

EA SUSTAIN. DEVELOP.

A FRAMEWORK FOR CHANGE

# A 'greener' business world

JULY 2001



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# A 'greener' business world

“The enlightened company increasingly recognises that there are good commercial reasons for being ahead of the pack when it comes to issues to do with the environment.”

SIR JOHN BROWNE, CHIEF EXECUTIVE OFFICER, BP AMOCO, APRIL 2000 (BBC REITH LECTURE)

## 1. Why a Framework for Change?

### The Environment Agency's vision

In June 2000 the Agency consulted widely on its long-term objectives and goals. After taking into account the responses that we received, in January 2001 we published *An Environmental Vision: The Environment Agency's Contribution to Sustainable Development* (the *Vision*)<sup>1</sup>.

This sets out our long term, aspirational objectives for the environment, grouped under nine environmental themes. In preparing it, we were very conscious that it would be the process by which those objectives are met - the route by which the Agency plans, in partnership with others, to make progress towards the long term destination - that would be of particular interest. This was reinforced by the comments we received during the consultation on the *Vision*.

### Frameworks for Change

To show the route we propose to take, we have prepared a series of *Frameworks for Change*, one for each of the *Vision's* nine environmental themes. This document is one of these thematic *Frameworks* which are intended mainly for internal planning purposes though they are publicly available. They set out our proposals for the medium term to make progress towards the long-term objectives described in the *Vision*. These *Frameworks* - and the associated dialogue and business development that will flow from them - are not only intended to make progress towards the environmental outcomes in the *Vision*, but also to improve the Agency's service delivery to Government<sup>2</sup>, industry, and the public. They are also intended to improve our own internal efficiency and effectiveness. Overall, we regard them as being beneficial to both our stakeholders, and society in general. They are frameworks with a menu of possible actions, rather than final plans, because we still have to agree the final proposals. We have to balance the competing priorities within them, take into account their specific implications for others, and match them to the resources we have available. This balancing and prioritisation has to be agreed with Government, and will be done through our corporate planning process, with our firmed-up work programmes appearing in our formal Corporate Plans. The Government's current revision of its statutory guidance in respect of our sustainable development remit will also help us clarify the routes and options available to us.

<sup>1</sup> The Environmental Vision, and Frameworks for Change is available on the Agency's website <http://www.environment-agency.gov.uk>

<sup>2</sup> References to Government include the UK Government and, where appropriate, the National Assembly for Wales.

We will be discussing these proposals with our stakeholders. The main vehicle for this external dialogue and discussion will be a separate series of sector based *Frameworks* starting late in 2001. These will draw from the nine themes the issues and outcomes relevant to the sector concerned.

### **Working with partners**

We recognise that we cannot on our own deliver the outcomes and goals we have set out. We already work in close partnership with a wide range of organisations and groups, and we are keen to explore how we can strengthen existing partnerships and develop new ones. This does not just involve seeking partners for Agency led projects, but also supporting the work of others. We will need to work with a wide range of bodies with an interest in land issues, including those we regulate. Below we list areas where we will want to work in partnership with others, but have not sought fully to specify who these others might be.

## **2. A 'greener' business world**

We recognise that businesses are major contributors to the economic wealth of the nation and that they operate in a global competitive economy.

It is in the interest of businesses to minimise adverse impacts on the environment and to adopt a sustainable approach to their operations. An increasing number of companies act in this way. The inefficient use of raw materials not only produces waste and pollution; it represents a loss of productivity and potential profit.

The Environment Agency seeks to encourage this shift to more sustainable production through smarter regulation and the use of economic instruments. It expects companies to accept and demonstrate leadership at board level to protecting the environment. This commitment should be visible to all employees. Management should use this undertaking to promote a strong environmental culture in the organisation. Some companies do act in this way, but such approaches are far from universal.

### **Environmental effects of business**

Business, particularly industry is a major contributor to environmental effects such as acid rain and global warming, as well as to a wide variety of more local problems as a consequence of emissions to air and water from processes, and from the disposal of process wastes.

During the 20th century, changes in the types of industry, regulation and voluntary action by industry led to substantial reductions in pollution from industrial sources. However, industry continues to have an impact on the environment. There is also a legacy of past environmental effects, such as contaminated land and groundwater.

Table 1 (page 18) shows the regional variability of pressures due to businesses and Table 2 (page 19) sets out a selection of environmental trends associated with business activities.

Emissions to air and water have generally fallen but the levels of some pollutants have increased. We now have a greater understanding of the effects of these pollutants. This indicates that health may be damaged at lower levels than previously thought. In certain industries such as, pharmaceuticals and agro-chemicals, the numbers of compounds being discovered and manufactured are increasing.

