

Changing Patterns

UK Government Framework for Sustainable Consumption and Production

dti

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Economic progress has not always taken account of its potential impact on our society and environment. Too many people have been excluded from the benefits of development, while natural resources have been depleted and our environment degraded.

The UK government is determined to take a lead in tackling these damaging impacts. Our actions, at home and abroad, must strengthen the synergies between our economic, environmental and social agendas.

We were delighted that these objectives were given added prominence and urgency by the World Summit on Sustainable Development in September 2002, which agreed on a 10-year framework of programs on sustainable consumption and production.

Future prosperity – at home and abroad – depends on decoupling economic growth from environmental degradation. There are limits to the capacity of the Earth to absorb pollution and provide natural resources. This means getting more from less: more consumer needs fulfilled using less energy or water; more value added to a product with less pollution and waste in the process.

This document brings together, for the first time, the economic and environmental case for action to tackle sustainable consumption and production. It also outlines the key elements of the Government's approach. Government has a crucial role to play in this area. We need to take action to shape and create the markets we need, in order to achieve the outcomes we want.

Our framework for SCP also outlines the scope for further action and our priorities for the future. It should not be read in isolation. Our long-term targets for a low carbon economy, articulated in the white paper on energy policy that we published in February 2003, and our commitments arising from the Water Framework Directive and Landfill Directive are highly relevant to this agenda, as is our review of innovation policy that will be published soon. But this document sets out a series of principles that will inform all we do, as well as actions to take forward sustainable consumption and production in a cross-cutting way.

The next step is to integrate our principles into all relevant areas of UK policy, and into what we do at an EU and international level. To achieve our objectives, we need government at national, international, regional and local level to work together with business and consumers. This framework document and the action that will follow it, will help us achieve that.



Margaret Beckett

**Secretary of State for
Environment, Food and
Rural Affairs**



Patricia Hewitt

**Secretary of State for
Trade and Industry**

There is a tension at the heart of modern consumer societies. We want all the things the modern economy offers in terms of variety of products and services available to improve our quality of life, but we do not want the downsides such as pollution, congestion, waste or adverse impacts related to health and crime. The challenge is to ensure that we make progress in parallel on three fronts – economic development, environmental protection and social cohesion – and that initiatives to promote any one of them do not undermine either of the other two.

This challenge is at the heart of the UK Sustainable Development Strategy, *A Better Quality of Life*¹, and a wide range of action has already been taken to promote more sustainable patterns of consumption and production (SCP). There have been real successes from which we can learn, but more progress is needed, and faster. This report highlights some of the actions which are already being aimed towards businesses and individual consumers, and towards structural improvements in the market.

We all have aspirations for better living standards and we need to find ways of meeting those expectations, in the UK and developing world, without the side-effects that undermine the quality of life in other ways and without breaching environmental limits. We were very pleased therefore, when at the World Summit on Sustainable Development in Johannesburg last year, world leaders agreed on the fundamental need to change consumption and production patterns. They committed themselves to:

“... encourage and promote the development of a 10-year framework of programmes in support of regional and national initiatives to accelerate the shift towards sustainable consumption and production ... to promote social and economic development within the carrying capacity of ecosystems ... delinking economic growth and environmental degradation ... with developed countries taking the lead.”*

This agreement was a priority for the UK and its EU partners at Johannesburg, alongside the progress that we also achieved on commitments for ensuring that globalisation works for the poorest. This new document sets out the framework for the UK contribution towards action on this commitment. It will guide the Government's approach on action at national level and also on how we approach future developments that will arise at European Union (EU) and wider international level.

The nature and scale of the challenge

Attempts have been made to determine the scale of improvement in resource efficiency needed to achieve sustainable development, including the notion of halving inputs whilst doubling outputs (“factor four”) and possibly more in future decades. Others have argued that we need three planets' worth of resources to sustain our current level of consumption across the globe. Whilst the estimates vary substantially, it is clear that significant improvements are required to ensure sustainability.

However, our understanding of the scale of the improvements required is different across particular aspects of the environment. On climate change we have a reasonably robust understanding of what is required to stabilise concentrations of greenhouse gases in the atmosphere. This is the basis for the UK aim to reduce CO₂ emissions by some 60% by 2050². In contrast, assessing environmental limits in respect of material resources is much more complex and our understanding far less advanced.

Taking action

This document is a start, not an end point. It will inform the forthcoming review of the Government's Sustainable Development Strategy and will be developed further in that context. The action needed is not only for Government. It also needs the engagement of business, civil society organisations, international institutions and all of us as consumers, employees and citizens.

* For the full text see Annex 1.

¹ A Better Quality of Life: a strategy for sustainable development for the UK, Defra, May 1999

² Our Energy Future – creating a low carbon economy, DTI, February 2003

Many companies have gained bottom-line business benefits from the practice of corporate social responsibility – and in particular from the active management of their environmental and social impacts. For some this has been through the operational gains from reducing waste and improving energy and materials efficiency. For others the benefits have been in protecting and enhancing the value of their increasingly important intangible assets, such as reputation, brands, and the recruitment and retention of a skilled and committed workforce. Labelling and other instruments have helped consumers and investors make more informed choices, reflecting their ethical and other preferences and helping to stimulate more active markets in more sustainable goods and services. NGOs and others have worked with business and other stakeholders on practical actions to change patterns of consumption and production.

But much more is needed, if we are to harness the contribution from all stakeholders towards making sustainable consumption an attractive and desirable objective. In Annex 2 we indicate some areas where the Government wants to stimulate action by producers and consumers.

The vision and policy objectives

The Government seeks to deliver continuous economic and social progress that respects the limits of the Earth's ecosystems, and meets the needs and aspirations of everyone for a *better quality of life* now and for future generations to come.

This vision will be accomplished by:

1. **'Decoupling' economic growth and environmental degradation.**

A consultation paper being published alongside this document shows a basket of indicators to illustrate the progress being made. The evidence is that we are now successfully decoupling air and water pollution from growth in GDP, and making good headway with CO₂ emissions from energy. In other areas, like waste and CO₂ emissions from transport, more progress is

needed. It is important that in sectors where the costs of decoupling are high, policy instruments are sufficiently flexible to allow for different rates of improvement, avoiding significant economic or competitive penalties. When we look at data only for household consumption, the picture is less encouraging. The environmental impact of our own individual behaviour is more closely linked to consumption expenditure than the economy as a whole.

2. **Focusing policy on the most important environmental impacts associated with the use of particular resources, rather than on the total level of all resource use.**

Our first priority is in areas where it is clearest that the impact of resource use is pressing up against environmental limits – for example, in our long-term aim for reducing CO₂ emissions by 60% by 2050, our commitment to keep water use within the limits of its replenishment³, and the Landfill Directive targets to reduce landfilling of biodegradable waste by 65% by 2020⁴.

3. **Increasing the productivity of material and energy use, as part of the broader Government commitment to increase the productivity of the nation.**

We also want to support ways of meeting people's needs that are economically efficient. By encouraging patterns of supply and demand which are more efficient in the use of natural resources, we also aim to promote innovation and competitiveness. Our investment in areas like energy efficiency, water efficiency and waste minimisation, contribute to this objective.

4. **Encouraging and enabling active and informed individual and corporate consumers who practice more sustainable consumption.**

We need to do more to understand and exploit the potential market leverage which public bodies and large businesses can deploy, both as consumers and suppliers of goods and services,

³ Directing The Flow: priorities for future water policy, Defra, November 2002

⁴ Council Directive 99/31/EC of 26 April 1999

in helping to bring about more sustainable consumption patterns. We also need to find ways of making sustainable consumption attractive to the millions of diverse individuals who are often called 'the consumer'. We must move the more environmentally and socially sustainable options from the niche to the mainstream. This is a major challenge.

Policy approach

The guiding principles of the Government's approach are explained in our Sustainable Development Strategy, *A Better Quality of Life*, published in 1999. There have been some important developments since then at EU level, which the Government strongly supports, not least in the approach to the economic pillar of sustainable development and the EU's 'Lisbon agenda' for a modern, competitive, knowledge-based economy.

We believe that the sustainable consumption and production agenda is an excellent practical focus for these high-level principles. However, these principles need to be broken down further to describe the approach we intend to follow to promote sustainable consumption and production ('SCP').

These are the main features:

- **Taking a holistic approach that considers whole life-cycles of products and services, intervening to deal with problems as early as practicable in the resource/waste flow.**

Environmental degradation can be caused by the manufacture, distribution, use and disposal of a product or service. Our policy approach will be to look across the whole chain of consumption and production in a particular field before deciding the points on which to focus. Part of this must be through the promotion of a systems-based approach, founded on intelligent design, which seeks to encompass all considerations of the producer through to the end user.

It generally makes sense to favour prevention rather than cure. So our approach will be to look for ways to minimise waste, improve energy efficiency and address demand management of natural resources

such as water, rather than simply repairing environmental damage after the event. All interventions will be chosen on their practicality and cost-effectiveness.

- **Working with the grain of markets and identifying and tackling market failures.**

We believe that, in general, markets provide the best means of allocating resources. However, market failures can undermine SCP. We will continue to take a vigorous approach to tackling the key environmental challenges by using economic instruments. Nevertheless economic instruments alone cannot always deliver the improvements needed. This document indicates where the most important market failures lie, in relation to SCP, and what other policy interventions may be needed.

- **Integrating SCP thinking and objectives in all policy development and implementation.**

SCP will be an important part of the Government's review of the Sustainable Development Strategy, which is being integrated into policy making and spending decisions across all levels of Government, including the way that Government directs its own procurement of goods and services.

- **Using a well-designed package of policy measures and following the principles of better regulation.**

We believe that delivering SCP requires sophisticated policy packages, tailored to the circumstances, rather than single or 'one-size-fits-all' tools. Our approaches to energy and waste policy illustrate such packages, using combinations of economic instruments, voluntary measures, regulation and information tools. Where specific initiatives follow on from this document, our proposals will be accompanied by a Regulatory Impact Assessment.

- **Stimulating innovation in all its facets.**

We believe that innovation will be an essential element of the delivery of SCP. This must encompass technological change, new ways of thinking and working, different relationships

among organisations, design and delivery of products and processes.

Delivering SCP: the next steps

A number of Government priorities in this area are already set out in the long-term and far-reaching targets we have set in *Our Energy Future – creating a low carbon economy*, *Directing the Flow – priorities for future water policy*, and the commitments made at an EU level in the Water Framework Directive⁵ and Landfill Directive.

This strategy illustrates these features of our approach in relation to current policy initiatives. It then looks to the next steps for taking forward sustainable consumption and production in a cross-cutting way.

However, this strategy is only the starting point for developing a long-term framework, of the ten years or more envisaged in the agreement at WSSD. More work will be carried out over the coming months, and as part of the forthcoming review of the wider Sustainable Development Strategy going into 2005, with wide-ranging consultation.

The framework will need to address and prioritise actions at different levels (global, EU, national and local) and along different time-frames (short, medium and long term). That will mean reviewing and assessing the full range of existing activities to help determine what works, what doesn't, and where there are gaps. This will help to chart a structured way forward, perhaps on the lines of the 'map' illustrated in Annex 3. There is an emerging consensus at EU and wider international level on this broad approach, which will help in the sharing of national experience, in the design of more effective policies, and in the practical business of international collaboration.

These are the first steps:

- Defra and DTI will review, by the end of 2003, how they can add more value to their various **'sustainable production' programmes**, which contribute to resource efficiency and business support for SCP.
- The Government has undertaken a wide-ranging review of the scope for its **procurement** activity to contribute directly to progress on sustainable development. We will be rolling out changes to guidance, setting clear environmental standards in areas of our own purchasing and issuing more comprehensive information about product specifications over the coming year.
- Defra and DTI will aim to establish **collaborative projects** involving particular sectors or product chains as pilots to explore practical application of the SCP approach. This would be consistent with and contribute to the approach proposed in the European Commission's new communication on Integrated Product Policy (IPP). As part of this work, the Government will build on the approach used in its Market Transformation Programme to assess future scenarios for delivering SCP in priority areas of consumption.
- We will respond promptly to the latest recommendations from the Advisory Committee on Consumer Products and the Environment, which cover some important issues relating to the supply and consumption of **products**.
- We will be asking the Sustainable Development Commission (SDC) to recommend specific ways of taking the **debate on sustainable consumption** forward. The Government and the SDC will work together to develop some firm proposals to feed into the review of the Sustainable Development Strategy in 2005.
- Defra and DTI are publishing, alongside this strategy document, a consultation paper on a basket of **indicators** to monitor the decoupling of economic growth and household consumption from environmental degradation. The results of the consultation will feed into the review of the Sustainable Development Indicators in 2005.

