



Water resources for the future

Water is vital for life

All living things need water to survive. People rely on water not only for drinking and for personal hygiene but also for many other purposes:

- around our homes, for cooking, washing and cleaning;
- in our gardens, to water plants;
- on farms, to water crops, to clean equipment, and for animals to drink;
- in offices, schools, universities and hospitals, for cooking and cleaning;
- in commerce and industry, to help with manufacturing.

All the water we use is taken from streams, rivers or from water-bearing rocks below the ground (aquifers). Water in streams, rivers and wetlands allows plants to grow and keeps fish, insects and mammals healthy. It also gives people pleasure in many ways. We like the appearance of rivers and streams in the landscape, and many of us enjoy fishing, boating, canoeing or just walking by rivers. Water needs to be used in a way that safeguards these benefits.

Planning our use of water

In an average year, England and Wales receive enough rain to cover the entire land area to a depth of nearly 900 mm. More rain falls in the mountains of the west and north, and less in the east and south. After evaporation, this gives about 3,600 litres each day for every person who lives in England and Wales, or enough to fill about 360 buckets. However, we can't use all this water, because we want to leave enough in our rivers and streams to protect nature and allow us to enjoy our landscape. In a dry year, our use of water can lead to problems. Since every drop of water that humans take comes from our natural environment, we need to plan our use of water to make sure that we have enough for our needs while protecting plants and animals from damage.

Government has given the Environment Agency the task of planning our use of water. To help with this, we have developed a new water resources strategy for England and Wales. This leaflet provides a summary of the strategy.

Our strategy looks 25 years ahead, considering the many changes that may occur over this time. Our vision is:

Enough water for all human uses with an improved water environment.

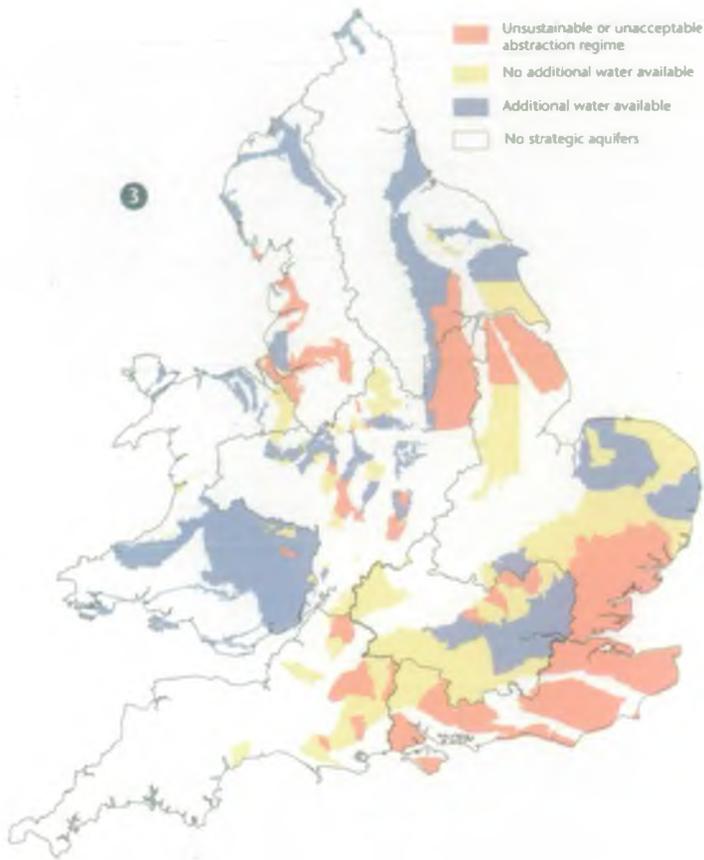
The availability of water

Water is taken from most of the rivers, streams and aquifers of England and Wales. In some places we think that too much water is taken already. In these places, the environment may already be damaged or is in danger of being damaged. If we want to restore the environment in these places, we must stop taking so much water. In some other places, we think that there is no damage now, but that no more water should be taken. In other parts of England and Wales water may be available. Anyone who wants to take water needs a licence from the Environment Agency. Before we give a licence, we must be sure that it will not harm the environment. Detailed studies are often necessary. The maps in Figure 1 show the situation in England and Wales.

