

EA-Sustainable Development
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**Introductory Guidance on the Agency's
Contribution to Sustainable Development**

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ENVIRONMENT AGENCY



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INTRODUCTORY GUIDANCE ON THE AGENCY'S CONTRIBUTION TO SUSTAINABLE DEVELOPMENT.

1. PURPOSE

- 1.1 The purpose of this document is to provide initial guidance on how the Agency will make its contribution to sustainable development. The Agency's principal aim as contained in the Environment Act 1995 is analyzed along with the statutory guidance on this duty that has been received from Ministers. The implications of this aim and guidance for the Agency's functions are explored with reference to the accompanying non-statutory explanatory document.
- 1.2 This document is intended as a starting point for sustainable development guidance and is part of a series of specific guidance including those on the Agency's Conservation Duties and Taking Account of Costs and Benefits. It explores the background to the Agency's sustainable development duty, its legislative and policy context and briefly describes the wider concept of sustainable development. The text in boxes is clarification and commentary on the form of the Agency's contribution to sustainable development. A short section has also been included on how the Agency could measure its progress on sustainable development.

2. A BRIEF BACKGROUND TO SUSTAINABLE DEVELOPMENT

- 2.1 The basic ideas for sustainable development were formulated into specific action plans in 1992 in Rio de Janeiro. Many world leaders and non-government organisations (NGOs) gathered at the United Nations Conference on Environment and Development (UNCED) - often called the Earth Summit. Over 150 states committed themselves to making future development sustainable. Its main products were:
 - Agenda 21 - a global action programme for sustainable development;
 - the Climate Change Convention - to tackle global warming by reducing emissions of greenhouse gases;
 - the Biodiversity Convention - for worldwide species and habitat protection; and
 - the Forestry principles - for the management and conservation of the world's forests.
- 2.2 It also recommended that each country prepare national strategies and action plans to implement their part of these agreements.
- 2.3 In response to this the UK Government produced *"Sustainable Development: The UK Strategy"* in January 1994. It also produced plans in accordance with the other 3 Rio commitments. These are *"Climate Change: The UK Programme"*, *"Biodiversity: The UK Action Plan"* and *"Sustainable Forestry: The UK Programme"*.

3. BACKGROUND TO THE AGENCY'S SUSTAINABLE DEVELOPMENT DUTY

3.1 As guardians of the environment the Environment Agency's vision is:

"A better environment in England and Wales for present and future generations."

3.2 Through its regulatory functions - water management and pollution prevention and control the Agency is responsible for regulating a wide range of processes and activities which either do or could affect the environment including:

- over 2000 industrial processes
- disposal of radioactive waste from 8000 sites
- 8000 waste management sites
- 70,000 waste carriers
- 100,000 water discharge consents including 6,000 sewage works
- 50,000 licensed water abstractions
- 43,000 km of flood defence works
- 1,000,000 angling licenses
- administration for 40,000 navigation licenses

The Agency also has a duty to monitor and assess the state of the environment.

3.3 Section 4 of the Environment Act 1995 lays down the principle aim of the Environment Agency as follows:

"It shall be the principal aim of the Agency (subject to and in accordance with the provisions of this Act or any other enactment and taking into account any likely costs) in discharging its functions so to protect or enhance the environment, taken as a whole, as to make the contribution towards attaining the objective of achieving sustainable development mentioned in subsection (3) below."

3.4 The Agency therefore has a key role to play in environmental monitoring, protection and enhancement and in making a contribution to sustainable development.

3.5 The Environmental Strategy Directorate is responsible for developing the Agency's overall guidance for its functional activities in order to deliver its principal aim. This will be done through the environmental strategy which will indicate the environmental priorities for the Agency and put forward the best ways to achieve its environmental objectives. The environmental strategy will guide the Agency's actions in the future. The Agency's sustainable development contribution will be a key outcome of the environmental strategy.

- 3.6 In order fully to understand the contribution that the Agency is required to make towards sustainable development, it is necessary to appreciate the overall framework within which it will operate. This framework includes UK Government policy, and statutory guidance to the Agency, and builds on previous Agency activity. This is discussed in section 4 of this Guidance.

3.7 Much of what was done by the Agency's predecessor organisations will continue and will contribute towards its sustainable development role. This includes the application of best practicable environmental option (BPEO) assessment techniques, cost/benefit analyses of projects, environmental impact and risk assessments, conservation and recreation schemes, waste minimisation programmes and integrated catchment management planning (now being developed as Local Environment Agency Plans - LEAPs).

- 3.8 This is the first substantial internal guidance on the Agency's sustainable development contribution and there will be amendments, updates and additions to it. The guidance in this document falls into 3 categories:
- a) statements and principles that can be applied to the Agency's work now, which are contained throughout this guidance and in section 7 where sustainable development in relation to the Agency's functions is discussed;
 - b) areas where separate guidance is already available; and
 - c) areas where separate guidance is being developed.