We can make major reductions in our impact on the environment by encouraging businesses to adopt greater responsibility for their activities and products. They can help to minimise pollution by considering such aspects as product design, and conducting life cycle analysis to identify the major environmental impacts. Companies can also develop and implement waste control strategies including reuse and recycling.

### **Sustainable development**

Business makes a fundamental contribution to society and has an important role in contributing to sustainable development by developing more sustainable consumption of resources and the sustainable production of goods, whilst also promoting social fairness and a prosperous economy. However, business does not exist in isolation from the rest of society, it is driven by the demands of its customers and is responsive to public opinion. The Agency recognises that greener business can only thrive when there is consumer demand and support for the goods and services produced through sustainable business practices. This requires a change not only on the part of business, but also by society in general, by those who use and benefit from the goods and services business provides.

There are a number of elements to bringing about this change to more sustainable business practices:

- The Agency will continue to regulate in order to maintain basic standards and to bring about improvements. In doing so, we will modernise our regulatory approach, in consultation with our stakeholders, to simplify and improve the regulatory process for business and ensure that administrative and bureaucratic aspects are minimised. We will target our effort through taking a risk-based approach to regulation.
- We will encourage the application of external pressure from customers, suppliers and investors through approaches such as supply chain development and wider use of green criteria for investment.
- We will support stronger corporate governance for the environment and better training and awareness of staff in order that the internal management of companies is "greener". Real benefits would be achieved from more companies having a clear commitment at Company Board level, which is visible to all employees and promotes a strong environmental culture within the organisation. This can make good business sense.
- We will encourage businesses, especially in the manufacturing sector, to measure and report on key determinants of environmental performance such as the ratio of the quantity of raw materials/natural resources to production levels (natural resource efficiency)
- We will support Government in the examination of economic instruments, such as green taxes and tradable permits, in order to give further incentives to companies. Such instruments can provide a mechanism for promoting change, innovation and efficiency, and higher environmental standards. Measures already adopted by the Government include landfill tax, a fuel duty differential and the climate change levy. We will also determine how we can use our charging regime to create incentives for good environmental performance.



### 3. The Environment Agency's role

The Agency regulates a wide range of industrial activities in England and Wales, including energy, manufacturing and service industries, chemical and steel works, oil refineries, waste incinerators, the water industry, the nuclear industry and some parts of food and agriculture. Historically, regulation has been a major influence on businesses to reduce their impacts on the environment.

Under Integrated Pollution Control (IPC) we regulate about 2,000 industrial processes with the greatest pollution potential, ensuring that Best Available Techniques Not Entailing Excessive Cost (BATNEEC) are used to prevent or minimise pollution of the environment. We regulate the treating, keeping, movement and disposal of controlled waste, involving around 7,000 waste management sites and over 50,000 waste carriers and brokers, so as to prevent pollution of the environment or harm to public health. We monitor more than 7,000 sewage treatment works and 5,000 trade discharges; and monitor the quality of freshwater, groundwater and tidal waters. We also regulate the disposal of radioactive waste at approximately 1,000 sites, including about 30 nuclear sites. However, although a range of environmental legislation is in place, many environmental impacts of business remain largely unregulated, including transport and domestic sources.

During 2000 the legislation that implements IPC will be superseded by the Pollution Prevention and Control Regulations, which implement the EU Directive on Integrated Pollution Prevention and Control (IPPC). The Directive is similar to IPC but covers a wider range of activities and industrial processes, including landfill sites and larger sewage treatment works. IPPC will be progressively applied to existing processes, with full implementation by 31 October 2007.

We are committed to developing goal-orientated, risk-based approaches to regulation. The Operator and Pollution Risk Appraisal (OPRA) system has been implemented for IPC and waste management sites and will help the Agency target its resources on those sites presenting the greatest environmental risks.

A small number of environmental licences issued by the Agency give rise to significant public interest. The Agency is developing procedures for enhanced public consultation in such circumstances.

#### **Environmental Management Systems**

Environmental Management Systems (EMS) provide a means for businesses to manage their environmental impacts in a considered and structured manner. A number of initiatives are in place to encourage business to progress to EMS, including the pilot Department of Trade and Industry (DTI), British Standards Institute (BSI) and Department for Environment, Food & Rural Affairs (DEFRA) "Acorn" project. The Agency encourages the use of EMS by those we regulate and recognises that many aspects of an EMS are similar to our regulatory activities. We are therefore evaluating the opportunities for a new approach that combines the voluntary elements of an EMS with our regulatory systems.

#### **Provision of Information**

Information on releases to air, water and land from IPC processes is now available via the Agency's web site and we are looking at how such information can be extended to produce annual environmental reports. Greater standardisation in the type of information provided in

environmental reports is required including a common set of criteria for each sector. More companies and sites will be encouraged to report. DEFRA's MACC2 initiative ("Making a Corporate Commitment") is a recently introduced tool to promote reporting.

