression, but also about how inequalities in access to education and health might produce inequality in ability to affect politics over the longer term. 'Maximalist social liberalism', in contrast, worries about inequality more directly, starting from substantive ideals of equality, such as the principle that no one is entitled

without further justification to use more than an equal share of their society's resources.[5]

Although there is no obvious connection between the environment and the formal equalities promoted by all types of liberalism, the forms of equality promoted by social liberalism do imply concern for the environment. The connection is clearer in the case of maximalist social liberalism. It takes two forms. The first connection is that the resources of society over which we might have only an equal claim without further justification include the environment and the benefits it bestows. Admittedly, one needs a further principle, of the form that resources should not be destroyed without justification, to exclude perverse methods of reaching equality by making some people's lives worse, but that further principle is not in itself illiberal.

The second connection is more direct. Many kinds of environmental problem bear more heavily on the poor, so that solving them is inherently egalitarian. Slightly more subtly, improvements in equality can arise even where burdens are not so unequally shared. It is difficult to exclude people from environmental benefits. Some are close to universal, for example ecosystem services such as the potential to provide new medicines. Others, such as a stable climate, might have differential geographical effects, but their benefits within regions are not confined to specific individuals or strata of society. The effect is that, on the whole, improving the environment in these ways tends towards equality in itself. As environmental benefits of this kind grow as a proportion of the total resources of society, the proportion of those total resources taken up by a relatively equally distributed resource also grows, and thus overall equality grows too.

The connections between the environment and equality might seem to be relevant only to maximalist social liberals. Indeed, one might be able to observe empirically a correlation within liberal politics between maximalism and environmentalism, a correlation that arises not from a red-green desire for state control but directly from the correlations between equality and environmentalism. But there are also reasons for minimalist social liberals to worry about environmental degradation. For example, serious environmental problems interfere with health in ways that should engage minimalists' attention. Geographically specific environmental problems that tend to interfere with the ability of those there to take part in politics should strike minimalist social liberals as a significant threat to political equality, a point which applies most obviously to local conditions, but which also applies at a global level. The threat posed by climate change to the very existence of small island states, or states whose population is concentrated

in low-lying river deltas, for example, is precisely the kind of environmental problem with serious political consequences about which minimalist social liberals should worry.

The difference between maximalists and minimalists comes down to the difference between being attracted to the equalising effects of environmental improvement and being repelled by the political effects of environmental degradation. The former is likely to produce a larger effect than the latter, and, arguably, neither is likely to be as important in impelling liberals towards environmentalism as the need to avoid a threat to democracy itself or the connection between the environment and the capability of individuals to choose their own plans of life, but their effects are at least in the same direction.

Modern liberal parties, as alliances between minimalist and maximalist social liberals, might contain within them some tensions about the relative importance of the environment, especially about the importance of positive environmental benefits, but they are united in treating environmentalism as inherent in their political outlook.

Liberal means and rethinking the importance of 'choice'

Greens are not wrong, however, when they point out that liberals are unwilling to use whatever means might be necessary to deal with environmental problems. That is because liberals are generally unwilling to use certain types of means in politics. When Hobhouse declared that freedom means being treated as a rational being,[6] he was underlining a fundamental liberal commitment not so much to rationality (he knew, as we do, that people are not in fact always, or even often, rational) but to an important aspect of the respect liberalism believes is due to all individuals. That is why liberalism rejects methods of manipulation and mind control. It is also why liberals favour choice – not, as sometimes believed, because liberals have swallowed the market fundamentalist dogma that choice always leads, by quasi-magical means, to universal improvements in quality, but because providing choice pays appropriate respect to individuals. The result has been that liberals display a bias towards policy instruments that seem to leave the population with choices – for example, consumption taxes, tradable permits and subsidies – and a bias against those that appear to give no choice – especially the criminal law.

One might question, however, whether these distinctions really work in the way liberals have thought. Tax and permit trading schemes themselves ultimately depend on criminal law penalties against tax evasion and against carrying on an activity without a permit. Indeed, proposals for trading

schemes that apply to most of daily life – personal carbon allowances, for example – have the effect of bringing the criminal law into a high proportion of daily life via the need to enforce the scheme. Choice is technically still present, but the pressure of regulation on the mental life of individuals might be so great that a line has been crossed into oppression. Having one's own plan of life presupposes having the time to formulate such a plan, time that might not exist if daily life is overwhelmed by rules.

A parallel point is that schemes of regulation that provide for low levels of fines, although perhaps intended as coercive, might end up being treated as mere costs of production. That might be seen from a liberal point of view as a good thing, as bringing back an element of choice, but the wider effect on the rule of law (and especially on equality before the law, since the wealthier the defendant the more likely they are to treat the fine as a cost) might be considered potentially disastrous.

A further challenge is how liberals should think about policy instruments that have developed out of the insights of behavioural economics and applied psychology – for example, 'nudge' techniques. At first sight, such methods are highly manipulative. They take irrational aspects of how people think – their inability to calculate risks properly, their susceptibility to simple errors such as excessively favouring an option framed as the middle one, and their sheer laziness – and use them to change behaviour. Can they ever be justified?

The time might have come to reconsider what should count as liberal means. One way forward is to return to basic liberal concerns and ask: what are the conditions of people being able to formulate their own plans of life and to participate freely in politics? From that point of view, what matters is less what form of choice a policy instrument offers – to pay a price in the form of a tax, a fee or a criminal penalty – and more the extent to which it hinders individuals in the formulation of plans of life and in political participation. One consequence of such a move would be that the *effects* of policy interventions would matter more than their *form*. Direct environmental regulation might not be objectionable in itself as long as it avoids producing conditions that interfere in individuals' ability to formulate life plans. Regulation that prevents the use of gas-guzzlers, for example, does not by itself interfere with the choice of any plausible life-plan (except perhaps for bizarre ones that revel in the waste of resources) and might be preferable to tax or subsidy measures that might not work. On the other hand, where nominally 'choice'-based techniques do have such effects, such as intrusive personal carbon allowance schemes, they should be ruled out. 'Nudge' techniques similarly

might be acceptable as long as they are carried out openly, so that they do not involve the use of arbitrary power and do not cut off political debate. Indeed, it might be a usable principle about 'nudge' techniques that they should not be deployed if using them openly means that they fail.

The net effect of such a rethink would not be that liberals would turn into 'any-means-necessary' Greens, but they might be able to contemplate a wider range of measures, especially regulatory measures, than they do now.

Conclusion

Liberalism is not just compatible with environmentalism. It *requires* environmentalism. It might not require a commitment to dissolving human interests into the swirling flows of the natural universe, as deep Greens demand. Indeed, it might even require the rejection of such a view.

Liberals are unashamedly anthropocentric because they worry above all about the capability of human beings to lead their own lives and to govern their own, human, communities. But that capability itself presupposes a liveable environment, without which liberalism itself would not be possible. Above all, in the long term, uncontrolled accelerating environmental degradation is a threat to democratic institutions, and so constitutes a threat to all that modern social liberals hold dear.

Notes

1 Marcel Wissenburg, *Green Liberalism: The Free and the Green Society* (UCL Press, 1998), p. 166.

2 See *On Liberty* (Collected Works, University of Toronto Press, 1977) p. 282, where Mill elaborates, 'But with regard to the merely contingent, or, as it may be called, constructive injury which a person causes to society, by conduct which neither violates any specific duty to the public, nor occasions perceptible hurt to any assignable individual except himself; the inconvenience is one which society can afford to bear, for the sake of the greater good of human freedom.'

3 See Wissenburg, *Green Liberalism*, and Robyn Eckersley, 'Environmental Pragmatism, Ecocentrism and Deliberative Democracy' in Ben Minteer and Bob Pepperman Taylor, *Democracy and the Claims of Nature: Critical Perspectives for a New Century* (Rowman & Littlefield, 2002), p. 54.

4 See Nicholas Stern, *Stern Review on The Economics of Climate Change* (HM Treasury, 2006), pp. 31–33, and, e.g., Terry Barker, 'The economics of avoiding dangerous climate change: An editorial essay on The Stern Review', *Climatic Change* (2008) vol. 89, pp. 184–87.

5 See David Howarth, 'What is Social Liberalism?' in Duncan Brack, Richard Grayson and David Howarth (eds), *Reinventing the State: Social Liberalism for the 21st Century* (Politico's, 2007), pp. 1–16. 'Minimalist' social liberals, in common with all social liberals, care about democracy and social justice (unlike classical 'economic' liberals with whom they are often confused by journalists), but they care about social justice only to the extent that lack of social justice interferes with democracy. 'Maximalist' social liberals accept arguments in favour of social justice and equality over and above those based on protecting democracy.

6 L. T. Hobhouse, *Liberalism and Other Writings* (James Meadowcroft ed.) (Cambridge University Press, 1994), p. 59.

Chapter 7

Setting Standards: Environmental Regulation as if Human Health Mattered

Mike Tuffrey

Environmental regulation as health protection

In recent years the mood across the political spectrum has been almost universally hostile to government regulation. Initiatives for greater intervention are routinely accused of adding to 'red tape'. Those presenting themselves as 'pro-business' insist that regulation is essentially a bad thing – holding companies back, adding costs, discouraging innovation and destroying initiative-taking.

Little mention is made of the very real benefits which regulation to protect the environment can bring, spurring innovation and enterprise, while also also protecting human health. Yet even a cursory look at recent history shows how regulation can prove effective.

Take our capital city. The earliest recorded effort to protect London's notoriously bad air quality dates back to 1306. It took the Great Smog of December 1952 to spur effective action: 12,000 people died in the immediate aftermath, with a further 8,000 in the following months. Government only acted when the Select Committee on Air Pollution recommended legislation, and backbench MPs sought to pass a private member's bill on domestic coal burning. The Clean Air Act 1956 gave local authorities the power to create 'smoke control areas'. Even today, failure to implement EU directives to clean up modern day pollution, largely caused by the internal combustion engine, means that Londoners suffer heightened health risks. An estimated 450,000 people in the European Union die prematurely each year as a direct result of exposure to air pollutants.[1]

Another example of environmental regulations to protect health is how lead was eliminated from petrol in the UK, with a leading role for an erstwhile Liberal Democrat hero. Lead's toxic properties have been known since Roman times, yet for more than sixty years a form of the metal, tetraethyl lead, was added to gasoline to increase its octane rating. Evidence mounted in

America of the damage done, especially to children's brains, and the US acted in the 1970s. It took a concerted campaign in the UK, run by Des Wilson in 1982, and two EU directives in the 1990s finally to achieve the goal, requiring all new cars to have catalytic converters and eventually phasing lead out completely. Since 1 January 2002 all petrol sold in the EU is unleaded. Academic studies are now attributing lower levels of violent crime among teenagers to lower levels of lead in the atmosphere when they were growing up.[2]

For those who argue that necessary international agreements are too hard to reach, there is the success of phasing out the production of ozone-depleting substances. As a result the annual 'ozone hole' over Antarctica is now beginning to close and the risk of damage from ultraviolet light – which can contribute to skin cancer and cataracts – is diminishing. The breakthrough came in 1985 when twenty nations signed the Vienna Convention for the Protection of the Ozone Layer. This established a framework for negotiating international regulations on ozone-depleting substances and was followed in 1987 by the signing of the Montreal Protocol, which ultimately ended the production of the main culprit, chlorofluorocarbons (CFCs) completely in the 1990s in the developed world and ten years later in developing countries.