4 WHAT DOES SUSTAINABLE DEVELOPMENT MEAN FOR THE AGENCY?

- 4.1 Because the Environment Agency is directed and guided by Ministers on its contribution to sustainable development, it is helpful to examine the context of the guidance.
- 4.2 UK sustainable development policies are contained in "*Sustainable Development: The UK Strategy*". This introduces the concept of sustainable development by stating:

"Most societies want to achieve economic development to secure higher standards of living, now and for their children. They also seek to protect and enhance their environment, now and for their children. 'Sustainable development' tries to reconcile these two objectives"

- 4.3 The strategy refers to the definition of sustainable development attributed to Gro Harlem Brundtland in her role as Chair of the World Commission on Environment and Development as:

"development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Our Common Future, The World Commission on Environment and Development, 1987.

- 4.4 The UK Strategy expands on the principles of sustainable development and states:

"Sustainable development does not mean having less economic development: on the contrary, a healthy economy is better able to generate the resources to meet people's needs, and investment and environmental improvement often go hand in hand. Nor does it mean that every aspect of the present environment should be preserved at all costs. What it requires is that decisions throughout society are taken with proper regard to their environmental impact."

- 4.5 Considering the above the Agency should therefore integrate environmental impacts into its decision making. This applies at both policy and operational levels. This does and will continue to happen in the Agency but there are areas that need to be developed.

- 4.6 The strategy expands on the meaning of sustainable development:

"Because in many ways the environment is shared, collective action is necessary. There are certain specific principles to take into account in pursuing this."

- a) *Decisions should be based on the best possible scientific information and analysis of risks.*
- b) *Where there is uncertainty and potentially serious risks exist, precautionary action may be necessary.*
- c) *Ecological impacts must be considered, particularly where resources are non-renewable or effects may be irreversible.*
- d) *Costs implications should be brought home directly to the people responsible - the 'polluter pays' principle.*

Judgements have to be made about the weight to be put on these factors in particular cases. Sometimes environmental costs have to be accepted as the price of economic development, but on other occasions a site, or an ecosystem, or some other aspect of the environment, has to be regarded as

so valuable that it should be protected from exploitation."

- 4.7 Another guiding principle of UK sustainable development policy is the precautionary principle which is described in the UK Strategy as:

"Where there are significant risks of damage to the environment, the Government will be prepared to take precautionary action to limit the use of potentially dangerous materials or the spread of potentially dangerous pollutants, even where scientific knowledge is not conclusive, if the balance of likely costs and benefits justifies it."

- 4.8 These principles are and can continue to be used directly by the Agency now. However, specific tools will have to be developed to apply them. The Agency already engages in collective action such as waste minimisation projects and further areas can be identified and the Agency's role in them explained or developed.

- 4.9 Examining the principles laid out in paragraph 4.6 above in turn, they are as follows:

- a) Decisions should be based on the best possible scientific information and analysis of risks.

- 4.9.1 The Agency already does and will continue to act on the best scientific information available at the time when carrying out its functions and formulating policies. If there is a gap in its knowledge it does and will continue to seek to fill it from either internal or external research and development programmes, or from the research of others for future use.

- b) Where there is uncertainty and potentially serious risks exist, precautionary action may be necessary.

- 4.9.2 Risk assessment techniques are used by the Agency and others will be developed where appropriate. The precautionary principle will be applied by the Agency, which will be guided on its application where appropriate by views and evidence from others such as the Government's Chief Medical Officer and the Health and Safety Executive and standards determined by other competent bodies.

- c) Ecological impacts must be considered, particularly where resources are non-renewable or effects may be irreversible.

4.9.3 The Agency already considers ecological impacts of its operations in many cases. Tools to enhance and, where necessary, extend these assessment will be developed.

- d) Cost implications should be brought home directly to the people responsible - the 'polluter pays' principle.

4.9.4 Through fees, charges and levies the Agency already applies, to some extent, the principle of the polluter or user pays by recovering the cost of its regulatory activities. This area will develop and require further consideration of its application in order to ensure that the full costs of environmental pollution and resource depletion are borne by the producer.

4.9.5 Sound judgement is and will continue to be applied to the application of the above principles in the Agency. This is often based on operational experience and consideration of the issues raised, but other tools are being developed such as the use of decision making support techniques like multi-criteria analysis (MCA).

4.9.6 Multi criteria analysis provides a framework for complex decision making by assessing the information and data available and weighting the importance of the criteria which form the elements of decision making process. It has been applied to various areas where the decision making process required consideration of environmental components.

- 4.10 In order to reconcile economic development and environmental protection it is necessary to develop specific tools and techniques to evaluate policies and actions. The UK Strategy recognises this:

"In policy-making, proper tools of analysis have to be applied. An important objective is to develop better indicators and natural resource accounting which will over time give some better measure of the benefits and damage to the environment associated with economic change."

- 4.11 The Strategy then goes on to apply these principles to a range of environmental media, services and sectors in society. The use of indicators as mentioned above for measuring progress towards sustainable development is discussed in section 8 of this guidance. Where natural resource accounting is applicable to the Agency's duties is included in separate guidance, SD003 "Taking Account of Costs and Benefits".

- 4.12 Further insight into Government policy can be gained from the 1990 White Paper on the Environment, "This Common Inheritance". It contained the idea of sustainable development and stated:

"The Government therefore supports the principle of sustainable development. This means living on the earth's income rather than eroding its capital. It means keeping the consumption of renewable natural resources within the limits of their replenishment. It means handing down to successive generations not only man-made wealth (such as buildings, roads and railways) but also natural wealth, such as clean and adequate water supplies, good arable land, a wealth of wildlife and ample forests."

