

FRESHWATER COUNTRY PROFILE

UNITED KINGDOM

Decision-Making

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Please note. The information contained in this report relates only to the activities of the UK Government and bodies responsible to the UK Government. On some issues different arrangements may apply in Scotland, Wales and Northern Ireland.

Decision-Making: The Environment Agency (EA) is charged with protecting water resources, the quality of water in inland and coastal waters and the natural aquatic environment. The Environment Agency also has a significant role in coordinating anti-pollution and anti-flooding measures in England and Wales. The corresponding authorities in Scotland and Northern Ireland have similar functions.

Water resource management: The Environment Agency is the statutory body with a duty to secure the proper use of water resources in England and Wales. Their aim for water resources is that there should be enough water to meet people's needs while providing proper protection for the water environment. The principle mechanism through which the Agency manage water resources sustainably is through a system of abstraction licensing; this has been in place since the 1960s. It regulates water abstraction from sources of supply that include rivers, lakes, canals and underground sources.

Following a review of the abstraction licensing system in 1998, the Government made a number of recommendations to reform the abstraction licensing system through legislative and non-legislative changes. These changes included the need for better water resource planning by water companies and planning for contingency actions to be taken in times of drought. Each water company now has a water resource plan in place. This sets out how it proposes to maintain the supply and demand balance for the next 25 years, taking into considerations future changes in demand due to population and climatic changes. These plans complement national and regional water resource strategies which are produced by the Agency. Each water company also has a drought plan in place, which, in addition to water resource plans, will be made mandatory by the recent Water Act 2003.

The Water Act 2003 has taken forward the necessary legislative changes to update the abstraction licensing system to enable more sustainable management of water resources. It has provided stronger powers for the Environment Agency to take action against abstractors causing environmental damage and will encourage abstractors to adopt greater environmental responsibility.

The Environment Agency has made a number of non legislative changes to its strategy for abstraction licensing. It has developed Catchment Abstraction Management Strategies (CAMS) which set out the water resource situation on a catchment basis and allow a consistent approach to local water resource management, recognising the needs of water users and the environment. It has also set up a Restoring Sustainable Abstraction Programme which investigates and looks to remedy abstractions causing damage to the water environment.

The Urban Waste Water Treatment Directive sets priorities for the treatment of sewage according to the nature and sensitivity of the area receiving the sewage discharge and the size of the discharge. For the most significant discharges, the Directive specifies secondary treatment as the norm but provides for higher standards of treatment for discharges to sensitive areas and at least primary treatment for discharges to areas with high natural dispersion characteristics. The Directive also required an end to the disposal of sewage sludge at sea by the end of 1998. The Government considers that such an arrangement will facilitate the environmentally sustainable management of water resources, including the protection of aquatic ecosystems and freshwater living resources.

The UK has taken steps to reduce inputs of organohalogenes in water bodies, but does not believe that full elimination is currently achievable or that these substances should be treated as a uniform group. Major Groups participate fully at the national and local level.

Programmes and Projects:

A. Integrated Water Resources Development and Management: The Environment Agency's water resource strategies strengthen its ability to manage water resources throughout England and Wales. The

Agency also has a role in encouraging water companies to share resources where it is cost effective and of environmental benefit to do so.

The Government published the policy document 'Directing the Flow – Priorities for future water policy' in November 2002 which set out the need for an integrated approach to water policy issues. The document sought that the three pillars of sustainability should be embraced in our approach to water. With respect to water resources, the document reinforced the need for a twin track approach of demand management and development of resources to achieve sustainable management of water resources.

The EU Water Framework Directive also seeks an integrated approach to water resource issues on a river basin basis. The Environment Agency's Catchment Abstraction Management Strategies will be an important link to provide the information required at the river basin scale.

As part of its commitment to WSSD the UK Government introduced and continues to support a tri-sector initiative 'Partners for Water and Sanitation'. This involves representatives from Government, civil society and private sector organisations in a partnership to assist developing countries, initially from Africa, with work in achieving international development targets relating to poverty reduction through sustainable access to safe water and sanitation.