Aside from these examples, the evidence that unrestricted environmental damage harms human health is incontrovertible. The World Health Organisation estimates that a quarter of the global disease burden can be directly attributed to environmental factors – one in four premature deaths and billions of people suffering ill health during their shortened lives.[3]

The global impact on human life from the consequences of climate change, such as increasingly severe weather incidents, changes in rainfall patterns and ultimately from rising sea levels, is now widely understood. Measures to mitigate the impact are slowly being devised around low-carbon energy generation, changes to transport, greater efficiency in product manufacture and use, and higher efficiency standards for buildings. These will have immediate health benefits.

Lower emissions of pollutants from reduced burning of fossil fuels saves lives, cuts asthma and improves children's life-long healthy development. Similarly, switching to more walking and cycling in urban areas has a direct positive effect on chronic illnesses such as cardio-vascular disease, diabetes, certain cancers and depression. Improving access to green spaces not only increases quality of life but enhances health and reduces NHS costs. One recent study of the cause of death of almost 400,000 people found that the health gap between rich and poor could be halved if the least well-off had access to parks and woodland.[4]

If the evidence that an improved environment can increase quality of life and human health is clear, what are the costs and benefits of interventions to achieve this? Who will benefit and who should pay?

The economics of regulation

Since the start of the industrial revolution, the problem of what economists call externalities has been acknowledged. This is where individual producers or consumers cause harm to wider society or the environment without paying the resulting costs. Taxes and regulations have been progressively increased, so that more externalities are included in the normal price of transactions.

Examples abound. Individual businesses gain from being able to recruit workers already educated in basic skills. The corporation tax they pay in part supports the public education system. Health and safety regulations require spending on protective measures. This saves individuals from harm, ensures that responsible employers are not undercut by unscrupulous competitors, and ultimately helps reduce expenditure in the National Health Service and on disability benefits.

Where the benefit to human individuals is clear, few today would argue about the principle. However regulation for environmental protection is more contested. Most accepted are those where the public health benefits are patent and immediate, and the environmental damage is visible and directly traceable to source. Examples include preventing factories from emitting noxious fumes or discharging pollutants directly into rivers or groundwater. The Environment Agency is charged with enforcing these rules, with prosecutions and fines for breaches. Even here, business benefits. Preventing water pollution protects businesses downstream of polluters or those who extract ground water. Necessary costs are spread fairly among all companies, preventing freeloaders.

Regulations affecting individual industries tend to be hotly contested by those affected, at least initially. After the ban on CFCs was proposed, the fluorochemicals industry rapidly saw a commercial opportunity, as safe alternatives could be profitable too, so started racing to compete. Development went far faster than expected and the Montreal Protocol was successively amended to bring the phase-out dates closer. American companies like DuPont led the way, with the extra incentive of threatened court action after the US government published studies estimating that an additional 40 million cases and 800,000 cancer deaths were likely if no action was taken.

Another example of innovation, much cited by former US Energy Secretary Steve Chu, is how improved federal energy efficiency standards for fridges were set, despite opposition from the industry, which warned that higher standards would increase costs. In fact while running costs definitely fell, with a fridge in 2010 costing a third less to run than one made in 1975, the real cost to the consumer of the initial purchase fell too, while the typical size grew. Overall savings achieved by the minimum standards are estimated at US$300 billion up to 2010.[5]

A current example affects the European tyre industry, worth some €30 billion a year. As from November 2012, manufacturers and importers of all tyres in the EU must provide product labels about three environmental and safety aspects: fuel consumption (related to the rolling resistance), wet grip for shorter braking distances in the rain and external noise generated. Distributors and retailers must make sure this is visible at the point of sale.

Although the benefits of higher graded tyres had long been known, the industry vigorously resisted the proposed rules, but has since embraced the opportunity to promote A-rated versions. These tyres can reduce fuel bills by up to 9 per cent, saving a typical passenger car around €200 a year. Across the EU, by 2020 this measure is expected to reduce carbon dioxide emissions equivalent to removing 500,000 to 1.3 million cars from roads.[6]

In both examples, it took a government standard and a labelling regulation to unleash innovation and spur action even among supposedly rational buyers who should have upgraded long ago based on the economics alone.

And yet from the earlier examples, it is also clear that governments and politicians rarely take action without considerable pressure. To make progress, the health damage must first be convincingly proved, and long-term costs and benefits demonstrated. Those with vested economic interests in the status quo must be attacked and embarrassed. Technological alternatives must be devised – and shown to be workable. The public and the media have to be mobilised. Then governments have the 'space' (politics being the art of the possible) to use regulatory and fiscal measures to encourage a transition; they can set standards, usually escalating; and ultimately they can impose restrictions to capture externalities and overcome market failure.

The economics of the natural environment

However, this approach relies on a good understanding of the cost on externalities. Where the environmental damage is long term or hard to attribute to an individual, devising an effective regulatory intervention becomes difficult. Thankfully our understanding of the extent of economic dependence

on (and increasing damage done to) natural ecosystems is growing. This is now exposing a gap between what is needed for planetary survival and the accepted limits of the current system of environmental protection and regulation.

A simple example illustrates this. The recent decline of the UK's bee population is revealing that much of British agriculture is fundamentally dependent on natural pollination by bees. If farmers had to pay for this to be done artificially, the annual cost would be in the order of £1.8 billion, dramatically pushing up food prices and lowering the standard of living for many.[7] Yet there is no consensus on whether to charge the food industry for the costs of protective measures.

The full extent of the UK economy's dependence on the natural environment was assessed in 2011 by a major study of the national ecosystem. Its central conclusion was that we depend on ecosystems and the services they deliver to underpin our very existence, to produce our food and regulate water supplies and climate. Yet we consistently undervalue them in conventional economic analyses and decision-making.[8]

Increasingly studies such as the 2006 Stern Review, *The Economics of Climate Change*, are estimating the long-term cost of failing to take action on climate change. The true value of natural ecosystems such as tropical rainforests is becoming better understood although not yet captured in conventional accounting. For example, halving the rate of deforestation by 2030 would reduce global greenhouse gas emissions and avoid damages from climate change estimated at more than US$3.7 trillion in net present value terms.[9] Yet forests continue to be cut down for little more than the current cost of clearance.

Estimates by Trucost show that global environmental external costs caused by human activity – principally related to greenhouse gas emissions, over-use of water, pollution and unsustainable natural resource use – amounted to an estimated US$6.6 trillion in 2008. To put that in context, the top 3,000 public companies cause over US$2.15 trillion of the damage, equivalent to half of their conventionally reported company earnings.[10]

The politics of regulation

If economic analysis and environmental science are now coming into better alignment, will politicians accept the urgent and serious consequences for human health and quality of life of failing to act? Can we overcome entrenched ideological reluctance to intervene, not least among those in the Liberal Democrats who align themselves to 'small state' thinking?

Actually, a look back at recent history shows that all parties have proved remarkably inconsistent in their approach. Even at the high water mark of socialist intervention, Harold Wilson greeted his appointment in 1947 as President of the Board of Trade with the promise of a 'bonfire of controls'. The last Labour government – which created 4,300 new criminal offences in its thirteen years – nonetheless promoted 'light touch' regulation of the financial services sector, with results now widely seen as disastrous. It also persistently delayed implementation of EU directives on air quality.

The Liberal Democrats – heirs to the legacy of social liberals like Lloyd George and William Beveridge – fought the last election on a platform to 'reduce the burden of unnecessary red tape', promising to 'properly assess the cost and effectiveness of regulations before and after they are introduced, using "sunset clauses" to ensure the need for regulation is regularly reviewed, and working towards the principle of "one in, one out" for new rules'.[11]

Deregulation provided common ground with the Conservatives and the subsequent coalition agreement contained pledges to 'cut red tape' and to 'end the culture of tick-box regulation', with three separate commitments to reduce the number of quangos. The agreement's foreword even closed with a rallying cry to deliver 'a stronger society, a smaller state, and power and responsibility in the hands of every citizen'.[12]

A 'Red Tape Challenge' unit in the Cabinet Office now leads a cross-government effort to 'get rid of unnecessary red tape – freeing up business and society from the burden of excessive regulation'.[13] The desire to find alternatives to regulation is exemplified in the Department of Health's approach to the public health crisis caused by excessive eating, consumption of alcohol and lack of physical exercise. Businesses are invited to sign up to a Public Health Responsibility Deal and 'commit to taking action voluntarily to improve public health through their responsibilities as employers, as well as through their commercial actions and their community activities'.[14]

Yet consistent antipathy to regulation is not a hallmark of Conservatives either. Lord Heseltine, who promised a 'bonfire of red tape' in the early 1990s, today leads calls for an interventionist industrial strategy. In the nineteenth century it was Conservative antecedents who more often than not introduced the early factory legislation and extended municipal powers to protect public health.

Sadly, despite the political pendulum of attitudes to the so-called 'red tape' burden, surprisingly little work has been done to assess what sorts of regulatory interventions are most effective. A recent academic review for the Environment Agency found relatively little evidence of rigorous assessments

of outcomes from different interventions. The report concluded that: 'even fewer studies have examined relative cost-effectiveness, a vital assessment if cost-effective choices are to be made.'[15]

Recommendations for liberals in government

What, then, are the priorities for Liberal Democrats in an incoming government? And what is the right approach to regulation? They group into three categories.

From regulation to standard-setting

This new approach to regulation should move away from seeking to regulate by imposing rules on processes and limiting actions towards setting standards with clear end goals and helping players achieve them through innovation with minimum coercion.

The growing potential of social media can be harnessed to empower ordinary citizens in monitoring performance. Far from requiring armies of inspectors, service breakdowns are now instantly pilloried on Twitter and similar platforms. Companies that offer dodgy deals have nowhere to hide. Regulators can do much more to monitor this and seek direct feedback from consumers.

The examples of effective interventions cited above offer clear pointers to how a new approach to standard-setting for the environment should work, based on assessments of health outcomes. The elements of the new approach are:

- A strong legal framework – so that freeloaders cannot undercut those adopting the right approach.
- Clear and simple goals – so that participants are focused on achieving objectives, not complying with 'small print' rules.
- Open and regular reporting of results, as close to real-time as possible, with direct consumer and citizen feedback using smartphone apps.
- Unambiguous enforcement – unlike the 'responsibility deals' approach cited earlier.
- Inbuilt but infrequent reviews – stability and continuity is necessary if business is to invest in research and development and production and new markets are to develop.

In adopting this approach, regulatory agencies should be able to offer advice and guidance and – focused on results – be prepare to allow third parties such as trade associations or professional advisers to implement and monitor the 'rules' once outcomes are set.

Aligned with this new approach, a Liberal Democrat government should learn from the Netherlands, where our sister parties VVD and D66 established the Dutch Advisory Board on Administrative Burdens, Actal. This independent external advisory body advises government and Parliament on how to achieve its goals while minimising the hindrance of regulation.[16] The result is to limit regulatory burdens for firms and citizens in areas like health care, education, safety and welfare while still meeting society's expectations.

An Actal equivalent for the UK should have the overarching goal of sustainable development written into its mandate. All new standard-setting interventions should be subject to its independent scrutiny. It should seek advice from pioneering companies who have moved from always lobbying for deregulation to advocating smart regulation that will reward their innovation and investment.

This new body should also drive a 'bonfire of regulations' that hinder sensible environmental action. At present approval is needed from five bodies before community energy generation is connected to the grid, while onerous hazardous waste rules can prevent recycling. Furthermore, competition rules are stopping sensible cooperation between manufacturers to introduce new products with less packaging waste. Meanwhile EU rules require VAT to be charged on refurbishment while new build is zero-rated. The right approach is to aim for sustainability and set standards to help achieve it.