- 4.13 So in summary, the UK Government's policy on sustainable development is to balance economic development and environmental protection, to apply several guiding principles, such as the precautionary and polluter pays principles, and to develop tools such as natural resource accounting and policy analysis methods in order to determine the most appropriate action that is needed to contribute to sustainable development.

5. LEGISLATION ON THE AGENCY'S CONTRIBUTION TO SUSTAINABLE DEVELOPMENT

- 5.1 The legislative framework for the Agency's sustainable development contribution is contained in the Environment Act 1995. This Act established the Agency, consolidated some environmental protection legislation and contained specific sections on the Agency's duties and powers.

- 5.2 Section 4 (1) of the Act lays down the principle aim of the Agency as:

"It shall be the principal aim of the Agency (subject to and in accordance with the provisions of this Act or any other enactment and taking into account any likely costs) in discharging its functions so to protect or enhance the environment, taken as a whole, as to make the contribution towards attaining the objective of achieving sustainable development mentioned in subsection (3) below."

- 5.3 Section 4(2) states:

"The Ministers shall from time to time give guidance to the Agency with respect to objectives which they consider it appropriate for the Agency to pursue in the discharge of its functions."

5.4 Section 4(3) states:

"The guidance given under subsection (2) above must include guidance with respect to the contribution which, having regard to the Agency's responsibilities and resources, the Ministers consider it appropriate for the Agency to make, by discharge of its functions, towards attaining the objective of achieving sustainable development."

5.5 Section 4(4) states:

"In discharging its functions, the Agency shall have regard to guidance given under this section."

5.6 Guidance under section 4(2)&(3) has now been received by the Agency from Ministers and is discussed in sections 6 and 7 of this guidance.

5.7 Section 4 (1) referred to the Agency taking into account any likely costs in carrying out its principal aim. Section 39 is more detailed on this subject and places a general duty on the Agency to take into account likely costs and benefits in considering when and how to exercise its powers. Separate guidance, SD003 "Taking Account of Costs and Benefits" has been produced by the Agency on this duty.

5.8 In summary section 4(1) lays out the Agency's principal aim which is contributing towards the objective of achieving sustainable development which Ministers consider - having regard to its responsibilities and resources - that the Agency should make by the discharge of its functions. Ministerial guidance contains advice on this duty and the Agency must have regard to the guidance.

6. STATUTORY GUIDANCE ON THE AGENCY'S CONTRIBUTION TO SUSTAINABLE DEVELOPMENT

6.1 This guidance was issued by Ministers on 7th November 1996 and is given in respect to the objectives of the Agency and its contribution towards achieving sustainable development. It is issued together with a non statutory explanatory document which sets the context for the statutory guidance. Paragraph 2.3 of the Agency's management statement, referring to the statutory guidance, also states:

"The Agency will make the appropriate contribution towards sustainable development if it acts in accordance with that guidance."

- 6.2 The guidance document is organised in 6 chapters with one annex:

Chapter 1 is an introduction giving content and scope
Chapter 2 covers the principle aim, functions and objectives of the Agency
Chapter 3 sets out the principles of sustainable development
Chapter 4 repeats the statutory guidance
Chapter 5 contains a commentary on the costs and benefits duty
Chapter 6 provides informal guidance on each of the Agency's main functions
Annex A describes the main functions and purposes of the agency.

- 6.3 The statutory guidance makes it clear that in creating the Environment Agency the Government's main purpose:

"was not to create new functions - although it did create some - but to enable existing functions to be exercised in such a way as to bring greater benefit both to the environment and to those who are being regulated."

- 6.4 This statement indicates that through exercising its existing environmental protection and enhancement duties and powers, *the Agency is already making a contribution to the national aim of achieving sustainable development.*

- 6.5 However, there are areas that need to be developed by the Agency and the guidance supports this by stating that:

The principal aim is designed:

- " i) *to build on the work of the existing bodies in protecting and enhancing the environment; but*
- ii) *to lay greater emphasis on the need to look at the environment as a whole, through an integrated approach, rather than at individual media in isolation; and*
- iii) *to place the Agency's activities more firmly in the context of sustainable development."*

- 6.6 The Agency also has seven strategic objectives as laid out in the Agency's management statement, its 1995/6 Annual Report and in statutory guidance from Ministers under Section 4 (2) of the Environment Act 1995. These state that the Agency should:

- " i) *adopt, across all its functions, an integrated approach to environmental protection and enhancement which considers impacts of substances and activities on all environmental media and on natural resources;*

- ii) *work with all relevant sectors of society, including regulated organizations, to develop approaches which deliver environmental requirements and goals without imposing excessive costs (in relation to benefits gained) on regulated organisations or society as a whole;*
- iii) *adopt clear and effective procedures for serving its customers, including by developing single points of contact through which regulated organisations can deal with the Agency;*
- iv) *operate to high professional standards, based on sound science, information and analysis of the environment and of processes which affect it;*
- v) *organize its activities in ways which reflect good environmental and management practice and provide value for money for those who pay its charges and taxpayers as a whole;*
- vii) *provide clear and readily available advice and information on its work; and*
- viii) *develop a close and responsive relationship with the public, local authorities and other representatives of local communities, and regulated organizations."*

6.7 The statutory guidance from Ministers under Section 4 (3) of the Act states that in order to make a contribution to achieving sustainable development Ministers concluded that it would be appropriate for the Agency to act as follows.

