



Public Accounts Committee Inquiry

27 May 2020

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‘Water Supply and Demand Management’

Response to the NAO ‘Water Supply and Demand Management’ report

Water UK is the representative body and policy organisation for every water and wastewater provider in the UK, and we welcome the opportunity to provide evidence.

We provide a summary of our ten main recommendations at the end of this note. Where we are providing evidence on the issues highlighted by the National Audit Office (NAO), this follows the order of key findings and associated recommendations contained within the [NAO report](#).

Our Approach to Water Resources

The water sector is integral to the protection and enhancement of the UK’s rivers and seas and the habitats around them, with over £1 billion invested every year on environmental improvements, including a programme over the next five years to enhance 7,500 miles of river. This is a vital part of ensuring the safe and sustainable supply of clean water for our customers.

Water UK, supported by its members, has a track record of strategic leadership on tackling the challenges to a resilient supply of water, whether from climate change, changing weather patterns, or population growth. Our 2016 study [Water resources long-term planning framework \(2015-2065\)](#), identified that the risk of severe restrictions as a result of drought and climate change were higher than previously thought. These findings have subsequently fed into, and been validated and built on, by the 2017 climate risk assessment from the Committee on Climate Change, the 2018 National Infrastructure Report [Preparing for a Drier Future](#) and the Environment Agency’s recent study, supported by Water UK, [Meeting our future water needs: a national framework for water resources](#).

In April 2019, water companies in England reaffirmed their ongoing determination to work in the public interest through publication of Water UK’s [Public Interest Commitment \(PIC\)](#). At the heart of the PIC are pledges to champion measures through which water companies can enshrine public interest within their business purpose, and to work together towards five challenging goals for social and environmental progress. The first of these goals is tripling the rate of sector-wide leakage reduction by 2030, enabling us to halve England’s level of leakage by 2050. Companies are actively sharing best practice and innovation to deliver on this goal.

1. The Government is not yet able to reliably forecast total water demand as water resource management plans only cover the public water supply

Water companies are taking a lead on cross-economy water planning, working with other water users and abstractors to produce regional plans that meet the needs of all users. We are used to acting as a convening force to drive these plans, and have established five regional water resource groups to develop them. A clear trend in recent years has been increasingly to embed the needs of other water users in the planning process; while practice, need and maturity varies nationally, the default is now to see other users as co-designers rather than just consultees.

For example, Water Resources East has been working across all sectors for a number of years and published its emerging strategy [A Multi-Sector Approach to Providing Long-Term Resilience for Regional Water Resources](#) at the beginning of 2018.

The leaders of each of the groups meet together regularly, and with regulators and Defra, to coordinate their work, to share best practice and to ensure delivery of the national framework. This Regional Coordination Group links with the National Framework Senior Steering group, comprising Chief Executives, Senior Directors and leads from the regional groups, regulators and key stakeholders as illustrated below:



This should give the Committee confidence that all parties are working collaboratively to deliver regional plans and that progress is being actively managed.

However, we note that there is no explicit recommendation associated with the development of multi-sector plans. This leaves unresolved the question of how to set the ambition for multi-sector water resource assets, as well as how best to prioritise and fund them when benefits flow to users other than (or in addition to) the customers of water companies. This contrasts with the mechanism for financing

public water supply investment, which is well-established through company Water Resource Management Plans and the Ofwat price review process.

Defra should seize the opportunities promised by the 25 year Environment Plan to develop better governance arrangements at the catchment level, supported by new mechanisms to bring public and private finance into assets that bring wider benefits such as flood mitigation, tourism and recreation, economic growth, meeting the future needs of agriculture, and ambitious environmental improvements that go beyond statutory requirements. While water companies are leading the development of regional plans, their customers should not be expected to fund all of the future investment needed, and we would welcome the opportunity to work with Government on better models.

2. Defra does not provide guidance for water companies on the different types of intervention available to improve the resilience of the water supply

Given the need to reflect important differences between regions, it is not clear how useful such guidance might always be. The process for developing the 17 strategic schemes, funded by £469m included in Final Determinations and coordinated by RAPID, will inform Defra and regulators' views on which schemes should be ultimately be progressed. A further study has also been commissioned by RAPID to identify other schemes that may need to be developed and/or provide better value. The regional groups and water companies are involved in these studies, as that is where much of the engineering expertise lies.