⁵ Directive 2000/60/EC establishing a framework for the community action in the field of water policy

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- The DTI/Treasury Innovation Review, due in Autumn 2003, will embrace the resource productivity and environmental aspects of **innovation**.
- HM Treasury consultation on a number of **economic instruments** designed to reduce environmental impacts of energy use, aviation, waste management and other areas.

It is important to remember that SCP is a major **international** issue in which the UK is but one player. As we have done over the last few years, the UK will continue to argue in international fora and in the European Union for sustainable consumption and production approaches to be taken forward. This strategy document will support the process by setting out clearly what the UK itself is doing in practical terms to deliver SCP and how we can work with others to build this into an effective long-term approach.

Chapter 1

Sustainable Consumption and Production in context

1.1 Purpose of document

At the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002, the Prime Minister and other world leaders committed themselves to:

“Encourage and promote the development of a 10-year framework of programmes in support of regional and national initiatives to accelerate the shift towards sustainable consumption and production to promote social and economic development within the carrying capacity of ecosystems by addressing and, where appropriate delinking economic growth and environmental degradation through improving efficiency and sustainability in the use of resources and production processes, and reduce resource degradation, pollution and waste.”

This strategy sets out a framework for how the Government will take forward its commitment to sustainable consumption and production (SCP).

SCP featured prominently in the Government's strategy for sustainable development for the UK, *A Better Quality of Life*⁶ and is something which the Government has been pursuing for some time. The SCP framework set out in the current document develops this important element of sustainable development and will inform the forthcoming revision of the wider strategy. The social dimension of sustainable development, also relevant and important for SCP, is already addressed relatively fully in the Sustainable Development Strategy. The framework for SCP set out here is particularly concerned with the issues raised in the 'sustainable economy' chapter of the wider Sustainable Development Strategy.

The **purpose** of this document is:

- First of all to demonstrate how the Government is working to translate the commitments on SCP into practical action. So it is intended to:
 - provide an overview of existing and planned activities associated with SCP;

- strengthen the coherence and synergies between these activities in order to achieve more effective implementation;
- help identify gaps in these activities, scope for further action and key priorities for the next ten years, in order to move towards more sustainable patterns of consumption and production.

- Secondly, this document addresses many of the issues raised by the Strategy Unit's 2001 report on *Resource Productivity: making more with less*⁷, which form part of the wider SCP agenda.
- Thirdly, and perhaps most important, this document sets out the framework and rationale for an SCP approach, highlighting aspects which need further work; and how the Government will take this approach forward over the next few years through other policy decisions and processes, such as the review of the Sustainable Development Strategy, the Innovation Review and future spending decisions. We will be consulting in the near future on a number of specific measures that will result from this exercise.
- Finally, this document will be used to help the UK make a positive contribution both to WSSD follow-up at the global level and to the various EU initiatives in this area.

1.2 What is Sustainable Consumption and Production?

Building on the WSSD definition, the Government defines the core of SCP as:

Continuous economic and social progress that respects the limits of the Earth's ecosystems, and meets the needs and aspirations of everyone for a better quality of life, now and for future generations to come.

⁶ A Better Quality of Life: a strategy for sustainable development for the UK, Defra, May 1999

⁷ Resource Productivity: making more with less, Strategy Unit, November 2001

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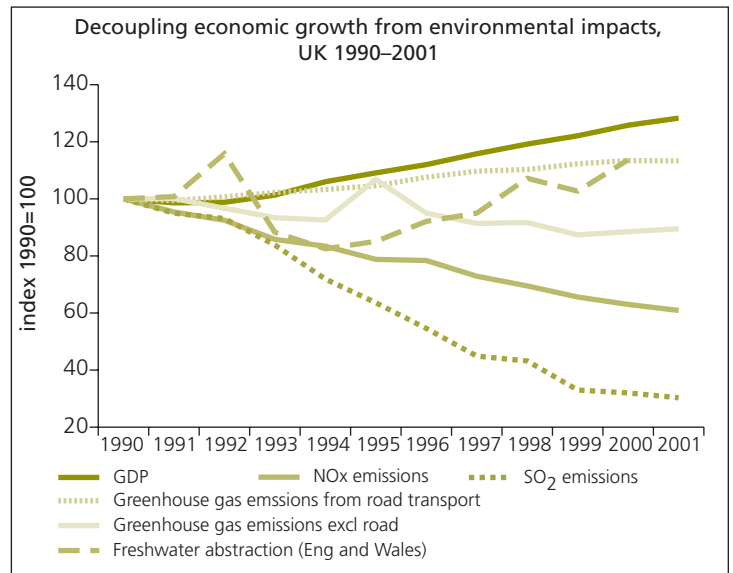
Given that there are limits to the capacity of the Earth's ecosystems to absorb pollution and provide natural resources, the only way to maintain economic progress in the long term without approaching these limits is to **decouple economic growth from environmental degradation**:

- by 'decoupling' we mean ensuring environmental degradation does not automatically grow with the economy to the extent that environmental limits could be threatened in the medium term.
- by 'environmental degradation' we mean unsustainable use of natural resources – which embraces situations where we exceed the carrying capacity of the environment to absorb pollution.

In practical terms this means **getting more from less**:

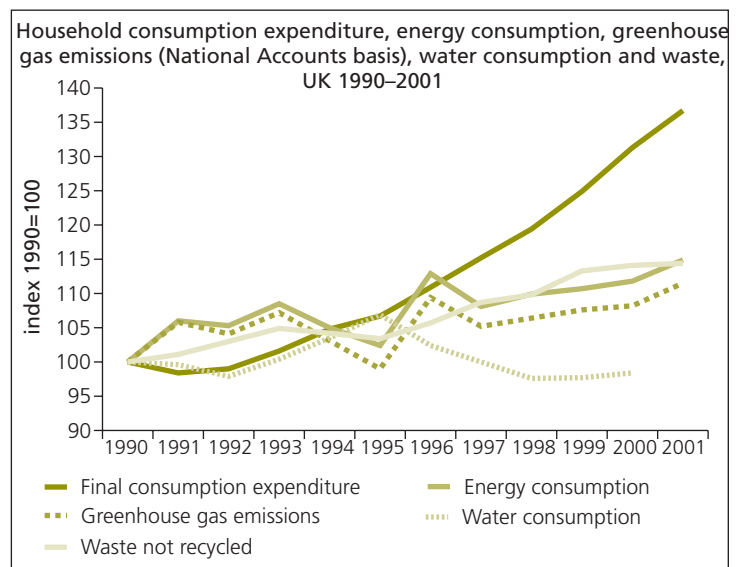
- more efficient and profitable production, using less raw material;
- more value added to a product, with less pollution and waste in the process;
- more consumer needs fulfilled, with less energy, water or waste.

The chart below shows recent trends in air pollution, CO₂ emissions from energy and transport, and water use, compared to GDP. It shows how SO_x and NO_x emissions are clearly being decoupled from economic growth, CO₂ emissions from energy are beginning to be, but from transport they are only just starting to deviate from economic growth. The trends on water abstraction fluctuate, but do not appear to be decoupling consistently.



Sources: Office for National Statistics, Defra, Environment Agency

When we look at data only for household consumption, the picture is much less encouraging. The analysis in the second chart suggests that the environmental impact of our own individual behaviour is more closely linked to consumption expenditure than the economy as a whole.



Sources: Office for National Statistics, Defra, Ofwat

1.3 Why is SCP important?

The concept of Sustainable Consumption and Production (SCP) as set out at the WSSD has a clear rationale based on effective protection of the environment and delivery of prudent use of natural resources, in the context of international development and population growth. We certainly believe that SCP is very closely and positively linked to poverty eradication and social progress in the developing world. But there are also strong domestic economic reasons for setting our economy on such a path, as the Prime Minister has emphasised on a number of occasions.

Global rationale

SCP has been at the heart of sustainable development since the Rio summit in 1992. It is the means by which developed countries can reduce their own adverse impacts, whilst encouraging and enabling growth in developing countries to proceed without the patterns of natural resource use and adverse impacts that have been linked to such growth in the industrial past.

The main areas of concern were highlighted in UNEP's 2002 *Global Status Report on Sustainable Consumption*⁸:

- growing disparities in levels of consumption between rich and poor countries;
- growing disparities in levels of consumption within developing countries;
- total growth in consumption of resources (particularly water, food and energy) in developed countries such that benefits from technical eco-efficiency improvements are being overwhelmed.

On the disparities between rich and poor, the overall consumption of the richest fifth of the world's population is nine times that of the poorest fifth. UNEP go on to say that 'scaling up' current Western patterns of consumption as the basis of development for, say, China or India, is simply not a realistic option unless the risk of

catastrophic collapse of the global ecosystem is considered acceptable.

Not only do the rich nations currently consume the lion's share of natural resources, but it is the poorest countries that are least well equipped to deal with the consequent environmental damage. The agricultural land threatened by climate change is overwhelmingly in the developing world. Countries like Bangladesh stand to lose a great deal more than developed countries, physically and financially, from increased storms and a rising sea level.

In the modern global economy, international supply chains are increasingly sourcing the products we buy from all over the world. This has increased the diversity of goods and services available to the consumer, but also the potential for environmental damage. This economic pattern is here to stay – and we must acknowledge the great benefits it brings both to UK consumers and the developing world economies. However, we also need to look for ways to address the other consequences of UK consumption, so the benefits are not outweighed by the damage caused.

When addressing SCP in the UK, the Government is very conscious that consumption in the UK has increasing environmental and social consequences across the world. There is little value in improving the resource productivity of the UK economy if it is at the expense of increased environmental, social and economic degradation in other countries – or at the expense of global concerns such as greenhouse gas emissions, tropical rainforests and fish stocks. The commitments made by the developed countries at WSSD are about us taking seriously our global responsibility, both to the well-being of developing countries and to the world environment, economy and community.

Environmental rationale

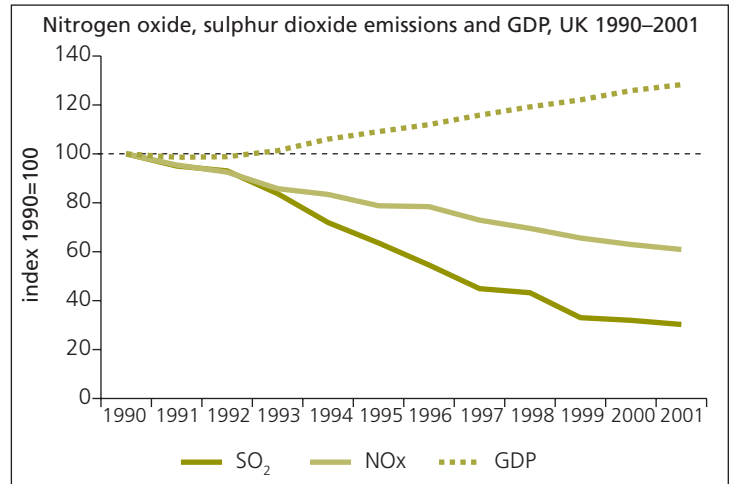
Some aspects of environmental degradation in air and water quality have been successfully decoupled from economic growth. However, many of these are by-products of economic activity which are relatively easy to control through better technology and

⁸ Global Status 2002: Sustainable Consumption and Cleaner Production, UNEP, 2002

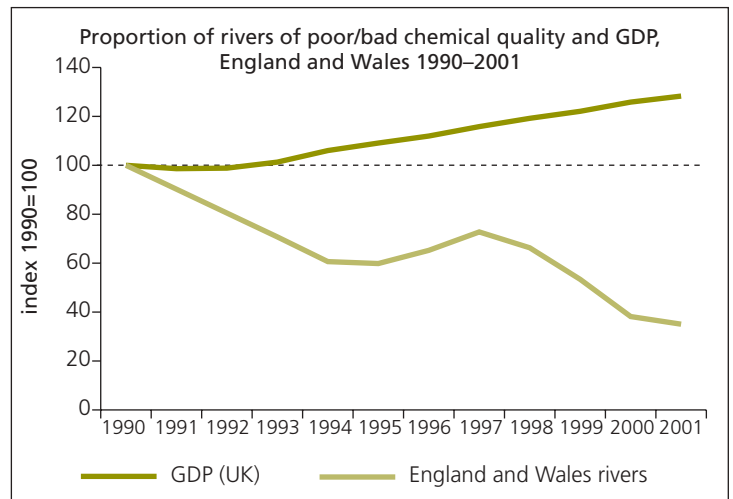
management. By contrast, in order to decouple in other areas – for example, CO₂ emissions from energy use, the volume of waste or the demand for transport – further structural change in the economy will be required. The aim of our strategy is to highlight those areas where decoupling has not yet occurred or needs to accelerate in order for the UK to meet its environmental objectives.

