
Discussion Summary

Running out of water?

Water resources and efficiency

Top Lines

- **We are at risk:** A severe drought in England in the next decade is very possible, and would be publically unacceptable and very expensive to the economy (eg. >£300m per day).
- **The level of risk is uncertain:** Droughts are difficult to predict in certain regions that are reliant on rain and reservoirs rather than boreholes. It is also difficult to predict future water demand, and therefore the water resources that England will need in the future.
- **We must take action now:** Despite this high level of uncertainty, there is a strong case for taking action now - new reservoirs will be needed in some areas; higher product standards and a mandatory water label; greater smart meter coverage; and greater water efficiency to reduce demand, including building new houses to a higher water efficiency standard.
- **We must plan for the future:** Drought risk planning needs to be put on a par with flood risk management planning, with more regional planning being encouraged so that different water companies work together. There should be a more risk-based approach to drought planning, so that the worst risks are alleviated first.

Speakers

- **Luke Pollard MP**, Chair – Shadow Water and Flooding Minister
- **Prof. Ian Barker**: Water Policy International
- **Dr Manuela Di Mauro**, National Infrastructure Commission
- **Aaron Burton**, Waterwise

Overview

Hosted by the Westminster Sustainable Business Forum (WSBF), this policy roundtable on 23rd October 2018 built on the findings and recommendations from WSBF's recent [Bricks & Water](#) report published in June 2018, which was a plan of action for building homes and managing water in England.

This was the first of the follow-up events which looked at long-term water resources in England, and sought to answer the following questions:

- With the stresses on water of climate change and population growth, are we ever going to get into a situation in England where we are running out of water?

- Is there more forward resilience planning we need to do?
- Do we need to build more water resource assets like reservoirs?
- What role can demand management and water efficiency play in achieving resilience?

This roundtable was kindly chaired by Luke Pollard MP, Member of Parliament for Plymouth, Sutton & Devonport and Shadow Water Minister.

Speaker Summary

Prof Ian Barker – Water Policy International

- Forecasts and estimates for future water resource availability and water demand are difficult to make with much accuracy, because they are made on a number of uncertain variables which you have to make assumptions about. How the next generation think about and use water will be very important for predicting these trends.
- Brexit will potentially impact water demand if it has impacts on the need for the UK to manufacture or grow more after leaving EU.
- Water efficiency and demand management are often cost effective interventions, but public information about the need to conserve water and behavioural change will be important.
- More water resource assets like reservoirs need to be built, but these alone will not prevent water shortages in a severe drought scenario – Australia has 200 times more reservoir capacity per person than England and still regularly suffers water shortages from drought.
- As well as demand management, there will be need for more inter-region water transfers to improve resilience.
- Water efficiency is important to reduce overall water demand, but as with energy just as important is reducing the peak water demand at certain times of the day and times of year.
- There is a need for greater water meter penetration in the UK, as coverage in certain areas remains stubbornly low. Current meter coverage in England is around 50%, but some water stressed areas have had a compulsory metering programme.
- Other potential solutions include rainwater harvesting, greywater reuse and desalination. All of these solutions have potential drawbacks and so a mix of measures will be needed to ensure resilience.

“Forecasting future water resources and water demand is very difficult and there is a high degree of uncertainty in the assumptions that you have to make.”

Prof. Ian Barker – Water Policy International

Dr Manula Di Mauro – National Infrastructure Commission (NIC)

The NIC published their report of future water resource planning on 25th April 2018 – [Preparing for a drier future: England’s water infrastructure needs](#). This gave the Government a road map of the water resource infrastructure and actions that need to be delivered over the next 30 years. The NIC’s recommendations are fully costed, and identify best value and low regrets actions. The findings of the report included:

- There is a high public confidence in the provision of water, but the system is potentially vulnerable to drought. This is going to worsen due to the effects of climate change and population growth.
- There is at least 1 in 4 chance of a level 4 drought (severe water provision interruption, standpipes in the street) in England between now and 2050.
- Providing water during an emergency to avoid level 4 restrictions would be incredibly expensive, if at all possible, and brings high environmental cost and potential health risks. There is a strong economic case for taking action to improve water resilience now.
- To ensure resilience of water provision, we would need an extra 4 billion litres of water every day by 2050.
- 20% of water in England is lost through leakage from pipes; this is a waste of a resource that should be reduced by half by 2050.
- Universal smart metering should be rolled out to help inform the public about the water they are using and how they can reduce it. Smart meter coverage should be nearly universal by 2030. This would reduce national per capita consumption (pcc) to 118 Litres per person per day (Lpppd), but this is not an NIC ‘target’ – we can and should go further on reducing average water consumption.
- New assets such as reservoirs take a long time to build and come online, so there are steps that we can take to improve resilience and reduce demand now.

“There is a high public confidence in the provision of water, but the system is potentially vulnerable due to climate change and population growth pressures... There is a strong economic case for taking action to improve water resilience now.”