6.7.1 To Take A Holistic Approach To The Protection And Enhancement Of The Environment

The guidance states that the Agency should:

- strive through its actions to optimise environmental benefits as a whole taking into account costs and benefits; and
- carry out its functions taking into account the impacts of pollutants from different sources across different media or within any medium and the interaction of pollutants by:
 - exercising its functions in combination,
 - carrying out its pollution control and water management functions in an integrated manner, and
 - making use of integrated catchment management planning or other integrated geographic planning tools.

In order to achieve a holistic approach these areas will need to be developed in the Agency. Integrated planning will have to be delivered at corporate, policy and operational level. Local Environment Agency Plans (LEAPs) are seeking to achieve these aims by integrating planning at the operational level.

6.7.2 To Take A Long Term Perspective

The guidance states that this means:

- taking into account long term implications and effects particularly
 - those which appear to be irreversible
 - those which are only reversible at a high cost over a long timescale
 - those which raise issues of inter-generational equity

Timescale and investment criteria are already well understood in some of the Agency's work. However these may not be comprehensive and guidance will need to be developed particularly on the issue of inter-generational equity.

6.7.3 Conserving And Enhancing Biodiversity And Protecting Natural Heritage

The guidance states that this means:

- paying particular attention to its statutory obligations with respect to conservation;
- protecting habitats and ecosystems in accordance with Government policy and commitments; and
- applying these obligations to both officially designated sites and non-designated sites which are important for nature conservation.

Separate more detailed guidance is available, SD002 "The Agency's Conservation Duties."

6.7.4 Contribute To Protecting The Global Atmosphere

The guidance states that this means:

- having regard to the Government's commitments under the UN Framework Convention on Climate Change on reducing greenhouse gas emissions and the Montreal Protocol on limiting the use of ozone depleting substances.

The Agency is assessing which actions will be appropriate for it carry out in order to adapt to the consequences of climate change through its functions and explore any possible role it may have in mitigating climate change. The Agency has a Climate Change Focus Group that is developing this area.

6.7.5 Investigate The Scope Of Reconciling The Needs Of The Environment And Those Of Development

The guidance states that this means: -

- assisting regulated organizations to maximise the scope for cost-effective investment in improved technologies and management techniques;
- discharging its regulatory functions in partnership with regulated organizations; and
- with the above in mind seek to take advantage of companies planned investment cycles within the Agency's overall timetables for meeting environmental standards.

The Agency should seek:

- to establish clear and consistent policy parameters so that regulated organizations can plan for the future;
- to encourage regulated organizations to adopt plans and management techniques, such as environmental management systems, to enable them to meet those clear policy parameters;
- to encourage regulated organizations to exploit fully the potential for cost savings through environmental initiatives;
- to encourage regulated organizations to take voluntary action to improve their environmental performance beyond regulatory requirements cost effectively; and

to encourage knowledge and understanding, particularly in regulated organizations, of best available techniques not entailing excessive costs for the prevention and minimisation of pollution, including the efficient use of resources, such as energy, and the minimisation of waste.

Improved technology in the form of environmental and clean technology is capable of delivering environmental improvement in appropriate cases. Not only does this help regulated industries to meet their objectives but it could also benefit the environmental technology industry who supply the services. This in itself is an economic development opportunity. There may be other ways in which this link between regulation, environmental improvements through technology and environmental technology markets can be developed. This will be investigated by the Agency.

Improved management techniques can also be valuable in achieving environmental objectives. Whilst the Agency is primarily a regulatory organisation and achieves its environmental objectives using regulation, there may be innovative ways of achieving them.

The Agency will explore ways in which regulated organisations could benefit from improved environmental management. This is an area that will need careful consideration by the Agency and the development of appropriate policies and systems.

6.7.6 Strive To Develop Close And Responsive Relationships

The guidance states that this means:

building and developing relationships with external groups with environmental responsibilities in order to work together towards achieving sustainable development.

The Agency does not have duties and responsibilities for some areas which can have a significant impact on its work such as local air quality, transportation, land use planning and local Agenda 21. In order to assess the impact of these environmental pressures and enhance and protect the environment from them, the Agency will need to work in partnership with others.

The Agency already has many links with external organisations with environmental responsibilities. Local authorities with their range of environmental responsibilities such as land use planning, environmental health and transportation are key partners for the Agency in achieving its environmental objectives. The Local Authority Liaison Team in the Water Management Directorate of the Agency is continuing to assist in developing relationships with local authorities.

A key opportunity for the Agency will be the continuation and expansion of its role as competent environmental authority in the administration of European structural funds. Successful work to date has produced project screening criteria which maximise the environmental benefits of applying such funds and minimising adverse impacts. Guidance is in preparation and will be available early in 1997.