In terms of effective environmental protection, the UK measures its progress against targets linked, wherever possible, to the scientific evidence of environmental limits. Most of the issues of concern are environmental impacts, rather than absolute resource use. In some areas of policy this has led us to conclude that the SCP agenda needs to look significantly further than the 10-year framework agreed at WSSD. For example:

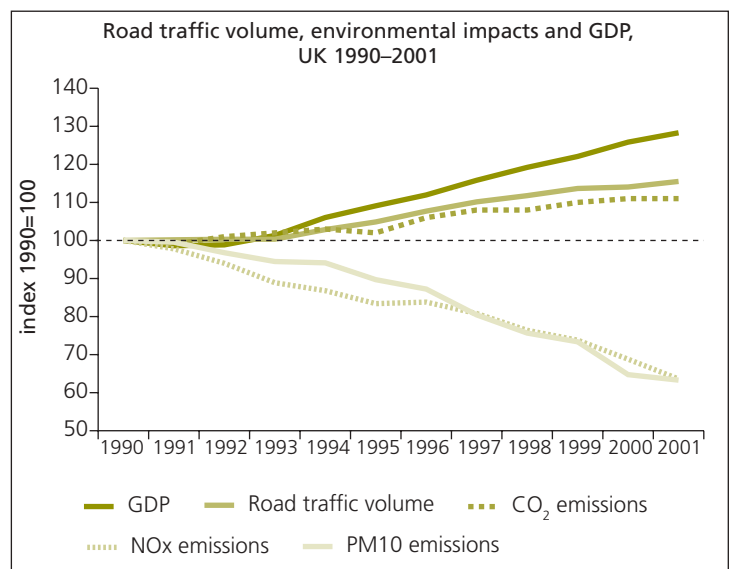
- **Carbon emissions.** The UK recognises that long term reductions in carbon dioxide emissions will be required to prevent dangerous climate change. In the recent Energy White Paper⁹, the Government has said we will put ourselves on a path towards a reduction in carbon dioxide emissions of some 60% from current levels by 2050. Because of the global nature of the issue, action taken by the UK has a limited effect on the outcome. Therefore we are particularly keen to ensure that action is taken by others: the Prime Minister has also proposed that the whole European Union follows this path.
- **Water use.** *Directing the Flow: priorities for future water policy*¹⁰ commits the Government to respecting environmental limits, neither abstracting beyond the rate of replenishment nor causing avoidable damage to the water environment through the use we make of it.
- **Water quality.** The Water Framework Directive¹¹ commits the Government to meeting quality objectives for all water bodies to achieve 'good status' by 2015.



Source: Defra



Source: Environment Agency



Source: Department for Transport, Office for National Statistics, NETCEN

⁹ Our Energy Future – creating a low carbon economy. DTI. February 2003
¹⁰ Directing The Flow: priorities for future water policy, Defra, November 2002
¹¹ Directive 2000/60/EC establishing a framework for the community action in the field of water policy

- **Waste.** Targets agreed through the Landfill Directive¹² set reductions of municipal biodegradable waste going to landfill for as far as 2020, with interim targets set at 2010 and 2013.
- **Marine environment.** The Government has commitments through the OSPAR Convention¹³ to reduce discharges, emissions and losses of radioactive substances to levels where the additional concentrations above historic levels are close to zero by 2020.

So whilst the commitment to a 10-year framework for SCP is the one that the UK is taking forward from WSSD, we recognise that, in many areas of environmental degradation, the science is pointing us towards a considerably longer term agenda. The strategy in this document must therefore be understood as the orientation for a much longer march, rather than the end in itself.

There are other areas of concern where the evidence for environmental limits is less well developed, but the Government is no less committed to making prudent use of natural resources. For example, there may be enough physical space to dispose of the country's waste or to set up installations for unlimited renewable electricity, but there are limits on the number of sites that are acceptable to local communities. The UK's environmental resources are valued in many ways by its people, whether in the biodiversity value of protecting habitats, the quality of life value of accessible open space, the aesthetic value of upland landscapes, or the economic and social value of high quality areas to live and work. English Nature is carrying out a series of research projects into the value of nature 'services': these include the economic activity associated with tourism, the crop protection provided by certain insects and the flood defence value of natural flood plains.

Economic rationale

The combination of inefficient use of resources in the economy and the costs of environmental degradation is a significant drag on the UK economy. Government interventions aim to reduce some of these costs to the economy, whilst not incurring new ones, in order to improve the UK's overall productivity and competitiveness.

The costs of resource inefficiency

For a number of years case studies at a company level, often generated by Government funded programmes, have shown how some businesses have been able to improve their resource efficiency dramatically. The Envirowise programme, the Carbon Trust, the Environment Agency and others have documented many case studies where simple advice has helped individual companies save millions of pounds through changes in management practice or cost-effective investment in technological improvements.

A recent study¹⁴ from the Environment Agency has used the data from case studies such as these to make an estimate of the total cost to manufacturing industry of wasted natural resources. Based on economic modelling from Cambridge Econometrics, they estimate between £2 billion and £3 billion is lost each year, equivalent to about 7% of total manufacturing profit.

The analysis carried out by the Strategy Unit in the energy field¹⁵ concluded that energy efficiency could be increased by 30% if all known cost-effective actions were taken by businesses and individuals. That translates into a saving of £12 billion for the economy as a whole.

These and many other studies make it clear that UK competitiveness could be substantially increased if simple resource efficiency measures were taken.

¹² Council Directive 99/31/EC of 26 April 1999

¹³ 1992 OSPAR Convention, OSPAR Commission for the Protection of the Marine Environment of the North East Atlantic

¹⁴ The Benefits of Greener Business, Cambridge Econometrics and AEA Technology, April 2003

¹⁵ The Energy Review, Strategy Unit Report, February 2002

Case studies of business resource efficiency gains

Envirowise

This Government funded best practice programme has to date helped business save £800m through waste minimisation and resource efficiency.

British Telecom

The energy awareness campaign at BT, targeted over 165,000 employees, helped the company implement a programme to cut total energy consumption by 15% within five years, saving over £16 million per year.

ICI Paints

Based on advice from Action Energy, ICI Paints implemented an energy management strategy that cut carbon dioxide emissions by 2,850 tonnes and reduced energy consumption by 16% – savings worth over £100,000 per year.

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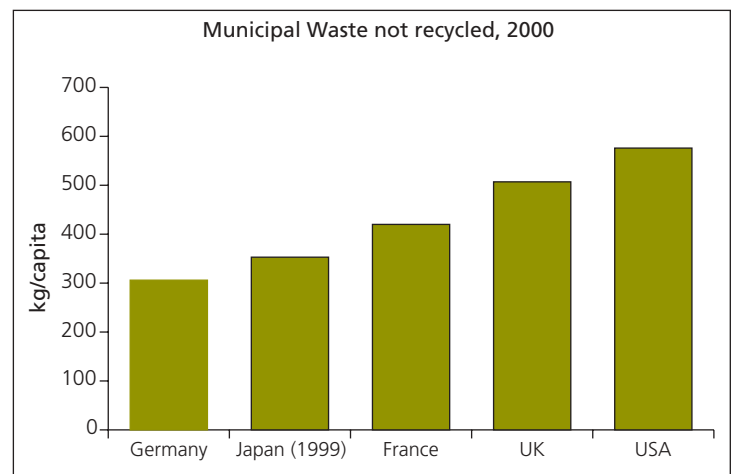
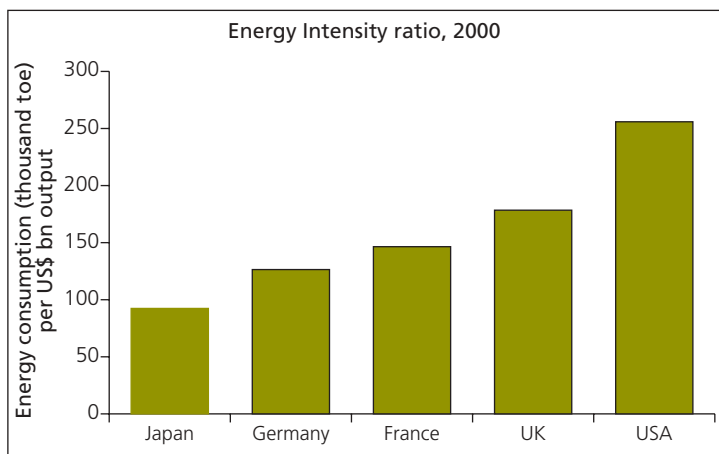
Having to apply for Pollution Prevention Control (PPC) permits from the Environment Agency is drawing some companies’ attention to techniques to improve resource efficiency. For example, yarn dyers Autofil Worldwide Ltd in Nottingham have achieved annual savings of around £90,000 through waste minimisation since applying for their PPC permit.

The resource productivity gap

It is more complex to make comparisons across economies and assess the impact of resource efficiency on international competitiveness, but there are some clear trends. In terms of energy required and waste produced, the UK is significantly less efficient than some of its key trading partners.

It should be noted that these comparisons are just snapshots and the OECD has recently praised the UK for making progress on improving our carbon intensity. Given the scale of the challenge, all countries, including the UK, need to do much more.

This is a developing field of knowledge and the Government will continue to refine its work on indicators and, in particular, fill some of the data gaps in the waste field in order to produce a basket



Source: International Energy Agency

of indicators to illustrate the relationship between economic growth, household consumption, environmental degradation and resource use. The current document is therefore accompanied by a consultation paper on the indicators of decoupling, which will feed into the review of Sustainable Development Indicators in 2005.

External costs of pollution – and the benefits of environmental quality

On top of the costs of inefficient use of natural resources, the UK also pays a high price for environmental degradation. The external costs of pollution are eventually paid by businesses, consumers or taxpayers. For example, Defra's recent review of diffuse pollution¹⁶ reported estimated external costs of water pollution from agriculture of £140–430 million per year. In 2001, a national assessment of assets at risk of flooding and coastal erosion¹⁷ suggested that damages due to climate change could increase by approximately £1 billion per year.

The other side of this equation is the increasing value which is placed on environmental quality in our society and economy. For example, the South West RDA estimates that 12% of the region's economy is dependent on a good quality environment. According to recent research published by the Scottish Environmental Protection Agency (SEPA), the value of Scotland's natural environment, in terms of the services it provides, is equivalent to almost 30% of the country's total annual output – almost as much as its exports of manufactured goods.

Market failures

The costs to the UK economy highlighted above are strong evidence of market failure and the justification for Government intervention. Chapter 2 analyses the sources of the market failures as the first step to identify the types of policy intervention that Government should take. Policy measures to address these market failures, without creating new

ones, will enhance overall UK competitiveness as well as the potential to open up new markets for our businesses.

Consumer behaviour

A further influence – though highly complicated, but needing to be much better understood in the SCP context – is that of consumer behaviour and attitudes towards the fulfilment of needs and aspirations. As consumers, how rational are we, how susceptible to market and other influences, and not least to sustainability implications? What some have called the 'pathology' of consumption – why we consume what we consume – is the subject of debate and research and has become a significant topic of national and international interest. But the explanations put forward are many and often conflicting. Yet understanding this matters. It requires a great deal more work, but it will help to inform the drive toward more sustainable consumption. Policy interventions will not be fully effective unless the drivers for consumer behaviour are better understood and taken into account.

1.4 Political context – international level

The UK and EU argued for, and therefore strongly welcomed, the SCP commitment at WSSD. It was agreed that all countries should take action, but that developed countries should take the lead. The WSSD agreement has turned an international spotlight onto an area in which the UK and other EU member states are already working.

