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# COP26 and Water

## Safeguarding a vital resource

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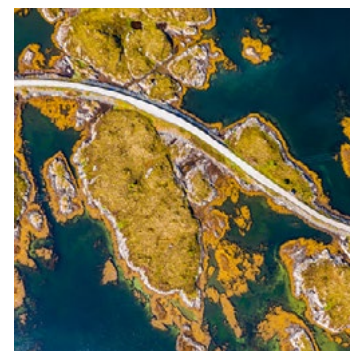
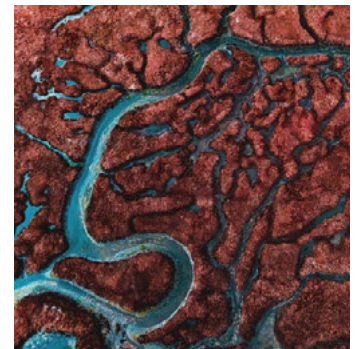
Climate change is already challenging water resources. Can the industry and regulators paddle in the same direction?

UN-Water, a United Nations inter-agency body, has stated that “water is the primary medium through which we will feel the effects of climate change”. Like air, water is one of the most important natural resources for the existence of life – from our day-to-day personal activities such as drinking and washing, to wider societal uses such as in agriculture, industry and manufacturing.

Although a renewable resource, only 3% of our planet’s water is freshwater and most is not easily accessible. As the climate changes, rising temperatures, rainfall fluctuations and extreme weather patterns threaten to affect the availability and quality of water and sanitation services for billions of people.

According to a 2021 UN-Water report, “over a fifth of the world’s basins have recently experienced either rapid increases in their surface water area indicative of flooding, a growth in reservoirs and newly inundated land; or rapid declines in surface water area indicating drying up of lakes, reservoirs, wetlands, floodplains and seasonal water bodies.”

Water companies must plan and take adaptation and mitigation measures to address the effects of climate change on their businesses, particularly when coupled with meeting increased demand from population growth. Nevertheless, water companies are not the only industry stakeholders needing to address climate concerns. This article explores the role of other pivotal players, most notably investors and regulators. While delivery of





water and sewerage services is structured differently across the globe, we make particular reference to the UK example given its crucial role in hosting the 26<sup>th</sup> UN Climate Change Conference of the Parties (COP26) in Glasgow this year.

### Water companies

The role of water companies as providers of critical infrastructure, and their reliance on predictable weather patterns for the delivery of water and sewerage services, have exposed them to a number of challenges. For example, in early 2018, the UK was struck by an extreme cold snap dubbed the “Beast from the East”. The rapid thaw that followed led to a significant increase in burst pipes on companies’ mains and customers’ own premises. Over 200,000 customers lost supply for over four hours, with the most severely impacted losing supply for over a week. More than £7 million was paid out in compensation. This incident prompted an investigation by the water regulator, Ofwat. The agency made clear its view that water firms are responsible for preparing for extreme weather events and having the processes to respond effectively.

Another related issue facing industry providers is water resourcing. For example, record-breaking temperatures during recent dry summers led to intense drought and water restrictions in parts of Europe as suppliers faced the dual challenges of meeting increased demand from consumers while managing reduction in availability at source. Similar issues have been faced in many parts of the US, including in the summer of 2021 when California, Nevada and Arizona faced

excessive heat and drought, leading to wildfires and historic lows in reservoir levels.

Solving water resource issues is a multi-faceted challenge requiring cooperation across multiple public and private stakeholders. Moreover, unilateral action risks shifting rather than solving problems. For example, revoking or modifying abstraction licences can provide a benefit to flora and fauna relying on particular water sources but this environmental benefit must be weighed against the potentially adverse impact of alternative water sources. Significant water resource constraints may require substantial infrastructure developments, such as desalination plants. While providing a major source of water and avoiding the need for abstraction, they bring environmental challenges due to their energy-intensive nature, and the difficulty of disposing of high-density brine waste without adversely impacting coastal ecosystems.

There is also the question of how to incentivise water companies to meet climate challenges. For companies in England and Wales, the regulatory price control process provides options to encourage innovative solutions to climate challenges. The existing PR19 price control regime, which applies until 2025, includes a number of measures which further this goal. Each water company’s price control includes a package of performance commitments (PCs), specifying targets such as the percentage of leakage reduction which must be achieved over the price control, and outcome delivery incentives (ODIs), which encourage companies to attain, and sometimes outperform, PCs, such as creating financial rewards for outperformance and penalties for

underperformance. Under the current price control, water companies must reduce both leakage and per capita water consumption, and face target limits on incidents of sewer flooding and unplanned outages.