The immediate priority – energy efficiency

More efficient use of energy – in products, services, transport, housing and the wider built environment – has huge potential to save consumers money while reducing pollution, enhancing health, increasing energy security, helping combat climate change and spurring moves towards a more sustainable economy.

According to DECC estimates, EU ecodesign regulations, which require consumer products such as boilers, tumble driers and computers to use less energy, could save £26 billion over the next twenty years. That's equivalent to cutting £158 a year off the average household energy bill by 2020. However the Green Alliance has warned that administrative delays and lower than expected consumer take-up jeopardises this goal.[17]

A recent study by McKinsey for the Energy Efficiency Deployment Office confirms the huge potential for energy saving if standards are set and adopted. The potential to reduce electricity demand is as high as 36 per cent of likely demand in 2030 – approximately 146 TWh of generation capacity

– through a range of measures such as better thermal insulation and automated light-control systems in public buildings.[18]

McKinsey identified eleven obstacles that could slow down implementation of necessary measures. They predict that once the market for energy-efficient goods develops, the cost of initial investment will fall and payback periods reduce. However, mandatory standards remain important to overcome an instance of market failure – the problem of 'agency' in real estate where most commercial buildings and much housing is occupied by tenants, with space being rented from landlords themselves who lack the market incentives to invest.

Reductions in energy demand will improve health outcomes as harmful emissions are cut. It is estimated that premature deaths from air pollution in Europe cost between 1.5 per cent and 4 per cent of GDP. The European Commission has estimated that health benefits worth between €3.4 billion and €7.9 billion annually from 2020 would accrue if carbon reduction targets were increased from 20 per cent to 25 per cent, and that is without including ill-health factors such as working days lost and hospital admissions for people with respiratory or cardiac diseases.[19]

That is why achieving progressively higher eco-efficiency standards (in parallel with measures discussed elsewhere to increase the price of carbon) – and winning the political argument for the health benefits – is the single most important manifesto commitment the Liberal Democrats should make.

Longer term and systemic changes

There is potential too across other areas of government to overcome the 'silo effect' of separate decision-making – where DECC sets energy policy and Defra protects the environment, while DoH picks up the tab for continuing ill-health. This should focus on establishing three mindsets across government:

- The need for a long-term perspective: improvements to health and reductions in health inequalities take time, certainly longer than one budget round and usually longer than a single election cycle.
- The scope for co-benefits: improvements to the environment can have extensive health benefits, both from the removal of harm, such as from pollution, and the fostering of benefit, such as through walking and well-being.
- The potential for 'virtuous circles of improvement': better environmental health has powerful social spin-offs, by reducing inequalities, and economic gains too, by saving costs and boosting productivity; this is likely

to reduce future environmental damage and so reinforce positive health trends and economic gains, and so on.

To embed these three mindsets across government decision-making requires structural and organisational changes, in four areas.

First, all major government decisions should be subject to a prior (and published) assessment of the long-term environmental costs, measured as additional or reduced spending on health and social care. Already proposals for legislation are routinely subject to a public assessment of their financial implications, costs and benefit analysis, additional burden on public bodies, impact on human rights and the like. Making explicit the health and environmental costs will help make the right longer-term decisions. It will also reveal whether the public exchequer should remain liable for the costs, or if regulation and market pricing mechanisms (tax and subsidy incentives, fines and credits) should bring these externality costs into current business and household decision-making.

Second, this approach will also reveal where the 'polluter pays' principle should be extended, so that legal liability for the long-term environmental health damage done by products in their consumption, disposal and waste packaging is clear. Case study evidence from America shows that potential liability is a powerful driver of prudent and precautionary innovation.

The initial focus of an enhanced 'polluter pays' policy should be on chemicals and foodstuffs, where the risks are currently greatest. This extended liability approach will also create opportunities for the UK's financial services sector to become more 'socially useful' – by developing new insurance instruments to protect business with lower risk, greater cost certainty and incentives to innovate.

Third, work already being done by the coalition government to change and broaden how we view success in society should be extended. Already under consideration are alternatives to GDP to measure advances in the prosperity and well-being of the country as a whole – incorporating, for example, measures of environmental quality, natural resource depletion and social factors such as standards of health or literacy. This is consistent with moves internationally for a new set of worldwide sustainable development goals, to succeed the Millennium Development Goals in 2015. This offers a conceptual and practical framework to integrate current fragmented approaches to climate change, environmental protection, child health, food and nutrition.

Fourth, local government needs to be given new duties and powers to promote environmental health. The role of the new health and well-being boards should be broadened. Their current stated aim is to improve integrated

working between local health care, social care, public health and other public service practitioners. They also have responsibility for leading locally on reducing health inequalities. Yet they were established with little reference to environmental aspects, despite social, economic and environmental factors being such powerful determinants of health.

A joined-up approach locally will not work without a big extension in 'total place budgeting' – where the various streams of Whitehall-controlled funding into an area are pooled under local authority coordination. The current cautious focus on problem families needs to be radically extended. If not, the new powers of general competency and duty to promote sustainable development will prove stillborn.

As a quid pro quo for this freedom and flexibility in delivery, central government should set exacting outcome goals and agree the measures of success based on the new GDP+ indicators, with requirements to report regularly and engage with citizens locally.

Conclusion

The Liberal Democrat manifesto for the 2010 election aligned the party firmly with the deregulation agenda, proposing a 'one in, one out' approach. Five years of coalition government will have accomplished the task of removing genuinely unnecessary 'red tape' that is inhibiting growth and freedom. For the next election, Liberal Democrats need to make the case that the environmental challenges are so severe, and the increased costs, both economic and in terms of human well-being, are so great from delaying action, that a new approach is needed.

They need to advocate an objective, health-based approach to environmental regulation that focuses on achieving high standards and uses social media to empower citizens.

An independent external advisory agency must scrutinise new initiatives to ensure these achieve their goals, with input from pioneering responsible businesses.

The priority for new government standards is in energy efficiency for products, services, transport, housing and the wider built environment.

All government spending decisions must be subject to prior assessment of their long-term environmental impacts, calculated in terms of increased or reduced spending on human health.

Legal liability on the 'polluter pays' principle should be extended.

Local government needs to be given greater duties, with commensurate powers to tackle environment and health in a joined-up way.

To make this happen, Liberal Democrats will need to move on from the deregulatory and 'small state' rhetoric in the coalition agreement and embrace effective regulation based on standards that meet the scale of the challenges facing us all.

The prize – environmental regulation as if people and their health really mattered – is not just right, it will also prove politically popular.

Notes

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Chapter 8

Green Taxes

Stephen Williams MP[1]

The fact that we must act to combat carbon emissions is now part of the political mainstream. But consensus is far from complete as to the tools we should use to squeeze out carbon use from the British economy. A long-term liberal solution could be to give everyone the same carbon budget, which could be adjusted over time. But so many social, technological and philosophical issues flow from this proposal that it is unlikely to be adopted soon enough to make a difference. So we must resort to traditional methods to drive individuals and businesses to change. That means new taxes and market incentives.

Successive governments have already imposed taxes, levies, duties, escalators of duties and a variety of mechanisms, obligations and schemes. Some of the very simplest have achieved their aims remarkably quickly. A tax difference of just a few pence per litre moved millions of car owners from 4 star to unleaded petrol. The Welsh Government's 5p per bag levy introduced in October 2011 reduced plastic bag use by 90 per cent in the first few months of operation. Other tax rises have aroused huge unpopularity. The decision of the Major government to raise VAT on domestic energy bills handed the Liberal Democrats one of their greatest by-election victories in 1993, as the residents of Christchurch saw a tax hike masquerading as a green policy. The Blair government eventually reduced the rate to 5 per cent, but put in place a labyrinth of charges and controls on industry that have driven up the price of electricity and gas.

Liberal Democrats in government are working hard to put in place the schemes and incentives to produce supply-side reform. Electricity generated from renewable sources and nuclear power will form a greater proportion of our energy mix. Investment in high-speed trains and rail electrification will offer an attractive alternative to motorway travel. But supply-side reforms will soon be futile if demand continues to grow. For consumers and producers to reduce their demand there will have to be a very clear price signal – delivered (unlike previous taxes and levies) in a transparent manner. Liberal Democrats

in government could send this signal by making a carbon tax the main tax on energy, and road user pricing the main tax on car and lorry movements.

Transition to a low-carbon economy is necessary to ensure future economic and social sustainability: the world needs to reduce the amount of energy required and spur behavioural changes which change demand. The costs and risks associated with a low-carbon transition are likely to be outweighed by the costs and risks of staying with conventional energy. A low-carbon transformation will avoid many wider costs associated with climate change and its damage, and reduce the UK's dependence on volatile and finite fossil fuels. It is also a chance to open up economic opportunities for British companies to expand into the global low-carbon market for energy, products and services, providing new employment opportunities.

The introduction of a carbon tax and road user pricing should not lead to an overall increase in the tax burden, in particular on the poor. The primary purpose of both taxes is to shift behaviour, not raise revenue for the government. Some of the revenue raised could be recycled within the scheme. Poorer households would be protected against the rise in energy bills, through a mix of cashable credits or grants to reduce energy consumption. Low-income motorists in rural areas would find it cheaper to use their car while a city-centre commuter would experience a rise in the cost of driving if they decided not to switch to public transport.

Why a carbon tax?

A revenue-neutral carbon tax would cover all carbon emissions with a consistent and rising carbon price. It would offer a fair and efficient means for the UK to reduce its carbon emissions and drive the transition to a low-carbon economy. A carbon tax allows all consumers, workers and businesses to make decisions on their purchases and investments based not only on their needs but the carbon costs, knowing the environmental impact of their actions.

Taxing carbon emissions provides an appropriately liberal way in which to identify a collective problem, determine solutions and then allow individuals, communities and businesses to address the issue as it works best for them. This contrasts with a Conservative 'market alone knows best' or a Labour 'the government alone knows best' approach. Liberal Democrats believe in shifting taxes away from things that we want to encourage, such as earnings from work, on to those things that we want to discourage, such as pollution. A rise in 'green taxes' such as a carbon tax complements the £10,000 income-tax-free allowance being introduced by Liberal Democrats in government. As the primary purpose of the emissions levy is to reduce

emissions, not to raise revenue for increased public spending, the roll-out of a carbon tax should be revenue-neutral, with all proceeds returning to individuals, households and businesses for them to spend and invest as they feel appropriate.

A single charge reflecting wider environmental costs would influence millions of transactions daily with clear price signals for all to respond to. The advantage of these signals is that they allow everyone to make rational decisions, about both their own and others' actions, which unconsciously integrate across the economy through the best aspects of market mechanisms. From individuals deciding on whether to make a car journey to companies looking to invest in multi-billion pound schemes, each will recognise a consistent and rising cost of the carbon emissions associated with their actions. Individuals and businesses will be presented clearly with the details, impacts and consequences of their actions and make their individual decisions accordingly. They will balance these costs by either reducing their actions, shifting to other options or moving spending from elsewhere. With rising tax rates over time, carbon emissions will become ever more costly, increasing the incentive to reduce or eliminate them through increasingly ingenious and widespread measures.