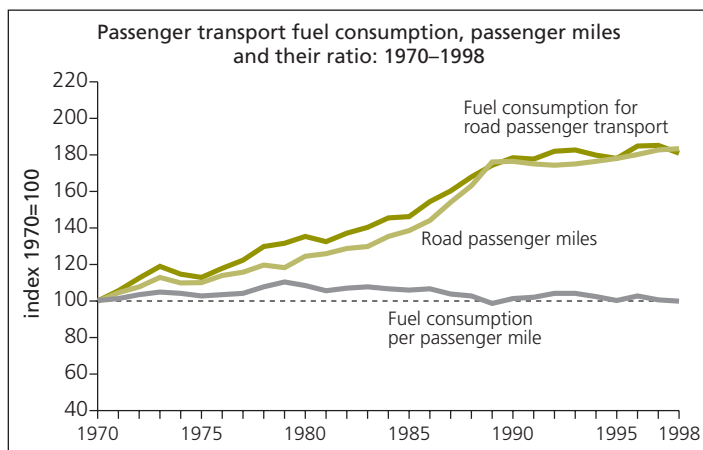
At the EU Spring Council in 2003, Heads of Government built on the overall WSSD commitments and agreed that the Commission should draw up an implementation plan with targets and timetables. It also recognised the role of new technologies as a means of helping deliver a sustainable and competitive economic model

¹⁶ Agriculture and Water: A Diffuse Pollution Review, Defra, June 2002

¹⁷ National Appraisal of Assets at Risk from Flooding and Coastal Erosion including the potential impact of climate change Final Report, Defra, July 2001

The 'rebound effect'

In some areas the volume of consumer purchases is outstripping any gains made through the improved efficiency of the products. Important challenges lie ahead where further effort is needed. For example, within the transport sector the car is responsible for roughly 80% of the CO₂ emissions and the number of cars per inhabitant is also increasing, using up more resources in manufacture, more space for parking and roads, and creating more waste disposal problems. All this is despite real improvements in the environmental performance of the average new car.



Source: DTI, DETR

The same phenomenon of progress in efficiency being offset by growth in usage can also be seen with:

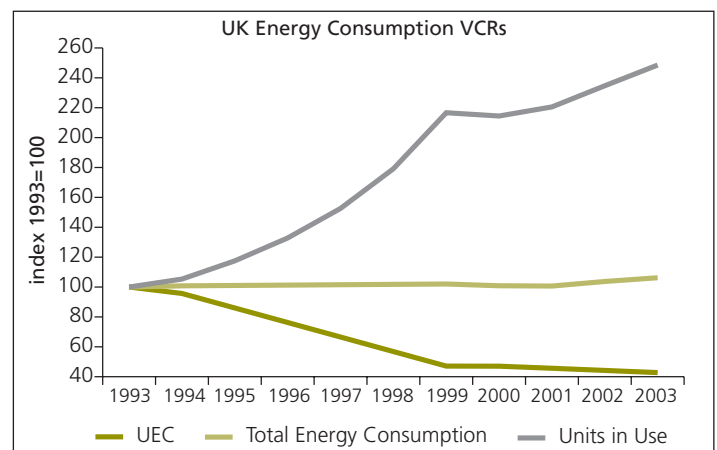
Washing machines: average unit energy consumption fell by 4.5% (from 295.5Kwh to 282.2Kwh) between 1999 and 2003, but total energy consumption rose by 18.5% (from 6.03Twh

to 7.15Twh). During this same time the number of washing machines rose from 20.4 million to 25.4 million.

Dishwashers: average unit energy consumption fell by 9.5% (from 398Kwh to 360Kwh) between 1999 and 2003 while total energy consumption rose by 6.8% (from 2.2Twh to 2.35TWh). During this same time period the number of dishwashers rose from 5.6 million to 6.5 million.

Cold Appliances (including fridges, freezers and fridge freezers): average unit energy consumption fell by 6.7% (from 462Kwh to 431Kwh) between 1999 and 2003 while total energy consumption only fell by 2.2% (from 17.5Twh to 17.1 Twh). During this same time period the number of cold appliances rose from 36 million to 37.7 million.

A further example of this phenomenon – of improvements in unit energy consumption (UEC) being offset by much higher consumption of units – is **video-cassette recorders**. The following graph illustrates the pattern over the last ten years.



Source: Market Transformation Programme.

for the EU (the 'Lisbon agenda'). The Council particularly emphasised the need to support and develop environmental technologies. Its conclusions also referred to the need to develop overall and sector-specific decoupling objectives, as well as improving key environment-related indicators.

The main EU processes relating to SCP are:

- implementation of the EU Sustainable Development Strategy;
- progress on the Lisbon objectives, with environmental technologies as an important means of delivering change;
- the European Commission's action plan on environmental technology;

- further development of Integrated Product Policy;
- proposals for a directive on the eco-design of end-use products;
- publication of the thematic strategy on the sustainable use of natural resources;
- publication of the thematic strategy on waste prevention and recycling.

The Government's strategy will take account of all these issues and itself feed back into the EU work, particularly in helping to build a strategic EU approach to SCP.

In the wider international context, the Government's strategy on SCP will also shape our contribution to the future work programme of the UN Commission on Sustainable Development, the OECD and UNEP (as the 'map' at Annex 3 helps to illustrate).

1.5 Political context – UK level

Relationship to the UK Sustainable Development Strategy

This strategic framework for SCP should be seen as a part of the whole Sustainable Development Strategy, which rests on the three pillars of economic, social and environmental objectives. The SCP framework reflects this approach but particularly addresses the issues raised in the 'sustainable economy' chapter of the Sustainable Development Strategy. As SCP is a central aspect of the WSSD Implementation Plan, the framework for sustainable consumption and production set out here will be an important theme in the review of the Sustainable Development Strategy in 2005.

Recent developments by the UK Government

Since the World Summit in September 2002, the Government has set out its thinking in a number of critical areas which are the key building blocks of a strategy for sustainable consumption and production. In particular, there have been new announcements on energy, water, vehicles, waste

and the use of economic instruments. The following is a chronological summary:

Vehicles. In July 2002, just before WSSD, the Government published its *Powering Future Vehicles Strategy*, which sets out how we are trying to move to a low carbon transport economy. It sets targets for sales of low carbon vehicles, to be met by 2012, and explains the steps the Government is taking, and will take, to encourage a shift to more efficient, less polluting vehicles.

Water. In November 2002, the Government published *Directing the Flow – priorities for future water policy*. In it we set out how water policy is founded in our commitment to sustainable development. In particular, there are three priorities for the future, where we believe more effort is needed than hitherto:

- prudent use of water resources and keeping water use within the limits of its replenishment;
- tackling agricultural and urban diffuse pollution of water;
- achieving better integration between water and other policies (eg, agriculture, biodiversity, tourism and land use planning) and between different aspects of water policy.

Economic instruments. Also in November 2002, HM Treasury published a paper, *Tax and the environment: using economic instruments*, explaining the Government's approach to using economic instruments in environmental policy. The Chancellor's foreword emphasised that environmental taxes can be an efficient mechanism for improving the productivity of natural resources.

Energy. In February 2003, the Government published its White Paper, *Our Energy Future – creating a low carbon economy*. In it the environmental challenges were placed at the heart of energy policy. In particular, the paper set out four goals for our energy policy, which can be achieved together:

- to put ourselves on a path to cut the UK's CO₂ emissions by some 60% by about 2050, with real progress by 2020;

- to maintain the reliability and diversity of energy supplies;
- to promote competitive markets in the UK and beyond, helping raise the rate of sustainable economic growth and improve our productivity;
- to ensure that every home is adequately and affordably heated.

Waste. In May 2003, the Government responded to the Strategy Unit report, *Waste Not, Want Not*¹⁸, with a series of policies designed to take forward the package of recommendations in that report. In particular, the Government recognised that long-term progress in sustainable waste policy will require refocused thinking, in which the issue becomes one about good management of resources – so that we increase national resource productivity and manage waste in a way that underpins our goals for sustainable development and a cleaner environment.

All these developments over the last year are foundations for the Government's strategy for SCP – they are real contributions to SCP now and markers for the future decision-making that will deliver SCP.

Links with Strategy Unit reports of 2001 and 2002

Decoupling economic growth from environmental degradation was the theme of a series of reports from the Strategy Unit in the Cabinet Office (formerly the Performance and Innovation Unit). *Resource Productivity: making more with less* (2001), *The Energy Review* (2002) and *Waste Not, Want Not* (2002) all addressed aspects of the sustainable consumption and production agenda.

The Government has taken on board many of the recommendations in these reports and, as described above, has already responded separately to the Energy Review and to *Waste Not, Want Not*. An Inter-Departmental Group has been following up the issues in the *Resource Productivity* report and the present strategy document embodies the Government's formal response to that report.

1.6 The role of stakeholders

Whilst it is the role of government to lead and set the framework, government is by no means the only actor in this enterprise. There has been a great deal of interest and activity amongst businesses, environmental groups, consumer organisations and research bodies. The Government believes strongly that only effective partnerships between all of the stakeholder groups can deliver SCP. We welcome initiatives from other partners and our strategy is designed to stimulate and support more such developments.

Business

Forward-looking business organisations have been contributing to the SCP agenda for many years. Initially led by the World Business Council on Sustainable Development, the number of initiatives in the field of resource efficiency has continued to rise, as companies increasingly recognise the financial benefits. Nevertheless our Advisory Committee on Business and Environment (ACBE) is currently working on a report on resource productivity which considers why, despite this growing interest in resource efficiency in business, it is still not a mainstream issue and certainly not regularly discussed at boardroom level.

For business, the message must be that there are real economic benefits from improving resource efficiency. Government programmes are there to help, advise and support such improvements, but companies taking action themselves will see financial returns, as well as a reduced risk of environmental liability in the future. There will also be rewards in the marketplace for companies who innovate to reduce their direct environmental impact and the downstream impact of the products and services they deliver.

Consumers

There is a long way to go, but there are encouraging developments which can be built on:

- A growing proportion of **individual consumers** are becoming aware that even the

¹⁸Waste Not Want Not: a strategy for tackling the waste problem in England, Strategy Unit, November 2002

smallest decisions made over lifestyle or individual purchases make a real difference to the quality of the world around us, from the immediate local environment to the global eco-system. The Government will continue to use information, regulation and fiscal incentives to raise awareness and help create some of the conditions for sustainable consumption.

- **Consumer organisations** are becoming more involved in the debate. The National Consumer Council has set up a Forum for Responsible Production and Consumption and has undertaken some relevant research. The broad messages from this work are that consumers are willing to take account of the sustainability implications of their purchasing and lifestyle, but need more support and infrastructure to do so. It is also clear that other factors such as convenience and household budgeting are always likely to be given a higher priority, particularly for less advantaged consumers.
- There are a growing number of small-scale **initiatives at community level**, which promote and implement sustainable lifestyles and choices – such as low-energy housing developments, car pools, organic box schemes and the networks set up by the Global Action Plan. Some of these receive direct Government support, others are developed as not-for-profit enterprises or charities. We are keen to encourage such initiatives and understand the lessons we can learn from them.

Environmental NGOs

Environmental Non-Governmental Organisations (NGOs) have for some years been raising awareness amongst businesses and consumers. World Wide Fund for Nature (WWF) have carried out some substantial work through their 'ecological footprinting' research. Similar exercises by Friends of the Earth and others have also contributed to the debate. Other organisations have focused on the policy implications for government. For example, a series of workshops held jointly with Green Alliance has helped DTI to develop its programme of work

on resource productivity. There are also initiatives to encourage NGO members to consume more sustainably, for example by switching to green energy contracts or purchasing organic food and sustainable timber products. More of these initiatives could help considerably in both stimulating the market and public debate.

Academia

There is growing academic literature on sustainable consumption, some of which is being supported by Government funded research programmes. The Sustainable Development Commission (SDC) has commissioned a review of this literature which will inform its future thinking on these issues and that of Government.

The SDC's review concludes that consumption patterns are influenced by a huge range of factors: economic, psychological, sociological and even anthropological. Government intervention can have varying effects on these factors, but there is strong evidence that Government has to be engaged in shaping consumption patterns when aspects of the public good – such as the environment or wider quality of life – are being affected by them.

Government advisory bodies and Non-Departmental Public Bodies

Several of the Government's advisory bodies have been working in this area:

- The Sustainable Development Commission (**SDC**) has contributed directly to this strategy document and will continue to develop its thinking on the SCP agenda, particularly in stimulating further debate over sustainable consumption.
- The Advisory Committee on Business and the Environment (**ACBE**) is currently drafting a report on resource productivity.
- The Advisory Committee on Consumer Products and the Environment (**ACCPE**) has contributed a great deal of thinking on the direction of product policy in the context of SCP (see box)

and has recently published recommendations for some next steps in UK strategy.

- The **Environment Agency** promotes waste minimisation through the PPC regulations, and water efficiency through its Centre for Water Demand Management. The Agency has a corporate target of securing the minimisation

of waste through a 10% increase in resource efficiency by Agency-regulated processes. It is also carrying out research into resource efficiency and helping to develop an economic model for resource productivity in partnership with a number of Regional Development Agencies.

Advisory Committee on Consumer Products and the Environment (ACCPE)

ACCPE was appointed in 1999. It has a general remit to “advise on the development of policies to reduce the environmental impacts associated with the production and consumption of goods and services, and the priority areas for research and future action”. The Committee’s membership is drawn from business, consumer and environmental NGO backgrounds.

From the outset the Committee has been examining the market instruments or tools available to increase the demand for and supply of products which are less harmful to the environment, and particular product sectors where there is scope for most improvement.