Defra and the Secretary of State will, though, need to play a key role in facilitating the delivery of nationally significant infrastructure projects (NSIPs) under the National Policy Statement (NPS) for water resources infrastructure, as well as maintaining clear political support for continuing to strengthen resilience.

3. Water Companies have found it difficult to determine what level of infrastructure investment the Government will deem acceptable

Defra's [strategic policy statement](#), issued in September 2017, was helpful in emphasising the need to secure long-term resilience and reduce the risk of severe restrictions as the result of droughts: *Parts of the country face unacceptable levels of risk from drought, while neighbouring regions have surplus water. There is a 12% risk that we will see a drought in the next 25 years that would lead to emergency restrictions such as standpipes in place for at least 2-3 months. Historically, there has been insufficient investment to secure long-term resilience in some regions. Objective: Ofwat should further a reduction in the long-term risk to water supply resilience from drought and other factors, including through new supply solutions, demand management and increased water trading.*

This statement, together with guidance from the Environment Agency, gave confidence to all companies to develop water resource plans that reduced risk to a level where a 1 in 200-year drought should not result in severe restrictions in supply.

However, further guidance will be required from Defra and regulators if water companies are to have confidence that investment will be allowed in adaptive plans that deal with futures that inevitably carry some uncertainty. For example, PR19 saw 'uncertainty and risk' disallow investment plans that would have reduced drought risk and allowed for potential transfers to other regions without the duplication

of pipelines¹. We do not think this will always be the right approach, and needs careful thought in advance of the next price review.

4. Total water supply is forecast to decrease by 7% by 2045 as a result of climate change and the need to reduce abstraction to restore sustainability

Water UK fully supports the ambition to reduce abstractions to improve the environment. Regional water resource groups and water companies are exploring at a detailed spatial level what improvements would best protect and improve the environment.

As noted under section 1 above, a key question that Defra and regulators need to address is who should set and pay for ambitious environmental improvements. This must be clear and baked into plans.

More broadly, we have an opportunity to look again at how best to plan for, fund and manage environmental improvements at local scale. There are significant opportunities to improve our approach to this in ways that better make links between different objectives (for example on farming, biodiversity and floods), and to replace traditional asset-based approaches with green infrastructure.

5. Bulk water transfers are a major part of water companies' plans but the government is only now starting to address barriers to progress

Water UK strongly welcomes the establishment of the cross-regulator alliance, RAPID. The approach to identifying and exploring solutions to the policy challenges has been collaborative and we look forward to this continuing. We are encouraged that RAPID is working closely with the National Framework Regional Coordination Group and that regional water resource group members closely involved in studies as they are commissioned. Water companies are also working closely with RAPID in the development of the 17 strategic schemes identified by Ofwat at PR19. However, it is correct that there is further to go.

6. Reducing the demand for water

a. target for personal water consumption

b. action by other government departments – building and planning regulations, product labelling and product standards

Water companies, Waterwise, government, regulators and the Consumer Council for Water have worked collaboratively over many years to share best practice on the effectiveness of water efficiency measures and have supported the development of the [Waterwise Water Efficiency Strategy](#).

More recently, Water UK completed a significant piece of research with Artesia Consulting to identify the most effective mechanisms for obtaining significant reductions in per capita consumption: [Pathways to long-term PCC reduction](#). This evidence supported Water UK's [response](#) to Defra's consultation on reducing per capita consumption outlining the evidence for recommended changes in policy and informed the National Framework's planning assumption of a 110L/day PCC level.

¹ See e.g. Ofwat submission to CMA: <https://www.ofwat.gov.uk/wp-content/uploads/2020/05/Reference-of-the-PR19-final-determinations-response-to-Anglian-Waters-statement-of-case.pdf>

Paragraphs 3.211 -3.213

However, our analysis also concludes that there is a very strong case for us to:

- use the Environment Bill to set a formal national target on Government for reducing water consumption. Only Government can ensure that all those with the ability to act on water demand have the right incentives in place. This is the best way of setting an overall direction for water companies, manufacturers, developers, charities, regulators and others – and, crucially, ensuring that all of Government plays its part, not just Defra
- set that target on the basis of evidence and an impact assessment, at a level that ensures that our approach to balancing supply and demand is (i) cost effective and (ii) accounts sufficiently for risk and uncertainty (which is large and asymmetric). We then need to monitor delivery against that target to ensure we can adapt plans as needed
- set the target on ‘distribution input’ (so, the amount removed from the environment) rather than just per capita consumption. This allows companies to build joined-up strategies by tackling issues among business demand and the distribution network as well as household demand, and more closely aligns activity with the objective of leaving more water for nature, rather than focussing on one component of demand alone. This can still be translated, if desired, into a per capita number for the purpose of customer communication if felt to be more tangible.
- make clear that companies must continue to take a leading role. This will need a significant expansion of metering over coming decades, with a sharply increasing ‘smart’ proportion of new meters. Our research shows that over coming decades, a progressive metering approach, supported by voluntary switching, could make a significant difference
- tackle the critical policy gap around ‘non household’ users like businesses. Up to about a quarter of water is used by these organisations, but existing incentives and regulations are insufficient for dealing properly with this important component of demand

More than anything, the single most cost-effective and impactful change for reducing demand (whether measured by cost effectiveness, marginal cost, volume impact, risk, fiscal impact, or customer disruption) is to introduce two measures: a mandatory national labelling scheme for water appliances like dishwashers and washing machines, coupled with minimum standards to ensure they are not wasteful. The policy case for acting on that now is overwhelming, and we understand Government believe they may have the powers to introduce a scheme - modelled on successful examples abroad, and on domestic energy efficiency - without new primary legislation.

Finally, there is a very strong case for strengthening building regulations in line with those changes, in order to stop the constantly increasing stock of water-inefficient homes. That would require a single minimum standard for all fittings in new developments, which our analysis suggests would be very inexpensive and beneficial to the owner.

Messaging and Love Water

Reducing personal water use requires a multi-stakeholder response not just in terms of taking policy actions but also in communicating the necessity for action to customers. For example, water companies have a role in demonstrating bill savings and the benefit for water supplies; government in underlining

regulatory action; local government in promoting good building practices; and NGOs in highlighting the environmental impacts.

Love Water should play an important part of that as a call to action by customers, but it will only be effective if customers also have the tools to manage and reduce their consumption. It will be much less effective if it is simply used to exhort customers to use less. For example, if the government were to introduce water labelling and water fittings regulations then Love Water could be used as the banner under which these measures are promoted.

c. Water companies' plans to tackle leakage are ambitious but there is a risk of them not being achievable

The sector has deliberately taken an ambitious and challenging approach to leakage. As with all stretching targets, we did that to force the pace on innovation and inspire different ways of doing things.

Water companies are committed to reducing leakage by 50% by 2050, in line with the NIC's recommendation, and, consistent with the trajectory required to achieve that, our Public Interest Commitment is to triple the rate of sector-wide leakage reduction by 2030.

These commitments are embedded in a 16% reduction in leakage required by Ofwat by 2025, with financial consequences included in companies' business plans and Ofwat's Final Determinations.

In recognition of the fact that these reductions are bold rather than incremental, in addition to actively sharing best practice, companies through the research body 'UKWIR' has set a "Big Question" to drive research and innovation work via a [route map](#). Leakage is also an important candidate for considering as part of Ofwat's innovation fund.

Ultimately, we will also need the regulator and Government to take a clearer view on whether further action is also needed on replacing (as opposed to constantly patching-up) water mains to improve asset health and sustainability. This is more costly in the short term, but, given the extreme age of many pipe networks and other assets, this may be required to bring leakage down to very low levels and will in many cases represent better long-term value for money.