The UK Government also supports, and makes an active contribution to, the EU Water Initiative. The main objective of this initiative is to provide a catalyst on which future action to implement the goals agreed at WSSD on water, sanitation and water resource management can be built.

The Department for Environment, Food and Rural Affairs (Defra) and the Department of Trade and Industry (DTI) has produced environmental reporting guidelines, including on waste and water use, which set out in straightforward terms how to produce a good quality environmental report. The guidelines were developed with a wide range of stakeholders and have been endorsed by the Confederation of British Industry. They explain how to produce an environmental report, outline its main contents and suggest key indicators to report against.

Following the publication of the White Paper on Modernising Company Law in July 2002, the Government is intending to introduce regulations in 2004 to require company directors to report annually on all issues relevant to achieving business objectives, including the environment, through a new operating and financial review (OFR).

The Soap and Detergent Industry Association regard its 'Wash Right Code' as playing a significant role in their general approach. Water UK has developed and reported on a set of indicators measuring the industry's progress toward environmental sustainability.

Integrated management of coastal areas: The Government has adopted the European Union recommendation on integrated coastal zone management which it aims to implement by early 2006. ICZM aims to ensure government bodies take a joined up approach to policies and programmes on our coasts and estuaries. The UK's national policy on oceans is integrated into a national strategy- the Marine Stewardship report (May 2002). The following national policies have been partially addressed: coastal vulnerability assessment; identifying on-going and planned programmes for the systematic observation of the marine environment, integrating activities and establishing priorities; and research to determine the biological effects of increased levels of ultraviolet rays due to depletion of the stratospheric ozone layer. The Government rates sewage related issues as very important in all areas, and policy gaps are being addressed in the area of coastal outfalls.

B. Water Resources Assessment: As part of its water resource management duty the Environment Agency collates data to allow it to assess water resources in England and Wales. It collects data about water abstraction, reservoir, rainfall, river flows and groundwater volumes. In addition each water company has modelling tools to enable them to assess the water resource levels.

C. Protection of Water Resources, Water Quality and Aquatic Ecosystems: Through its abstraction licensing system, Environment Agency ensures that the needs of water abstractors are balanced against the protection of the wetland environment. The Agency has a number of enforcement powers it can use if abstractors are causing environmental damage, and these have been strengthened by the Water Act 2003. The Agency's Catchment Abstraction Management Strategies also enable water resources and environmental issues to be considered on a catchment basis enabling action to be taken where necessary.

The Environment Agency's Restoring Sustainable Abstraction programme is being developed to deal with situations where over-abstraction has resulted in unacceptably low flows in rivers. This programme will focus on abstractions causing damage to sites designated as Natura 2000 conservation sites, Ramsar sites and Sites of Special Scientific Interest. The programme will be implemented from 2005 to 2010

The largest agri-environment scheme¹ in the UK is the Environmentally Sensitive Areas (ESAs) scheme. Within the ESAs farmers can enter into voluntary ten-year agreements to undertake specific management practices and, if they wish, to take action to enhance, extend or restore features of particular conservation value.

In 1996 the UK designated 72 Nitrate Vulnerable Zones for the protection of drinking waters against nitrate pollution under the EC Nitrate Directive (91/676). However, the European Court of Justice ruled that the Nitrates Directive requires the protection of *all* waters against pollution caused by nitrates from agricultural land. Therefore, in 2002/03, additional Zones were designated in the UK to comply with the ECJ judgment (total coverage is now 55% of England, 13.5% of Scotland, 3% of Wales, and <1% of Northern Ireland. Farmers within the Zones are required to comply with mandatory measures to control nitrate pollution from agriculture. These include requirements to limit applications of fertilisers and organic manures and to observe closed periods for fertiliser and some applications of livestock manures as well as rules on record keeping and waste handling and storage facilities.