In its relationships with external groups the Agency should seek to make its role clear and consistent with its responsibilities and ensure that collaboration is resulting in achievement of the Agency's environmental objectives as well as those of others. This can be difficult in areas which are developing for the Agency. Guidance will be developed.

6.7.7 High Quality Information And Advice

The guidance states that this means:

- the Agency becoming a recognised centre of knowledge and expertise
- providing advice and information on its work and best environmental practice.

Providing advice and information is already a responsibility for the Agency. This is being assisted by the work of the Scientific and Technical Information Service in the Environmental Strategy Directorate. It is developing a national data policy to guide this process. A network of national centres is being established in the Agency which will bring together expertise on particular subjects and areas that need to be developed. This will assist the Agency in becoming a recognised centre of knowledge and expertise and any other necessary actions on this subject will need to be developed.

7. THE NON-STATUTORY EXPLANATORY DOCUMENT AND ITS GUIDANCE MATERIAL ON PARTICULAR FUNCTIONS

- 7.1 The non-statutory explanatory document on the Agency's sustainable development contribution which accompanies the statutory guidance states that:

"One of the challenges in pursuing sustainable development is to promote ways of encouraging environmentally friendly economic activity, and of discouraging or controlling environmentally damaging activity."

- 7.2 This statement is another working principle for the Agency. The following sections expand on the meaning of this principle and its application, along with other principles, to the Agency's work.

- 7.3 In Chapter 3 the document argues that the motivation for earlier environmental legislation was the protection of human health and that this led to action to reduce air pollution, provide clean water and minimise the risks from waste disposal. The success of much of this early legislation has led to a shift of public concern to areas where cause and effect are harder to determine - such as long term exposure to low level of pollutants.

- 7.4 There is also a concern to conserve natural resources that have an economic value and which are in finite or potentially finite supply. People value aspects of the environment for its own sake and want to preserve aspects of the environment such as landscape, wildlife and habitats and the built heritage, not least in order to pass them onto future generations. People's concerns now go beyond their immediate environment to global issues such as ozone depletion and climate change.

- 7.5 The document states:

"Decisions about economic development ought to take account of the costs of potential pollution and waste and the value of resources that are consumed and conversely, of the value of any environmental improvements made. A key objective of environmental and sustainable development policy is to ensure that environmental costs and benefits are properly and fully taken into account in public and private sector decisions alongside the economic costs and benefits."

- 7.6 There are a number of principles that can be applied in the Agency's work and which support the aims in paragraph 7.5 above. They are contained in Chapter 3 of the non statutory explanatory document:

- action should be based on fact and the best available scientific information;

- when potential damage to the environment is both uncertain and significant, it is necessary to act on the basis of the **precautionary principle**; this was described in section 4.6 and is supported by the Rio Declaration's expression of the precautionary approach

"Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

The document states that the principle can be applicable to all forms of environmental damage that might arise; nor should it only apply to the actions of government.

- Ecological criteria have a central role to play. The concept of **carrying capacity** can be used to determine not only the ability of a habitat or ecosystem to sustain a population of a particular species but also the capacity of the environment to absorb pollution or waste such as the calculation of the critical load of a pollutant that an ecosystem can absorb.

- Human wealth consists of both man-made capital and **natural environmental capital** and other aspects of quality of life. Natural capital consists of both **renewable and non-renewable resources**. Sustainable development enhances total wealth while using natural resources prudently in order to conserve renewable resources and uses non-renewables at a rate that considers the needs of future generations. Consideration also needs to be given to the significance of the risk of irreversible environmental effects.

- There are a number of ways in which the Agency interfaces with human health. Standards relating to flood defence are directly related to the saving of human life, and standards set in statute - such as those relating to radiological protection - are also directly related to risks to human health. Many aspects of risk assessment, environmental modelling, the estimation of environmental impact, and the assessment of likely costs and benefits also include considerations of human health. The Agency is also involved in epidemiological studies - such as those relating to bathing water standards - and other research and development programmes in which the protection of people is the prime concern. But the Agency does not itself employ medically-qualified staff, and the explanatory guidance requires the Agency to be guided, where appropriate, by the views of the Chief Medical Officer and the Health and Safety Executive and Commission.

- Judgements have to be made about the weight to be put on these factors in particular cases and the balance of economic and environmental considerations. Some aspects of the environment may have to change due to economic development others may be considered so valuable that they should be protected from exploitation. Allowance should be made for the interests of **future generations** and pressures on the **global environment** when making these judgements.

Polluters are often not those that bear the consequences of their pollution. If a polluter is made to pay for environmental pollution and resource depletion then the costs of pollution, waste and resource use are part of the calculations of their enterprise. The document states that the "polluter pays" principle requires that:

" when production processes threaten or cause damage to the environment, the cost of necessary environmental measures should be borne by the producer, and not by society at large, giving incentives to reduce pollution."

If these costs are passed onto consumers then ultimately the user pays which may have the effect of reducing demand for products and services that result in pollution.