The water industry has taken steps in the right direction, having been supported by the price control regime in several ways, but there is scope to go further. Water UK, the trade association, has outlined a roadmap setting out a target for the industry to achieve net zero carbon emissions by 2030, two decades ahead of UK government targets. Every water firm in England has committed to that target through their Public Interest Commitments. Water UK estimates between £2 billion and £4 billion in capital investment will be required to achieve this. A number of issues must be tackled to shape a future price control mechanism which can address this significant funding need.

The PR24 price control will begin in 2025, running to early 2030. It will, therefore, be key that the regime strikes the right balance on facilitating the necessary heavy investment while ensuring current consumers do not bear an unfair share of the cost. Immediate increases to consumer bills may be inevitable, but long-term societal benefits of delivering net zero - and the needs of the wider economy recovering from Covid-19 - call for a price control structure that spreads investment across generations. This requires the right technical measures on capitalisation of costs and a price control framework that demonstrates the stability required to attract investors.

### Investors

Just as water companies have a major role in responding to climate challenges, there is considerable scope for other market participants to contribute, in particular, infrastructure funds, pension funds and other long-term investors. There is a vast pool of capital looking for infrastructure assets providing stable, low-risk returns, especially demonstrably ‘green’ assets that boost investors’ ESG credentials.

It is the responsibility of governments and regulators to create the conditions for such private investment. In many countries, competing demands for state spending mean public finance alone will be inadequate to meet many climate challenges. With proper incentives and structures, the private sector can deliver such investments promptly and cost-effectively.

A good example is the Thames Tideway Tunnel project, a ‘super sewer’ currently under construction along the River Thames. It is intended to intercept outfalls that currently discharge diluted raw sewage into the river whenever the London sewer network becomes overloaded due to rainfall. Without Tideway, climate change will likely exacerbate the frequency of these overflows, as well as the volume of discharges.

The UK government and Ofwat established a regulatory framework to encourage investors to compete to finance, build and operate the Tideway sewer. The competitive tension has ensured Tideway will be constructed at a cost of capital among the lowest achieved for a greenfield project.

Building on the success of Tideway, Ofwat is developing a mechanism under which the private sector – both contractors and long-term investors – can contribute to efficient delivery of greenfield water and sewerage projects, including those driven by climate change. Known as Direct Procurement for Consumers (DPC), under the scheme, incumbent water companies will be required to tender large, separable infrastructure projects. They will seek a competitively appointed provider (CAP) to take on financing, construction and operating the project for a fixed-term period such as 25 years. The CAP’s charges for doing so, once approved by Ofwat, will be recoverable by the incumbent water company from its existing customer base. At the end of the fixed term, the assets – which

are likely to have a useful life well in excess of the CAP’s fixed term – will be transferred to the incumbent in return for a final payment reflecting the pre-agreed value of the asset.

The first and largest of the first tranche of DPC projects since the introduction of the mechanism is Haweswater Aqueduct Resilience Programme, to be brought to market by United Utilities. If successful, the DPC model may be rolled out for larger, more ambitious projects, including those involving multiple water companies.

### Regulators

As highlighted above, governments and regulators have a crucial role to play in establishing the right policies and frameworks. This can not only incentivise water firms to plan for climate change, but also create the conditions to attract private capital to deliver infrastructure for the provision of water and sewerage services.

The way such services are delivered will differ globally, affected by factors such as structure of the water sector, local topography and population density. Nonetheless, there will be common themes in the issues faced and may be scope for greater international cooperation on best practice.

In addition, given the importance of water across various sectors, there may be several regulators in the same region that need to work together to forge long-term measures to mitigate and adapt to the effects of climate change. For example, to help tackle the climate challenges, the UK’s Ofwat has allowed almost £500 million of funding during the current price control for water companies to explore creative solutions. The programme is overseen by the Regulators Alliance for Progressing Infrastructure Development (RAPID), made up of Ofwat, the Environment Agency and the Drinking Water Inspectorate. Other bodies such as the Consumer Council for Water and Natural England also provide support. RAPID was established in 2019 to assist with development and funding of strategic water supply options for service providers and to seek to manage regulatory roadblocks. RAPID has so far approved 15 proposals for the next stage of assessment. The proposals have been submitted by nine water companies and include the construction of reservoirs, a desalination plant and infrastructure for water transfer schemes.

### Conclusion

It is clear no single player can tackle the challenges of climate change. Major disruption to water services by extreme weather events has been seen worldwide. Although much will be driven by local factors and practices, lessons can be learned from the actions being taken towards climate change resilience to foster a shared purpose among stakeholders. Water companies must play a key role in ensuring their services can be delivered effectively. However, given the complex measures needed to ensure sustainable management of water resources amid climate threats, achieving this task will require increasingly significant collaboration between investors, stakeholders and regulatory bodies.