International examples of a carbon tax

The UK would not be the first country to introduce a carbon tax. Sweden has one of the most extensive systems, raising SKr 26 billion (£2.5 billion: 1.5 per cent of total government revenue, or £270 per head) a year.[2] Denmark's carbon tax also works alongside a more general energy consumption tax; revenues raised reduce taxes and social security charges on labour as well as fund environmental efficiency measures. The Netherlands introduced a carbon tax in 1990, which is now largely integrated with a wider energy tax. It pays for tax breaks for green investments, reduced social security contributions and lump-sum transfers to households. Since May 2010, the Republic of Ireland has had a €15 per CO_2e tonne carbon tax on fuels not covered by the EU Emissions Trading System (ETS), raising €330 million a year (£280 million, 1 per cent of total government revenues, or £63 per head).[3] Average household energy prices are expected to rise by €2–3 per week depending on the fuel mix used (e.g. natural gas prices have gone up 6 per cent, but coal prices by 11 per cent). Receipts are used for energy-efficiency support for low-income households, as well as general government revenue.

In Canada, British Columbia introduced a comprehensive carbon tax in 2008, raising C$737 million in 2010–11 (£460 million, 1.9 per cent of total

government revenue or £100 per head).[4] The tax rate rose from C$10 per tonne in 2008 by C$5 a year to C$30 (£19) by 2012. Tax receipts are used to provide roughly equivalent tax reductions for individuals (including tax credits for poorer households) and businesses. The Australian federal government is in the process of introducing a carbon tax.

Implementing the carbon tax

The carbon tax would be collected at the point of combustion for electricity generation and large industrial users, based on fuel mix, and at point of processing and distribution for natural gas and other products which are consumed directly by households and small businesses. In this approach, the carbon tax would already be included on energy and products in both wholesale and retail markets. This upstream carbon tax reduces both the number of entities who need to administer the tax and provides much stronger protection against revenue leakage through evasion or fraud. As tax will already be included in every kilowatt-hour of energy distributed, it ensures that the tax is borne by all those who ultimately consume energy. Producers should report the levy amount (even if this is averaged across production) to the final customer in bills, as is done with VAT. This transparency is essential in order to drive change through the energy chain.

Energy production from renewables and nuclear fuels would not be liable for carbon tax directly, as these are carbon-neutral *at the point of generation*. However, carbon taxation would be embedded in the cost of materials and fuels used in components, construction and maintenance. In particular, the nuclear industry's processing, decommissioning and disposal of spent fuels would pay carbon tax on their consumption of other fuels and materials. In order to recoup any advantage gained by the nuclear industry on its existing plants, Liberal Democrats have proposed a windfall tax on the sector. The proceeds could be used for the same purpose as the carbon tax or, as it may be a one-off tax, for a specific project; another possibility would be to allocate windfall tax proceeds to the Green Investment Bank's capital fund, giving a direct link from the fiscal effect of the carbon tax through to the building of Britain's renewable energy sector.

The current plethora of taxes and levies – the Climate Change Levy (CCL), the Carbon Reduction Commitment (CRC), the Carbon Price Floor, the Renewables Obligation, the Energy Company Obligation – bear much more heavily on electricity than on gas. A comprehensive carbon tax on emissions would cover all sources more fairly, and would support a shift towards widespread electrification by levelling the cost base of different energy types.

Gas will continue to have an important industrial and power generation role (where it can be used at maximum efficiency) as a low-carbon alternative to renewables. However, gas's domestic role is expected to diminish in favour of electric heating and cooking appliances over the coming decades. And the coalition government's flagship Green Deal programme now offers households a real opportunity to invest in energy conservation, reducing their need for gas and electricity for heating.

In place of this confusing array of taxes and levies, businesses would have a single system, with the EU Emissions Trading System (ETS) and the carbon tax. Equal treatment of consumption enables tax collection further upstream in the production process, significantly reducing complexity and costs.

There would not be any additional levy on transport fuels as their carbon content is already – at current rates – sufficiently taxed. However, there should be a legal link between the carbon tax and fuel duty or any new road pricing system (see below) to ensure that the charge is at least equal to the carbon price on the fuels' carbon content. Aviation fuel, which is currently tax-exempt under international conventions, may have to be excluded, though it is of course covered by the EU ETS. Exceptions to the tax might also have to be made for agriculture, where significant reform of the subsidy regime is needed and the monitoring costs for the breadth of carbon emissions could be prohibitively expensive.[5]

All UK carbon emissions will be covered be the regime, but as a green tax shift, all revenues will be distributed back to individuals and businesses. This will encourage a cross-economy demand shift towards low-carbon goods and resources while avoiding net additional taxation on the economy, supporting the coalition agreement's commitment to raise environmental taxation's share of UK total taxes and existing Liberal Democrat policy.[6]

Relative price changes will encourage a general demand shift from more carbon-intensive to less carbon-intensive consumption, both within and across industries. These demand shifts would increase the economies of scale and efficiencies of low-carbon goods, enabling them to be provided both more cost-effectively and more widely.

While initially set low, the carbon tax rate would climb steadily and predictably over time. This would bolster the incentive for long-term investment and change but also provide an appropriate technological and implementation window for more challenging and costly adjustments to be addressed. As the costs associated with carbon emissions rise over time, these costs would be more appropriately allocated through market mechanisms to the highest value use – reducing total carbon emissions, promoting economic

competitiveness, and enabling the UK to meet its binding emissions commitments while providing international leadership.

A consistent tax

The current UK emissions taxation system has varying impacts, creating a non-level playing field for individuals, communities and businesses for decisions on their activities and investments. The current levels of Climate Change Levy, for instance, do not equate to individual fuels' carbon content. A proper carbon tax should set the tax on a carbon-content basis.

Consistency and confidence requires realistic future expectations and integration with complementary programmes. Alongside current pricing policy, the government would set publicly a carbon price trajectory required to achieve UK carbon budgets. Future price expectations would be clearly signalled, so businesses and individuals had the time and incentive to put in place the investments and changes required to reduce their carbon intensity. The carbon price floor to be introduced this year sets a real-terms trajectory from £16 per tonne in 2013 to £30 per tonne in 2020 and £70 in 2030, providing a good basis upon which to build an economy-wide tax. While not possible to lock in completely future governments, the current government could pass primary legislation to fix the procedures and emissions targets and, as far as practical, use independent bodies, such as the Committee on Climate Change, to recommend future price changes and the medium-term trajectory.

The carbon tax would work with the existing structures. Some would be amalgamated into the proposed tax regime. CCL and CRC receipts would be merged and extended to cover a wider range of emissions producers. Their individual rates would be superseded by a general carbon price. No new Climate Change Agreements (which enable energy-intensive businesses to lower their CCL charges in return for meeting agreed energy efficiency targets) would be entered into, and existing ones would be run down. CRC reporting schemes would be continued and would be expected to merge into mainstream corporate reporting requirements in the low-carbon transition.

Other tax-raising schemes, primarily fuel duty and the EU ETS, would need to align with the emissions tax structures to ensure complementarity. Coordinating policies ensures the emissions tax operates an effective carbon floor price, but companies and individuals do not face double taxation. In some instances, this may require adjustments to the proposed approaches, and, in others, reasonable adjustments in existing UK and EU schemes. For fuel duty, there would be the lock-in of the legal pricing link of a

carbon-content floor rate; this could become particularly important if a future move towards road-user charging leads to fuel duty reductions.

UK users of the EU ETS would offset their UK carbon tax assessments using EU ETS allowances at the prevailing price. Any additional tax due after offsetting all their allowances would need to be paid. Policies that support the transition to more renewable power generation – such as Renewables Obligation and Feed-in Tariffs – and those that support energy efficiency – such as the Green Deal and Energy Company Obligation – would continue as important supports to update the energy generation system and energy efficiency of the built environment.

Impacts

At a rate of £25 per CO_2 tonne (where the 2011 Budget set the carbon price floor in 2016, including inflation[7]), the carbon tax would raise £6 billion annually, split equally between business and domestic consumers.[8] This would be ten times the current level of total CCL receipts. Average household energy expenditure should rise by £2.40 a week – less than a pint of beer – representing an increase of just 0.5 per cent in average household spending. This could lead to a 5 per cent reduction in domestic energy use, equal to 6.5 million CO_2e tonnes (1 per cent of UK emissions).[9]

The overall net economic impact would be small (less than 1 per cent of GDP[10]) in the short term – much less costly than cleaning up the financial system – and reduce emissions by 2 per cent in the first year alone, with much steeper reductions expected as businesses and individuals react to the new regime.[11] Given the need to build a more sustainable economy eventually, this is more akin to bringing investment forward rather than permanently lost output. As a society, we would have our low-carbon investments in place and paid for as soon as is practical. The longer-term positive economic impacts would be potentially vast and transformational if they enable the UK to make a smooth and early transition to a low-carbon economy.

The tax would encourage individuals to learn to reduce their environmental impact. In the longer term, individuals may need to consider choices related to their residence, transport choices and careers. However, by promoting an early transition before fossil fuel prices rise too high, people will be able to adjust more gradually, minimising costs and adjustment impacts. Some adjustments may come quite quickly as changes and investments which are already technically feasible become increasingly economically viable.

Communities will see more clearly where they can act collectively to enable their residents to operate in a more carbon-efficient manner. This

may require investment in activities (e.g. education), direct facilities (e.g. renewable energy generation) and wider infrastructure (e.g. greater energy efficiency in community buildings). They must also consider how they will provide support to those who require additional assistance to make the low-carbon transition.

Protection from rising carbon tax rates would be put in place for households already in or tipped into fuel poverty. Government must continue to support those groups who may be particularly hit by price changes, such as pensioners and families with children, through the existing benefits system and programmes such as the Warm Homes Discount. Some carbon tax revenues could be used to focus support on the neediest groups. At the carbon tax rates suggested above, approximately £900 million would be needed to offer a 100 per cent offset of the tax for the poorest tenth (decile) of households, plus a 67 per cent offset for the ninth decile and a 33 per cent offset for the eighth decile. Financial cushioning for energy price increases would be fed into Universal Credit, but schemes such as the Green Deal should also be used to target help more directly on a wider range of vulnerable individuals, helping them to reduce their energy costs for good. This dual-track approach is essential so that low-income households are both given immediate support in response to higher energy bills and also the ability to invest in changing their homes' longer-term energy efficiency levels.

Businesses will need to work through changes that enable them to operate and compete in a low-carbon world. For some, this will require developing their central processes and investments to reduce their carbon intensity. Others will need to address their facilities, transport needs and other support activities. Those businesses not able to adjust will need to consider whether they will be able to pass costs on to their customers as part of relative price (and demand) changes.

When, in 2011, the carbon floor price was announced by the Chancellor, the subsequent debates on the Budget featured several MPs highlighting the cost to energy-intensive industries in their constituencies: steel works, chemicals and potteries were among those identified as needing transitional relief. It is certainly true that there is no point in the UK having an ambitious green taxation regime if one of the consequences is an offshoring of British firms and jobs to more lax regimes. The long-term goal must be an international agreement to ensure a common contribution from all carbon emitters, but in the mean time, limited and specific protection and support should continue to be implemented. This should include assistance to make adjustments in industrial process to reduce emissions and energy use, and also additional

allowances and reliefs where companies are working towards reducing their carbon intensity but face significant competition from companies (for example in other countries) which are not bound by similar carbon prices and regulations. The UK government and industry need to agree clear goals as to what the final objectives for these industries should be and the expected timetable to accomplish them.