Translating principles into practice is not easy. Sound techniques of analysis for public decisions, standard setting, balancing environmental impacts and public expenditure and assessing compliance costs for business need to be developed. Cost benefit analysis can be used, in theory, to assign values to the environmental impacts of economic development. However, it is not always possible to identify impacts or quantify values. Risk assessment can be used to help decision making or planning action where there is uncertainty. In order to perform risk assessment the best science should be used to identify the hazards, the potential consequences and actions to mitigate these under alternative options. Scientific uncertainties should be identified and given proper weight in the risk assessment.

7.6.1 Descriptions of some of these techniques and their application are contained in recent Government publications as part of The Deregulation Initiative: *"Regulation in the Balance: A Guide to Regulatory Appraisal Incorporating Risk Assessment"* and *"Checking the Cost of Regulation: A Guide to Compliance Cost Assessment."*

7.7 The following are extracts from the guidance and explanations on how sustainable development relates to the Agency's specific functions. It refers to functions but the Agency's work must be integrated, as detailed in the sections above. The Agency should *"seek to identify the best practicable option to protect and enhance the environment taken as a whole."* This is another working principle for the Agency. Exercising its work in an integrated form will present new opportunities for achieving environmental objectives.

7.8 Integrated Pollution Control

7.8.1 The concepts of BATNEEC and BPEO as applied to IPC, which is a dynamic process, are seen as contributing to the principles of sustainable development. The document states that:

"The most sustainable form of development is that which achieves the optimum distribution of any pollutants remaining to be released to the environment after they have been minimised under BATNEEC to the three media of air, water and land, according to the ability of those media to accept such pollutants, without, for example, exceeding critical loads."

7.8.2 The Agency already applies the principles above to IPC. It will continue to do so and will seek to review their application when significant developments occur.

7.8.3 The document also contains the following:

"In addition, Ministers expect the Agency to consider whether, and if so how, either or both of these concepts could be of wider relevance in its work, given the overriding need to contribute towards the achievement of sustainable development in all of the Agency's functions."

7.8.4 Although at present BPEO is applied to industrial processes, the Agency should apply the BPEO and BATNEEC principles to both non-IPC related functions and holistically - across all its functions. These are powerful techniques and would include risk assessment, life cycle assessment and decision making techniques to be developed for application holistically to the Agency's work. This area will be developed further.

7.9 Radioactive Substances

7.9.1 The Government's policy aims on radioactive waste are set out in the White Paper *"Review of Radioactive Waste Management Policy: Final Conclusions."* The document states that radioactive waste management should be based on the principles of sustainable development and that means managing and disposing of it in ways that protect the public, the workforce and the environment.

7.9.2 The Government will maintain and continue to develop a policy and regulatory framework which ensures that:

- radioactive wastes are not unnecessarily created;
- such wastes as are created are safely and appropriately managed and treated; and
- they are then safely disposed of at appropriate times and in appropriate ways.

7.9.3 The Agency will continue to contribute to these aims.

7.10 Waste Regulation

7.10.1 The Government's policies on waste management are set out in its *"Making Waste Work - A Strategy for Sustainable Waste Management in England and Wales."* Its policy aims are:

- to reduce the amount of waste that society produces;
- to make best use of the waste that is produced; and
- to choose waste management practices which minimise the risks of harm to human health and of immediate and future damage to or pollution of the environment.

7.10.2 The strategy sets out the role of the Agency in helping to deliver its objectives:

- through its regulatory functions in relation to waste;
- through advice and guidance on good waste management practices and by sponsoring research; and
- through the improved collection of data, especially by carrying out a national survey of waste arisings and facilities.

7.10.3 The Agency will continue to contribute to and develop these aims.

7.11 Contaminated Land

7.11.1 Government policies for contaminated land are set out in *"A Framework for Contaminated Land"* published in November 1994. Its view is that the 'suitable for use' approach supports sustainable development both by reducing the damage from past activities and by permitting contaminated land to be kept in, or returned, to beneficial use wherever practicable - thereby minimising avoidable pressures for new development to take place on greenfield sites.

7.11.2 The Government expects the Agency to contribute towards sustainable development when exercising its contaminated land functions including:

- regulating "special sites";
- giving advice and technical guidance to relevant bodies;
- arranging for the carrying out of research;
- reporting on the state of contaminated land; and
- responding to planning consultations.

7.11.3 The Agency will continue to fulfil and develop its contaminated land duties.

7.12 Water Protection

- 7.12.1 The document states that the Government's policy objective for water protection is where possible to prevent deterioration in water quality and to seek to secure improvements in accordance with agreed priorities which reflect the requirements of Community legislation. This is seen as promoting sustainable development by aiming for high standards of health and environmental protection whilst focusing measures and expenditure where action is most necessary.
- 7.12.2 The Agency will continue to contribute to and develop these aims.

7.13 Water Management

- 7.13.1 The Government's policy is stated in the document as promoting sustainable development by seeking to protect and enhance the water environment, with due regard to the sustainable use to be made of it. The Agency's work should be integrated so that its other activities are consistent with its water management objectives. When exercising its water management functions it must also take into account the sustainability of relevant marine environments and the relevant UK international obligations:
- 7.13.2 The document states that the key elements that should govern the Agency's activities are:
- a strategic approach to catchment protection;
 - the need to work with natural river and coastal processes;
 - integration of technical, economic and environmental factors;
 - assessment of costs and benefits; and
 - consultation with interests affected by its water management activities.
- 7.13.3 The Agency will continue to contribute to these objectives and develop policies and practices in the necessary areas.

