

**August 2001**

**Environmental Action Plan:  
Sustainable development**

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# 1. Introduction

## *Purpose of this document*

- 1.1 This document is published electronically in conjunction with Ofgem's Environmental Action Plan. It is designed to provide more detailed background information on sustainable development than is possible in the main Environmental Action Plan.

# 2. Sustainable development

## *Definitions of sustainable development*

- 2.1 Sustainable development has been defined in a number of different ways. A widely used United Nations definition is:

*'Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'*<sup>1</sup>

- 2.2 The UK Government describes sustainable development as: 'A better quality of life for everyone, now and for generations to come' in their document *'A better quality of life, A strategy for sustainable development in the United Kingdom'*.

- 2.3 The UK's national sustainable development strategy goes further, explaining that:

"Sustainable development involves meeting the following objectives at the same time:

- ◆ social progress which recognises the needs of everyone
- ◆ effective protection of the environment
- ◆ prudent use of natural resources
- ◆ maintenance of high and stable levels of economic growth and employment."

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<sup>1</sup> Bruntland, 1987

- 2.4 Another commentator explains that: 'If sustainability means anything, it must require that something be conserved for the very long run. It is very important to understand what that something is. I think it has to be a generalised capacity to produce economic well being.'<sup>2</sup>

### ***Economic aspects of sustainable development***

- 2.5 The International Panel on Climate Change (IPCC) stresses that: 'although sustainable development began as an ethical principle, it is at the same time an economic concept, focusing on two issues: intertemporal equity, and capital accumulation and substitutability.'<sup>3</sup>

#### **Intertemporal equity**

- 2.6 The idea of intertemporal equity is based on the requirement that future generations be at least as well off as current generations. Any environmental degradation should be offset by increases in capital stock to ensure future generations at least the same standard of living. Therefore sustainable development does not preclude the use of exhaustible natural resources, but requires that any use be appropriately offset. In practice, this requires calculations as to what is needed to 'offset' the resources.

#### **Capital accumulation and substitutability**

- 2.7 This concept is based on the question of how far technology, skills and capital equipment can substitute for a decline in exhaustible resource stocks. Some economists believe that substitutes exist for all resources making no single resource indispensable whereas other economists disagree.

#### **'Strong' versus 'weak' sustainability**

- 2.8 Commentators make the distinction between 'strong' sustainability which requires that a part of any natural capital, being irreplaceable, should be

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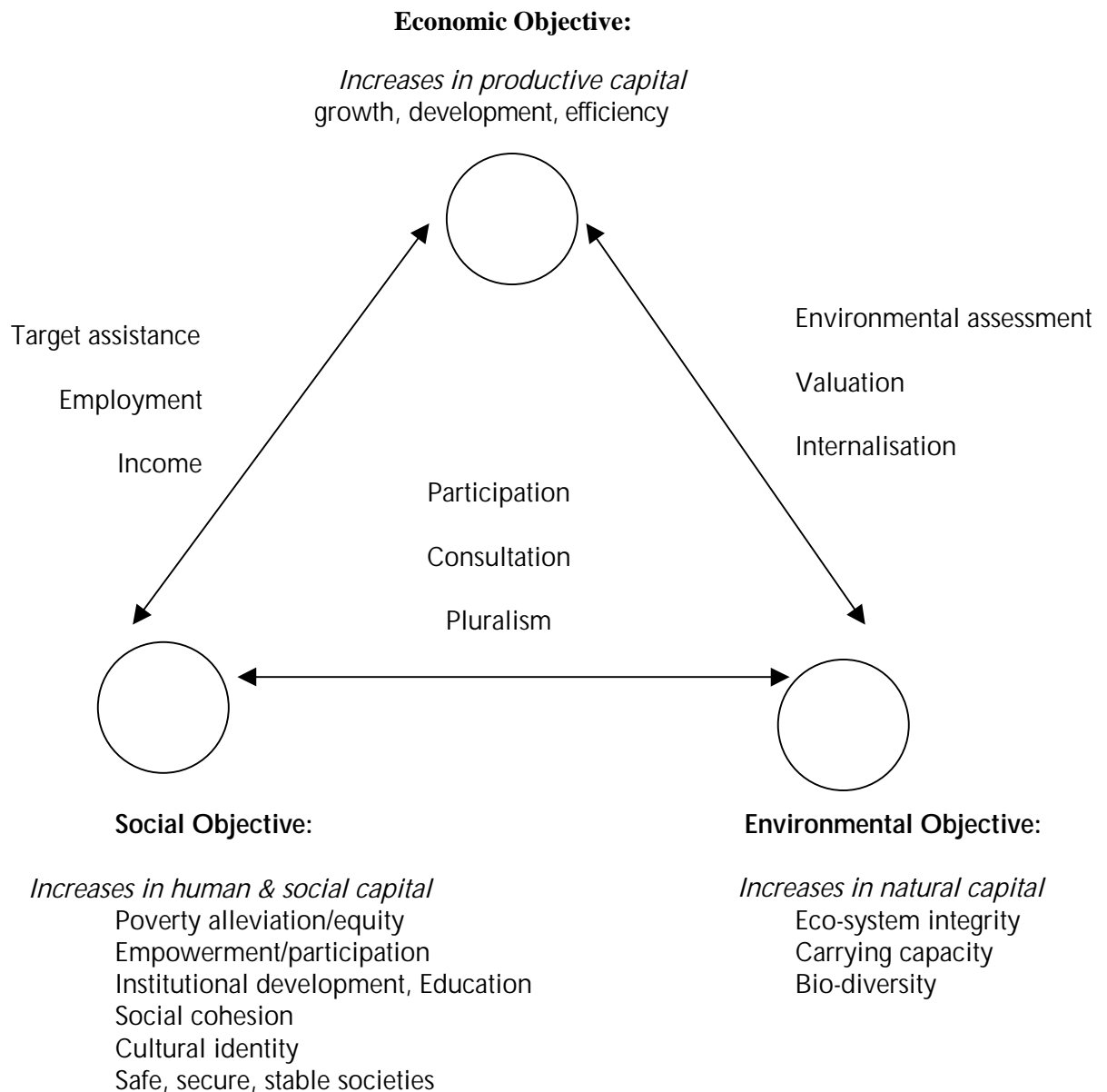
<sup>2</sup> Solow, 1992