Dr Manuela Di Mauro - NIC

Aaron Burton – Waterwise

- Waterwise published their [Water Efficiency Strategy for the UK](#) in June 2017. This (like WSBF’s Bricks & Water) highlighted the likely increased incidence of drought in England in the future.
- Currently the average water consumption in England is 141 Lpppd. There is a need to see more ambitious targets for reducing pcc to get towards national annual consumption of 100 Lpppd. Setting percentage (%) pcc reduction targets have worked in California and Australia.

- At the moment only new houses have to be built to a standard of 125 Lpppd, or 110 if they are in a water-stressed area. Building all homes to a standard of 110 Lpppd would only cost the builder an additional £9 per property, and building to 100 Lpppd (as *Bricks & Water* recommends) would likely not cost more than this.
- Water efficiency would also save carbon by reducing energy usage – 5% of UK carbon emissions come from heating water in the home.
- Waterwise agrees with *Bricks & Water* recommendation of a mandatory water label for household fixtures and fittings to drive greater efficiency and consumer choice.
- Waterwise also back WSBF's call for a Property Resilience Certificate (PRC) for housing, so that house buyers can have more choice and information to inform what will be the biggest buying decision of their lives. The PRC would show how 'future-proofed' the property is by rating the house on its relative flood risk and resilience, water efficiency, energy efficiency and thermal performance.
- To ensure the public are informed, the government should support a national education programme to engage customers on why they should save water. Waterwise notes the efforts of the industry to speak to customers on these issues, such as the Target 100 initiative from Southern Water. A coalition of public and private stakeholders will need to be on-board so that a concerted effort is made to better inform the public.

“We must see more ambitious water efficiency targets set for England, to get per capita consumption down. This has worked in other countries and would make us more resilient to climate change.”

Aaron Burton - Waterwise

Open Discussion

The open discussion around the table covered various topics, including:

- Anglian Water operates in a very large and dry region of the country, and there a million new houses planned to be built in our area over the next few years. At the same time, we need to reduce our footprint on the environment by reducing abstraction from rivers. To correct these potential strains on water resources, AW is investing in innovative ways to promote water efficiency in the home, and featuring these [Newmarket Innovation Shop Window](#) to test out the relative benefits of these technologies.
- Droughts are difficult to predict for certain water companies (like United Utilities) that are reliant on rain and reservoirs rather than boreholes.
- Some of the regional planning being done now by group such as Water Resources East (WRE) has improved taking a long-term and large scale view of water resources. The Environment Agency is encouraging more of this kind of regional planning.
- Drought risk planning needs to be put on a par with flood risk management planning. There should be a more risk-based approach to drought planning, so that the worst risks are elevated first.

- A level 4 drought (standpipes in the street) situation is not acceptable for a modern society. We need a practical change in some of the guidance that is given to the public about water use during a drought situation.
- OFWAT have been encouraging greater engagement between water companies and customers about saving water, and are moving to a long term best value rather than immediate lowest cost when evaluating infrastructure decisions, like new reservoirs. Ofwat hasn't been a blocker that has stopped these decisions being taken; we just perhaps haven't discounted them over a long enough time to show value for money.
- Inter-region water transfers will be of limited benefit for increasing future resilience: expensive and carbon intensive to pump water; water in different regions is chemically very different, and this leads it to having different properties (hard or soft) to the public and the network; plus a drought is likely to affect the donor company as well as the recipient, which means the donor could be unwilling to transfer the water out of region if they are running low.
- 25-30% of water leakage is from the customers' pipe work, which the water company cannot fix.
- 10% of homes have a WC that leaks, which is unnoticed by many householders and wastes a huge amount of water. Innovations like dual flush toilets can greatly reduce water usage, but most people don't understand how to use them.
- There needs to be greater water meter coverage in England, which currently stands at around 50%, with huge regional disparity. Households with a water meter fitted use an average of 16% less water, and this can be more if it is a smart meter which the customer can interact with. There is still some resistance to metering rollout in some areas, and this resistance is strongly tied to deprivation. There is a need for a joined-up public campaign on water to explain to the public the need for greater water meter rollout.

About the organisers

The Westminster Sustainable Business Forum (WSBF) is a high-level coalition of key UK businesses, Parliamentarians, Civil Servants and other organisations. Providing a politically neutral environment for knowledge sharing and discussion on sustainability policy, we help to inform the wider sustainability agenda in government and are a trusted source of independent information and advice for policymakers. We publish authoritative research reports; impact on government policy through our in-depth round table policy discussions and outputs; and inform the wider sustainability debate by convening Parliamentarians, senior Civil Servants, business experts and other stakeholders at our larger policy events and seminars. The WSBF works in the policy areas of construction, infrastructure, water, sustainable planning, green finance and natural capital. We are cross-party, independent and not-for-profit.

For more information on our activities, please visit: www.policyconnect.org.uk/wsbf or alternatively please contact Jim Clark at jim.clark@policyconnect.org.uk

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