Its first report (*Choosing Green: towards more sustainable goods and services*) focused on the role of consumers and the product information tools they need to make greener choices. It made recommendations on green claims, the development of a family of labels based on the EU energy label and a comprehensive website to highlight product issues and steer green purchasing.

Its second report (*Action for Greener Products: a toolbox for change*) looked at the role of big purchasers, who it believes are powerful drivers for change in the supply chain. In particular, it made recommendations about how the Government can make faster progress towards ensuring that sustainable development objectives are taken into account in its procurement policies. It also looked at how retailers can use their purchasing power in the supply chain to select a stock of products carrying lower environmental impacts.

The Committee currently has four working groups looking at key product sectors – food, homes, transport and mobility, and electrical and electronic products. These groups are looking in more detail at the various measures or ‘tools’ for reducing environmental impacts in each of these sectors as examples for wider application.

1.7 Deepening the stakeholder dialogue on SCP

This document is, in part, a response to the growing stakeholder debate over SCP. It seeks to set out how current Government activity is addressing this area, but also to find ways in which the debate can be taken forward, building a consensus which involves consumers, communities and business.

The sustainable consumption part of this debate is still under-developed. The Government will be asking the Sustainable Development Commission to recommend specific ways of taking this debate forward. The Government and the SDC will work together to develop some firm proposals.

2.1 Introduction

The Government bases its policy intervention on sound science, economic analysis and the identification and quantification of market barriers to Sustainable Consumption and Production (SCP).

The recent Treasury publication, *Tax and the Environment: using economic instruments*¹⁹, outlined how the Government's economic analysts define the relevant market failures in this field. Many of the failures connected with SCP are complex and involve information failures in the understanding of future costs and benefits. This chapter draws heavily on the Treasury analysis and builds in other relevant material from across Government and from stakeholders.

The Government recognises the difficulties involved in identifying market failures clearly, but believes that intervention will be most cost effective if it is based on the best possible analytical framework. Our policy making also needs to take account of the dynamic nature of markets, and to exploit the ability of business to respond to market signals to innovate and develop new ways of supplying goods and services.

2.2 Getting the prices right

The most familiar market failures relating specifically to the environment are 'externalities'. Negative externalities are where economic agents impose costs on others but do not pay these costs, so do not take them into account when making consumption and production decisions. Examples include the health costs of air pollution or the noise and visual impacts of quarries. (There can be positive externalities as well, such as the knock-on regeneration benefits to areas which surround a plot of recently decontaminated land.)

The Government's approach to environmental externalities is set out in detail in *Tax and the Environment*. The main policy tools used by Government have been economic instruments,

particularly environmental tax measures, such as the Climate Change Levy or the Landfill Tax. We believe that the decoupling of economic growth from environmental degradation cannot be achieved without policies to address externalities. However, there are also many other types of market barrier. This means that 'getting the prices right' is a necessary but not sufficient condition for sustainable consumption and production.

2.3 Information failures

The next biggest set of market failures are those associated with imperfect information. This information may take many forms – knowledge of the technologies that are available, the level of savings that investment in resource efficiency would reap, or the certainty which can be apportioned to the current and future price of resources.

Information barriers are often more acute for SMEs and individual consumers. In terms of policy intervention, they can be addressed with simple provision of information, or packaged together with other incentives. For example, consumer products can be labelled for their energy or water efficiency, but the Government can back these labels up by running public awareness campaigns, providing fiscal incentives or setting minimum standard regulation. This more integrated 'product policy' approach (IPP) is the way the Government will pursue such issues.

For investors, an important information barrier is the degree of certainty in the policy framework in which the market is operating. Indeed, banks and equity funds have particularly reported that policy certainty is a key determinant in whether they invest in the environmental sector. If Government is able to create an understanding of greater certainty over the way the regulation of a market is likely to develop, this helps investors manage their risk.

For example, decisions over plant and machinery will take into account estimated running costs. If the expectation, based in part on Government

¹⁹ Tax and the Environment: using economic instruments, HM Treasury, November 2002

policy, is that resources and waste disposal are likely to become more expensive over the lifetime of the plant, then investment in more resource efficient design and technology is more likely. Similarly, if it is known that regulations are likely to come along in a few years demanding higher environmental standards, then the market for the technologies to meet those standards will become more attractive for the suppliers.

Providing 'certainty' is easier said than done, but ensuring policy consistency and communicating early with business about future regulations are two ways of building it.

2.4 Lack of competition

The Government's Productivity Strategy highlights the absence of perfect competition in markets as a barrier to improved productivity. If the markets in question involve competition between supply side options and demand side options, then it is important that there is full and fair competition across markets for goods and services, regardless of how they are offered. Correcting market failures that affect some players could create new barriers to entry for others.

The Energy White Paper set out the ambition to stimulate the energy services market, where companies which provide demand side solutions to deliver warm rooms or hot water, such as insulation services, can compete on level terms with companies selling more energy to provide the same service. A working party with the Office of Gas & Electricity Markets (Ofgem), energy suppliers and others will be set up to explore issues such as the barriers caused by the current 28-day notice period for energy suppliers.

Another example worth considering is whether the long-term contracts and economies of scale offered by companies providing waste disposal options to local authorities may undermine competition from companies providing recycling facilities that depend on local collection of separated waste.

2.5 Contractual problems

The Performance & Innovation Unit (PIU) (now the Cabinet Office Strategy Unit) highlighted a set of contractual issues that could act as barriers to resource efficiency. The most frequently cited example is in the field of energy efficiency investment, when the business or individual who pays the energy bill is a tenant and the investment in efficiency measures would have to be paid for by the landlord. Here, even if they have the information, neither party has any incentive to make the economically rational choice of investing to save on energy bills.

2.6 Skills gap

The PIU report also highlighted a shortage of appropriate skills in the economy to fully implement the best available resource efficient technologies. The Energy White Paper acknowledged this gap and work by the Sector Skills Councils is beginning to assess and address this.

Skills of sustainable development are important. As well as helping the UK make progress towards a sustainable economy, they are also relevant to the performance and productivity achievements of 'lean' and low-waste organisations. The Department for Education and Skills' (DfES) key partner in addressing sector skills issues throughout the economy, including skills for sustainable development, and thereby improving the UK's competitiveness, is the Sector Skills Development Agency (SSDA) and its Skills for Business (SfB) network of Sector Skills Councils (SSCs) and other expert and cross-sector bodies.

The SSDA role is to ensure that the SSC network and emerging SSCs must agree their contribution to the sustainable development agenda in their partnership agreements with key stakeholders. In order to inform its policy and actions for the future and influence the development of cross-sector and generic skills agendas, the SSDA is taking action to determine the skills implications of sustainable development. The first step in this process is a study

(to be completed later this year) to determine how SfB might take forward the requirement to work with groups considering the skills implications of sustainable development and determine ways to incorporate this in the work of SSCs.

Parliament's Environmental Audit Committee is now completing an inquiry into skills issues, *Learning the Sustainability Lesson*. We will look to their report to see what further steps can be taken to develop workforce skills for sustainable consumption and production.

2.7 Government intervention

Sometimes actions by Government to address one problem have unintended or unavoidable indirect environmental impacts, creating another. For example, production subsidies, such as those in the food chain, are often associated with negative environmental consequences. In addition, although Government regulation has a clear and vital role to play in ensuring that markets operate efficiently, excessive or unnecessary regulation can obstruct efficient functioning of the market. It is therefore important that the SCP approach is integrated across all relevant areas of policy making.

Policy consistency

One of the clear recommendations from businesses sitting on the DTI's Innovation and Growth project is that consistency of Government policy is particularly important to the resource management sector. The Energy White Paper acknowledged that the energy policy of the past will not meet tomorrow's challenges. It set out four goals of energy policy: environment, energy reliability, affordable energy for the poorest, and competitive markets for our businesses, industries and households. It seeks to define a long-term strategic vision for energy policy, making clear the direction to be pursued, whilst indicating the shorter-term policies to put us on the right path.

Market intervention on the supply and demand sides

In any market which uses a natural resource to deliver a consumer service, and where demand for the service is increasing, there are two categories of market response. The first (supply-side) option is to increase the supply of natural resource to meet the demand for the service. The second (demand-side) option is to find ways of reducing the amount of natural resource required to deliver the service, thus allowing more of the service to be delivered for less resource use.

An example might be the provision of heat services to a home. More heat could be delivered by increasing the supply of energy to the current boiler, or more heat could be retained by insulating the home or increasing the efficiency of the boiler, so that less energy is required to make the home warm.

Another example is in the provision of additional homes. More new build housing can be provided to deliver the required homes, or disused buildings and empty properties can be brought back into use.

In order to improve the productivity of the economy, the Government will sometimes intervene to improve the efficiency of markets. It is important that such interventions to improve efficiency on the supply side are balanced by ones which address the demand side. Doing one without the other could distort competition between the two.

2.8 Access to capital

A barrier that is frequently highlighted by businesses, both in the Innovation and Growth Teams and the Advisory Committee for Business and the Environment (ACBE), is access to capital. The barrier affects SMEs and individuals in particular, but can also affect larger companies. Policy interventions that could be used to address these types of barriers may include forms of investment capital for new ventures, or grants and loans for the smaller investments in existing technologies. Even some

forms of regulation such as the Energy Efficiency Commitment²⁰ can help bridge the capital gap.

2.9 Structural change and the central role of innovation

Major environmental improvements – for example, to reduce CO₂ emissions from energy use, the volume of waste and the demand for unsustainable modes of transport – require some structural kind of change in the economy. ACBE has recently argued that, as well as incremental improvements in resource efficiency, radical step changes – involving new technologies or new approaches to delivering services – will be required.

To deliver this step change in resource use, the market has to generate innovative uses of technology, new ways of doing business and changing consumer behaviour. It is therefore important that innovation is understood in its broadest sense. Technological innovation is vital, but is not the only route to structural change. Innovation could also involve businesses offering services to customers, rather than selling more products. Or there could be innovation in the way consumers use goods and services to deliver their needs. Such innovation depends on willingness to change by business and consumers, but Government has a key role in creating the framework to stimulate and encourage such change.

Barriers to environmental innovation

A number of market failures may hold back innovation, including environmental externalities not being reflected in prices, information failures and uncertainties about future costs. New technologies can also deliver positive spill-over effects from a wider application which are not reflected in the financial return to innovators.

DTI is currently reviewing the Government's policies on innovation. Environment and resource efficiency issues are being integrated into the review as part

of the overall package of issues relevant to the innovation agenda. This recognises that innovation goes beyond technology improvements – encompassing everything from design to delivery of products; new ways of thinking and providing services; organisational structures and fiscal measures. Innovation in all these areas and more has the potential to help drive forward changes in support of the SCP agenda.

The Innovation Review is focusing on:

- a more strategic approach to technology collaboration and support;
- a regulatory and business environment more conducive to innovation;
- management and skills, including design;
- the role of public procurement, and knowledge transfer from Government R&D programmes;
- regional innovation as part of economic development;
- international opportunities.

2.10 Taking the 'policy package' approach

The variety of market barriers that exist in this field show how policy intervention is fraught with difficulty, made harder by the complex nature of the market and the often close relationship between, and motivations of, producers and consumers.

The Government's approach is to go with the grain of the market and intervene using the most appropriate and cost-effective policy tools available. Because many different actors have a role to play in this market, the most likely form of intervention will be a policy package, rather than any one instrument. The final two chapters show how policy packages are already being used, then look at how they should develop in the future.

²⁰Energy Efficiency Commitment 2002-2005, DETR, November 2000

3.1 Introduction

The Government's Sustainable Development Strategy, *A Better Quality of Life*, featured many of the issues of SCP even though the term itself was not so current back in 1999. Our policies have in fact been shaping this direction for several years.

Sustainable Consumption and Production (SCP) has relevance for a huge range of policies. The diagram below illustrates the basic framework for SCP-related policies, many of which tend to be targeted primarily at either individual producers or consumers. However, this distinction between producers and consumers needs handling with some care, and it can sometimes be an artificial or misleading one.