<sup>3</sup> International Panel of Climate Change (IPCC), 1995 Report

retained, and 'weak' sustainability which allows for any depletion of natural capital to be offset by other forms of natural capital.

### ***The sustainable development nexus***

Sustainable development is sometimes depicted as the interaction of three nodes<sup>4</sup>.



<sup>4</sup> Adapted from Munasinghe, 1993; Khan, 1995 & Serageldin and Steer, 1994

## *The UK Sustainable Development Strategy*

- 2.9 The Government prepared its first Sustainable Development Strategy in 1994 following the Earth Summit in Rio. (See Section 2, above, for more details on the global strategy for sustainable development.) The UK Round Table for Sustainable Development was set up in January 1995 as a forum to advise the government on the key issues and to work with the Government Panel on Sustainable Development.
- 2.10 In May 1999, the Government published a white Paper: *'A better quality of life A Strategy for Sustainable Development in the United Kingdom'*<sup>5</sup> to update the 1994 strategy. The final document took account of comments on the 1998 public consultation paper – *'Opportunities for change'*<sup>6</sup>.
- 2.11 The Strategy called for a new, higher profile advisory body to help the UK reach its sustainable development aims, as well as the Sustainable Development Unit in DEFRA. In October 2000, The Sustainable Development Commission, chaired by Jonathon Porritt, was launched with a lifetime of five years. The new body replaced both the Government Panel on Sustainable Development and the Round Table on Sustainable Development and has been given a larger budget to raise the profile of sustainable development. The Commission reports to the Prime Minister, First Minister in Scotland, the First Secretary in Wales and equivalent Ministers in Northern Ireland.
- 2.12 The Sustainable Development Commission's mission statement is:

*"To inspire sustainable development in government, the economy and society."*

Its strategic objectives are:

- ◆ to advocate a compelling vision of a sustainable economy and society
- ◆ to review how far sustainable development is being achieved in the UK across all sectors
- ◆ to identify the opportunities for, and obstacles to, step changes to sustainable development by government, business and the media

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<sup>5</sup> DETR *A better quality of life: a strategy for sustainable development in the United Kingdom*, May 1999

<sup>6</sup> DETR *Sustainable Development: Opportunities for Change Consultation on a revised UK Strategy* 1998

- ◆ to promote mechanisms which will deliver a sustainable society
- ◆ to advance innovative approaches to policy-making and encourage wider participation, and
- ◆ To help mainstream the principles and practices of sustainable development, and to support and encourage leadership and best practice, in all sectors of society.