### **Policy drivers**

Among the key national and international drivers that will influence our actions over the period of this *Framework* are:

- **International drivers:** United Nations Framework Convention on Climate Change; Kyoto Protocol; UNECE (United Nations Economic Commission for Europe) Protocol to abate acidification, eutrophication and ground-level ozone; and the UNECE persistent Organic Pollutant and Heavy Metal Protocols.
- **European drivers:** The proposed Sixth Environment Action Programme of the European Community 2001–2010. European Directives on Integrated Pollution Prevention & Control, Water Framework, Waste Incineration, Large Combustion Plant, Air Quality Daughter Directives, Landfill, Habitats and Birds. White Paper on Environmental Liability.
- **National and regional drivers:** Air Quality Strategy for England, Scotland, Wales and Northern Ireland; UK Strategy for Radioactive Discharges 2001 – 2020; Climate Change: The UK Programme; Waste Strategy for England and Wales.

## **4. Working in partnership**

The Agency works closely on policy development with the Department for Environment, Food & the Regions (DEFRA), the Department of Trade and Industry (DTI), the National Assembly for Wales (NAW). We also provide technical advice and guidance based on our expertise and operational experience. Our activities are framed by, and help to implement, a range of Government policies and commitments, including its Sustainable Development Strategy (and the supporting strategies and schemes of the DTI and NAW), its Urban and Rural White Papers, and Modernising Government and Better Regulation policies.

We are actively involved in a number of European and other international fora. We contribute experts to technical committees and have seconded a number of technical experts to the European IPPC Bureau in Seville to assist with the production of EC Best Available Techniques reference documents (BREFs).

We work with local and regional government, through our role as a consultee in their planning control of developments and in local air quality management. We liaise with other regulators, both in the UK and overseas, to develop better regulation and promote consistency.

We have agreed Memoranda of Understanding with the Health and Safety Executive and the Food Standards Agency relating to areas where we have mutual interests. We also have a signed Concordat with the Cabinet Office Regulatory Impact Unit.

We work with many companies, frequently at board level. We are actively involved with over 50 waste minimisation "clubs" to help reduce water use, production of solid waste and energy consumption.



The Agency also works with industry trade associations on many issues. We work with the Environmental Industries Commission to ensure that our technical guidance addresses best available techniques and to encourage innovation. We are also keen to encourage businesses that are promoting environmental technologies.

We work with a range of business support services such as Envirowise and the Energy Efficiency Best Practice Programme and Carbon Trust in order to understand and add value to their activities.

We are also involved with a wide range of groups with specific interests, such as non-governmental organisations, liaison committees, research organisations, other agencies and consultancies, to provide advice and develop tools for better regulation.

We will be seeking to strengthen our links with industry and our other partners over the short and medium term.

#### **4. The Agency's objectives and goals**

In *An Environmental Vision*, our overall long-term objective with respect to the business world is that:

*Industry and businesses will value the services provided by a rich and diverse natural environment. In the process they will reap the benefits of sustainable business practices, improving competitiveness and value to shareholders and securing trust in the wider community.*

A 'greener' business world provides many of the mechanisms – along with *Wiser, sustainable use of our natural resources* – by which improvements to the state of our air, land and water, will be delivered, with resulting benefits for everyone's quality of life, and for wildlife.

The *Vision* and long-term objectives will help achieve these outcomes:

- All business activities will have environmental concerns at the heart of their thinking and operations.
- The adoption of sustainable production and consumption practices will be the norm.
- Industries will exercise stewardship over their products to ensure that they are compatible with sustainable development.
- Risk and incentive-based charging schemes will reward reduced risks to human health and the environment and encourage effective environmental management.
- The public will use its purchasing and investment powers, and its opinion, to influence industrial performance in terms of human health and the environment.
- Through the public being better informed and involved, there will be greater general approval in the regulatory process and public confidence in it.

We will seek to achieve these outcomes in the most efficient and effective manner, taking into account the costs and benefits of the options available to do so.

## 6. Goals and actions

For each outcome we have identified below a number of goals we intend to achieve in the short to medium term in order to move towards the *Vision*. We have also outlined the activities that will help achieve these goals, together with the tests to assess progress in their delivery. In practice, activities may contribute to the achievement of more than one goal and outcome.

### Tests for progress

The Government's set of sustainable development indicators<sup>3</sup> help show, at a high level, whether we are on a sustainable track. The Agency has also developed its own set of environmental indicators<sup>4</sup> that will be used to show progress towards the *Vision*. In addition to these, we have included some key tests for progress for each outcome.

