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This document has been written in line with the requirements of the RAPID Gate 2 Guidance and to comply with the regulatory process pursuant to United Utilities' statutory duties. The information presented relates to material or data which is still in the course of completion. Should the solution presented in this document be taken forward, United Utilities will be subject to the statutory duties pursuant to the necessary consenting process, including environmental assessment and consultation as required. This document should be read with those duties in mind.

United Utilities

Water for the North West

Emotionally Intelligent Communications

WATER RESOURCES WEST

EMERGING REGIONAL PLAN PRE-CONSULTATION WORKSHOPS:

NORTH WEST; MIDLANDS; AND WALES

26 JANUARY, 2 FEBRUARY, AND 9 FEBRUARY 2022

CONTENTS

INTRODUCTION

On 26 January, 2 February and 9 February 2022, Water Resources West (WRW) hosted a series of virtual workshops that formed a pre-consultation on their emerging Regional Plan. Each of the workshops had a regional focus – the first on the North West, the second on the Midlands, and the third on Wales – and were designed to seek feedback from stakeholders on the following topics: WRW's environmental destination; drought resilience and demand management; and water resources options. The fourth session of each workshop was dedicated to the specific Water Resources Management Plans (WRMPs) for each region within WRW. On 26 January, this optional session was hosted by United Utilities. On 2 February, it was hosted by Severn Trent Water and South Staffs Water, jointly, and on 9 February by Welsh Water.

For the purposes of this report, feedback from each location has been organised by region: the North West; the Midlands; and Wales. While there were instances of stakeholders attending from outside the WRW region, where relevant, regional differences in opinion have been noted and analysed.

The workshops were hosted online, using Zoom. Each session consisted of a short presentation given by WRW representatives and / or their counterparts at United Utilities, Severn Trent Water, South Staffs Water, and Welsh Water, followed by facilitated discussions in virtual breakout rooms. In addition, stakeholders were asked to vote in an online poll using Slido on a number of topics.

WRW instructed EQ Communications, a specialist stakeholder engagement consultancy, to independently facilitate the workshop and to take notes of the comments made by stakeholders. Every effort has been made to faithfully record the feedback given. In order to encourage candour and open debate, comments have not been ascribed to individuals. Instead, notes have been made of the type of organisation each stakeholder represents.

The full presentation can be found here.

METHODOLOGY

MAXIMISING PARTICIPATION

WRW's database contains the details of more than 1,000 stakeholders, all of whom were invited to take part in the workshop series. The stakeholders on the WRW database were sent several email invitations for the consultation events to ensure that they were given the opportunity to participate. The first invitation was sent on 17 December 2021 to give stakeholders at least five weeks' notice. In addition to the email invitations, pre-identified stakeholders also received telephone calls with the aim of ensuring a mix of different stakeholder groups across the workshops. As standard practice, ahead of any workshops, all stakeholders who have registered are reminded about the event via telephone and email with a view to maximising participation.

PROVIDING ACCESSIBLE INFORMATION

There were four short presentations, each followed by breakout sessions in smaller groups to enable stakeholders to provide verbal feedback. Relevant slides from the presentation were shared in the breakout rooms to ensure that stakeholders had sufficient information in front of them to participate. If stakeholders did not answer a question, the facilitators asked them to confirm whether their silence indicated tacit approval or whether they felt unable to respond.

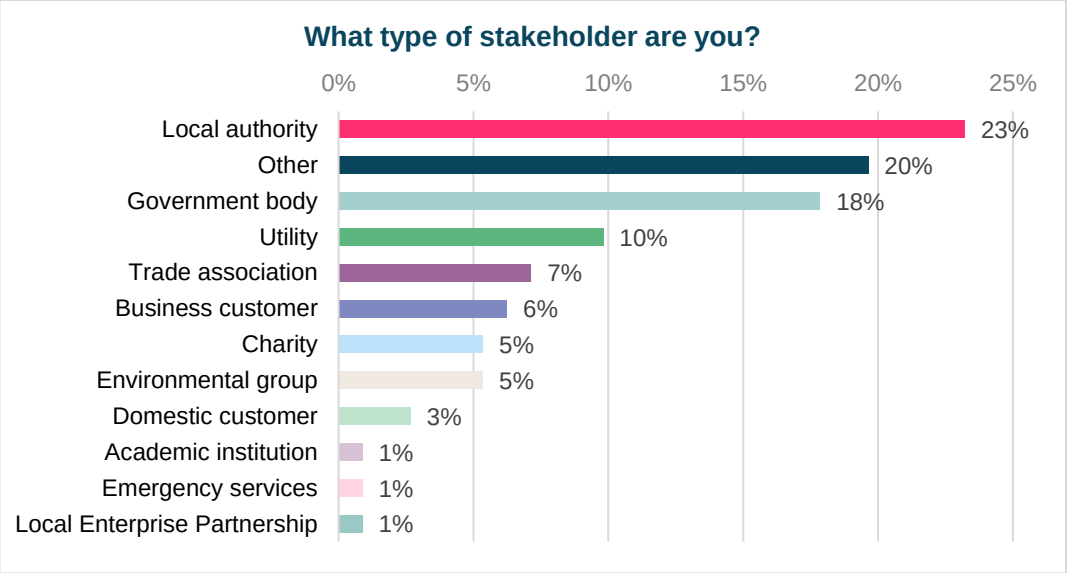
Each breakout session was followed by electronic voting, with online voting software used to gather quantitative feedback on each topic. Stakeholders were given the option of 'don't know / can't say' when voting and were asked not to answer if they felt that they did not have enough information or the necessary level of expertise to take a view. The number of voters who abstained has been set out under each voting question in this report.