7.14 Water Resource Control

- 7.14.1 The Government's policy for water resource control is to conserve, redistribute and augment water resources.
- 7.14.2 The Government expects the Agency to use its powers to encourage water conservation in areas of potential shortage where it is economic to do so and to encourage the development of new water resources in a sustainable way where they are needed. A more efficient use of existing water storage and leakage control options should be considered when assessing the need for new water resource developments.
- 7.14.3 The Agency will continue to contribute to and develop these objectives.

7.15 Flood Defence

- 7.15.1 Sustainable flood and coastal defence schemes are defined as those which take account of natural processes and of other defences and developments within a river catchment or coastal sediment cell and which avoid as far as possible committing future generations to inappropriate options for defence. The Agency will be expected to act in accordance with this policy. In addition, it will be expected to discourage inappropriate development in areas at risk from flooding.
- 7.15.2 The Agency will continue to contribute to these objectives and develop policies and practices where necessary.

7.16 Fisheries

- 7.16.1 The Agency should seek to develop sustainable fisheries through controls on exploitation; enforcement of anti-poaching legislation; scrutiny of planning applications, flood defence schemes and abstraction and discharge consents; and, where appropriate, through habitat restoration and stocking. In doing so it should have regard in particular to the need to maintain and where appropriate enhance the natural diversity of fish species and to maintain the genetic integrity of individual stocks.
- 7.16.2 A healthy and abundant representative stock of freshwater fish will demonstrate the Agency's success in meeting its water protection and water management objectives.
- 7.16.3 The Agency will continue to contribute to and develop these objectives. Quantity and quality of fish stocks are already used as an indicator of water quality. This will be continued.

7.17 Recreation

- 7.17.1 The Government's general objective for water recreation is that the water environment should contribute to the wider provision of opportunities for recreation and sport, providing for as broad a range of interest groups as practicable and ensuring that the recreational needs of the surrounding area are fully taken into account. The Agency has a duty under Section 6 of the Environment Act 1995, to such an extent as it considers it desirable, to promote the use of inland and coastal waters and associated land for recreational purposes.
- 7.17.2 A code of practice to be issued under Section 9 of the Act will give guidance on these matters. In the meantime, the principles of the *"Code of Practice on Conservation, Access and Recreation"* made under Section 10 of the Water Act 1989 apply.

7.18 Navigation

- 7.18.1 The aim of Government policy on navigation is to maximise the potential of the waterways, so far as this is consistent with other objectives of sustainable development, whilst taking account of the needs of all interest groups, and ensuring good value for money for the taxpayer. The Agency should have regard, in managing its navigation duties, to landscape, nature and archaeological conservation, and environmental protection and enhancement. The Agency should pursue opportunities for joint working and close collaboration with other navigation authorities.

7.19 Coastal Zone Management

- 7.19.1 The Government's general policies for coastal zone management are set out in its Policy Guidelines for the Coast, November 1995. These emphasise the need for an integrated view of coastal zone management, taking account of the wide range of interests involved, and place this in the context of the principles of sustainable development. The Agency has important responsibilities within the coastal zone and its programme of LEAPs will make a major contribution to its planning and management assisting in taking an integrated view of coastal zone management.

7.20 Land Use Planning

- 7.20.1 The Agency is already involved in land use planning in a number of well understood ways. The need to assess the likely impact of proposed development as far as its areas of responsibility are concerned will continue. Additionally the Agency will consider its involvement in the wider aspects of land use planning and sustainable development. Such as consultation on the sustainable development aspects of local authority strategic land use plans.

7.21 Conservation

- 7.21.1 Separate guidance is available on the Agency's conservation roles and responsibilities, SD002 "The Agency's Conservation Duties."

8. MEASURING PROGRESS ON THE AGENCY'S CONTRIBUTION TO SUSTAINABLE DEVELOPMENT

- 8.1 In his letter accompanying the statutory guidance to the Agency's Chairman, the Secretary of State for the Environment asked that he and his colleagues be kept informed of the Agency's progress on the implementation of the guidance and in pursuing the aims and objectives set out there and in the management statement. He suggested that this could be monitored as part of the Agency's annual corporate planning process.

- 8.2 This supports the need to assess the effectiveness of the Agency's actions and sustainable development indicators may be helpful in doing this. In the DoE March 1996 document "Indicators of Sustainable Development for the United Kingdom" it is stated that indicators serve three basic functions: simplification, quantification and communication. Indicators generally simplify in order to make complex phenomena quantifiable so that information can be communicated.
- 8.3 Sustainable development indicators are different from environmental indicators and measurements. Consideration is being given to the appropriate indicators of sustainable development for use by the Agency. A consultation exercise is being undertaken by the Environmental Monitoring and Assessment Section in the Environmental Strategy Directorate on how the Agency should measure, monitor and assess the state of the environment.
- 8.4 When developed the indicators should have the ability to be used in conjunction with the Agency's report on the environmental pressures in England and Wales *"The Environment of England and Wales - A Snapshot"*.
- 8.5 Indicators should also be relevant to local Agenda 21 processes, the Agency's internal planning processes - both environmental through Local Environment Agency Plans and Corporate Planning (and its individual service performance indicators where possible). An Agency group is progressing this issue.