Future demand for water

The amount of water we need is known as demand. The demand for water will change over the next 25 years. Different factors influence demand.

In the home, for instance, we can choose how much water we use. Today, on average we each use about 150 litres every day – enough to fill 15 buckets. Future household water use will change according to the choices we make as individuals and collectively as a society. For example, showering usually uses less water than a bath, but using a power shower for five minutes can use more water than taking a bath. Depending on attitudes, individual household water use could increase or decrease over the next 25 years. In some places, more homes are planned.

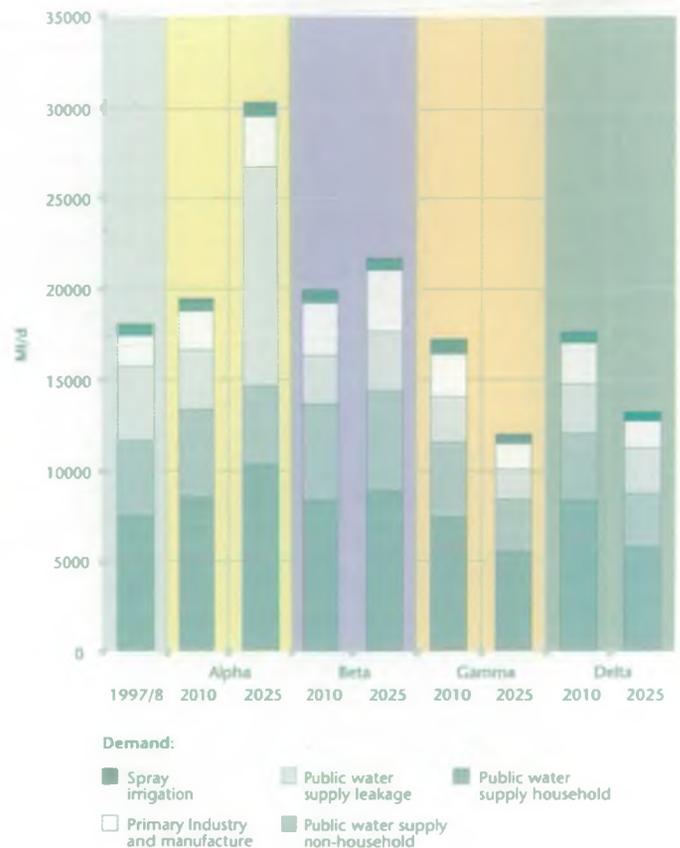


protection of the environment, making wise use of natural resources, and maintenance of high and stable levels of economic growth and employment. Our strategy is flexible and phased, so that we can avoid unnecessary investment while retaining the security of our water supply and improving the water environment.

Our strategy concludes that:

- in much of England and Wales, water can be a scarce resource. In some places, environmental improvements are necessary. We will work to provide the water for these improvements;
- continued availability of a reliable public water supply is essential. We recommend the enhancement of supply by about 5 per cent over the next 25 years by improving existing schemes and developing some new resources;
- water efficiency should be promoted actively;
- over the next 25 years we should expect household water metering to become widespread, in the context of the Government's broader social and environmental policies including the protection of vulnerable households;
- continued progress in leakage control will be necessary;
- agriculture must focus on using available water to best effect;

Figure 2 Total demand by scenario in 2010 and 2025



- commerce and industry should pay increasing attention to water efficiency.

The table on the following page shows our detailed recommendations.

To make our strategy successful, we will need to work with many other groups and individuals. Together, we can ensure that there is enough water, both for people to use and to improve the environment.