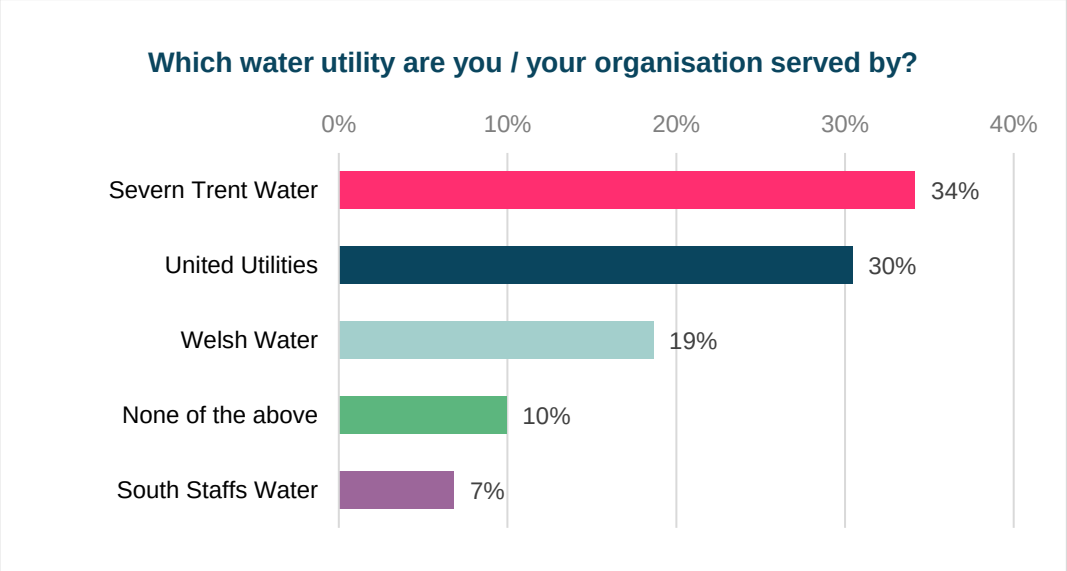
Stakeholders were emailed a copy of WRW's emerging Regional Plan ahead of the workshop to provide them with additional background information for the event.

EXECUTIVE SUMMARY

PARTICIPANTS

- A total of 133 stakeholders participated in the workshop, representing 84 organisations.
- The most widely represented stakeholder types were local authorities (23%), government bodies (18%), and utilities (10%). A fifth of participants (20%) identified as 'other', indicating that their stakeholder type was not adequately described by the available categories.
- 34% stated that they were served by Severn Trent Water, followed by United Utilities, with 30%.
- 56% of attendees who filled out a feedback form told us that they found the workshop to be 'interesting', with another 41% opting for 'very interesting'. 70% felt that the facilitation at the workshop was 'very good', while 30% chose 'good'.





**Stakeholders were able to select more than one region.*

WORKSHOP 1: WRW'S ENVIRONMENTAL DESTINATION

The first workshop began with a presentation from Matilda Beatty, Principal Hydrogeologist at WRW, who explained that WRW is planning a long-term 'environmental destination' for water resources up to 2050 and beyond, using scenarios to consider the impact of climate change and growth and taking active measures to protect and improve the resilience of its catchments. She then asked for feedback on the prioritisation of benefits for action – water resources, multi-benefit, or catchment-specific – and for direction on three possible levels of environmental ambition – current regulation, business as usual (BAU), or enhanced.

- A clear majority wanted to see WRW enact an enhanced level of environmental ambition, and this was reflected in the electronic voting, where 79% opted for level 3 (enhanced).
- Across all three workshops, there was some debate about where to prioritise the benefits for action, with some arguing in favour of a multi-benefit priority in order to gain the widest scope, while others were concerned this could dilute impact and effectiveness and advocated a catchment-specific approach.
- These differences in opinion were reflected in the electronic voting, where maximising multiple benefits received a slim majority (56%), with a catchment-specific approach close behind on 42%.
- Delegates were asked to rank environmental benefits according to their importance, and the top priority was water quality, with an average score of 5.34, followed by water resources – flows & levels, with 5.17. The third most important benefit was flood management (4.54).