9. CONCLUSIONS

- 9.1 The Agency's principal aim is to contribute towards the objective of achieving sustainable development, having regard to its responsibilities and resources, by the discharge of its functions. This duty is guided by Ministers. Paragraph 2.3 of the Agency's management statement issued by Ministers on 7th November 1996 states that the Agency will make the appropriate contribution towards sustainable development if it acts in accordance with that guidance. The background to sustainable development, the Agency's legislative duties in respect to it and guidance from Ministers is described above.
- 9.2 The legislation and guidance indicates that by carrying out its functions the Agency by and large is already contributing to sustainable development. However, some areas need to be developed in order to take advantage of the opportunities that integration brings for contributing to sustainable development. The guidance above describes many sustainable development principles and techniques. In summary they are:
- Because the environment is shared, collective action is necessary
 - Decisions should be based on the best possible scientific information and analysis of risks
 - Where there is uncertainty and potentially serious risks exist, precautionary action may be necessary

- Ecological impacts must be considered, particularly where resources are non-renewable or effects may be irreversible
- Cost implications should be brought home directly to the people responsible - the 'polluter pays principle'
- A holistic approach should be taken to environmental objectives
- A long term perspective should be taken
- Biodiversity should be conserved and enhanced and natural heritage protected
- A contribution should be made to protecting the global atmosphere
- The scope for reconciling the needs of the environment and those of development with regard to regulated organizations should be investigated
- Close and responsive relationships should be developed
- High quality information and advice should be used by the Agency and provided to others
- Judgements will have to be made about the weight to be put on these factors in particular cases

9.3 These principles can be applied directly to the work of the Agency. Guidance will be needed for some areas and this will be developed. Focusing the Agency's activities to make its contribution to SD will be an integrating and unifying theme, contributing to change. It will present many opportunities for new ways of working towards achieving the Agency's objectives.

10. THE NEXT STEPS

10.1 Following this general guidance more specific guidance will be developed for those areas where it is necessary and which have been indicated above. Some related guidance is already available or is being developed such as: SD002 "The Agency's Conservation Duties" and SD003 "Taking Account of Cost and Benefits".

10.2 Further subsequent versions of this guidance will contain a number of case studies that detail the Agency's contribution to sustainable development (SD).

- 10.3 In order to facilitate this, the SD Team will produce a collection of case studies in a separate document on the Agency and its SD contribution in 1997. This will illustrate the Agency's present contribution to SD and its planned future contribution. This will assist the Agency in assessing the form of its SD contribution. This will be a compilation of existing and developing initiatives and the case studies will be submitted from throughout the Agency. The SD Team will produce a short guide on how to assess whether the initiatives are suitable for inclusion in the case study document and circulate this widely, calling for submissions. The initiatives will have to meet the SD criteria laid out in this guidance and summarized in section 9.
- 10.4 The form of the Agency's sustainable development contribution in particular functions should be a key element of its functional strategies and corporate policies. They will therefore be assessed to ensure that the Agency's contribution to sustainable development is incorporated.
- 10.5 Regulation is the main environmental protection and enhancement tool used by the Agency. However, the Agency should also explore further innovative methods that are consistent with sustainable development and achieving the UK's environmental objectives. For example the Agency's waste minimisation projects have helped industry to achieve some of its environmental objectives by non-regulatory means through reducing resource use and waste production (liquid, gaseous and solid). These projects have resulted in both costs savings and reductions in environmental emissions for industry, improving their commercial and environmental performance. These projects also explored the possibility of shifting the focus of some industrial environmental activity from regulation of emissions to reduction at source, a shift which is consistent with sustainable development.
- 10.6 The SD function will develop a framework within which there will be a number of strategic programmes, initiatives and tools to assist the Agency in making its contribution to SD. These tools will be used to support and assess our contribution to SD and will include:
- strategic application of BPEO
 - risk assessment
 - assessment of costs and benefits
 - strategic life cycle assessment
 - strategic environmental assessment
 - assessment of carrying capacity
 - decision support tools such as multi criteria analysis
 - project appraisal
 - strategic partnerships with other sectors
 - support for partnership based environmental initiatives
 - integrated resource planning
 - demand management

- SD modelling and SD indicators
- R&D to support development of SD tools and programmes
- production of strategies eg for climate change
- discussion documents

- 10.7 The proposed National Centre for the Assessment of Risks, Costs and Benefits will be developed as a key mechanism for developing and applying the principles and tools for the Agency's contribution to SD.
- 10.8 In developing policies the Sustainable Development function will ensure that they are useful and usable, and satisfy both operational and strategic needs. They will be formulated following discussions throughout the Agency and appropriate external bodies. Clarification and amplification of this guidance is available from the SD Team at Head Office.

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SD 2	The Agency's Conservation Duties.	November 1996
SD 3	Taking Account of Costs and Benefits.	November 1996
SD 4	The Local Communities in Rural Areas	Forthcoming

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