### Role of the Environment Agency

To clarify the role of the Agency in achieving each of these goals, we have allocated the activities to one of three categories:

Environment Agency's role is central
Environment Agency as a substantial partner
Environment Agency's involvement to build understanding

<sup>3</sup> DETR (1999) *Quality of life counts. Indicators for a strategy for sustainable development for the UK: a baseline assessment.*

<sup>4</sup> Environment Agency (July 2000) *Environmental Indicators*. A set of Environmental Indicators for Agency use (also available on the Agency's website <http://www.environment-agency.gov.uk>)

**Business attitude to the environment**

**Outcome 1 – All business practices will have environmental concerns at the heart of their thinking and operations.**

**Tests for progress:**

- Emissions to air and water.
- Wastes are quantified and reduced.
- Numbers of pollution incidents.
- Number of sites and companies with certified environmental management systems.
- Proportion of SMEs using EMS.
- Contribution of SMEs to key environmental impacts is recognised.
- Extent of standardisation of licences.
- Sector based criteria agreed with trade groups and reported on.
- Regulation and voluntary environmental management are integrated.

GOAL	ACTIVITY
<p>Goal 1.1 Major reductions in the impact on human health and the environment arising from industrial activities.</p>	<p><b>Ongoing:</b></p> <ul style="list-style-type: none"> <li>• Use site environmental improvement programmes cost effectively to reduce emissions to air and water and the production of solid wastes.</li> </ul> <p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Implement national strategy and statutory guidance for reduction in radioactive discharges through revised authorisations.</li> <li>• Introduce IPPC (phased to 2007).</li> </ul>
<p>Goal 1.2 Increased commitment, at Company Board level, to environmental performance.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Recommend that company directors have a “duty of care” towards the environment in the same way that directors have a statutory duty of care towards their employees and customers.</li> <li>• Support a requirement for companies to publish a company policy on the environment and a statement by company directors of how environmental risks, impacts and performance have been managed.</li> </ul>
<p>Goal 1.3 Increased number of sites and companies with formal, externally certified environmental management systems.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Develop Agency policy and guidance for the role of EMS in its regulatory approach</li> <li>• Produce guidance on EMS for IPPC applicants and then extend to all Agency regulatory regimes.</li> </ul> <p><b>Medium term:</b></p> <ul style="list-style-type: none"> <li>• Encourage IPPC processes to have EMS at time of application or as part of an improvement plan, and for these to become effective within four years of authorisation.</li> <li>• Develop joint compliance assessment and reporting arrangements for Agency and organisations certifying EMS.</li> <li>• Encourage industries to promote the use of EMS with their suppliers and to require them to comply with environmental legislation.</li> </ul>



**Business attitude to the environment** *continued*

<p>Goal 1.4 Greater ownership by operators of their releases to the environment.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Introduce audited "Operator Self-Monitoring Regimes" across all regulatory functions.</li> <li>• Work to increase public acceptance and trust of Operator Self-Monitoring Regimes.</li> </ul>
<p>Goal 1.5 Standardised approach to environmental licences, which are available electronically.</p>	<p><b>Ongoing:</b></p> <ul style="list-style-type: none"> <li>• Continue development and pilot testing of licences with consistent layout and format (Unified Environmental Licences – UELs) and then (short term to medium term) extend to use in all the Agency's Area offices.</li> </ul> <p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Install facilities for electronic dissemination of licences.</li> </ul>
<p>Goal 1.6 Single, integrated, environmental site licences available. Further development of General Binding Rules (GBRs).</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Identify costs and benefits of simplifying and resolving inconsistencies between regulatory regimes.</li> <li>• Identify opportunities for changes to legislation to remove inconsistencies and to use standard conditions.</li> <li>• Develop opportunities for General Binding Rules (GBRs) and other procedures designed to reduce the cost to business of regulation, while fully securing environmental aims.</li> </ul>
<p>Goal 1.7 Industry sector groups and account managers established in Agency.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Develop key industry-facing sector groups to coordinate activities in the Agency, improve liaison with trade associations and link with DEFRA/DTI work on sectoral sustainability strategies.</li> <li>• Establish an account manager for each site to coordinate all regulatory activities.</li> </ul>
<p>Goal 1.8 SMEs understand their obligations under environmental legislation and receive guidance on good practice.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Use the internet to provide guidance on legislation for specific industry sectors based on NetRegs.</li> <li>• Identify key environmental impacts from SME subgroups.</li> <li>• Work with business support services to provide SME subgroups with guidance and other tools to improve their environmental performance.</li> </ul>

**Environment Agency's role is central**

Environment Agency as a substantial partner

Environment Agency's involvement to build understanding

**Adoption of sustainable business practices**

**Outcome 2 – The adoption of sustainable production and consumption practices will be the norm.**

(Cross refer to future uses of land addressed in the *Framework* document *Restored, protected land with healthier soils*).