WORKSHOP 2: DROUGHT RESILIENCE AND DEMAND MANAGEMENT

Richard Blackwell, Director of WRW, introduced the second session. He began by showing the need for resilience, using forecasts that predict the negative impact of both climate change and growth on the supply of fresh groundwater. He explained that demand reduction was WRW's starting point, with an ambition to reduce personal water consumption by 20% by 2050, and to reduce leakage by half. He then asked for feedback on the acceptability and feasibility of this proposal, and whether other measures, such as water labelling, building standards and water metering, would be supported. Finally, he asked whether WRW should aim to achieve the drought resilience standard (of once in every 500 years) earlier than the proposed date of 2039.

- There was strong support for reducing water consumption by 20%, with 76% agreeing or strongly agreeing with this proposition.

- A majority of stakeholders felt that government intervention was vital in driving down personal water consumption, with this view further supported by the electronic voting, where 89% agreed or strongly agreed with the proposal.
- There was more nuance around the issue of smart metering: although many agreed with it in principle, concerns were raised over affordability, the more fundamental issue of leakage, and the use of hard engineering solutions where a smarter approach might be wise. Voting electronically, 72% were supportive of this measure, 12% remained neutral, and 17% disagreed.
- Many felt that increasing customers' bills to solve deficits by reducing demand was a politically difficult issue, especially given the levels of regional poverty across WRW's patch. This lack of consensus was reflected in the voting, with 48% agreeing, 35% disagreeing, and 17% remaining neutral.
- Views were mixed on bringing the drought resilience standard forward to 2025, and this was witnessed in the voting, where 58% agreed with bringing the standard forward, 19% disagreed, and 23% remained neutral.

WORKSHOP 3: WATER RESOURCES OPTIONS

Marcus O'Kane, WRW Options Lead and Water Resources Lead at Severn Trent Water, began the third session of the day. He showed that leakage and demand management alone will not be sufficient to meet increased demand, and that new supply options will need to be identified. He outlined some of the 226 feasible new water supply options, such as reservoir enlargement, effluent reuse, and surface water enhancement, and asked for feedback on the range presented, as well as suggestions on other partner organisations that WRW can work with to create multi-sector benefits and opportunities.

Following Marcus' presentation, Richard Blackwell then explained local water needs, showing that by the 2040s, supply options will be needed to serve the Midlands, potentially Carlisle, and, further away, the South East. He sought feedback on water transfers, asking whether this was acceptable to stakeholders, and, if so, what protections and benefits they would expect.

- Overall, it was felt that WRW had presented a good range of water options, with 81% agreeing or strongly agreeing that this was the case.
- There was strong support for options that were seen to have both economic and environmental benefits, and this was reflected in the voting: when asked to rank their top novel water resources, catchment management was first (21%), followed by water treatment works loss recovery (15%) and surface water enhancement (10%).
- There was little appetite for 'hard engineering' solutions, such as new reservoirs and bulk water transfers, which were seen as politically and environmentally contentious.

- There was majority support for sharing water resources, with 75% agreeing with the proposal. However, this was also a politically divisive issue that reflected regional concerns and differences: some delegates objected to their more water-rich regions losing out to development in the South, while others felt that ethically it was correct to share water resources.
- When asked to rank the benefits of water transfers, enhancements to the environment was first, with an average of 3.5, followed by improvements to water supply and resilience, and investment into the area (new jobs), with 3.39 .
- When delegates were asked to vote on the proposition: “Overall, I am supportive of Water Resources West’s emerging plan”, 74% agreed, but 22% remained neutral, suggesting that more work needed to be done to educate, inform and consult with stakeholders on the plan.

WORKSHOP 4: WATER RESOURCES MANAGEMENT PLANS (WRMPS)

The fourth session of the day was hosted by representatives from each of the utilities in the WRW region, with the first workshop in the series devoted to United Utilities, the second to South Staffs Water and Severn Trent Water, and the third to Welsh Water. These sessions were designed to elicit local knowledge and feedback from each of WRW’s regions, with a focus on specific areas of their WRMPs: environment, demand management, options, service levels, transfers, water quality, and consultation and engagement.

- Environment was selected for discussion across all three workshops, and key concerns were voiced around river pollution from sewage runoff and pesticides, phosphates and fertilisers, with many delegates of the view that ‘water companies have a statutory duty to protect water quality’.
- Discussing land management, stakeholders wanted to see more engagement with farmers, large landowners and big industry over reducing harmful runoff, and this connected to a wider picture regarding better catchment management, which could lead to greater biodiversity, more effective flood management, and environmental net gain.
- Demand management focused on the impacts of the levelling up agenda, growth, heavy industry and manufacturing. Policy and strategy geared towards more stringent building regulations, grey water reuse and reducing leakage were all strongly advocated.
- Water quality was viewed through the environmental context of algae blooms, pesticide runoff and contaminants: catchment management and nature-based solutions, such as slowing water flow and environmental management schemes, were proposed, as well as smarter use of technology, such as strategies to reduce contaminants and pollutants to the rivers before extraction, removing the use of chlorination in drinking water, and better treatment at sewage works.