Moving from fuel duty to road user pricing

The coalition government has been resolute in setting out a carbon floor price. It has also acted decisively, and not without controversy, in limiting the costs of various clean energy incentives. It has legislated for the Green Deal, which should over time enable the retro-fitting of millions of homes with energy-reducing measures. But in the area of cars and road fuel tax the government has failed to give a lead, instead bowing to populist pressure from the tabloids and nervous backbenchers to hold down the cost of road fuel duty. The Chancellor has scrapped the previous government's fuel duty escalator, and deferred or cancelled each of the rises in fuel duty that had been planned since May 2010.

Road fuel duty is a major source of revenue for the Treasury. The Office for Budgetary Responsibility has estimated the 2012–13 yield to be £26 billion, making the duty the joint fifth largest source of revenue, roughly the same as Council Tax. It is fairly clear that in my lifetime the underlying price of petrol and diesel is going to follow an upward trajectory. A sustained attempt by any government to shield people from this inexorable rise by tweaking the duty will ultimately be fruitless. Efforts so far have been enormously expensive: the cancellation of the January 2013 rise cost £890 million in 2012–13 and will cost over £1.6 billion in a full year. Arguably such sums would have been better spent on reaching the Liberal Democrat goal of a £10,000 tax-free allowance sooner than intended in this Parliament, or softening the impact of various benefit changes.

Road fuel duty has effectively ceased to be a green tax, as the underlying price of petrol itself becomes more of an incentive for people to change behaviour. But for as long as it remains it will be a fairly blunt instrument, neither effective at a macro nor a micro level; it is unlikely to hold back or reduce the overall level of road usage. As a uniform national tax it is an indiscriminate cost to the motorist. There can be no distinction between either time or location of travel. The tax paid for a journey into central Bristol at 8.30am is no different for a journey into Brecon or Brechin at the same time. Fuel duty hits a Bristol commuter as much as a Mid Wales farmer or a rural

Scottish pensioner. It is a regressive tax, especially in rural areas where use of the car is often an essential means of travelling. It would clearly be impractical to have different rates of duty in various parts of the country. Fuel duty is an inflexible fiscal tool that ought to be replaced by a tax that is more responsive to geographical, economic and social factors.

Road user pricing is the most obvious alternative to road fuel duty. Road user pricing could be levied at different rates in cities and sparsely populated areas, to encourage a switch to public transport in urban Britain but recognising the lack of such alternatives in some parts of the country. It could also be set at different rates at certain points of the day in order to reduce congestion at peak times.

A move to road user pricing would clearly require significant capital investment by government in equipment to identify car movements. Satellite-based tracking is already familiar to everyone through the rapid take-up of 'sat-navs'. It would hardly be a major technological leap for a similar tracking system to be linked to a payment regime. The major barrier to road user pricing now is political will.

Road user pricing could also replace vehicle excise duty (VED). The current annual yield from car tax discs is approximately £5.9 billion. VED is more flexible than fuel duty, as it varies according to the fuel efficiency (and propensity to pollute) of a car's engine. It would surely be easy to abolish this tax too and incorporate it into road user pricing.

Conclusion

Humanity needs to rapidly and substantially reduce its global climate change emissions. The UK could choose to take a key leadership and exemplar role. Both a carbon tax and road user pricing would give fiscal clarity to individuals and businesses about the cost of deciding not to change their behaviour. An impact on household budgets and business expenditure is much more likely to drive change than exhortations from government and campaign groups.

The costs of an early low-carbon transition are likely to be significantly lower than a forced later switch, with continued reliance on fossil fuels. As the Green Fiscal Commission reported, it is the exposure to expensive and volatile fossil fuel prices that leads to the greatest economic cost in the low-carbon transition.[12] Earlier and planned transition not only reduces costs and risks but also enables UK firms and workers to seize emerging opportunities in global low-carbon generation and product markets.

There is a future to be won where Britain decarbonises its energy production and enjoys another industrial revolution, turning sustainable production into an economic winner. Homes will be more energy-efficient and people will drive their cars with more thought for the consequences. Regulation, publicity campaigns, peer pressure from friends and neighbours will all help to change behaviour. But much clearer and predictable green taxes are an essential step to a more sustainable future.

Notes

1 The author is grateful to Charles Tarvin for his research support during his secondment from PWC to the Liberal Democrat Policy Unit, and to his Parliamentary Researcher, Lara Greer.
2 Swedish Tax Agency, *Taxes in Sweden* (2010).
3 Republic of Ireland Ministry of Finance, *Budget 2010* (2010).
4 British Columbia Ministry of Finance 'What is a Carbon Tax?', www.fin.gov.bc.ca
5 Natural carbon emissions from agriculture, forestry and fisheries (such as from digestion and decomposition) should not be included in the tax regime due to the difficulties and costs of measuring and monitoring. However, agricultural, forestry and fishing producers would pay tax on the carbon emissions associated with the fuels, goods and services that they use in the activities – though they should continue to be able to use 'red diesel', which has a reduced fuel duty price but still prices the carbon content.
6 As set out in the September 2010 conference motion on green taxation.
7 Based on a £22 per CO_2 tonne price floor in 2009 prices (as per the Treasury and HMRC response on the carbon price floor consultation) and a 2 per cent annual inflation rate to 2016.
8 Liberal Democrat Policy Unit analysis, based on DECC and ONS data; the calculations incorporate first-round short-term demand changes and revenue recycling.
9 Liberal Democrat analysis based on demand changes.
10 Green Fiscal Commission and Committee on Climate Change.
11 Committee on Climate Change, *The Fourth Carbon Budget: Reducing emissions through the 2020s* (December 2010).
12 Green Fiscal Commission, *The Case for Green Fiscal Reform* (2009).

Chapter 9

Can Behaviour Change Make a Difference?

Paul Burall

Technology almost certainly provides the most direct route to reducing our use of energy and other resources. However, human behaviour can also be a significant factor, not least in making sure that technology is used in ways that achieve the best results.

But changing behaviour presents problems. For a start, for liberals, there is always a disinclination to force individuals to change their ways unless there is a substantial public benefit. Thus it is acceptable to ban smoking in public places to protect non-smokers, but there is considerable reluctance to apply such a ban to the home. Even more of a challenge is simply the sheer difficulty of achieving behavioural change: years of dire warnings of the harm caused by poor diet, illegal drugs and excess alcohol have made very little difference to the way people behave.

The coalition government recognised the challenge when, soon after being elected, it set up the Behavioural Insights Team – popularly known as the 'Nudge Unit' – with a remit to 'find innovative ways of encouraging, enabling and supporting people to make better choices for themselves'.[1] A year later, the House of Lords Science and Technology Sub-Committee's report on behaviour change welcomed the government's desire to take the science behind behaviour change seriously because: 'Societal problems, like the need to reduce obesity and reduce carbon emissions, aren't going away – and are even getting worse'.[2] But the report warned that the task was not easy and that using 'nudges' or any other single intervention in isolation was unlikely to work.

So what works and what doesn't?

In 2010, the American Psychological Association published a report bringing together research and practice that casts light on how behaviour can be changed. *The Interface Between Psychology and Global Climate Change* concluded that, despite warnings from scientists and environmental experts that limiting the effects of climate change means humans need to make some

severe changes now, most people do not feel a sense of urgency.[3] The report cites numerous psychological barriers to explain this, including:

- *Mistrust*: most people don't believe the risk messages of scientists or government officials;
- *Uncertainty*: uncertainty over climate change reduces the frequency of 'green' behaviour;
- *Denial*: a substantial minority of people believe climate change is not occurring or that human activity has little or nothing to do with it;
- *Lack of control*: people believe that their own actions would be too small to make a difference, so choose to do nothing;
- *Habit*: ingrained behaviours are extremely resistant to permanent change; habit is the most important obstacle to pro-environment behaviour.

Taking this last point first, Professor Bas Verplanken, from the University of Bath, has suggested that there are key moments in life when it is much easier for people to change their habits – moments such as moving house, starting university, switching jobs, retiring from work, or becoming pregnant. At a seminar in Melbourne, Australia, in 2012 he analysed the effect of moving house on the choices people make about transport, and found that eco-conscious people who had moved recently commuted by car less often than like-minded people who had stayed put.And they did it without any outside prompting:

> Many of our everyday behaviours are habits that are undertaken without much thought or deliberation. But when the previously stable contexts of these behaviours change, our habits become vulnerable. The timing of a behaviour change intervention can therefore be just as important as its content. We have a greater chance of both breaking and developing habits at certain moments of change, so it's an ideal opportunity to try to encourage new water-saving, energy-saving and waste-reduction behaviours.[4]

So intervention at these life change points may be among the most fruitful actions that a government can take. Examples might include:

- *Retirement*: worries about the loss of income following retirement makes people more likely to respond to offers to cut expenditure on items such as energy, travel and food. So help with home insulation and PV installations, information about local public transport, and invitations to take on an allotment should all be focused on the period leading up to retirement.
- *Changing jobs*: offering personal travel planning advice to people when they start a new job may persuade them to adopt greener modes of transport before their habits become ingrained.

- *Moving house*: providing clear information about the annual energy running costs of houses on the market to influence purchasing decisions and targeting buyers to include energy-cost-cutting measures as part of the home improvements that often follow.

This last point illustrates a generic issue in persuading both individuals and businesses to invest in energy-efficient buildings, appliances and other equipment, as most decisions are based on the initial capital cost rather than the lifetime cost of ownership. Some years ago, the British Airports Authority looked at how it was specifying passenger lifts at Gatwick and discovered, to its surprise, that the lifetime energy costs were many times the initial purchase price; choosing a more energy-efficient lift that was not the cheapest to buy could result in considerable lifetime savings. The same is often true of buildings and appliances, and a new regulation to ensure that, where appropriate, lifetime cost information is provided at the time of purchase could have significant benefits.

As for people's mistrust in many information sources, this can be overcome by ensuring that messages appeal to the specific audience at which they are aimed. In 2009 the Joseph Rowntree Foundation published a useful report describing effective behavioural change case studies illustrating how understanding what motivates the target audience is a key to success.[5] One described a successful campaign in Florida which aimed to persuade young people not to smoke. Research had shown that young people knew the health risks but carried on regardless, partly because this meant going against habits prescribed by adults: they used smoking to indicate rebellion and 'coolness'. So the campaign aimed to convince young people that smoking, far from being a sign of rebellion, was conforming to what the tobacco industry wanted. It exposed facts about the manipulative power of the industry – such as its expenditure of US$10 billion annually on advertising – and used posters displaying fat businessmen dressed in bikinis, with the slogan: 'No wonder tobacco executives hide behind sexy models'.

Another successful campaign described in the JRF report promoted green travel in Seattle. The city's InMotion campaign was based on research showing that residents were unimpressed by traditional messages about the cost and congestion of private travel, but did care about improving their health through increased cycling and walking. So 'improving our community through healthier travel choices' was one of the key messages. Combined with providing localised information about alternative transport modes and other activities, the campaign resulted in a notable switch from cars to public transport.

The source of information can also be a key to effectiveness. One fact that politicians and governments need to accept is that any exhortations from them are at best likely to be ineffective and at worst counter-productive, as this source is viewed with suspicion by much of the public. Using peer pressure is likely to be far more effective.

A study published by the Transport Research Laboratory in 2012, using both focus groups and an online survey, found respondents saying that they were more likely to be influenced by information that they received via personal networks (such as friends and family) than via formal networks (such as from the government, a commercial organisation or independent body or charity).[6] The study concluded that this made social networking sites a potentially valuable tool in getting messages across.