2.13 The Government's policies for implementing the strategy are based on the ten principles outlined below. Some are established legal principles while others are 'approaches' to decision making.

- ◆ putting people at the centre of development
- ◆ taking a long-term perspective while meeting today's needs
- ◆ carefully taking account of costs and benefits, including those that cannot be easily valued in money terms
- ◆ creating an open economic system that supports economic growth in all countries stimulating trade, competitiveness and resource efficiency
- ◆ combating poverty and social exclusion at home and abroad
- ◆ defining and respecting the limits of the natural environment
- ◆ using the precautionary principle as *The Rio Declaration* defines it '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'. Precautionary action requires assessment of the costs and benefits of action, and transparency in decision-making
- ◆ using scientific knowledge of the highest calibre from a wide range of viewpoints
- ◆ ensuring transparency, participation and access to information and justice for all

- ◆ making the polluter pay, forcing the responsible party to reduce environmental pollution, resource depletion and social cost. The polluter pays principle must be carefully applied to allow for cases where the polluter cannot pay, particularly for essential goods and services.

### **Commission work plan**

2.14 The Sustainable Development Commission published a two-year forward work programme in April 2001. It comprises five individual project areas:

- ◆ **‘Productivity plus? Sustainable development and the economic paradigm’.** This project considers how the goals of economic growth, social progress and environmental protection can be reconciled with one another.
- ◆ **Climate change.** This work may include: a progress report on UK greenhouse gas emissions, renewable energy and a route map for transition to a much lower carbon economy.
- ◆ **Sustainable food production**
- ◆ **Urban and rural regeneration**
- ◆ **Communicating sustainable development.** Bringing sustainability to life and demonstrating the exciting opportunities and challenges it presents to decision makers in all sectors is a key part of the Commissions mission statement.

2.15 The work programme also includes strategies for specific sectors including business, central and local government and devolved administrations and the English regions.

### **Consumption of fossil fuels**

2.16 Fossil fuel consumption is responsible for almost all the UK’s CO<sub>2</sub> emissions, 80 per cent of greenhouse gas emissions, making it the single largest contributor to climate change. Some fossil fuels are also a major cause of emissions to the air of pollutants like sulphur dioxide and nitrogen oxides putting fossil fuels high on the UK sustainable development agenda.



2.17 Future economic growth does not necessarily have to lead to an increased strain on resources or impact on the environment. The UK Strategy suggests uncoupling economic growth from negative impacts of energy use by:

- ◆ **increasing energy efficiency** through, for example, combined heat and power (CHP), improved vehicles and appliance technology, increased efficiency of electricity production, better insulation of buildings and reducing energy wastage
- ◆ **reducing environmental impacts per unit of energy consumed** by, for example, switching to less polluting fuels, using more renewables, installing equipment to remove pollutants in power stations, vehicles etc.

2.18 The Strategy indicates that there has already been some success in uncoupling energy consumption from CO<sub>2</sub> emissions, mainly because of the switch from coal and oil to gas and nuclear power and because of the relative decline in manufacturing between since the 1970s.

2.19 However, in the long-term the Strategy maintains that reductions in CO<sub>2</sub> per unit of energy consumed, will probably have to be through a switch to renewable sources, not between fuel types, and nuclear power is likely to be phased out.

2.20 The challenges to reductions in the impact per unit energy suggest that reduced energy use and increased energy efficiency will play a major role in the UK meeting its climate change targets. The Government has a target for the installation of 10,000 MWe of CHP electrical capacity by the year 2010. Installed capacity at the end of 1999 stood at 4,238.9<sup>7</sup> MWe.

2.21 There has already been great success in uncoupling other pollutant emissions from energy consumption. Emissions of sulphur dioxide have dropped because the switch from coal to gas and the use of de-sulphurisation equipment in power stations. Catalytic converters in vehicles have caused the recent sharp fall in emissions of nitrogen oxides.