- Consultation and engagement were seen as critical to good progress, and a majority of stakeholders felt that stakeholder workshops were extremely helpful: for most, face-to-face interaction was preferred, but it was also felt that a hybrid, online option was sensible in order to reach the maximum number of participants.

WORKSHOP 1: WRW'S ENVIRONMENTAL DESTINATION

Delegates were introduced to WRW's long-term 'environmental destination' plan for water resources. They were asked to take a view on the types of benefits that WRW should prioritise when identifying measures for action and were presented with a choice between water resources benefits, multiple benefits, or catchment-specific benefits. They were also asked to take a view on WRW's level of environmental ambition and were presented with a choice between current regulation (level 1), business as usual (level 2) or enhanced (3).

LEVEL OF AMBITION

Stakeholders weighed up the potential bill impact against the three proposed levels of environmental ambition, and while across all three workshops the cost-of-living crisis was of real concern, a clear majority wanted to see WRW enact an enhanced level of environmental ambition. This was reflected in the electronic voting, where across all three workshops, 79% opted for level 3 (enhanced). For many, working to the current baseline simply wasn't good enough, and there was real concern around the current quality of rivers and waterways, with levels of pollution in the Severn, Wye, Usk and Lugg rivers cited as unacceptable.

In the North West, there was discussion around the ethics of cost around this issue, with some feeling concerned that WRW's current approach, which pits bill impact against enhanced environmental protections, 'sets us against the environment in a kind of zero-sum game', where bill payers would inevitably choose the cheaper option. More education and communication around water and the environment were seen to be vital, here, to expand customers knowledge and understanding of what was required to safeguard water resources and their biodiversity and ecosystems for the future. Others felt that the onus on paying to protect and enhance the environment should not fall solely on domestic customers, but focus on major polluters, such as agriculture and industry.

In the Midlands, there was more diversity of opinion on this question, perhaps reflecting the competing needs and demands of the region between industry, farming and the more densely populated towns and cities. Some felt strongly that even the enhanced level 3 did not go far enough, and wanted to see a level 4, modelled on the Danish approach to water resources, with greater investment in new technologies, flood management and carbon sequestration. However, on the other end of the spectrum, delegates representing farming and energy wanted to opt for levels 1 or 2, arguing that reduced abstraction would have a negative impact on the Midlands' ability to produce soft fruits and vegetables, and on ensuring continuity of energy supply and reaching Net Zero.

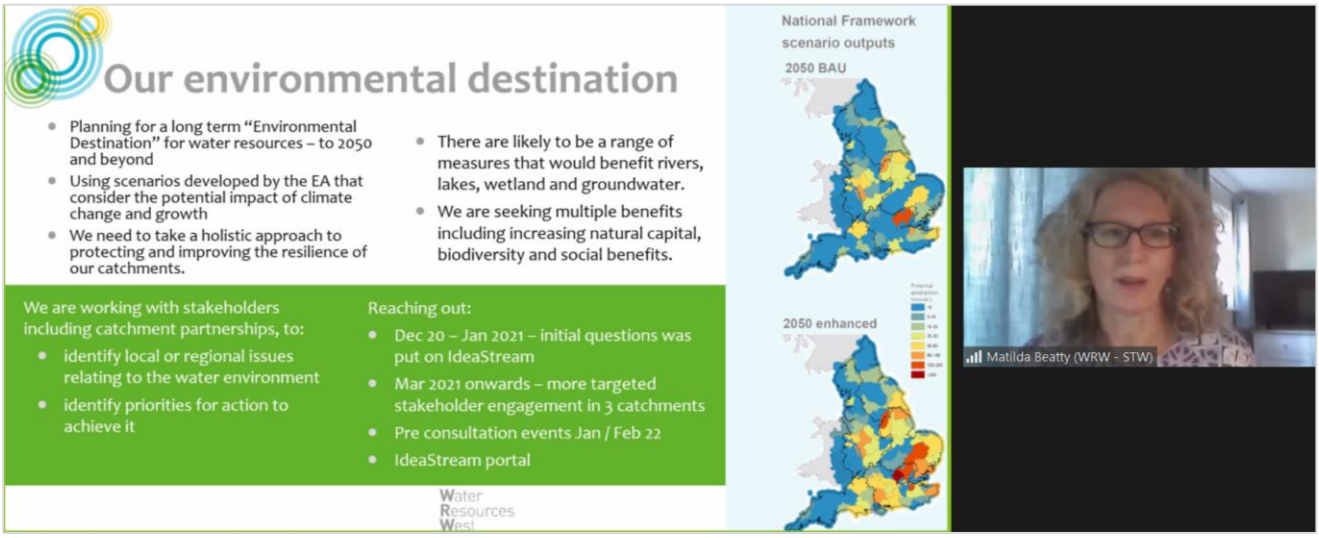
In Wales, the focus was on Welsh Government legislation and the Water Framework Directive, with many stakeholders pointing out that levels 1 and 2 were not compatible with the legislative direction of travel, which is to maintain and enhance diversity. For these delegates, the legislative context inevitably pointed to an enhanced level of ambition. While bill impacts and inflation were of real concern, a clear

suggestion here was to ‘take customers on this journey with us’ by embedding education and engagement into conversations around water resources, gaining buy-in, and taking the sting out of bill increases. Furthermore, many delegates noted that customers were now prioritising the environment, and that the appetite to learn more and participate in discussion around relevant issues was already present and needed only to be acted on by WRW.