Social pressures can work in another way, as was shown by research at California State University which found that people cut their electricity usage if told that their neighbours used less than they did. In one trial, householders were told what the average electricity usage was in their area; those using more than the average cut their use. However, low users increased theirs, a problem that disappeared when the message to the low users carried a smiley face to encourage them to continue their good practice. In another experiment, the researchers provided information asking residents to take certain actions to save electricity. Some messages simply stressed energy conservation; some talked about protecting future generations; and others stressed financial savings. But it was the leaflets that asked residents to join their neighbours in saving energy that were the most effective.

Research also shows that political attitudes can affect how people react. A study into the energy use of more than 80,000 Californian households by the University of California showed liberal-leaning people cut their electricity use most in response to information about their neighbours' consumption while those declaring themselves as Republicans reduced their consumption by less than a quarter of the average; and Republicans who said they had no interest in environmental causes reacted by increasing their consumption.[7] However, evidence suggests that such prejudices can be overcome if the message comes from someone recognised to have the same political leanings as the target audience: so in the US Republicans are hardly likely to take notice of Democrats or those they perceive to be liberal but may listen to someone from their own party.

Research has also shown that scientific evidence is unlikely to convince sceptics of the reality of climate change. But research at the University of Queensland has found that informing climate change sceptics of the

'co-benefits' of action to reduce climate change encourages them to adopt green activities, whereas telling them that climate change may lead to millions of deaths has little effect.[8] Sceptics persuaded that action on climate change would make people more considerate or would promote technological development were more likely to express pro-environmental intentions than those told about the risks of climate inaction.

Of course, persuading people that green actions are desirable does not mean that they will change their behaviour: there is considerable evidence that there is no direct link between people's professed values and their actions. For example, in one study, all the forty participants who attended energy efficiency workshops claimed they now knew and cared more about energy conservation; but only one actually changed their behaviour. Another study found that 94 per cent of those questioned believed that individuals had a responsibility to pick up litter – but only 2 per cent picked up litter that was 'planted' by the researcher.

Achieving greater buy-in is one of the benefits of using social pressures, and this can be boosted by associating the message with an individual whom the audience respects. The state of Texas reduced visible roadside litter by 72 per cent using an ad campaign targeting macho men in pickup trucks who were unresponsive to a simple 'Please don't litter' message. Instead, the campaign used Texan celebrities such as stars from the TV cowboy series *Dallas* who were featured crushing littered beer cans with their fists and declaring 'Don't mess with Texas'.

Peer pressure can also enhance the effectiveness of such simple green messages as the ubiquitous plea for towels in hotels to be used for more than one day. Social psychologist Robert Cialdini found that the straight message resulted in an average of 40 per cent of hotel guests reusing their towels at least once during a stay, but that changing the message to say that the majority of people who stayed in the hotel reused their towels led to an increase to 66 per cent. Making the message even more specific by tying the majority reuse message to the individual room raised the average to 73 per cent.

The power of majority opinion to influence has been highlighted in research by Dr Chris Jones of the Department of Psychology at the University of Sheffield, who has pointed out that psychological theory shows that groups can exert power over the beliefs and attitudes of individuals if they are perceived to be in the majority, even if they are not.[9] In the context of wind turbines, Jones suggested that opponents tend to be more highly motivated and may therefore have a disproportionate influence on planning decisions even when the majority of local people support the proposal. He argued

that the impression that opponents are in the majority can be reinforced by the news media: 'Conflict sells, and with the increasing perception of wind development as controversial per se, newspapers in communities earmarked for wind development have, in effect, a licence to print money.' Jones suggests that there is a need for a fundamental restructuring of wind-development strategy and that developers need to move from their current autocratic approach towards engaging the public. Communities need to be involved from the start in order to give confidence to local people who support such developments.

Governments have traditionally used financial incentives to encourage behavioural change but research suggests that these work notably better if combined with other means. For example, research into campaigns aimed at persuading people to improve the insulation of their homes has shown that using social marketing techniques and supporting the incentive with a quality insurance guarantee adds notably to their effectiveness.

People also respond better to incentives if the benefits are fairly immediate. So majoring on the benefits of restricting global warming that will not be felt for decades is not especially appealing. Research at Columbia University found that people react to decisions involving future environmental gains and losses in exactly the same way as they do when making financial decisions.[10] So schemes that give people an upfront cash payment for insulating their home work better than those promising long-term savings, even if the people receiving the cash end up paying a little more in the long run. The research also found that people are more worried about future losses than they are persuaded by future gains, so a warning that they would lose US$500 if they didn't follow a particular course of action was more effective than being told that they would be US$500 better off if they did take action.

But using financial incentives carries a risk. Research published in 2010 by the University of California found that, if altruistic motives for green actions were replaced by incentives, the original motivations could be undermined if the incentives could not be maintained for a long time.[11]

Even when behavioural change is achieved, the change may not last. A 2006 Defra-funded study found that, as a rule of thumb, a new type of behaviour formed over a three-month period or longer was likely to persist, but continued feedback was needed to help maintain the change and, in time, encourage other changes.[12] This was especially important for the use of technologies such as smart meters, as experience suggested that, without additional support such as information about their neighbour's energy

use, the resulting new habits only lasted for a few weeks, after which people reverted to their old ways.

There is also considerable evidence that a comprehensive programme of different actions is far more likely to achieve long-lasting behavioural change than individual initiatives. An excellent example of this was the Sustainable Travel Towns initiative funded by the Department for Transport over a five-year period to 2009. This was aimed at assessing the effectiveness of an intensive programme in three towns, Peterborough, Darlington and Worcester. The programme comprised workplace and school travel plans; awareness programmes, such as personalised travel planning and public transport information; and the introduction of car clubs. The result was a reduction of 9 per cent in car trips under 50 km over the five years, with an estimated cost/benefit ratio of at least 4.5 from reduced congestion.

This success pales into insignificance when compared with the switch from private to public transport achieved in the German city of Freiburg where, between 1982 and 2007, cycle trips almost doubled to 27 per cent of all trips and the share of trips by public transport rose from 11 per cent to 18 per cent at a time when car use elsewhere was soaring. Among the factors accounting for this were a reduction in the cost of travelcards, and the addition of features such as transferability to friends and family and across public transport networks; increased route coverage and frequency of public transport services; and disincentives to car use in the form of extensive pedestrianisation, high parking charges, and traffic-calming measures.

Technology is providing ever better ways for people to save resources and energy. But these savings often rely on the user operating the technology in the optimum way, which means making systems easy to understand and control. Some years ago, Honeywell carried out a survey that showed that more than two-thirds of home-owners failed to benefit from the energy-saving potential of programmable central heating controllers because they found them too difficult to operate. The engineers who had designed the programmers had concentrated on finding the best technology to control the system; users, on the other hand, were not interested in engineering quality but simply wanted something that was easy to use.

Since then, the technology to control home energy use has become ever more complex. My house has two heating programmers, nine separately programmable thermostats and a programmable air change unit; the thermostats alone take ten minutes each to set up even after the instructions have been deciphered. So it is perhaps not surprising that at least one of my

neighbours simply gave up and left everything on the whole time, opening windows when the house got too hot.

With complex technology extending rapidly and already including remote control of heating and appliances via either the Internet or mobile phone, as well as various switching devices to save standby energy, there is an urgent need for a standard to be established for ease of use to guide installers and consumers to systems that ordinary people can operate simply. House-builders should also be encouraged to provide a home instruction book with every new property to provide simple operating instructions for the installed appliances and systems; this would not duplicate the manufacturers' instruction manuals but merely pull out the essential information needed for setup and day-to-day operation.

Recycling is one of the most generally accepted routes to improving sustainability. However, once again, persuading people to recycle is inhibited by over-complex systems, in this case by local authorities having very different rules about what can be recycled and what cannot. Councils cannot even agree on standard colours for the bins for different materials, puzzling visitors and people moving from a different area. And some local authorities provide such a variety of bins that their residents can only be confused about what they are meant to put where; one recent survey found some twenty local authorities providing seven or more different containers into which householders were supposed to separate their rubbish; one, Newcastle-Under-Lyme, offered a choice of nine.

But perhaps the biggest obstacle to make people's behaviour more sustainable is advertising. While no liberal would argue that companies and organisations should be banned from advertising, there are two major areas of concern.

The first is where advertising leads directly to harm to the individual consumer. The House of Lords Science and Technology Sub-Committee report on behaviour change mentioned at the beginning of this chapter looked specifically at the way in which the marketing of food fails to guide consumers towards a healthy diet, and called for the government to take more action. The committee chair pointed out that: 'Businesses try to influence our behaviour all the time – supermarkets influence us though the location of, and promotions for, certain foods and all businesses use advertising and marketing to change our behaviour'.[13]

The second area for concern is simply the sheer weight of advertising that is primarily geared to persuading people to change their behaviour to buy more stuff, drive more miles in more expensive cars, or fly more often

to long-distance destinations. In 2011, the British public was exposed to £16.1 billion of advertising spend. Maybe it is time to consider taking a tiny proportion of that to present counter-messages to try and persuade people to reconsider what is important in their life, which may not be what some advertising is telling them. A levy on advertising is nothing new: the industry already contributes 0.1 per cent of its turnover to fund the Advertising Standards Authority. It does not seem unreasonable to suggest taking at least another 0.1 per cent to fund sustainability messages to try to persuade consumers to question advertising claims; £16 million may not go far but it would be a start. As the President of Independent Practitioners in Advertising recently pointed out, 'Some brands engender trust in a way that governments often do not'. So a visibly independent organisation – perhaps comprising representatives of green groups, behavioural scientists, consumer watchdogs and so on – could be responsible for such campaigns.

What kind of messages might such a fund promote? For a start, it could point out that some products are grossly over-hyped. For example, the Dettol 'No Touch Hand Wash System' which dispenses soap without touching it is an extreme example of a fetish approach to home cleanliness that may actually damage health, as exposure to some dirt has been shown to be beneficial in building up resistance to germs. *Private Eye*'s verdict on the iPhone 5 as only being different from the iPhone 4 because 'It's more expensive' provides an exemplar message to begin to tackle the waste of consumerism driven purely by keeping up with the Joneses, reminding people that research suggests that this kind of consumerism is self-defeating as the latest gadget rapidly becomes a disappointment when it is overtaken by yet another new model.

Of course, tackling consumerism begins to question the whole basis for economic growth. Yet, perhaps surprisingly, the coalition government has actually suggested that the traditional measure of economic growth, GDP, is not the best measure of success. Early in its life, the coalition instructed the Office for National Statistics to develop a measure for well-being, David Cameron suggesting that this would measure 'Our progress as a country, not just by how our economy is growing, but by how our lives are improving; not just by our standard of living, but by our quality of life'.[14] The new measure is based on individual well-being; health; jobs and leisure etc.; personal finance; education and skills; the economy; governance; and the natural environment. The 2012 results, published at the end of 2012, showed an average 'life satisfaction' rating of 7.4 out of 10. The *Measuring National Well-being* report showed, to the surprise of many, that people were just as happy in 2012 as they had been before

the recession, despite a significant reduction in average incomes.[15] Economist and chief economics commentator for *The Independent*, Hamish McRae, concluded that: 'Time spent finding ways of increasing people's well-being is a lot better spent than time calculating GDP'.[16]

This 'happiness index', as it has predictably been named, has the potential, at the very least, to send the message that behaviour based entirely on seeking financial reward is not the best way to achieve satisfaction. There is already plenty of evidence that, beyond a certain fairly modest level, increases in individual income do not bring increased happiness and that life satisfaction does not rely on consuming ever more goods and services. However, this message has clearly not got through to many politicians or to the media who, every three months, treat the publication of the quarterly GDP figures as the prime measure of the government's success or failure. One change that could help to alter this perception would be for the well-being index to be published alongside the quarterly GDP figures and for the government to give both measures the same prominence.