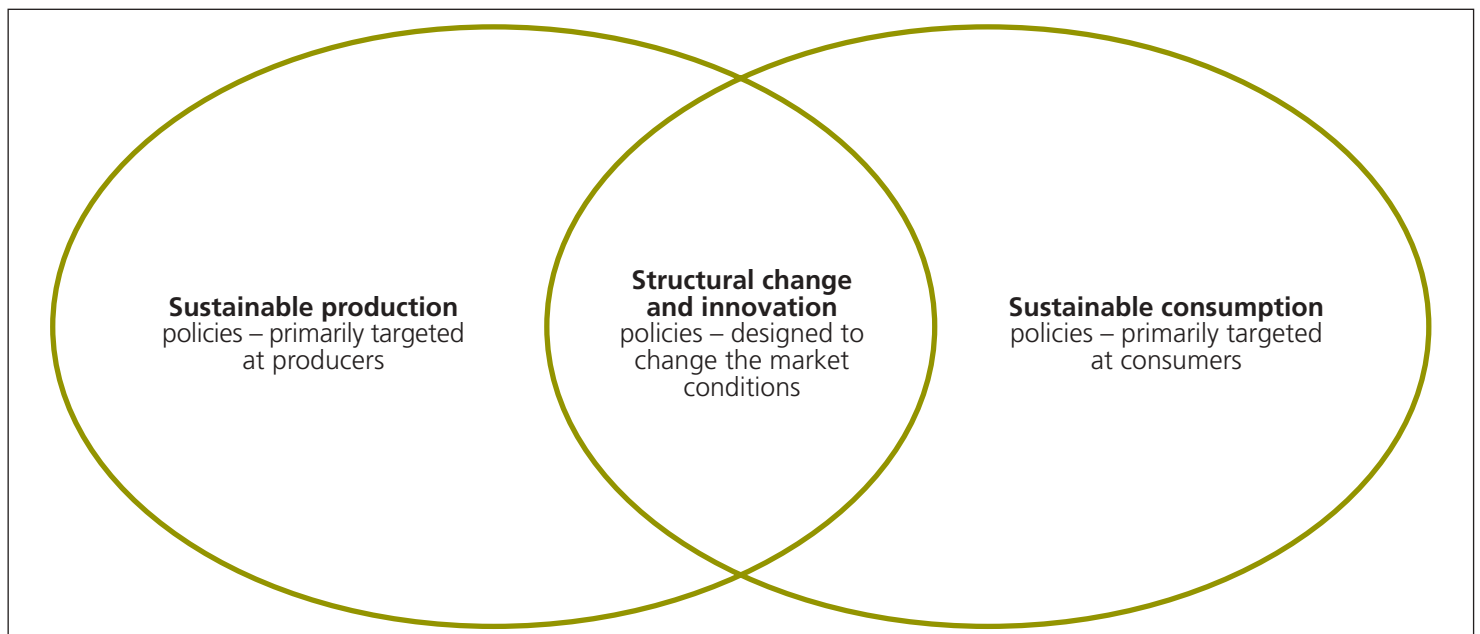
- There are many 'producers' (in the sense of economic actors whose activities are about adding value for onward sale) who are consumers of raw materials or intermediate products as part of their onward supply; or who are also consumers of certain goods for end-use. And there are many organisations (for example in the Government or not-for-profit sector) which are generally not thought of as 'consumers' but are effectively the end-users of most of the goods and services they buy.

- There are many economic linkages between these groups and the effects of a 'production' policy will probably have an effect on consumers, and vice versa. There are also some policy instruments which are genuinely aimed at both producers and consumers. Indeed to some degree they will be trying to effect some structural change in the market in which they are operating.

Increasingly the Government's aim is to identify actions which can take effect at the earliest point in the system that will address the link between economic activity and environmental degradation. Wherever feasible, the approach is to move from rectifying the effects of environmental degradation and wasteful resource use, towards helping producers and consumers prevent pollution and minimise their use of natural resources.

3.2 'Sustainable production' policies

Policies targeted at producers can have a more direct and tangible effect on the market than those directed at consumers. Consequently more effort to date has been devoted to stimulating sustainable production than consumption. This has been the



experience not only of the UK but most other countries as well.

Fiscal measures such as the Climate Change Levy, the landfill tax, and the aggregates levy have been introduced to reflect **external costs** of pollution in production. Similarly there are incentives such as enhanced capital allowances for investing in equipment to improve energy efficiency, water use and quality. The Government is committed to the further application of such measures, where the circumstances are right.

The need for **awareness and information** is also being addressed through various advice programmes such as:

- Envirowise, which since 1994 has spent £38 million and saved UK business £800 million;
- The Carbon Trust and its Action Energy programme (along with its predecessor, the Energy Efficiency Best Practice Programme) have saved UK business £800 million in energy bills since 1989;
- The Market Transformation Programme provides a valuable knowledge base which is helping to reduce the energy intensity of key product areas;
- The Environment Agency provides advice to business on water efficiency through its Centre for Water Demand Management;
- The Department for Transport's Transport Energy Best Practice Programme identifies and disseminates best practice through guides, case studies, videos, benchmarking reports, displays and conferences;
- The Road Haulage Modernisation Fund funds the large-scale roll-out of a number of training and dissemination projects to the trucking industry;
- Other business support programmes, eg, Biowise, the Small Business Service, the Business Excellence Model, Fit for the Future, the Construction Best Practice Programme.

Specific incentives are being offered through:

- Enhanced Capital Allowances for energy and water efficient equipment and for new alternative refuelling infrastructure;
- Action Energy loans for companies to invest in energy efficiency equipment;
- Grants for fuel efficient and clean vehicles;
- Investment in leakage reduction in the water industry, stimulated through the use of regulation and price controls;
- Climate Change Levy Agreements, which stimulate greater efforts towards energy efficiency in some sectors;
- Tax credits for R&D to stimulate new investment in resource efficiency.

A number of funding programmes have been set up to stimulate **technological innovation**, including:

- The Sustainable Technologies Initiative;
- The Low Carbon Innovation Programme run by the Carbon Trust;
- The Foresight Vehicle programme and the New Vehicle Technology Fund;
- R&D on waste technologies funded through WRAP;
- Increases in R&D for renewable energy technologies;
- Support for environmental industries from RDAs.

3.3 'Sustainable consumption' policies

There are many mechanisms which aim one way or another to influence purchasing behaviour or consumer lifestyle.

A number of **information failures** are being addressed through policy instruments such as:

- the promotion of labelling – eg, energy labels on electrical products, similar labels proposed for cars, and plans for environmental information on homes. (Defra has recently published 'A Shopper's Guide to Green Labels'²¹ which summarises the many different green labels currently on the market);
- differential tax rates on Vehicle Excise Duty, Road Fuel Duty and certain energy efficiency products, which help to convey information about their environmental performance, along with measures on company car taxation which give strong information signals to the market;
- advice on energy and water efficiency through the Local Energy Efficiency Advice Centres, coordinated by the Energy Saving Trust, and the Environment Agency's Centre for Water Demand Management;
- minimum energy efficiency standards, water and building regulations, to protect the consumer from being offered products which waste energy and water.

The Government is also using the price signal to reflect **external costs** on some products used by the consumer, primarily transport fuel. Local authorities are being given powers to introduce council tax discounts to encourage recycling.

There is help available to consumers to adopt more sustainable **lifestyle practices**, for example:

- schemes from Government and the Devolved Administrations (Warm Front, Warm Deal, New Home Energy Efficiency Scheme) to fund home insulation;
- the Energy Efficiency Commitment on energy utilities;
- spending by WRAP (£40 million over the next three years) to support waste minimisation in households, including a fund set aside for innovation to stimulate behaviour change;

- support for voluntary sector initiatives, such as those of Global Action Plan and Environmental Campaigns (EnCams), through Government grants.

The Government is also consulting on the use of economic instruments to provide further incentives to support householder choice towards more sustainable consumption.

3.4 'Structural change and innovation' policies

Changes in behaviour from producers and consumers are clearly important, but some structural change in the market itself is also required to encourage more sustainable patterns of consumption and production. This means stimulating innovation in technologies, markets and behaviour, so that the choices on offer from the market make it easier to take the more sustainable option. It should also mean taking a holistic approach that considers the life cycle of products, using **integrated product policy**, identifying key players, such as bulk purchasers or retailers, who may have the greatest influence over a market.

In the fields of energy and transport, the Government is looking at what **system and infrastructure innovations** may be required to move to a more sustainable future, where renewable energy and the use of alternative transport fuels such as hydrogen and bio-fuels become far more widespread.

The Government's new approach to **sustainable procurement** will ensure in time that the Government uses its huge buying power to steer the marketplace and provide greater incentive for innovative and sustainable products.

Producer responsibility initiatives are helping to stimulate new approaches to waste management and resource efficiency in individual sectors. WRAP is undertaking a series of programmes designed to stimulate the market for recycled material.

²¹ A Shopper's Guide to Green Labels, Defra, April 2003

By setting **long-term environmental targets**, such as the 2050 aim of cutting CO₂ emissions by 60%, the Government is sending a signal to the market about the future prospects for certain investments, although the target is economy-wide, not specific to every sector. Other outcome-based policies will be helping to set a long-term framework for resource use. These include:

- the EU Emission Trading Scheme in greenhouse gases;
- the Water Framework Directive;
- the tradable allowances in biodegradable waste to landfill, being legislated for in the Waste and Emission Trading Bill;
- work being undertaken by the Strategy Unit on the future of fish stocks.

3.5 An SCP framework on which to build

The Government will continue to pursue and build on this framework of policies, both at a national level, but also through feeding in our experience and approach into the EU and international discussion on SCP.

As this summary and the following chapter on next steps make clear, it is vital that the SCP approach is integrated across all relevant areas of policy. No one part of Government can take this agenda forward on its own. Moreover, the delivery of SCP will engage Government agencies, regional institutions and local government, as well as relationships to the EU and international processes already highlighted.

4.1 Introduction

Actually delivering Sustainable Consumption and Production (SCP) will be a difficult ongoing process – it is not the work of some single policy pronouncement. This document explains the **framework** by which Government will be taking forward the SCP commitment.

A number of Government priorities in this area are already set out in the long-term and far-reaching targets we have set in *Our Energy Future – creating a low carbon economy*, *Directing the Flow – priorities for future water policy*, and the commitments made at an EU level in the Water Framework Directive and Landfill Directive.

This chapter highlights areas of work where the Government will be pursuing the SCP agenda **over the next year or so**.

4.2 A 'basket of indicators' for Sustainable Consumption and Production

This framework document is accompanied by a consultation paper about proposed SCP indicators. It shows how the environmental and economic statistics already collected by Government go a long way to describing the extent to which the UK is decoupling economic growth or household consumption from environmental degradation and resource use. The paper does this by using a basket of indicators, rather than attempting an aggregate indicator.

The proposed basket of decoupling indicators

The consultation paper sets out nine decoupling indicators, where the environmental impacts are directly compared to either GDP and/or household consumption.

Economy-wide decoupling indicators

1. Greenhouse gas emissions
2. Air pollution
3. Water pollution (river water quality)
4. Commercial and industrial waste arisings, and household waste not recycled

Resource use indicators

5. Material use
6. Water abstraction
7. Homes built on land not previously developed, and number of households

Decoupling indicators for specific sectors

8. Emissions from electricity generation
9. Motor vehicle kilometres and related emissions
10. Agricultural output, fertiliser use, methane emissions and farmland bird populations
11. Manufacturing output, energy consumption and related emissions
12. Household consumption, expenditure energy, water consumption and waste generated

The next stage of this work will be to identify the indicators that require more work to maintain or new sources of data to be gathered. The consultation will be carried out as part of the wider review of sustainable development indicators to be completed by 2005. A number of the indicators chosen already have associated targets, so helping policy makers to assess the degree of decoupling needed between economic growth and those particular aspects of environmental degradation.

The basket of indicators will also help Government consider the case for other possible targets.

The indicators show where the Government's priorities for future action on SCP are expected to lie. Policies to decouple NO_x, SO₂ and water pollution from economic growth appear to be working well. More progress is required to decouple waste and transport-related greenhouse gas emissions from economic growth, where this is technically feasible and economically reasonable. Whilst some progress has been made on CO₂ emissions from energy, a greater rate of decoupling is needed to meet the environmental target.

4.3 Sustainable procurement

The scope for using Government purchasing actively to help deliver sustainable development objectives, and particularly environmental objectives, is greatly under-utilised at present. A number of specific green procurement commitments have been made by the Government in recent years – on paper, timber, renewable electricity and alternatively fuelled vehicles – but a much more ambitious and coordinated approach is needed.

A cross-Government Sustainable Procurement Group has recently recommended some positive changes to support sustainable procurement²². These include:

- an explicit policy commitment to pursue sustainable procurement;
- new central guidance to Government departments making clear, among other things, the approach to value for money within sustainable procurement;
- an initial set of minimum environmental standards ('quick-win' specifications) for selected product types;
- use of environmental risk assessment for Departments' larger procurement projects;

- development of an on-line information service to enable greener purchasing and contract specification by practitioners.