PRIORITISATION OF BENEFITS FOR ACTION

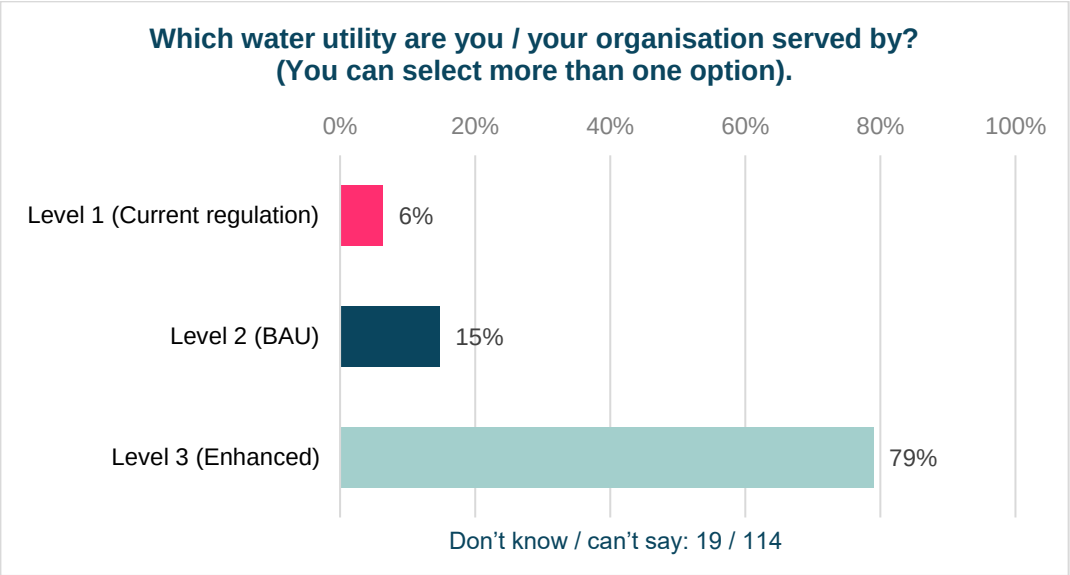
There was some debate about where to prioritise the benefits for action, and this was true across all three workshops. Some argued that it was difficult not to lean in favour of a multi-benefit priority as the best approach, with delegates urging WRW to think in terms of ‘stacked benefits’ where certain partners can focus on specific priorities, ensuring that, despite the wide remit of the multi-benefit option, all bases are covered. However, others felt strongly that ‘one size doesn’t fit all’, and that, conversely, to meet the complex needs of the environment, WRW needs to act very specifically and locally, with a catchment-specific option therefore having the greatest impact. These differences in opinion were borne out in the electronic voting, where maximising multiple benefits received a slim majority of 56%, with a catchment-specific approach close behind on 42%.

When delegates were asked to rank environmental benefits according to their importance, the top priority was water quality, with an average score of 5.34 out of 6, followed by water resources – flows & levels, with 5.17. The third most important benefit was flood management (4.54).



VERBATIM COMMENTS AND ELECTRONIC VOTING RESULTS

1. Which level of ambition do you most support: 1 (current regulation), 2 (BAU), or 3 (enhanced), bearing in mind the additional cost?



NORTH WEST

- "The effect on the bill size is significant and we cannot lose sight of that. My professional head thinks that we should go hard and be as ambitious as possible, but on a personal level, I'm not sure, as electricity costs are spiking at the moment and many families are already struggling with the cost of living as is. However, professionally speaking, level 3 is the minimum that we should be delivering for our environment." Charity
- "Our river resources are worsening in quality and are not meeting the standards that they should be, so we need a step change to meet a specific baseline. Some of the work that needs to be done will inevitably be covered by the water companies, which will impact on the bills, so that needs to be considered. However, I think that we should be thinking holistically and going as far as we can to find environmental solutions, as they could also help us to deliver abstraction solutions." Charity
- "I'm concerned that this current approach sets us against the environment in a kind of zero-sum game. If you ask people whether they want something cheaper, they will always want the cheapest option and often don't see the picture behind it. It's so much more complex than that and we need to get that information out to make people willing to spend a little more on their bills to protect our natural environments." Government body
- "The numbers presented around cost look scary, but if you drill down, it will equate to an extra £10 a year, which would be OK to me if the government supports the poorest with these costs. I would also say that these environment issues and costs are catchment dependent, so we

don't need to have a completely fixed approach across the entire operating area. At the same time, I do understand that all of this needs to fit in within an overall cost picture." Environmental group