Of course, this would only provide background noise for programmes aiming to persuading people to act more sustainably. But it would be a start.

Changing people's behaviour is an important component in moving towards a more sustainable future. But behavioural change is not easy and policies must be based on the evidence of what works and what doesn't. And perhaps even more crucially, politicians and governments need to recognise the limitations of trying to change people's behaviour; there are real constraints on how much difference policies aimed at changing behaviour can make. Persuading people to change their behaviour is, in general, only likely to succeed when it goes with the grain of the lifestyles and beliefs of individuals and their peers.

Where change is really important to sustainability, regulation, standards, and use of technology that minimise human intervention are likely to be far more effective than trying to persuade millions of humans to change their behaviour individually. Thus upgrading the energy efficiency standards of products and homes is far more certain to deliver climate change benefits than labelling or providing information in other ways. Smart meters that provide information about the energy use of individual appliances in the home may persuade a few green enthusiasts to change their ways but are unlikely to have any lasting effect on the great majority of people; but using this technology to automatically control appliances, heating and lighting is guaranteed to deliver real benefits.

Regulation and standards can be unpopular, which is why politicians tend to prefer behavioural change options. But a 2011 report published by the Joseph Rowntree Foundation demonstrates how even potentially unpopular regulatory actions can win support.[17] Research for the report was carried out by the Fabian Society through a series of focus groups; one of its key conclusions is the importance of understanding the difference between people liking a policy and supporting it because they see it as legitimate. The report concludes that people will support policies aimed at sustainable consumption if they understand the issues and believe that the policies are fair – a key finding that will chime with Liberal Democrats. Addressing people as consumers and appealing to their self interest – the usual tactic used by government – may not be the most effective approach.

Four key points are highlighted in the report to persuade people that a policy is fair:

- Ensuring that everyone cooperates, which may make regulation and enforcement crucial.
- Where compulsion is used, measures to target a product or activity rather than the individual are preferred.
- Sustainability policies should be progressive: the greatest burdens of behaviour change should be on those with the greatest ability to reduce their consumption.
- 'Economic' approaches, and specifically taxation, are often seen to fail the fairness test.

Behavioural change is just one of the tools needed to achieve sustainability and in many circumstances it may not be the most effective. So it is crucial that behavioural change is not seen as a soft option to avoid taking hard decisions and is only used where there is real evidence that it can deliver the necessary change.

Notes

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Chapter 10

Embedding Sustainability in Government

Simon Wright MP

Within weeks of the 2010 general election, the coalition government announced that it would cease funding the Sustainable Development Commission. Since 2000, the Commission had advised the four UK governments (UK, Northern Ireland, Scotland and Wales) on policy and helped government departments to develop the expertise they needed to make more sustainable decisions. From 2005, the Commission also reported on the sustainability of government operations and policies. The decision to axe the Commission led to intense criticism of the government and raised early questions over its commitment to be the 'greenest government ever'.

In practice, all governments face a significant challenge in pursuing environmental goals throughout their departmental structure. The actions and decisions of a wide range of ministers and departments are relevant to the achievement of environmental policy goals – including, for example, those covering business, finance, transport, housing, planning, agriculture and international development – but are rarely a high priority for many of them. Furthermore, environment departments are often smaller, in terms of staff and funding, and of lower perceived political status than, for example, economic, finance, industry or trade departments. As a result, many countries have found it difficult to ensure that environmental objectives are pursued consistently across government.

Over the last twenty years a range of different models has been deployed in the UK. These include a small internal committee and secretariat (the UK Panel on Sustainable Development, 1994–2000), a much larger external advisory outfit (the Sustainable Development Commission, 2000–11), and a Parliamentary scrutiny body (the House of Commons Environmental Audit Committee (EAC), from 1997). Although progress has been made, none of these models has worked to fully embed sustainable development objectives at the heart of government. The main reason, as the EAC observed in 2011, has been that 'sustainable development has not been fully embedded into Government because the political will to do this has not been maintained'.[1]

The withdrawal of funding for the Sustainable Development Commission was poorly handled; it was announced, in 2010, as part of the government's review of quangos, making it look as though the coalition put cost-cutting ahead of a commitment to sustainable development. Nevertheless, although the Commission had done much valuable work, it had increasingly come to operate essentially as a (high-quality) external pressure group, too easily overlooked or ignored by ministers. As the Commission itself indicated before its closure, weak governance arrangements had held back the progress of sustainable development as a driver of government policy and practice.[2] It was probably more effective in helping government departments manage their own operations sustainably, often generating cost savings in the process.

Coalition ministers were therefore not wrong to say that the closure of the Commission provided an opportunity for government itself to take the lead on sustainable development, strengthening democratic accountability, rather than delegating responsibility to an arms-length body. This chapter will look at whether the government has yet achieved this, whether it has moved sustainable development beyond being seen as a priority for only a few departments and pushed it into mainstream thinking and practice across the whole of government.

Embedding sustainable development in policy-making: the coalition's record

Several months after announcing the end of the Sustainable Development Commission, the coalition government published its vision for sustainable development, *Mainstreaming Sustainable Development*.[3] It defines its aim as 'stimulating economic growth and tackling the deficit, maximising well-being and protecting our environment, without negatively impacting on the ability of future generations to do the same'.

The emphasis on economic growth and tackling the deficit raised concerns that the balance of the three pillars of sustainable development risked being weighted against the social and environmental, in favour of the economic. These concerns were reinforced in July 2011, on the publication of the draft National Planning Policy Framework, which included an inadequate definition of sustainable development, and confusing statements emphasising economic growth over other considerations of sustainability; fortunately, and partly thanks to Liberal Democrat ministers, the final Framework was much better.

In August 2011 the government published *Enabling the Transition to a Green Economy: Government and business working together*.[4] Originally

intended as a roadmap for business and government to develop a green economy, the document was a disappointment: it simply restated existing policies and suggested that businesses take voluntary action. As highlighted in the EAC report, *A Green Economy*,[5] the government did not fully embrace the principles of sustainability in its definition of the green economy. *Enabling the Transition* is predominantly concerned simply with growing the environmental goods and services sector, and in doing so does not adequately consider social justice, well-being or environmental limits and opportunities across the whole economy.

What the vision document, *Mainstreaming Sustainable Development*, did do, however, was to announce laudable intentions for clearer ministerial and Cabinet-level oversight for mainstreaming sustainable development. The Cabinet Office, working alongside the Department for Environment, Food and Rural Affairs (Defra), has responsibility for reviewing departmental business plans (which set out the actions required to deliver on the commitments in the coalition programme) in relation to the principles of sustainable development. The Minister of State for Government Policy, currently Oliver Letwin, reviews business plans on a quarterly basis, and oversees their revision; this gives him the power, at least in theory, to hold departments to account for their performance on integrating sustainable development.

The Sustainable Development Team within Defra provides expertise to support the Cabinet Office's review of business plans in relation to sustainable development. In addition, the Secretary of State for Environment, Food and Rural Affairs now sits on key Cabinet committees, including the Home Affairs, Economic Affairs and Reducing Regulation Committees, with the aim of providing a clear voice for sustainability across government policy-making. While this input is valuable, this is not a post which normally carries much political influence, and in areas of dispute it is far from clear that the arguments for sustainable development will prevail.

Defra staff also work with other government departments, helping them to ensure that tools such as impact assessments are applied consistently, and that policy training reflects sustainable development priorities. Although some former Sustainable Development Commission staff have been recruited to Defra, these activities represent only a small part of the service that the Commission was previously able to provide.

Departmental annual reports and accounts, which are presented to Parliament, now include information on how they have integrated sustainable development into policy, procurement and operations, together with

commitments on mainstreaming sustainable development for the following year. It is still too early to judge whether this system works effectively, but the lack of a common format for reporting hardly helps.

These are all welcome initiatives as far as they go, but has the coalition demonstrated a clear cross-governmental commitment to sustainable development? The evidence suggests otherwise. While *Mainstreaming Sustainable Development* provides a brief overview of how the government seeks to 'build on the principles' of the 2005 Sustainable Development Strategy, it neither provides a new overarching strategy nor explains how sustainable development should be integrated into other priority policy themes, such as localism or infrastructure development. In the absence of a single government strategy for sustainable development, there is likely to be a tendency for departments to look for ongoing direction from Defra and Cabinet Office ministers – or to ignore the issue entirely.

As mentioned, the Department for Communities and Local Government's draft National Planning Policy Framework, published just five months after *Mainstreaming Sustainable Development*, failed adequately to incorporate sustainable development. The Treasury, while committed under the coalition programme to raise the proportion of government revenue deriving from green taxes, has unilaterally, and without any consultation, redefined the concept to exclude transport taxation (which accounts for more than 90 per cent of the total), allowing itself to cut fuel duty and air passenger duty without, on paper, breaching the commitment.

In reality, only a small number of the current crop of ministers are genuinely committed to the sustainability agenda; they are inevitably limited by their capacity to deliver, and there is of course no guarantee that future holders of their office would be equally committed. Ministers not normally identified as 'green', however, can still be motivated by a clear lead from the top. The initial success of David Cameron, before the general election, in apparently moving the Conservative Party in a greener direction, followed by his early commitment in government to cut the energy use of departments by 10 per cent, achieved results. Sadly, those achievements have not been built upon by Mr Cameron, who has, more than halfway through the Parliament, yet to give any major speech on environmental issues.

While the record of the Prime Minister may be disappointing, the impression given by the Chancellor, George Osborne, is too often one of hostility. The language of his 2011 Autumn Statement to the House of Commons was of particular concern to many, with green policies seemingly dismissed as a burden and a cost to British businesses. The impression left was potentially

damaging, and is hardly likely to inspire ministers to progress sustainable development objectives in their departments.

Equally damaging has been the frequent reports of rows between departments, generally involving the Treasury, over environmental policies such as the fourth carbon budget, mandatory reporting of corporate carbon emissions, and borrowing powers for the Green Investment Bank. Proposals to reform the electricity market have also been obstructed, with the Treasury pushing back a decision on a 2030 decarbonisation target for the power sector until after the next election – though Liberal Democrat ministers won an important victory in the agreement for £7.6 billion of financial support for renewables.

Embedding sustainable development in policy-making: the future

It is clear that the current government has not succeeded in mainstreaming sustainable development objectives across all departments – just like Conservative and Labour governments of the past. It is clear that a more radical approach is needed. In reality, a combination of five key elements is necessary:

1. An agreed set of objectives across government
2. One or more departments giving a strong policy lead
3. An internal institutional set-up to (a) monitor all departments' adherence to agreed policies; and (b) question any department's decisions which impact negatively on agreed policies and objectives
4. An external scrutiny body
5. Strong, consistent and obvious support from the Prime Minister and/or other senior government figures

An agreed set of objectives across government

As noted, the publication of *Mainstreaming Sustainable Development* was a missed opportunity to update the previous government's approach – now eight years out of date – and develop a single new strategy for sustainable development to provide a clear point of reference for all departments in setting their policies and practices. In fact elements of this already exist, particularly in the *Carbon Plan* put together mainly by the Department of Energy and Climate Change (DECC) in 2011, explaining how the government as a whole intends to meet the targets set out in the successive carbon budgets.[6] Defra's Natural Environment White Paper, the Treasury's National Infrastructure Plan and other key documents can also be drawn on, but what is still missing is a strategic document which sets out the government's

commitment to sustainable development, explains how it will be achieved and sets a framework within which specific strategies published by individual departments can be developed.