**Tests for progress:**

- Benchmarked environmental impact criteria established for key industry sectors.
- Waste quantities and types generated by site and sector and disposal routes.
- Waste generated per unit of production.
- Overall resource used by industry.
- Use of priority chemicals.

GOAL	ACTIVITY
<p>Goal 2.1 Long-term environmental objectives and targets set for individual industries and sites.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Develop a methodology to assess the environmental burdens of industries and the relative impact of the same substances to air, water and land. Use the National Atmospheric Emissions Inventory and other sources to demonstrate the contribution of industries relative to other sources of pollution.</li> <li>• <b>Quantify and rank environmental impacts of SME subgroups, and use the outcome to prioritise effort.</b></li> <li>• Establish environmental impact criteria for key industry sectors addressing resource consumption and waste generated.</li> </ul> <p><b>Medium term:</b></p> <ul style="list-style-type: none"> <li>• Use environmental impact criteria to develop benchmarks.</li> <li>• Work with Government to investigate methodologies for calculating environmental burdens for product life cycles.</li> <li>• Work with industry to produce life cycle statements of processes and products and link with environmental management systems.</li> </ul>
<p>Goal 2.2 National reduction targets for environmental burdens from business in place, including specific chemicals.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• <b>Implement Agency Chemicals Strategy: establish priority chemicals, identify sources (point and diffuse) and develop cost effective reduction programmes for priority chemicals.</b></li> <li>• Support DEFRA chemicals stakeholders forum.</li> </ul>
<p>Goal 2.3 More appropriate siting of new industry.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• <b>Improve Agency input to the planning process through earlier contact and a streamlined Agency response service (the "Better Town Planning" project).</b></li> <li>• <b>Pilot improved communications with local planning authorities through the "e-commerce" project.</b></li> </ul>

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**Product stewardship**

<p><b>Outcome 3 – Industries will exercise stewardship over their products to ensure that they are compatible with sustainable development.</b></p> <p><b>Tests for progress:</b></p> <ul style="list-style-type: none"> <li>• Integrated product policy developed.</li> <li>• Number of “tax and return” schemes examined.</li> <li>• New producer responsibility systems developed to maximise protection of health and the environment, and which minimise purely administrative burdens.</li> </ul>	
GOAL	ACTIVITY
<p>Goal 3.1 Further development of integrated product policy.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Work with Government, industry and consumers in the development of integrated product policy.</li> <li>• Help to influence EC and UK Government to identify new producer responsibility schemes by provision of information on Life cycle analysis, environmental burdens and associated risks.</li> <li>• Examine end-of-life integrated product policy options for small items of electrical equipment and small batteries.</li> <li>• Introduce, with Government and industry, formal producer responsibility schemes for end-of-life vehicles and waste electrical and electronic equipment, minimising purely administrative burdens for business and regulators.</li> <li>• Work with Government to determine the scope and applicability for “tax and return” schemes.</li> </ul>
	<p><b>Medium term:</b></p> <ul style="list-style-type: none"> <li>• With Government and industry, examine tax and return pilot schemes for tyres and batteries and the lessons for other products.</li> </ul>

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**New charging schemes**

**Outcome 4 – Risk and incentive-based charging will reward reduced risks to human health and the environment and encourage effective environmental management.**

**Tests for progress:**

- Proportion of Agency activities based on risk-based approach.
- Risk-based charging introduced.
- OPRA scores for individual sites and for sectors.
- Emission trading schemes in place.
- Charging based on key emissions, working to complement regulation.
- Green taxes and other economic instruments, working with regulation.
- Further development of negotiated agreements, particularly with industry, dovetailing with regulatory approaches.

GOAL	ACTIVITY
<p>Goal 4.1 Regulatory effort targeted on those activities and operators that have the greatest environmental impact.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Develop a common risk based regulation strategy to cover all Agency-regulated activities and operators.</li> <li>• Implement a risk based compliance scheme covering IPPC.</li> <li>• Use National Waste Survey information and Special Waste data to target waste reduction activities.</li> <li>• Extend risk-based compliance scheme to all the Agency's regulatory regimes.</li> <li>• Influence increased penalties for environmental offences.</li> </ul>
<p>Goal 4.2 Increased use of economic instruments and negotiated agreements.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Consult with Government on legislative and other barriers to the introduction of charging for key emissions and trading.</li> <li>• Develop, in consultation with stakeholders, proposals for charging for key emissions and trading, consistent with regulatory approach, and with wider trading schemes, such as for carbon. Explore capacity for flexibility in regulatory approach in these cases.</li> <li>• Work with those developing energy efficiency and other sector negotiated agreements, to obtain optimal balance with regulation.</li> <li>• Work with Government and Emissions Trading Group on establishment of greenhouse gas emissions trading scheme.</li> </ul> <p><b>Medium term:</b></p> <ul style="list-style-type: none"> <li>• After consultation, examine pilot schemes for emission charging, worked up together with regulatory approach.</li> <li>• Develop pilot trading trials and then, in conjunction with Government and stakeholders, draw necessary lessons for operation of regulation.</li> <li>• Work with partners (such as Treasury, DEFRA, DTI, Cabinet Office Regulatory Impact Unit) to identify further scope for economic instruments, and to ensure such changes work with the grain of regulation.</li> </ul>