- "I'm broadly in favour of level 3, but as for the claim that BAU is meeting legal requirements, as we all know, our water has failed miserably to meet the EU water quality standards. I've sat on a United Utilities bill payers panel, and sometimes I'm the only person who votes for a bill increase to protect the environment. There's too much focus on reducing bills. While I'm sure a lot of us here will be in favour of level 3, it's getting the general public to see it that way." Environmental group
- "We need to start from the place that says that current standards aren't being met. There are multiple failures under the Bathing Water Directive. We've all seen the current publicity, George Monbiot's Riverside, the impact of sewerage. Particularly the Wye and the Usk and Lugg, they are failing because of pollution from agriculture, not predominately the water companies. You have to go to level 3 and have Ofwat look at who should pay the cost. My instinct is it shouldn't all fall on water customers. The sectors contributing most to the problem have to pay their way." Environmental group

MIDLANDS

- "I would like to see the most ambitious level possible, particularly bearing in mind my environmental remit at the council. Looking at where we're going in the future, we really need to safeguard the environment. I'm aware of the impact of higher bills for customers, but, at the same time, I feel that we need to put our hands in our pockets." Local authority
- "Level 1 is inadequate in terms of environmental protection. We're in great difficulty and the small monetary impact on the bill is fine, I'm sure. The regulation is not robust. Standing still, BAU isn't good enough. Forget the first two." Environmental group
- "Our rivers, the Severn and the Wye, are heavily polluted. In order to survive the next 20-30 years, we need to improve the environment and biodiversity. We have to protect species and allow them to flourish and thrive. Protection should mean populations are able to recover and grow." Local authority
- "WRW should look at the Danish model, perhaps, as a Level 4. Investing in new technologies, flood management and carbon sequestration are key." Local authority
- "I think all three options are poor. You need a level four. When you say, 'ensure water quality doesn't get worse', that's not good enough. We need 100% of rivers being good quality – this was the target by 2016 and it looks like we aren't even going to achieve this more than 10 years later!" Trade association
- "I think that we need to be mindful on the billing side. People have less money in their pockets, and we are all going to have to pay for the Covid support that we have received over the last couple of years, so we have to realise that people's wallets aren't bottomless pits of money. In

addition, water use isn't all on domestic customers and we need to look at how other areas of society, such as industry (a major user), can play their role in this process." Domestic customer

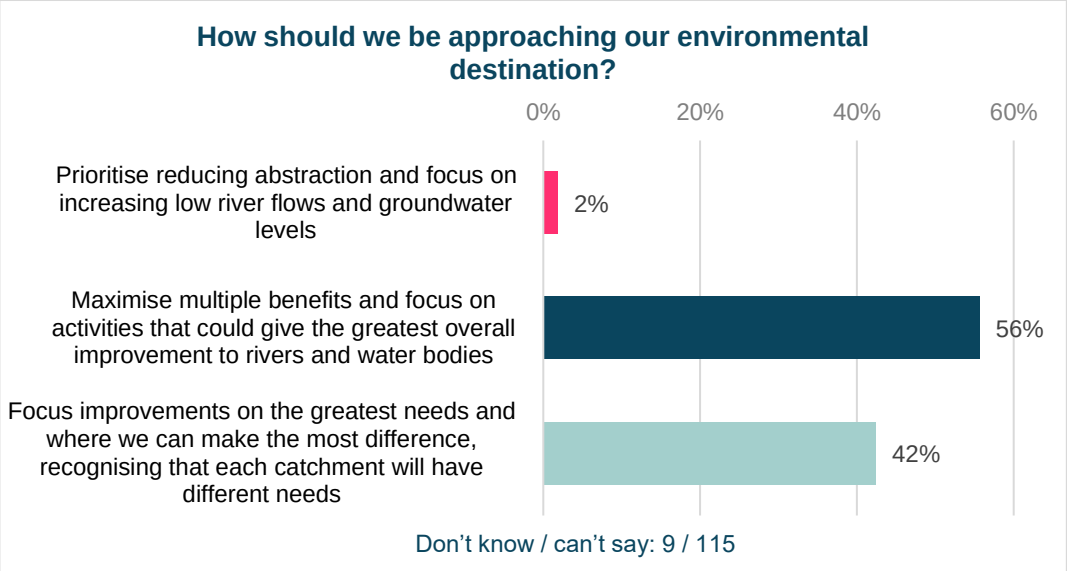
- "The cost of living crisis at the moment is really important. I presume these bill increases aren't taking into account inflation. We have to think of this in the context of reducing leakages, and the increasing cost of living." Business customer
- "I represent the National Farmers Union. I'd go for scenario one and I'm basing this on the outlined reduction in abstraction. In the Midlands, we have a significant horticulture industry, producing vegetables and soft fruits. We are national hub for horticulture, and we have to think about the impact of climate change impact on water availability. We do import produce from other countries, but these countries will also be under increased threat from water shortages, so for me it's about safeguarding our water as much as we can to ensure long-term food security." Trade association
- "My focus is on electricity and future hydrogen production. We need access to water at current and future operational sites. Looking ahead, to make investments we need certainty of water supply over the lifetime of future sites, which is around 25 years. I'd go for the BAU one but I'm not averse to more environment protection as long as we aren't restricted in terms of abstraction. From an electricity point of view, we need to protect our existing water abstraction levels to keep the lights on and ensure we reach decarbonisation." Business customer