One or more departments giving a strong policy lead

Neither of the two key environmental policy departments in government – DECC and Defra – are particularly influential, though in the lifetime of the coalition, DECC has had a much better record of achieving its policy objectives. But both are small in terms both of numbers of officials and budgets, and sit relatively far down the Whitehall hierarchy.

Although the Labour government's habit of repeatedly reorganising government departments is not to be emulated, environmental policy did have something of a higher profile over the period (1997–2001) in which it was located in the Department of Environment, Transport and the Regions with John Prescott as Secretary of State. Partly this was due to the size of the department and partly to his status as Deputy Prime Minister.

Creating one larger environmental department by itself will not solve the problem of lack of commitment across government, but it would create a stronger champion to lead the fight. Consideration should therefore be given to merging either the environmental policy sections of Defra or the whole of the department with DECC, and possibly the Department of Transport and some elements of the Department for Business, Innovation and Skills (BIS). The Secretary of State for the new department could also regularly be the Deputy Prime Minister, placing them in the front rank of the Cabinet alongside the Prime Minister, Chancellor and Foreign Secretary.

Some kind of cross-departmental body is also likely to be needed to bring together ministers to discuss sustainable development priorities. Under the current government this function is supposed to fall under the remit of the Home Affairs Committee, but it does fit well with the existing Cabinet Committee structure, and a separate dedicated Cabinet Committee should be established, chaired by the Secretary of State for the new environment department. Other countries have this kind of structure. In Germany the State Secretary Committee for Sustainable Development, on which all ministries are represented, has responsibility for implementing the national sustainability strategy; it is chaired by the Head of the Federal Chancellery. In the US, the White House Council on Environmental Quality coordinates federal environmental efforts and works closely with agencies and other offices in the development of environmental policies and initiatives.

An internal institutional set-up to (a) monitor all departments' adherence to agreed policies; and (b) question any department's decisions which impact negatively on agreed policies and objectives

This is the function that the Government Panel on Sustainable Development, which preceded the Sustainable Development Commission, carried out. Established by John Major in January 1994, the Panel comprised five non-government experts, and was chaired by Sir Crispin Tickell; it had administrative support from the Cabinet Office. It produced four short reports each year, on topics of its own choosing, and all relevant departments were required to respond to them; it also reviewed progress against the recommendations in its previous reports. It had the power to examine any relevant papers from within departments, though it did not, in general, scrutinise previous decisions; rather, it produced recommendations for future action in what it considered to be priority areas. Its reports and the government's responses were all in due course made public.

Although the Commission was a much larger and well-resourced body, it lost this function of internal pressure and oversight, and it is not clear that the Cabinet Office and Defra between them really fulfil this function under the new arrangements. A new Panel for Sustainability Across Government, comprising of experts appointed by the Prime Minister, could provide oversight of government performance. This Panel would report regularly to the Prime Minister and Deputy Prime Minister, publishing recommendations on improving sustainable development across government to which they would provide a formal published response, helping to become a political driver for change across government.

An external scrutiny body

A strong internal scrutiny process is not in itself sufficient. External (from government) scrutiny and accountability to Parliament is also essential. With the demise of the Sustainable Development Commission, the Environmental Audit Committee, first established in 1997, will play an increasingly important role as a recognised 'green watchdog' of the government. Its resources, currently far less than those enjoyed by the Commission, should be expanded.

Indeed, the committee has already appointed additional expert advisors and is developing links with the academic community. With its wide ranging cross-government scrutiny role, it should explore establishing specialist standing sub-committees, with support from specialist staff and advisers, to avoid over-stretching committee members.

The National Audit Office (NAO) currently works with the Environmental Audit Committee on a case-by-case basis as required. The original model envisaged for the EAC suggested an enhanced NAO acting as an environmental auditor of government in support of the committee, with rights of access and resources. In the absence of the Commission, a better resourced NAO with a strengthened mandate in relation to its work with the EAC has the potential to provide a strong model of external scrutiny.

In addition, government also needs to provide further clarity for how so-called 'armchair auditors' and society as a whole are intended to scrutinise government performance. The revision of performance indicators, the publication of real-time data on websites, and inclusion of more data in departmental annual reports and accounts may help the government to argue that it is being transparent, but without a framework to assist auditing processes, including clear targets, there is a risk that publishing data will not lead to more meaningful scrutiny from outside.

Strong, consistent and obvious support from the Prime Minister and/or other senior government figures

All of the above institutional reforms should prove useful in helping to mainstream sustainable development more consistently across government, but none of them will substitute for a lack of leadership. As outlined above, the coalition government has so far failed to display this; indeed, it has demonstrated almost the reverse, with ministers clearly at odds over key elements of policy. Much of what has been achieved has been thanks to Liberal Democrat ministers, with a tiny handful of their Conservative partners in support. In this sense the government is little different from its Labour predecessor, which also saw the small number of ministers who understood and were committed to the sustainable development agenda struggle to make progress against their indifferent or actively hostile colleagues, with only a few instances of real leadership from the top. We will not make progress in this area until the Prime Minister gives a consistent lead and ensures that all government departments and policies adhere to the imperatives of sustainable development.

Leading by example

As well as the policies it develops and implements, government has a major role to play in making sure its own operations are sustainable. Central government is a significant player in the economy, employing over 450,000 civil servants and owning or managing the thousands of buildings and facilities

they work in. The wider public sector, including the NHS, armed forces, prison service, public corporations and local government, is even larger, employing over 5.5 million.[7] Public procurement – the purchasing of third-party goods and services – amounts to over 10 per cent of the economy.

In attempting to ensure that these staff and buildings are employed and run in as sustainable a manner as possible, the coalition government got off to a good start. Within days of taking office, the coalition defined its ambition to reduce carbon emissions from central government departments by 10 per cent within a year: a clear demonstration that the new government would put its own house in order. The target was comfortably exceeded, with a 13.8 per cent reduction by May 2011, saving 100,000 tonnes of CO_2 and £13 million on energy bills across departments.[8] A new target was adopted of a 25 per cent reduction in emissions by 2015. Clearly this will prove more challenging to meet, but also provide the opportunity to implement more long-lasting measures.

The success of the emissions reduction target was in large part the result of strong political leadership. The previous government had also included targets, but made relatively little progress. The Prime Minister's personal commitment to deliver on the 10 per cent target was a key factor in seeing it met, but sadly has been seen on very few other environmental matters.

Real-time data of energy usage at the headquarters of all nineteen government departments in Whitehall, as well as Number 10, is now published online through departmental websites. By making this data available, departments can be held to account for behaviour that would otherwise be hidden in annual reports. (Indeed, one senior official at DECC is reported to have received enquiries from the public about the firing up of the building's heating system during bank holidays![9]) Transparency of performance is vital if the government is to show real leadership on sustainability; the vision held by ministers of 'armchair auditors' up and down the country holding public bodies to account can be realised only through the publication of relevant and comprehensive data.

As mentioned above, the government is the UK's biggest customer of goods and services. Total public sector spend on procurement was £238 billion in 2010–11.[10] This level of spend applied through the practice of sustainable procurement has the potential to be a significant driver for the green economy, stimulating industry innovation and reducing costs to the public sector. Indeed, in some areas this is already the case. For example, UK procurement policy for timber and timber products (including paper and packaging, wooden furniture and timber for construction) has, for

almost ten years required that all the products must be legally and sustainably sourced, or recycled. In turn this has had a significant impact on the UK market (both public and private sector) for timber products certified as sustainably produced; by 2008 certified products accounted for over 80 per cent of the market (both domestic production and imports), having grown by about 10 per cent a year for several years.[11]

New and revised Government Buying Standards have been published to support the public sector in buying goods and services that are more sustainable. Government departments and their agencies must meet minimum mandatory specifications when buying products and services, while higher voluntary best practice standards are also defined. Products that meet the criteria will save more money over their lifetime (compared to the immediate cost), as well as reducing carbon and delivering other environmental benefits. The Standards do not yet apply to every area of procurement spend, but are steadily being extended.

While the Standards apply to central government departments and their agencies, this only accounts for about one-third of public sector purchasing power. Public institutions, including schools, hospitals, and even the House of Commons, are not covered. Given the benefits that can be brought to the green economy, the government should now consider extending the Government Buying Standards to the whole of the public sector.

The government should also set out how it will use spending on procurement to develop wider markets for sustainable goods and services, and how it will monitor the progress that it makes. The Cabinet Office is responsible for managing the performance across government of delivering the Greening Government Commitments on operations and procurement. Published in 2011, these cover greenhouse gas emissions (discussed above), waste, water consumption and procurement. Departments submit their plans for delivering operational and procurement targets to the Cabinet Office – which provides support, challenges data, and publishes the progress of departments. In general this is a good approach, though it could be pushed forward more quickly and given a higher profile within government.

Conclusions

The objective of mainstreaming sustainable development across government has been an objective of the Liberal Democrats since the foundation of the party, and has featured in every election manifesto. The party's 2011 policy development programme, *Facing the Future*, reinforced the idea that sustainable development lies at the heart of our thinking.

Liberal Democrat ministers in the coalition have achieved much on individual policies, and the government has a respectable record on – slowly – greening its own operations. Yet the coalition has clearly failed, as yet, to mainstream sustainable development objectives and policies across all departments. Clear and consistent political leadership, together with strengthened arrangements for scrutiny, remain objectives that have not yet been delivered.

Liberal Democrats know that sustainable development is neither optional nor something that can be bolted onto policies. It must lie at the heart of everything we do. Many of our actions in coalition have put this government on course for being the greenest ever, but to complete the job we have to make sure that sustainable development becomes an integral part of all policy-making and departmental planning.

Notes

1 House of Commons Environmental Audit Committee, *Embedding Sustainable Development Across Government, After the Secretary of State's Announcement on the Future of the Sustainable Development Commission* (HC504, 10 January 2011), p. 3.
2 Written evidence submitted by the Sustainable Development Commission to the Environmental Audit Committee during the inquiry into Embedding sustainable development across Government; ibid., pp. Ev70–Ev99.
3 Defra, *Mainstreaming Sustainable Development – the Government's vision and what this means in practice* (February 2011).
4 HM Government, *Enabling the Transition to a Green Economy: Government and business working together* (2011).
5 House of Commons Environmental Audit Committee, *A Green Economy* (HC 1025, 21 May 2012).
6 HM Government, *The Carbon Plan: Delivering Our Long-Term Future* (December 2011).
7 All figures: Office for National Statistics, *Public Sector Employment*, Q2 2012 (12 September 2012).
8 See http://www.number10.gov.uk/news/whitehall-exceeds-10-carbon-reduction-target/
9 From the minutes of oral evidence provided to the Environmental Audit Committee, 3 November 2010, by William Jordan, Chief Sustainability Officer of the Efficiency and Reform Group, Cabinet Office.
10 House of Commons Library: *Public Procurement: Small Businesses and Savings* (January 2012).

11 Duncan Brack and Jon Buckrell, *Controlling Illegal Logging: Consumer-Country Measures* (Chatham House, March 2011), p. 11.