The Government is committed to implementing these changes. We will also be looking for further ways to ensure that purchasing decisions properly reflect and support sustainable development objectives. This further work will investigate the scope for innovation and social considerations to be integrated into the procurement process, and will also feature a determined sectoral push on food procurement.

4.4 Joint Defra/DTI review of resource efficiency programmes

The Government has a diverse range of programmes aimed at delivering resource efficiency in businesses and the home. It will undertake a review of these programmes to assess the effectiveness of this spending; the potential for closer coordination of related SCP activity in support of business, consumer protection or environmental regulation; learn from successes; and identify barriers to overcome.

The review, led jointly by Defra and DTI, will be carried out by the end of 2003 to help inform decisions on future Government spending.

4.5 Sustainable consumption debate

The debate surrounding sustainable consumption, whilst vibrant amongst certain stakeholder groups, academia, environmental NGOs and some consumer and business groups, is not widespread amongst the public. The Government wants to stimulate this debate, as policy change in this area can only be taken forward with the understanding and acceptance of the wider community.

²² Sustainable Development in Government: First Annual Report 2002

The Sustainable Development Commission (SDC) and other stakeholders have suggested that the Government initiates a wider public debate over these issues and we will indeed be exploring options for doing so in partnership with the SDC.

4.6 Integrated Product Policy

The Government is currently taking stock of the policies and tools which relate to sustainable consumption and particularly the sustainability of products. A major part of this exercise will be a report from the Advisory Committee on Consumer Products and the Environment (ACCPE) in Autumn 2003, which will set out recommendations for where product policy should go next. It will:

- emphasise the growing importance of product policies in the SCP debate;
- offer institutional options for coordination of product policy and information;
- discuss the appropriate mix of policy tools available;
- put forward ways of building on existing initiatives.

The Government will respond quickly to this, alongside ACCPE's recently published statement setting out its contribution to the SCP debate. We will aim to draw up a package of new 'product policy', covering information, the role of fiscal incentives, regulation and voluntary agreements. This will form the UK contribution to initiatives on Integrated Product Policy being proposed at EU level.

The Sustainable Procurement Group has already recommended that an information service and website on environmental standards for products be set up in order to guide the Government's own purchasing decisions. We will also investigate how this information source could be developed to support Government thinking on minimum standards for products, the case for fiscal incentives, and wider communication to the public.

4.7 Stimulating investment in environmental innovation

The role of innovation and the need for step-change in technologies, consumer behaviour and even the way that the market delivers services to the consumer, is a very important element of SCP. The Government is currently undertaking a wide review of innovation policy and its implementation. The resource productivity and environmental aspects of innovation are an important part of this review.

The Advisory Committee on Business and the Environment (ACBE) has also recently been studying this issue and will be reporting in the Autumn. It is developing ideas for how business action supported by Government can make progress towards step-changes in resource productivity, whether in improving the resource efficiency of the production process or the full life-cycle of a product.

4.8 Role of economic instruments

The Treasury publication, *Tax and the Environment: using economic instruments*²³, has set out the Government's approach. It confirmed that we would be considering further development of economic instruments in the field of climate change, waste, transport, agriculture and others.

A number of SCP-related areas are now being considered for the further use of economic instruments:

- The Government has announced increases in the landfill tax from 2005–06, and is considering how the use of economic instruments to tackle **waste** could be extended further.
- We have been holding discussions with stakeholders on the most effective economic instruments for ensuring that the aviation industry is encouraged to take account of, and where appropriate reduce, its contribution to global warming and to local air and noise

²³Tax and the Environment: using economic instruments, HM Treasury, November 2002

pollution. The outcome of these discussions will help inform decisions for the forthcoming White Paper on air transport.

- The Government will also discuss with stakeholders the issues raised by the taxation of **hydrogen** fuel production for road transport with a view to taking decisions on the fiscal framework for hydrogen in the future.
- We are considering the relationships between **tax and tradable permit schemes**, as the UK prepare for the introduction of the EU Emissions Trading Scheme.
- We are currently consulting on specific economic instruments to encourage **household energy efficiency**.

4.9 Planning policy and infrastructure

Many individual and business decisions on SCP are inevitably influenced by the infrastructure that surrounds them. This shapes the choice available and the technologies that have the advantage in the marketplace. Government can take the long-term view and ensure that an SCP approach is taken when addressing policies whose effects will last for generations.

- The Government agrees that maintaining environmental capacity is a key element of sustainable development, and that this should be reflected in the statement of priority objectives. Where relevant, the review of the Planning Policy Guidance notes will take into account the SCP framework.
- Future reviews of the Building Regulations, and other policies which affect new buildings, will take into account the needs of future generations and the long-term implications for energy use, water consumption and waste management.
- DTI and Ofgem are looking into the implications of a more decentralised energy infrastructure,

which will be required as a higher proportion of energy comes from renewable sources.

- The links between transport and land-use policies are very important. This year's Budget announced a wide-ranging review of these links: the Department for Transport will be taking this forward with the Office of the Deputy Prime Minister as part of the review of the Transport 10 Year Plan.

4.10 Pilot initiatives

Defra and DTI will aim to establish **collaborative projects** involving particular sectors or products as pilots to explore practical application of the approach described in this document. This will build on work which the two Departments have undertaken on 'sector sustainability strategies' with industry partners in some sectors, but carry it through into some specific areas of consumption and production. This will echo the ideas in the European Commission's Communication on Integrated Product Policy for pilot work in some selected product areas.

Initial ideas for work in the UK include food and drink, construction and glass. As part of this work, the Government will build on the approach used in the Market Transformation Programme to assess future scenarios for delivering SCP in individual sectors and areas of concern. Any such scenario work could usefully feed into the review of the Sustainable Development Strategy in 2005.

4.11 Delivering SCP through partnership

This document sets out what Government is doing to help deliver sustainable consumption and production. It shows how we define SCP, it offers options for how we will measure progress, and it sets out the next steps. But the majority of these actions will only be a success if they stimulate

debate and changes in behaviour amongst businesses and consumers themselves.

- For **business**, the message is that there are real economic benefits of improving resource efficiency. Government programmes are there to help, advise and support such improvements, but companies taking action themselves will see financial returns, as well as a reduced risk of environmental liability in the future. There will also be rewards in the marketplace for companies who innovate to reduce their direct environmental impact and the downstream impact of the products and services they deliver.
- For **consumers**, the message is that even the smallest decisions made over lifestyle or individual purchases do make a difference to the quality of the world around us, from the immediate local environment to the global eco-system. The Government will continue to use information, regulation and fiscal incentives to raise awareness of and create the conditions for sustainable consumption. We will consider whether our existing grant regimes and information channels could be better targeted to support this work.

In Annex 2 we indicate some areas where the Government wants to stimulate action by producers and consumers.

Finally, it must be emphasised that the UK is but one player in this major **international** issue. The 'illustrative map' at Annex 3 gives some indication of how the layers of action, for a '10-year framework of programmes', might fit together. As we have done in the last few years, the UK will continue to work hard for sustainable consumption and production approaches to be taken forward in international fora and in the European Union. The current document will support the process by setting out clearly what the UK itself is doing in practical terms to deliver SCP and how we can work with others to build this into an effective long-term approach.

Full text on Sustainable Consumption and Production from WSSD Plan of Implementation, September 2002

- 14.** Fundamental changes in the way societies produce and consume are indispensable for achieving global sustainable development. All countries should promote sustainable consumption and production patterns, with the developed countries taking the lead and with all countries benefiting from the process, taking into account the Rio principles, including, inter alia, the principle of common but differentiated responsibilities as set out in principle 7 of the Rio Declaration on Environment and Development. Governments, relevant international organizations, the private sector and all major groups should play an active role in changing unsustainable consumption and production patterns. This would include the actions at all levels set out below.
- 15.** Encourage and promote the development of a 10-year framework of programmes in support of regional and national initiatives to accelerate the shift towards sustainable consumption and production to promote social and economic development within the carrying capacity of ecosystems by addressing and, where appropriate, delinking economic growth and environmental degradation through improving efficiency and sustainability in the use of resources and production processes and reducing resource degradation, pollution and waste. All countries should take action, with developed countries taking the lead, taking into account the development needs and capabilities of developing countries, through mobilization, from all sources, of financial and technical assistance and capacity-building for developing countries. This would require actions at all levels to:

 - (a) Identify specific activities, tools, policies, measures and monitoring and assessment mechanisms, including, where appropriate, life-cycle analysis and national indicators for measuring progress, bearing in mind that standards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries;
 - (b) Adopt and implement policies and measures aimed at promoting sustainable patterns of production and consumption, applying, inter alia, the polluter-pays principle described in principle 16 of the Rio Declaration on Environment and Development;
 - (c) Develop production and consumption policies to improve the products and services provided, while reducing environmental and health impacts, using, where appropriate, science-based approaches, such as life-cycle analysis;
 - (d) Develop awareness-raising programmes on the importance of sustainable production and consumption patterns, particularly among youth and the relevant segments in all countries, especially in developed countries, through, inter alia, education, public and consumer information, advertising and other media, taking into account local, national and regional cultural values;
 - (e) Develop and adopt, where appropriate, on a voluntary basis, effective, transparent, verifiable, non-misleading and non-discriminatory consumer information tools to provide information relating to sustainable consumption and production, including human health and safety aspects. These tools should not be used as disguised trade barriers;

(f) Increase eco-efficiency, with financial support from all sources, where mutually agreed, for capacity-building, technology transfer and exchange of technology with developing countries and countries with economies in transition, in cooperation with relevant international organizations.

16. Increase investment in cleaner production and eco-efficiency in all countries through, inter alia, incentives and support schemes and policies directed at establishing appropriate regulatory, financial and legal frameworks. This would include actions at all levels to:

- (a) Establish and support cleaner production programmes and centres and more efficient production methods by providing, inter alia, incentives and capacity-building to assist enterprises, especially small and medium-sized enterprises, particularly in developing countries, in improving productivity and sustainable development;
- (b) Provide incentives for investment in cleaner production and eco-efficiency in all countries, such as state-financed loans, venture capital, technical assistance and training programmes for small and medium-sized companies while avoiding trade-distorting measures inconsistent with the rules of the World Trade Organization;
- (c) Collect and disseminate information on cost-effective examples in cleaner production, eco-efficiency and environmental management and promote the exchange of best practices and know-how on environmentally sound technologies between public and private institutions;
- (d) Provide training programmes to small and medium-sized enterprises on the use of information and communication technologies.

17. Integrate the issue of production and consumption patterns into sustainable development policies, programmes and strategies, including, where applicable, into poverty reduction strategies.

Action areas for Producers

- **Management and measurement tools** – adopting environmental management systems appropriate for the business.
- **Performance assessment tools** – making use of benchmarking to identify scope for impact reduction and greater eco-efficiency in all aspects of the business.
- **Best practice tools** – making use of free help and advice from Government best practice programmes (energy efficiency, environmental technology, resource savings) and sectoral advice (such as construction, freight distribution, waste management).
- **Innovation and eco-design** – rethinking the delivery of 'value added' by the business, so that impact reduction and resource efficiency are firmly built in at the design stage.
- **Cleaner, leaner production processes** – pursuing improvements and savings in waste minimisation, energy and water consumption, transport and distribution, as well as reduced emissions.
- **Supply chain management** – specifying more demanding standards of sustainability from 'upstream' suppliers, while supporting smaller firms to meet those higher standards.
- **Product stewardship** – taking the broadest view of 'producer responsibility' and working to reduce all the 'downstream' effects of products after they have been sold on to customers.
- **Openness and transparency** – publicly reporting on environmental performance against meaningful targets; actively using clear labels and declarations so that customers are fully informed; building stakeholder confidence by communicating sustainability aims to the workforce, the shareholders and the local community.

Action areas for Consumers (*ie*, businesses, organisations and household consumers acting as end-users of goods and services)

These action areas are not by any means in the hands of consumers alone. They depend on action by Government, setting the necessary frameworks and infrastructure support; and action by producers further up the supply chain, working to deliver the goods, services and choices that facilitate sustainable action by consumers. But these are the areas of consumption which the Government sees as priorities for this process.

- **Purchasing choice** – selecting the option that offers good environmental performance for its type, be it energy efficiency, recycled content, low emissions, least waste.
- **Waste reduction** – cutting down on the waste produced; favouring repair and reuse; recycling as much as possible of what is left.
- **Greener homes and workplaces** – taking the steps needed to save energy and water, both in the fabric of the building and the products that are used within it.
- **Greener travel** – breaking our reliance on the most polluting forms of transport; rethinking our travel needs and meeting them more flexibly and sustainably.