WALES

- "This is a difficult one to answer, but I would point out that level 1 is in line with what is expected under Welsh legislation anyway, meaning that water companies have to do a certain amount to protect biodiversity and habitats in Wales. In my area in Wales, we have high quality habitats, and we don't want to see them deteriorate, so we are working with NGOs and water companies to prevent this together." Government
- "Is level 1 the right place for Welsh legislation which talks about maintaining and enhancing biodiversity? That feels like level 3." Government
- "Given all of the legislative context that supports all of this, as much ambition as possible is a great way to go." Local authority
- "We're involved in the Water Framework Directive and are trying to bring other projects within its scope, so I would support an advanced level of ambition. However, it has been a highly challenging year, with droughts and high river levels. This means that we need to be innovative and go as far as possible." Government
- "I support being ambitious, but we do also need to think about the bill levels, as whatever WRW picks needs to be acceptable to customers. Demands around affordability are very real at the moment, so we need to take people on this journey with us. However, it is also worth noting that customers are prioritising the environment, so I think that they would be willing to pay what they can if it's affordable." Utility

- “Our local plan has our climate-emergency declaration at its heart. In a bright new utopian world where everything is possible, I would say level 3 every time. However, I’m not sure whether it is feasible, as developers will always argue about viability, so level 3 ambitions will always have some pushback on the ground. I would also embed education campaigns into this process, so that people understand why their bills are going up, which will make it easier to achieve buy-in. People don’t think about their water use or understand where it comes from.” Local authority
- “Business as usual does not appeal. We’ve been trying to do business as usual against a background of change. We need to anticipate that change and get ahead of the curve. The idea of keeping the current regulation when rivers are failing in England and Wales tells you that it’s not working. We have to up our game.” Local authority
- “It all comes down to what we want to engage with customers on and I don’t think we are. Whatever we are discussing in terms of water resources, our jobs are to find a way to translate that and engage with people so that they understand when they’re responding to a water resources management proposal. We need to have a conversation with the public. It’s not about paying. People need to understand what’s going on. The level needs to be informed by engagement.” Government

2. Which benefits should we prioritise when identifying measures for action: water resources, multi-benefit, or catchment-specific?



NORTH WEST

- “The environment underpins our society, and it is a complex system. That means we need to take a complex approach to tackling this issue, so I would not necessarily prioritise any particular area and would focus as widely as possible.” Government body

- “It’s a mix in reality. You can make arguments for all three. It will be place-specific too and you cannot be too generic.” Charity
- “It’s hard to prioritise some of these benefits in terms of what we’ve seen. In the context of what we are talking about, only going for a 50% [reduction in] loss of water from the company’s pipes does not feel particularly ambitious to me.” Local authority
- “This would be a multi-benefit priority. 12% loss into the future is quite significant and it seems like a waste.” Local authority
- “All three areas are priorities and can’t really be looked at or acted on in isolation.” Local authority
- “One size doesn’t fit all. We have to look to catchment-specific.” Environmental group