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**Public influence**

**Outcome 5 – The public will use its purchasing and investment powers, and its opinion, to influence industrial performance in terms of human health and the environment.**

**Through the public being better informed and involved, there will be greater general approval of the regulatory process and public confidence in it.**

**Tests for progress:**

- Number of IPPC sites producing annual reports for the community.
- Number of FTSE 350 companies disclosing their environmental performance in annual reports and accounts.
- Number of businesses using environmental cost accounting in their audited annual report and accounts.
- Use of environmental information by financial markets.
- Number of industries for which pollution inventory information is available via the Agency's web site.
- Trends in emission data available on internet for sites and sectors.
- Health based information available for key substances.
- Number of health and environmental based environmental quality standards available for emission to air and water.

GOAL	ACTIVITY
<p>Goal 5.1 Increased numbers of companies producing high quality environmental reports.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Within businesses the Agency regulates.</li> <li>• Support good practice in company environmental reporting, including the use of environmental cost accounting.</li> <li>• Press for greater transparency of environmental costs via new company law.</li> <li>• Use the Agency's expertise to demonstrate to insurance and credit providers the benefits to them of company environmental information.</li> </ul> <p><b>Medium term:</b></p> <ul style="list-style-type: none"> <li>• Work with Government and others to apply the lessons from our work with businesses we regulate to the wider business community.</li> </ul>
<p>Goal 5.2 Pollution inventory extended.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Widen the Pollution Inventory to cover processes to come under IPPC, waste, sewage treatment works and radioactive discharges.</li> <li>• Produce first report on IPPC emissions to EC.</li> <li>• With DEFRA place IPPC emissions into context with national air quality data.</li> </ul> <p><b>Medium term:</b></p> <ul style="list-style-type: none"> <li>• Make Pollution Inventory data user friendly and accessible.</li> </ul>
<p>Goal 5.3 League tables on site environmental performance available.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Agree key environmental impact criteria with industry sectors and publish performance data on sites on basis of these reporting criteria.</li> <li>• Publish Operator and Pollution Risk Assessment (OPRA) and permit compliance scores.</li> </ul>

**Public influence** *continued*

	<p><b>Medium term:</b></p> <ul style="list-style-type: none"> <li>• Make data available via internet to allow comparisons of sites and operators within sectors.</li> <li>• Ensure sufficient data available to establish benchmarks and trends.</li> </ul>
<p>Goal 5.4 Effective engagement with public in relation to environmental permits.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Evaluate and refine our own consultation process for permits.</li> <li>• Develop partnerships at local level with local authorities, community groups and industry to encourage dialogue around sites.</li> </ul> <p><b>Medium term:</b></p> <ul style="list-style-type: none"> <li>• Pilot making publicly available real time monitoring results of emissions via means such as the internet and displays in public places.</li> </ul>
<p>Goal 5.5 Wider engagement of companies with the public and interest groups.</p>	<p><b>Short to medium term:</b></p> <ul style="list-style-type: none"> <li>• Promote opportunities for industry to set out and justify their environmental performance (open days, local liaison groups etc).</li> </ul>

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- Environment Agency's involvement to build understanding



## 7. Research and development

New R&D to support delivery of our *Framework* is required to develop our understanding of how regulation should best be applied and how methods complementary to regulation should best be developed.

Key areas include:

- Determining the overall environmental burden of processes and practices.
- life cycles assessments of processes and products.
- emissions trading.
- use of economic measures.
- use of negotiated agreements.
- environment and health based assessment criteria.
- reducing the administrative burden associated with environmental protection and regulation.

## 8. Implications for the Agency

The Agency's ability to deliver these goals varies. Some are entirely within our power, while others depend on companies seriously addressing sustainability issues and the Government introducing legislative changes. We will be working with business, Government and others to influence these developments.