Annex 3 Illustrative map of actions at UK Government, EU and international Level

	Short term (next 1–2 years)	Medium term (within next 5 years)	Long term (within 10 years)
National level	<ul style="list-style-type: none"> ● Develop suitable metrics (indicators/goals) which address the decoupling of economic growth from resource depletion and environmental degradation. ● Run public awareness campaigns to reduce waste and energy use. ● Review options for adding more value to various programmes which contribute to resource efficiency and business support for SCP. ● Issue revised guidance for sustainable Government procurement, and more comprehensive information on products and green specification. ● Take forward recommendations from the Advisory Committee on Consumer Products and the Environment, covering some important issues relating to the supply and consumption of products. ● Initiate with the Sustainable Development Commission ways of taking forward the debate on sustainable consumption including ways to engage the general public on these issues. ● Develop firm proposals to feed into the review of the Sustainable Development Strategy in 2005. ● Begin planning and preparation for medium and longer-term actions (see next columns). 	<ul style="list-style-type: none"> ● Establish collaborative projects involving particular sectors or product chains as pilots to explore practical application of the SCP approach (consistent with and contributing to the approach proposed in the European Commission's communication on Integrated Product Policy). ● Further develop the approach used in the Market Transformation Programme to assess future scenarios for delivering SCP in individual sectors and areas of concern. ● Promote science-based approaches to improve products and services (eg, simplified eco-design and life-cycle guidelines). ● Expand coverage of business advisory services to include SCP, including for SMEs. ● Support flow of better product information, right through the supply chain, to end-consumers. ● Expand education and awareness programmes to a wider range of SCP issues. ● Implement active programmes for sustainable public procurement. ● Better integrate sustainability objectives in the setting and application of industry and other minimum standards. 	<ul style="list-style-type: none"> ● A well-developed framework, with set of mechanisms to support market and culture change (goals, price mechanisms, trading and "cap" mechanisms). ● Far greater decoupling of economic growth and environmental degradation ● Significantly improved productivity of material and energy use, as part of the wider productivity of the nation. ● Active and informed consumers (individuals and corporate) engaged in the drive for more sustainable patterns of consumption. ● SCP embedded in education and training systems at all levels. ● Techniques fully established to assess progress and target further actions.

	Short term (next 1–2 years)	Medium term (within next 5 years)	Long term (within 10 years)
EU level	<ul style="list-style-type: none"> ● Publish thematic strategy on resource efficiency. ● Publish thematic strategy on waste prevention and recycling. ● Publish White Paper on Integrated Product Policy (IPP). ● Ensure these (and other thematic strategies) are complementary and aligned with other strategies below. ● Align the EU Sustainable Development Strategy and Sixth Environmental Action Programme to relate more explicitly to WSSD/SCP commitments. ● Establish high-level link between these strategies and the 'Lisbon agenda' (to deliver a sustainable and competitive economic model for the EU). ● Develop metrics, taking account of national work (see above). ● Reflect all of the above work in an EU planning document on SCP, which can be kept under review. 	<ul style="list-style-type: none"> ● Consolidate SCP links (from previous column) with all the relevant high-level processes (Cardiff, Lisbon, Monterrey, Doha). ● Integrate SCP into review and development of relevant policy instruments and programmes (eg, producer responsibility, sustainable procurement, reviews of Ecolabelling, EMAS, IPPC) ● Reflect SCP in advisory instruments (eg, relevant Commission Communications, IPPC 'BREF Notes') ● Develop procedures for consistent EU-wide impact assessment, internalisation of costs. ● Explore use of negotiated/voluntary agreements. ● Support implementation of sustainable public procurement across the Single Market. ● Integrate sustainability objectives into standard setting. ● Monitor Member State initiatives, disseminate best practice and feed into further policy development at EU level ● Maintain overview of above activities for consistency with UNEP/OECD work, and to influence its future direction. ● Find ways of making best practice information more accessible to developing countries. 	<ul style="list-style-type: none"> ● Support the mechanisms developed at national level (above) with common and coordinated measures, where that would also support the Single Market.
International level	<ul style="list-style-type: none"> ● Agree at EU level on the most effective role for UNEP and OECD and UN CSD, and help to secure a suitable framework. 	<ul style="list-style-type: none"> ● Influence international trade regimes to support the SCP agenda. ● Develop the generic tools for use by businesses, consumers and others (eg, ISO standards, reporting, labelling and other supporting frameworks). 	<ul style="list-style-type: none"> ● Ensure that UNEP/OECD/UN CSD have in place the necessary machinery to assess the national and regional actions and to prepare for the next global phase.

Term	Definition
ACBE	The Advisory Committee on Business and Environment provides for dialogue between Government and business on environmental issues and aims to help mobilise the business community in demonstrating good environmental practice and management.
ACCPE	The Advisory Committee on Consumer Products and the Environment provides advice to Government on policies to reduce the environmental impacts of products and services.
Action Energy Programme	To help small businesses make investments in new equipment, Action Energy offers interest-free loans to fund the cost of buying energy equipment.
Aggregates levy	To address, by taxation, the environmental costs associated with quarrying operations (noise, dust, visual intrusion, loss of amenity and damage to biodiversity) in line with the Government's statement of intent on environmental taxation.
Business Excellence Model	The Excellence Model is a practical tool to help organisations to establish a management system by measuring where they are on the path to Excellence; helping them understand the gaps; and then stimulating solutions.
Carbon Trust	An independent not for profit company set up by the Government with support from business to encourage and promote the development of low carbon technologies.
Centre for Water Demand Management	Water Demand Management (WDM) is the focal point within the Environment Agency for the science and practice of water demand management in England and Wales.
Climate Change Levy	A levy applied to the energy use of all non-domestic sectors. Subject to certain exemptions and reductions to encourage energy efficiency.
Construction Best Practice Programme	Construction Best Practice (CBP) provides support to individuals, companies, organisations and supply chains in the construction industry seeking to improve the way they do business.
Directing the flow – priorities for future waste policy	The Government's strategic vision for the direction of water policy and its place among broader Government objectives in England. To identify the main future priorities and direction over the longer term for the inland and coastal water environment, water resources and the water and sewerage industry.
Eco design of end use products	EU Directive which harmonises requirements concerning the design of end use equipment to ensure the free movement of these products within the internal market, aiming to improve their overall impact on the environment.

EC's action plan on environmental technology	The Commission intends to put forward an action plan on environmental technology by the end of 2003.
EnCams	Environmental Campaigns (EnCams) is the charity which runs the Keep Britain Tidy campaign.
Energy Efficiency Commitment	The Energy Efficiency Commitment (EEC) places an obligation on energy suppliers to promote improvements in energy efficiency by domestic consumers.
Energy Review (2002)	The report was commissioned by the Prime Minister to set out a vision and strategy for future energy policy to 2050 and to come forward with practical measures for achieving them.
Enhance Capital Allowances	The Enhanced Capital Allowance Scheme enables businesses to claim 100% first year capital allowances on investments in energy saving technologies and products.
Envirowise	A government programme providing practical environmental advice for business.
EU Emission Trading Scheme in greenhouse gases	Part of the European Climate Change Programme, the Commission has now adopted a Green Paper to improve understanding of emissions trading as a potential tool for climate change policy within the EU.
EU Sustainable Development Strategy	The strategy contains a number of concrete proposals for how the European Union can improve its policy to make it more coherent and focussed on the long term, as well as a number of specific headline objectives and the measures needed to achieve them.
Factor Four	A concept that proposes 'doubling wealth, halving resource use' in order that the amount of wealth extracted from one unit of natural resources quadruples.
Fit for the Future	Fit for the Future is the National Best Practice Campaign led by the CBI. Through its network of partner organisations it encourages the sharing of knowledge between businesses of all kinds and across all sectors to improve their performance.
Foresight Vehicle	Foresight Vehicle is the UK's national automotive R&D programme aiming to promote technology and stimulate suppliers to develop and demonstrate technologies for future motor vehicles.
Global Action Plan	Global Action Plan is an independent charity that provides practical solutions to environmental and social problems.
Innovation and Growth project	This Innovation and Growth Team (IGT) has addressed issues such as the UK's capability in clean technologies and processes, the opportunities created by greenhouse gas abatement, and hurdles to success in the major markets of water and waste management.
Innovation Review	The review will set out a strategy for improving innovation performance in the UK.

Integrated Product Policy	Integrated Product Policy (IPP) seeks to minimise environmental degradation caused by product manufacturing, use or disposal by looking at all phases of a products' life-cycle and taking action where it is most effective.
Landfill Directive	The objective of the Directive is to prevent or reduce as far as possible negative effects on the environment from the landfilling of waste, by introducing stringent technical requirements for waste and landfills.
Lisbon Agenda	The Lisbon Strategy is a commitment to bring about economic, social and environmental renewal in the EU.
Market Transformation Programme (MTP)	A Government programme that aims to bring forward products, systems and services which do less harm to the environment, using less energy, water and other resources. The MTP provides strategic support to a growing set of 'product' policies that aim to encourage resource efficiency through supply-chain measures such as reliable product information, raising minimum standards and encouraging best practice.
National Consumer Council	The National Consumer Council is an independent consumer expert, championing the consumer interest to bring about change for the benefit of all consumers.
Ofgem	Office of Gas and Electricity Markets.
OSPAR Convention	The Convention for the Protection of the Marine Environment of the North-East Atlantic.
Our Energy Future – creating a low carbon economy	A long-term strategic vision for energy policy combining our low carbon environmental, security of supply, competitiveness and social goals. It builds on the Performance and Innovation Unit's Energy Review, published in February 2002, and on other reports which have looked at major areas of energy policy.
Regulatory Impact Assessment	An RIA is a policy tool which assesses the impact, in terms of costs, benefits and risks of any proposed regulation.
Resource Productivity: making more with less	The report looks at how the UK economy can be shifted onto a more sustainable footing. It is also intended to support and inform the development of the Government's long-term programme for sustainable development in the UK.
Sector Skills	A new network of UK wide Sector Skills Councils (SSCs) has Development Agency been charged to lead the skills and productivity drive in industry or business sectors recognised by employers. They bring together employers, trade unions and professional bodies working with government to develop the skills that UK business needs.
Scottish Environmental Protection Agency (SEPA)	SEPA's main aim is to provide an efficient and integrated environmental protection system for Scotland that will both improve the environment and contribute to the Scottish Ministers' goal of sustainable development.

Shopper's Guide to Green Labels	'A Shopper's Guide to Green Labels' is a fold-up credit card sized leaflet that explains the meaning of the green labels and logos commonly found on products, published in April 2003 for Defra.
Strategy Unit the Future of Fish Stocks	The project will aim to develop a long-term strategy for the sustainable future of the UK marine fishing industry. This will take into account the need for the sustainable management of marine resources, the diverse and changing circumstances of the fishing industry and the social and economic development of communities that depend on fishing.
Sustainable Development Commission	The Commission's main role is to advocate sustainable development across all sectors in the UK, review progress towards it and build consensus on the actions needed if further progress is to be achieved.
Sustainable Development Strategy	In May 1999, the UK Government published <i>A better quality of life, a strategy for sustainable development for the UK</i> . At the heart of sustainable development is the simple idea of ensuring a better quality of life for everyone, now and for generations to come.
Thematic strategy on sustainable use of natural resources	One of seven Thematic Strategies on the environment developed by the European Commission as foreseen in the 6th Environmental Action Programme.
Thematic strategy on waste prevention and recycling	One of seven Thematic Strategies on the environment developed by the European Commission as foreseen in the 6th Environmental Action Programme.
Transport Energy Best Practice Programme	A programme that provides practical advice and solutions to help improve the environmental performance and cost effectiveness of transport operations.
Warm Deal (Scotland)	A scheme for the provision of energy efficiency improvements, in Scotland, administered by Eaga Partnership for all housing stock and Local Authorities for their own stock.
Warm Front (England)	A scheme for the provision of energy efficiency improvements, in England, providing grants to households with children, who are on income related benefits. Larger grants are available for households whose occupants are 60 and over and receive an income related benefit.
Waste and Emissions Trading Bill	The Bill helps the UK meet its European obligations under the Landfill Directive and will give statutory footing to penalties in the world's first economy wide emissions trading scheme.
Waste Not, Want Not	A review of waste strategy in England by the Strategy Unit.
Water Framework Directive	Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy.
WBCSD	World Business Council for Sustainable Development.

World Summit on Sustainable Development

An international summit, held in Johannesburg in August/September 2002, to reaffirm the international community's (WSSD) commitment to sustainable development.

WRAP

WRAP (the Waste & Resources Action Programme) is a not-for-profit company supported by funding from DEFRA, the DTI and the devolved administrations of Scotland, Wales and Northern Ireland. It is working to promote sustainable waste management by creating stable and efficient markets for recycled materials and products.

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