How to find out more

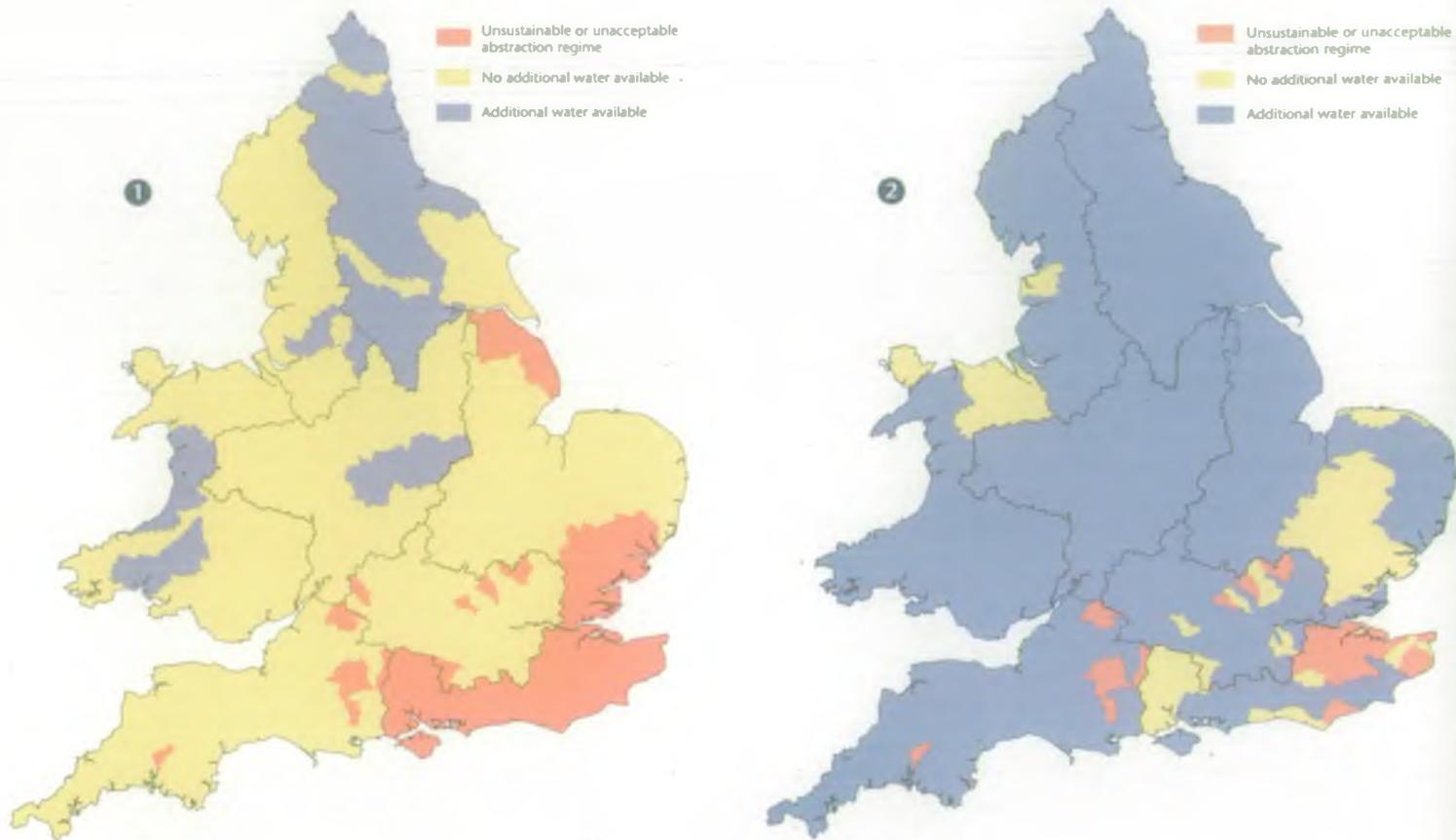
You can find more information in the full water resources strategy for England and Wales, available from our Bristol address. Our strategies for our seven regions of England and our strategy for Wales give more local detail; these are available from regional Environment Agency offices. Further information on our water resources activities can be found on our website.