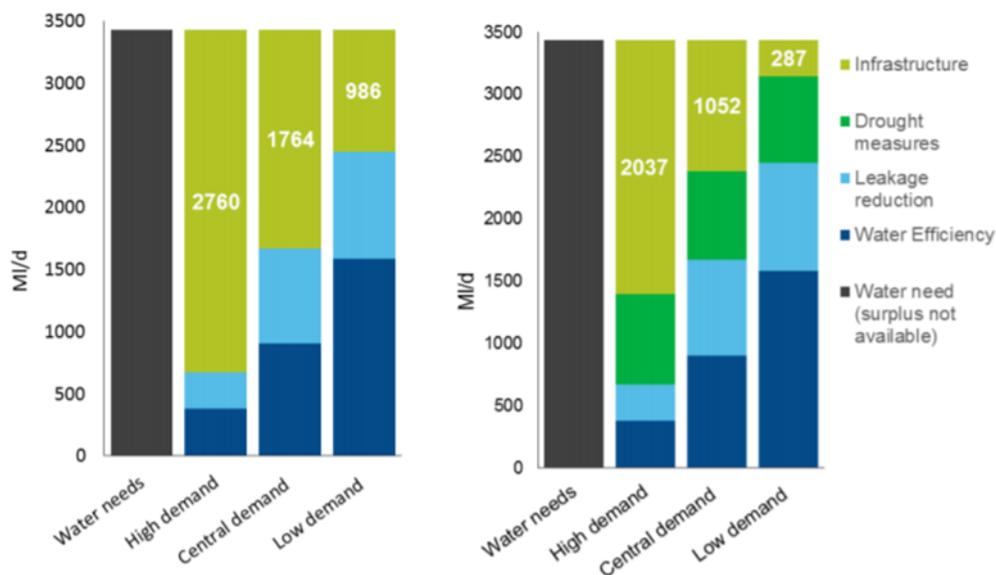
d. Adaptive plans

Reducing leakage by 16% and ultimately 50% by 2050 will require massive innovation and the development and implementation of new technologies that have not been implemented in the UK or globally in similar networks and infrastructure.

Reductions in personal consumption will also require customers to significantly change their behaviour, even with government policy changes.

It is therefore important to develop adaptive plans to identify additional supply schemes, should they be needed, to meet any gap. The National Framework for water resources used three demand scenarios, as illustrated below in a figure taken from the [National Framework report](#):

Figure 32: Shows additional national public water supply needs between 2025 and 2050 (assuming existing surplus cannot be made available). It shows how much of those needs could be met by three demand scenarios (in blue): high, central and low. It then assumes that the remaining need would be met by infrastructure and estimates this (in light green). The chart on the left excludes the use of drought measures and the chart on the right includes them.



It is essential for resilient water supplies that plans and options are developed on an adaptive basis, with key triggers and performance monitored to enable timely decisions to be made. Critically, however, decision points also need to be aligned to the constraints of a regulated, fixed, five-year business plan, which reduces the ability for companies to act between reviews. A process is needed that reconciles these two issues.

Summary of main recommendations

- I. Defra should seize the opportunities promised by the 25 year Environment Plan to develop better governance arrangements at the catchment level, supported by new mechanisms to bring public and private finance into assets that bring wider benefits such as flood mitigation, tourism and recreation, economic growth, meeting the future needs of agriculture, and ambitious environmental improvements that go beyond statutory requirements.
- II. Further guidance will be required from Defra and regulators if water companies are to have confidence that investment will be allowed in adaptive plans that deal with futures that inevitably carry some uncertainty.
- III. Defra and regulators need to address who should set and pay for ambitious environmental improvements. This must be clear and baked into plans.
- IV. Use the Environment Bill to set a formal national target on Government for reducing water consumption as only Government can ensure that all those with the ability to act on water demand have the right incentives in place.
- V. Set the target on 'distribution input' (so, the amount removed from the environment) rather than just per capita consumption. This allows companies to build joined-up strategies by tackling issues among business demand and the distribution network as well as household demand, and more closely aligns activity with the objective of leaving more water for nature, rather than focussing on one component of demand alone
- VI. Tackle the critical policy gap around 'non household' users like businesses. Up to about a quarter of water is used by these organisations, but existing incentives and regulations are insufficient for dealing properly with this important component of demand.
- VII. Introduce a mandatory national labelling scheme for water appliances like dishwashers and washing machines, coupled with minimum standards to ensure they are not wasteful.
- VIII. Strengthen building regulations in order to stop the increase in the stock of water inefficient homes. That would require a single minimum standard for all fittings in a new home.
- IX. Love Water should play an important part by acting as a call to action by customers, but will only be effective if customers have the tools to manage and reduce their consumption (for example, labelling to show appliances' water use).
- X. It is essential for resilient water supplies that plans and options are developed on an adaptive basis, with key triggers and performance monitored to enable timely decisions to be made. Critically, however, decision points also need to be aligned to the constraints of a regulated, fixed, five-year business plan, which reduces the ability for companies to act between reviews. A process is needed that reconciles these two issues.