The Agency will continue to regulate in a firm but fair manner in order to maintain basic standards in environmental performance by industry and to bring about improvements. We will ensure that administrative and bureaucratic aspects are minimised. The Agency will target its resources on those sites and operators presenting the greatest environmental risks. We will achieve this through:

- Effective risk based regulation to ensure industry minimises adverse effects on people and the environment, thereby contributing to the achievement of sustainable development.
- Ensuring that the regulatory process is integrated and addresses the local, national and other environmental impacts of a site.
- Where possible, persuading industry to go beyond legal compliance.
- Delivering regulatory services to industry, Government sponsors, the public and internal audiences with consistency, transparency, and clarity. We will do this in a timely manner, with no surprises and delivering value for money.
- Developing and adopting integrated policy appraisal techniques, covering environmental, social and economic costs and benefits, to inform our decision making processes.
- Ensuring that the Agency is respected as a technically skilled, efficient and effective environmental regulator.
- Establishing an organisation and career structure that encourages the development and retention of staff with relevant skills within the Agency.

### Policies and strategies

The Environment Agency uses and will continue to develop the following approaches to deliver effective regulation, in consultation with our stakeholders. We will:

- Pursue a risk based regulatory process that is based on the control of environmental impacts and addresses technical, people, leadership and management system issues.
- Match our approach at any site to the operator's performance, retaining a firm and proportionate enforcement response where necessary.

- Adopt a standardised approach to issuing permits wherever practical using, for example, Unified Environmental Licences and standard conditions.
- Investigate ways to charge industry based on environmental burdens imposed by activities, including incentives for better performers.
- Seek increased levels of fines so that they act as a significant deterrent to non-compliance with environmental regulations.
- Move progressively to the use of auditing and review of formal site environmental management systems as a complement to approaches based on technology, persuading those we regulate to take full responsibility for their environmental performance.
- Develop and implement cost effective programmes to reduce key pollutants.
- Encourage "product stewardship" approaches such as life cycle assessment and producer responsibility for key products such as pesticides and fertilisers.
- Shift to self-monitoring of discharges and impacts on the receiving environment, with the Agency periodically auditing and checking.
- Establish sector groups, focussed on specific industrial sectors to review policy, establish priorities and manage a coordinated national approach.

### **Monitoring and reporting**

- Make widely available information on businesses' discharges to the environment and compliance with environmental permit requirements, to inform the public and to facilitate benchmarking.
- Place the information on discharges from industry in the context of the overall emissions of substances from all sources, including domestic and transport.

### **Influencing and education**

- Work with others to promote the use of company environmental information by insurance and credit providers.
- Work with partners, such as the Treasury and Regulatory Impact Unit of the Cabinet Office, to investigate the further use of economic instruments, such as green taxes and tradable permits, to promote change, innovation and efficiency to achieve higher environmental standards.
- Consult widely to ensure that we make the best possible decisions and keep relevant audiences informed of regulatory developments.
- Further develop objectives and criteria against which we can assess impacts on human health and the environment.
- Develop a structured training programme for our new staff and ensure continued professional development of existing staff.
- Make representations to the independent Company Law Review of the environmental advantages of giving company directors a 'Duty of Care' towards the environment in addition to looking after their employees and customers.
- Promote the development and use of clean technologies and 'green chemistry'.

### **The bottom line**

Achieving a cleaner environment is both a challenge and an opportunity for the business world. It is not, though, an optional ambition. Customers, both in business and the general public, expect companies to be "greener". The Agency will help companies to achieve this.

**TABLE 1: Regional variation in environment impacts linked to major industry**

<b>Pressure</b>	<b>Anglian</b>	<b>Midland</b>	<b>North East</b>	<b>North West</b>	<b>Southern</b>	<b>South West</b>	<b>Thames</b>	<b>Wales</b>
Emissions of CO <sub>2</sub> from Part A processes	M	H	H	M	M	L	L	M
Emissions of NO <sub>x</sub> from Part A processes	M	H	H	M	M	L	L	M
Emissions of SO <sub>x</sub> from Part A processes	M	H	H	M	M	L	L	M
Loads from sewage-treatment works	M	M	H	M	H	L	M	L
Pollution incidents	M	H	M	M	L	H	L	M
Area worked for aggregates	L	M	M	L	H	M	H	M
<b>States</b>								
River quality (biological)	M	M	H	H	M	L	M	L
Air quality (sulphur dioxide)	L	M	M	H	M	L	H	M
Nitrogen deposition	M	L	M	M	M	H	L	H
Soils (exceedance of critical loads)	M	L	M	H	L	M	L	H

**KEY**

This has been based on selecting the two Regions with the greatest breaches of standards, poorest quality, or highest loadings and ranking these as H – highly impacted; the two Regions with the best quality or lowest loadings are ranked as L – less impacted. The other Regions are ranked M – moderate. (where the impacts are about equal, more than two Regions may be designated H or L).

Sources: Environment Agency (2000) *Environment 2000 and Beyond*.  
Environment Agency (2000) *Environmental Indicators*.