Our recommendations

Action	
A1	Where possible, water companies should consider sharing water from existing or new developments.
A2	Government should ensure that the Water Supply (Water Fittings) Regulations continue to contribute to the efficient use of water.
A3	Water companies should promote waste minimisation schemes with their industrial and commercial customers.
A4	Ofwat, Government, water companies, trade associations and the Agency should promote water efficiency and monitor results.
A5	The Agency will work with water users and water companies to improve water efficiency.
A6	Government should ensure that competition and restructuring of the water industry encourage the efficient use of water.
A7	The Agency will seek better access to information on leakage and leakage-control.
A8	Water companies should continue to develop new and better methods of leakage-control.
A9	The system for setting annual leakage targets should be maintained and developed.
A10	The Agency will work with Government and Ofwat to ensure that existing and proposed legislation assists in achieving good leakage-control.
A11	The Agency will work with Government, Ofwat and the water industry to provide information to householders on metering and in the development of tariffs that encourage water efficiency, while considering the Government's social and environmental policies.
A12	Water companies should take a positive attitude towards targeted household metering where appropriate and where opportunities arise.
A13	The Agency will look for opportunities for farmers to benefit from existing and new water resource developments.
A14	The Agency will encourage farmers to adopt best practice in water use around the farm.
A15	The Agency will work with agriculture to continue to develop indicators of good practice in water use.
A16	Farmers should seek ways of minimising their water use.
A17	Farmers should consider working together on shared schemes.
A18	The Agency will assist in the trading of abstraction licences, provided that no harm to the environment will result.
A19	Farmers should consider the possibility of trading abstraction licences to meet their needs.
A20	The Agency will talk with supermarkets and the food processing industry to help them understand the effects of crop requirements on water use and the water environment.
A21	The Agency will work with hydropower developers to achieve viable schemes.
A22	The Agency will work with others to identify the actions needed to improve the water environment.
A23	The Agency will work to help people understand how water use affects the natural environment.
A24	Navigation authorities should investigate their need for reliable water resources.
A25	The Agency will encourage the development of water transfers, provided that they take account of the needs of the environment.
A26	The Agency will work with Ofwat to rationalise the way that we gather information from the water industry.
A27	The Agency will work with planners to look for water efficiency in new developments.
A28	The Agency will work with Government to streamline approval processes for essential schemes while maintaining public accountability.
A29	The Agency will explore the idea of an independent water efficiency body.
A30	The Agency will work with others on research and development.

Figure 1

Current indicative availability: 1. summer surface water 2. winter surface water 3. groundwater



While individually any new houses built could be more water-efficient, they will add to total demand for water.

Industry and commerce use water in many ways and as processes become more efficient for most industrial sectors the use of water is likely to decline. However, the extent of this decline depends on how quickly we adopt new technology and on the relative wealth of the country.

The demand for water for agriculture depends on many factors, including the type and quality of crops that we want, as well as the state of the world market for agricultural produce. In the parts of England and Wales where irrigation is most important, demand for water may rise.

To consider many of these different effects, we have taken a scenario approach to predict future demands. Using the Government's Foresight framework, which looks at the different ways that our political and social values could change over time, we have considered a range of possible social and economic changes and calculated future demands as a result of these. They show that over the next 25 years, total demand for water could fall or rise, depending to a great extent on the choices that we make. The range of future demands is shown in Figure 2. We have developed a strategy for water resources that allows for all these scenarios.

Climate change

Climate change is of great significance to water resources. Changes in the pattern and amount of rainfall could affect how much water is available for people and for the environment. Climate change could also influence people's demand for water. For example, if it becomes hotter, we may wish to water our gardens more.

Present analysis suggests that over the next 25 years, summers could become drier and winters wetter, with more rain in total. Temperatures are likely to increase. Since many questions remain about the effects of climate change it makes sense to use our existing water resources carefully, and to look for flexible solutions to future demands that can cope with different climatic conditions. This is an area that we will keep under review.

Our strategy

Our strategy is designed to improve the environment, while allowing enough water for human uses. We have considered its contribution to sustainable development, including social progress that considers the needs of all,

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