The Nitrate Sensitive Areas offered five-year voluntary agreements to farmers in designated areas for the adoption of practices designed to reduce or stabilise nitrate levels in public water supplies. The Scheme has now closed and the last of the five-year agreements are coming to an end. Research into the effectiveness of the Scheme in tackling nitrate pollution is currently being assessed.

The Organic Farming Scheme offers payments to either encourage farmers to convert to organic farming or to help existing organic farmers maintain their land in an environmentally beneficial way. At the beginning of 2005, existing Defra agri-environment schemes, including OFS are to be replaced by a new scheme, the Entry Level and Higher Level 'Environmental Stewardship Scheme'.

A Department for Environment, Food and Rural Affairs (Defra) review is currently investigating the most cost effective ways to tackle diffuse pollution from agriculture. This is considering the full range of potential policy instruments, including voluntary measures and economic instruments, not just regulation, to tackle diffuse pollution in a co-ordinated way and to engage with stakeholders as the work progresses. Two discussion documents have been published on the Defra website, on 27 June 2002 and 2 May 2003.

¹ The Government's Agri-environment grant schemes encourage environmentally sensitive land management; promote biodiversity and protect soils, landscape and historic features; and underpin its policies on sustainable agricultural and rural development.

They can be found at: www.defra.gov.uk/environment/water/dwpa/index.htm Defra are currently working to develop policy instruments, which they intend to consult on by March 2004.

Agriculture is not the only source of diffuse pollution. For example, urban diffuse sources are an acute source of pollution in many urban catchments. In order to meet the requirements of the Water Framework Directive it is important to address diffuse pollution from both agricultural and non-agricultural sources. Defra has therefore begun a parallel review of non-agricultural sources of diffuse water pollution. This will include areas such as the transport and construction sectors, industrial sources, the forestry and leisure industries and contaminated land.

D. Drinking Water Supply and Sanitation: All dwellings and other buildings in the UK have adequate supplies of wholesome drinking water and drainage. About 98% of households are connected to the public water system and some 2% are served by private water supply.

E. Water and Sustainable Urban Development: Buildings have immediate impacts on the environment, in relation to the resources they consume, waste and emissions they produce and for the locations that provide materials for construction. The Government convened the Better Buildings Summit in 2003 to bring together key stakeholders to consider the key role of new and existing buildings in meeting sustainable development goals. This has led to further work to establish mechanisms to ensure that buildings will be designed and constructed to enable occupants to use less water through, for example, the installation of more efficient fittings and appliances. Maximum water use requirements for some products are already set by the Water Fittings Regulations 1999, for example a maximum flush volume of 6 Litres for WC's.

F. Water for Sustainable Food Production and Rural Development: No information available.

G. Impacts of Climate Change on Water Resources: Applying the scenarios for climate change developed by the UK Climate Impacts Programme (using the Hadley Centre model), it has been estimated that by the 2020s water resources will be affected by longer, drier summers and milder, wetter winters. The effect of climate change in the long term is likely to place more stress on water resources, water quality and sewage systems. The Environment Agency and water companies factor these climatic changes into their 25 year forward plans of water resources. In February 2003, the Government published a report on the Climate Change and Demand for Water project, which evaluated the impact of climate change on the demand for water in England and Wales.

Status: *Water resource management.* Water Companies already have a statutory duty to promote the efficient use of water by their customers, under which they provide assistance such as water audits, repair and replacement of supply pipes, water saving devices and information. The Water Act will improve the sustainable use of water by placing new statutory duties on water undertakers², public authorities and the Government, as well as requiring the Environment Agency to secure the efficient use of water resources.

Following the Water Summit in 1997, Ofwat, the economic regulator for the water industry, set water companies leakage targets to reduce leakage on their supply network. As a result most companies are now at their economic level of leakage. This is the level of leakage at which it would cost more for a water company to further reduce its leakage than to use an alternative source of water. This approach has been successful in achieving a significant reduction in leakage across England and Wales of about 20% since 1997.