### **The domestic energy market**

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<sup>7</sup> Digest of UK Energy Statistics, July 2000

2.22 The Round Table on Sustainable Development looked into the effects of competition in the domestic energy market on sustainable development in a report, *'The Domestic Energy Market: 1998 and Beyond'*, published in January 1996. The report concluded that market liberalisation was unlikely to have a significant effect on the consumption of energy resources. The study also indicated that the Government and regulators would have to set a framework for companies because the domestic energy market alone would not meet all the economic, environmental and social objectives of a sustainable energy policy. The Round Table's 1999 Annual Report addresses the domestic energy market specifically and highlights the following objectives:

- ◆ to maintain a competitive market for energy and energy products
- ◆ to ensure that the needs of all consumers are met efficiently
- ◆ to protect the needs and interests of all consumers, particularly vulnerable sections of the community
- ◆ to minimise any risk to the health and safety of the population, through the supply and use of energy
- ◆ to ensure the continued availability of long-term energy resources
- ◆ to minimise the use of resources in the production of energy
- ◆ to minimise emissions of greenhouse gases and pollutants during production and consumption, and to meet internationally agreed standards, and
- ◆ to ensure that the energy sector does not impact adversely on priority species, habitats and sites, and to minimise the impact on landscape.

### ***Measuring progress – sustainable development indicators***

- 2.23 In December 1999, the UK Government published *'Quality of life counts'*<sup>8</sup> which describes new indicators, and benchmark figures for the indicators, to measure UK progress towards sustainable development.
- 2.24 Fifteen headline indicators that cover the three areas – environmental, social and economic - were chosen to give a snapshot view of progress. The Government committed to report annually on these fifteen key indicators in order to facilitate reviews of the sustainable development strategy where necessary. The first annual progress report, *'Achieving a better quality of Life'*<sup>9</sup> was published in January 2001 and gives statistics for the year 2000. Its purpose is to review progress towards sustainable development in yearly steps while the Commission for Sustainable Development continuously reviews progress to give advice on future action.
- 2.25 Several of the key indicators selected relate to the gas and electricity industry, including:

◆ **A headline indicator on greenhouse gas emissions:**

Measured as UK emissions of the 'basket' of six greenhouse gases, weighted by global warming potential (GWP). This figure dropped 9 per cent between 1990 and 1997. Emissions of carbon dioxide, the main greenhouse gas, dropped 7 per cent between 1990 and 1998. Under the Kyoto Protocol, the UK has a legally binding target to reduce emissions of the 'basket' of six greenhouse gases by 12.5 per cent relative to the 1990 level over the period 2008-2012. It also has a domestic goal to cut CO<sub>2</sub> emissions by 20 per cent below 1990 levels by 2010.

◆ **Headline indicators on tackling poverty and social exclusion:**

Measured as the reduction in the proportion of elderly households experiencing fuel poverty. Over half the single over-60s in England experienced fuel poverty in 1996, needing to spend over 10% of their income heating their homes to the satisfactory levels of 21 degrees centigrade in living rooms and 18 degrees centigrade elsewhere. The

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<sup>8</sup> DETR Quality of life counts: indicators for a strategy for sustainable development for the UK, December 1999

<sup>9</sup> *Achieving a better quality of life*, Review of progress toward sustainable development Annual Report 2000

government has set up a ministerial group to develop a strategy on fuel poverty due to be published for consultation in early 2001.

◆ **An indicator of electricity from renewable sources:**

Measured as the percentage of UK electricity coming from renewable energy sources. In 1997 2% of the UK's electricity came from renewable sources. The domestic target is for 10 per cent of UK electricity to come from renewable sources by 2010, with an interim target of 5 per cent for 2003.

2.26 Further indicators relate to environmental reporting and managing environmental risk:

◆ **Environmental reporting:**

The Government supports Corporate Social Responsibility (CSR) for UK businesses, which includes environmental reporting. The government's goal is for the top 350 businesses to report to a common standard on major environmental impacts by the end of 2001, to be extended to the 7000 UK businesses with more than 250 employees. Guidance has been issued on greenhouse gas emissions, waste and water. DEFRA is currently consulting on general guidelines for environmental reporting.

◆ **Managing environmental risk:**

The UK insurance industry has drawn up guidelines for business on public liability insurance for pollution incidents. Fund managers, banks and insurers are taking a greater interest in this field of work.

2.27 One important aspect of sustainable development is that it should be integrated into other areas of Government policy. The first annual report notes that sustainable development provisions are now explicitly included in the Strategic Rail Authority Transport Act 2000, the Local Government Act 2000, the Greater London Authority Act 1999, and that the Department for Trade and Industry has its own sustainable development strategy.

2.28 The Government launched two related sustainable development websites to keep up the profile of the issue:

- ◆ [www.sustainable-development.gov.uk](http://www.sustainable-development.gov.uk)
- ◆ [www.sd-commission.gov.uk](http://www.sd-commission.gov.uk)