

# COST OF DELAYING WATER RESILIENCE ACTION TOO HIGH



The summer of 2022 was one of the driest on record in the UK, with water supplies coming under sustained pressure and a number of hosepipe bans put in place. Now, the National Droughts Group has announced that another hot dry spell could see drought conditions return to the UK this year, despite winter rainfall largely replenishing most of the country's water supplies.



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So, why does this keep happening, what is the state of the country's water resiliency and drought planning efforts, and what should we, as an industry, be focusing on?

### What are the biggest challenges?

It may seem surprising that with the United Kingdom's relatively high rainfall and long-established water infrastructure that the country can be so vulnerable to water shortages. Unfortunately, the fact is that much of the pipeline network is more than a hundred years old and certain pipe materials are becoming increasingly prone to failures and leaks.

Widespread maintenance efforts are, of course, taking place across the country.

Nevertheless, the water industry in the UK recognises that investment in maintaining water infrastructure assets has not kept pace with the growth in leakage issues. The latest figures<sup>1</sup> show that over 3 billion litres of water a day are lost through leakage.

The UK's water supplies are also under pressure from a range of other sources. Global climate change is affecting rainfall levels and the distribution of rainfall throughout the year. An increase in the number of heavy downpours leads to flash floods but without more advanced infrastructure, this water cannot be efficiently collected or properly released.

Moreover, the distribution of rainfall across

the country varies enormously. The West and North of the UK receives the most rain but is furthest from the areas of greatest demand in the South East, which takes 50% of the country's water requirement. Water at present cannot be easily transported from areas of surplus to those in need because the pipelines are either inadequate or do not exist.

Population growth is also putting pressure on the country's water supplies. It is estimated that by 2050 an additional 1 billion litres of water a day will be needed to supply England's growing population alone<sup>2</sup>.

### What can be done?

This disturbing picture of the UK's water supply issues raises the ultimate question: What are we doing and what could we do to address this?

In the Environment Agency's policy paper Meeting our Future Water Needs: A National Framework for Water Resources, great emphasis is placed on having a regional approach in England as a solution.

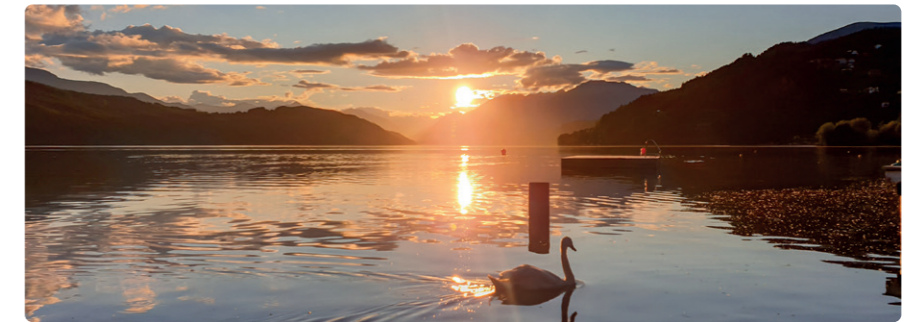
The paper argues that the statutory Water Resource Management Plans produced by England's water companies for their customers alone need to be informed by regional plans which consider the needs of all users, enabling a clearer national picture to appear which can deliver a step-change in resilience and environmental protection.

The policy paper recommends strategic regional planning by each of five regional groups – made up of the 17 English water companies and other water users. Each region's plan sets out what should be delivered.

Regarding increasing resilience to droughts, each plan should ensure that restrictions such as rota cuts and standpipes are needed no more than once every 500 years on average by the 2030s.

The paper expects the regional approach will adopt a planning assumption that an individual's water use will be reduced to 110 litres per day and that water leakage rates will be halved by 2050.

The paper also considers increasing supplies. It explores a range of options, such as reservoirs, water reuse schemes and desalination plants.



It mentions the potential for developing and sharing supplies with other sectors and work to improve water management in catchments. Finally, it suggests water transfers within and between regions.

All these recommendations paint a more positive future for water resilience in England. But we need to make sure that these plans can be rolled out quickly and effectively.

### Getting to where we want to be

Work is already underway to explore Strategic Resource Options that will be needed to meet the nation's future needs, including new water resource infrastructure and transfers already shown in company Water Resources Management Plans.

Up to £469 million of funding has been set aside between 2020 and 2025 for water companies to progress this work which is to be co-ordinated with that of regional groups and the National Framework.

Reducing water use and cutting leakage rates are part of the solution but delivery of new strategic resources is going to be critical such as the London Water Re-use plan by Thames Water, the Water for Life Hampshire programme being led by Southern Water and the new reservoirs planned by Anglian Water, to name a few.

Strategic planning sets a framework but changing both individuals' and organisations' attitudes to water conservation is also important. Water companies have made progress already through offering free water efficiency kits and discounts on water butts.

The UK Government is also considering water use and efficiency labelling, which has been successfully introduced in Singapore. These plans went out to consultation in the Autumn of 2022 and could come into force across all the UK's nations.

The proposal is to label water using products such as taps, showers, toilets, dishwashers and washing machines. However, at a national level the latest Building Regulations for England published in 2021 made no requirement for the collection or re-use of water, so it seems there does need to be an alignment in messaging.

### Urgent, accelerated action is needed

Setting and achieving ambitious targets on per capita water consumption and reducing leakage are both elements which are so important in ensuring resilience against multi-year droughts; but we are currently lacking clear plans as to how this will be achieved.

Working with water companies, we need to speed up widespread changes in behaviour. If any meaningful targets are to be met, we will also need to make greater use of digital, smart leak detection and monitoring tools.

As well as this, there needs to be a continued focus from all of us in the water industry on the delivery of strategic resource options to help prevent multi-year droughts across the UK.

At Stantec, we are at the forefront of delivering this change, bringing our global ability in wastewater recycling, and guiding major water resource schemes through the planning, design, and procurement process.

For more information about our holistic range of services, visit [www.stantec.com/uk](http://www.stantec.com/uk).

### References:

1. England & Wales three-year average Apr 2019 – Mar 2022 - WaterUK.
2. Meeting our Future Water Needs: A National Framework for Water Resources – Environment Agency.