TABLE 2: Summary of selected environmental trends linked to business

Viewpoint	State and trends
Land use and resources	<p><b>Aggregates:</b> By far the largest quantity of minerals extracted in the 1990s were aggregates, used mainly in the construction industry. Even though resources are not running out, their use and transportation requires energy and affects local environments. Current rates of extraction are four tonnes per person per year. Peat resources, on the other hand, are running out.</p> <p><b>Water abstraction:</b> Abstraction of water by industry has fallen in the past 20 years. Reduced river flows and groundwater levels, potentially or actually caused by abstraction, cause concern in many areas. Some 23 Sites of Special Scientific Interest (SSSIs) are affected and more are under investigation as sites of potential deterioration.</p> <p><b>Land contamination:</b> An area larger than the site of Greater London is thought to be contaminated. Much is in the north around sites formerly associated with coal mining and heavy industry.</p> <p><b>Renewable energy resources:</b> Wind, wave and solar power could provide large amounts of our energy needs but provide less than 3 per cent at present.</p>
Key biological populations	<p><b>Habitats:</b> Habitats have been lost through drainage, buildings, roads, cultivation and afforestation. Some upland habitats have been degraded by acid deposition.</p> <p><b>Effects on species:</b> Variable trends; there are examples of some species on the decline, whereas others are thriving. About half of small mammal species have declined but half of larger mammal species have increased in the past decade. Some lichens eradicated due to sulphur dioxide in the past are now starting to recolonise.</p>
Compliance with standards, targets and classification schemes	<p><b>Water and air standards:</b> A multitude of standards apply to air and water. Many have tightened over time and are expected to continue to do so in the future. Investment in better sewage treatment has contributed to a reduction in non-compliance with EC standards. Point source emissions from industry have reduced, for example, sulphur emissions fell by 67 per cent between 1980 and 1998. Dioxins have reduced by 76 per cent since 1990 and lead by 60 per cent. Loads of hazardous substances have reduced substantially since the 1980s. Pollution incidents are reducing but industry is still a major source of these.</p> <p><b>Diffuse impacts:</b> Nitrate concentrations are still increasing in some groundwaters. Certain pesticide concentrations still exceed operational standards in rivers and groundwaters.</p> <p><b>Radioactive discharges:</b> Discharges from nuclear facilities have reduced substantially as a result of regulation. The average human dose from artificial sources, excluding medical procedures, is less than one per cent of the total from natural background sources, and human exposure near nuclear sites is well within recommended limits.</p>
Human and environmental health	<p><b>Human health:</b> Air pollution can lead to serious short and long-term effects, particularly for sensitive groups. Particles, sulphur dioxide and ozone may bring forward 12,000 to 24,000 deaths and 15,000 to 24,000 hospital admissions annually. Personal exposure and the effects of pollution relative to other factors are not well quantified.</p> <p><b>Eutrophication:</b> Nutrient enrichment is a problem in some areas, although causes are diverse. This has largely been tackled by EC Directives of the 1990s, and successes should be evident in the next five years. Nutrient removal at large sewage works should reduce phosphate inputs to rivers and estuaries. Critical loads from nitrogen still exceeded in many areas of natural vegetation.</p>

**TABLE 2: Summary of selected environmental trends linked to business** *continued*

	<p><b>Persistent organic pollutants:</b> Substances such as hexachlorohexane (HCH), dieldrin and poly-chlorinated biphenyls can accumulate in some animals. Some hazardous substances have been banned or their usage reduced, but historic hotspots still occur. Other substances, such as poly-aromatic hydrocarbons (PAHs), may be increasing due to extra traffic.</p> <p><b>Sub-lethal effects:</b> Evidence of hormone disruption in some fish emerged in the 1990s, but impact on populations are still unknown. Considerable work is being carried out into causes.</p>
<b>Long-term reference sites</b>	<p><b>Industrial impacts:</b> Few data are available on actual emissions in the 19th century, although anecdotal information suggests that air and water quality was a serious problem in cities at this time. Industrial impacts have reduced in the last 20 years due to investment in reducing emissions and tighter regulation.</p> <p><b>Nutrients in marine waters:</b> These have increased, although there are measures in place to reduce inputs.</p> <p><b>Soil quality:</b> Organic carbon has been decreasing due to changes in agricultural practices over the last 50 years.</p>
<b>Aesthetic quality</b>	<p><b>Lowland landscapes:</b> The nature of many lowland landscapes has changed, mainly due to changes in agriculture, to new housing developments and associated transport infrastructures. The Common Agricultural Policy includes financial incentives for farmers to look after the countryside, although the effects of this are uncertain.</p> <p><b>Industrial plumes:</b> Plumes from chimneys have reduced substantially since the 1960s and visibility improved as air pollution has been cut.</p> <p><b>Odours:</b> There has been a downward trend in the number of complaints from industrial premises since the mid-1990s, linked to tighter regulation.</p>

Source: Environment Agency (2000) *Environment 2000 and beyond*.

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