² Companies holding a consolidated water company licence

Public and Private water supplies must meet statutory standards for microbiological, chemical and organoleptic parameters. In accordance with the requirements of the European Community Drinking Water Directive of 1998, regular sampling and testing to demonstrate compliance with the monitoring requirements and standards is carried out. About 96% of dwellings are connected to the mains sewerage systems. The Environment Agency (EA), in England and Wales, and the parallel authorities in Scotland and Northern Ireland lay down legally required standards for all sewage discharges to inland, estuarial and coastal waters. All sewage discharged to inland waters is given at least secondary treatment before discharge. A major investment programme is being developed to ensure compliance with the European Community's Urban Waste Water Treatment Directive. Remaining discharges from sewage systems will be given primary treatment before discharge, and such discharges will be limited to the areas where comprehensive scientific studies show that no harm to the local or regional environment can be expected from such limited treatment.

The UK has rated the country's clean water and sanitation "excellent". The quality of drinking water continues to improve: the Drinking Water Inspectorate's 13th annual report published in 2003, showed that of 99.87% of more than 2.9 million tests on drinking water samples taken during 2002 met the stringent EU and national quality standards. In 2002, the number of tests failing to meet the drinking water standards in the Regulations was 3,741, compared to nearly 37,000 ten years ago.

Capacity-Building, Education, Training and Awareness-Raising: Envirowise is a programme run by Defra and the DTI to provide practical environmental advice to businesses on a range of issues, including water use minimisation.

The Ministry of Agriculture, Fisheries and Food (now Defra) has published Codes of Good Agricultural Practice for the Protection of Water, Air and Soil. Other Agricultural Departments have done likewise. The Codes provide practical advice for avoiding pollution and following good agricultural practice. The Codes complement the advice given in the Code of Practice for the Safe Use of Pesticides on Farms and Holdings (the Green Code).

Information: The Environment Agency provides information on water resources through its website and via a helpline which connects callers to an advisor in a local Agency office.

Sustainable development indicators have been developed often from national environmental monitoring and research programmes.

Research and Technologies: The Government has part funded research into water resources including; a study called the Trees and Drought Project on Lowland England in November 2002, which assessed the likely impacts on water resources from an increase in woodland in England; and the Climate Change and Demand for Water (Revisited) project which evaluated the impact of climate change on the demand for water in England and Wales using the UK Climate Impacts Programme's climate scenarios.

The Government has a wide-ranging research programme designed to improve our understanding of the processes that affect the freshwater and marine environment and to develop standards for the protection of the environment and human health which are based on the best available science. It also has an extensive programme of research designed to improve the sustainability of agriculture. This includes, inter alia, analysis of the environmental impacts of land management practices and the development of best practice.

The Market Transformation Programme (MTP) encourages products which do less harm to the environment by using less water and other resources. It supports a structured, public domain sector review process, conducted in partnership with business, consumers, experts and other bodies. The MTP is currently looking into the feasibility of a product labelling scheme for certain water using fittings and

appliances. The Enhanced Capital Allowance (ECA) scheme for Water Technologies was launched in July 2003 to provide tax incentives for companies investing in designated technologies that save water and improve water quality.

Industrial collaboration in environment-related biotechnology research and development within the UK is promoted through such programmes as Biological Treatment of Soil and Water is promoted The Department of Trade and Industry's Biotechnology Means Business programme promotes the use of modern biotechnology by industry to improve competitiveness and enhance environmental performance, e.g., the use of living organisms as an alternative to chemicals in processes of cleaning up water. See also under G. Impacts of Climate Change on Water Resources on Programmes and Projects.

Financing: The Environment Agency is financed through charges on the abstraction and discharge of water to inland and coastal waters, thus ensuring the application of the "polluter pays" principle

Cooperation: Research Councils cooperate closely with the Department for International Development (DFID) and international bodies and contribute to a range of training and research programmes in developing countries covering issues such as water resources, agriculture, forestry, fisheries and human health.

The Ramsar Convention on Wetlands came into force in the United Kingdom of Great Britain and Northern Ireland on 5 May 1976.

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