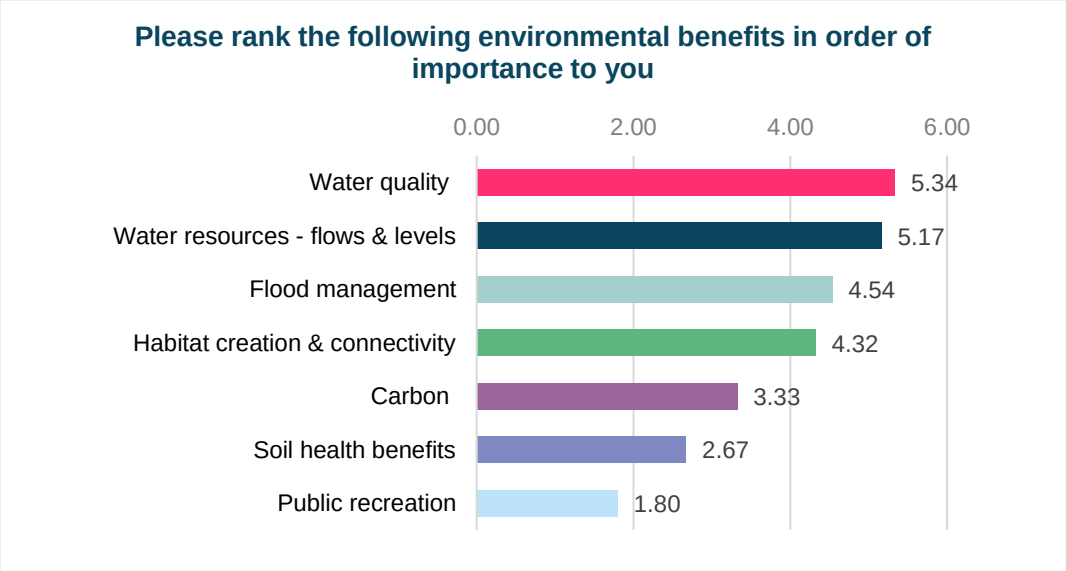
MIDLANDS

- “My interest is in the natural environment, so I’m motivated by biodiversity. On that basis, I would look at catchment-specific measures as a priority, as they work at scale and won’t tinker around the edges, which isn’t an option here. In addition, if we look after the environment, it will deliver rewards that are not purely financial, so it would be worth taking a natural-capital approach.” Domestic customer
- “It’s tempting to create a typology and break everything down. As this is a really large partnership, all of us can focus on different elements. Someone used the phrase ‘stacked benefits’ the other day. Certain partners can focus on specific priorities. Everything should be picked up by somebody.” Environmental group
- “It’s very difficult to answer because the multi-benefit option is the obvious choice. It’s not a matter of prioritising one over the other. All these things were supposed to be done many years ago. In fact, water companies have been paid to do this. Southern Water was paid to do this back in 2010 and didn’t. These things should already be the case.” Trade association
- “I think it’s got to be between the multi-benefit and water resources priority. The focus of WRW should be on making best use of the water we already abstract. A lot of the catchment-specific mechanisms are already being looked at. We need to tie into water quality type projects.” Trade association
- “It’s got to be the multi-benefit. There is going to be growth in housing and other developments. One of the key priorities of planning is protecting the environment. We need to find that balance between the environment and economic growth. It’s similar to planning, in that everything is always a priority!” Local authority

WALES

- “Most of these things are elements that we appraise, except for the fish components. We look at them strategically and for every site that we are considering allocating, so all of these are important to us. The multi-benefit approach would be particularly useful for us.” Local authority
- “The multi-benefit priorities are most important for me.” Local authority
- “I’d go for catchment-specific. We need to put our money in the places where it makes the most impact.” Business customer
- “Multi-benefit would be best, but it risks loss of focus and could be too general or limited. Is a holistic approach best, or ‘horses for courses’?” Business customer
- “We look at multi-benefits for the whole catchment, so I’m torn between the two. For catchment-specific I would look at water quality rather than flood risk, so it depends what you’re looking at.” Environmental group
- “It has to be part of your protection and monitoring plan to protect the environment. My fear is that multi-benefit could end up being too general and awkward to manage.” Business customer

3. Which environmental benefits are of most importance to you?



WORKSHOP 2: DROUGHT RESILIENCE AND DEMAND MANAGEMENT

The second session contextualised the plan to reduce personal water consumption by 20% by 2050, and to reduce leakage by 50%. Stakeholders were asked for feedback on the acceptability and feasibility of this proposal and were asked whether WRW should aim to achieve the drought resilience standard (of once in every 500 years) earlier than the proposed date of 2039.

SUPPORT FOR REDUCING CONSUMPTION BY 20%

Stakeholders were supportive of the plan to reduce water consumption by 20%, with 76% agreeing or strongly agreeing with this proposition. However, across all three workshops, questions remained over how achievable it would be. To mitigate this, delegates identified behavioural change as the key way to drive this target, with suggestions for better engagement with customers on the issue and better use of the data to focus on areas with high water use. Others urged WRW to look at how other countries had achieved reductions in water use.

Stakeholders in the North West and the Midlands cited leakage management problems on the part of the water companies as more of a priority to address than personal water consumption, with a key comment here being: 'Water companies need to change their behaviours first and lead by example before coming to us, the consumers.' In Wales, many delegates felt that, in fact, reducing personal consumption by 20% did not go far enough, with support for demand management initiatives, education, and the use of grey water and drain water as part of a holistic package to drive down consumption.

SUPPORT FOR GOVERNMENT MEASURES TO REDUCE CONSUMPTION

Most stakeholders felt that substantial government intervention was going to be absolutely critical in driving down personal water consumption, with the clear message being that customers need to be supported by national measures, product manufacturers, and access to efficient technologies. Others felt that more government support in the form of subsidies and grants was necessary to drive down consumption. This view was reflected in the electronic voting, where 89% agreed or strongly agreed with the proposition. It should be noted that, conversely, 10% strongly disagreed, although there was no supporting feedback for this position in the discussions.

Stakeholders in the North West felt that at the locus of the government's 'levelling up' agenda, there was a clear, direct connection to be made with the proposed growth in housing and industry and increased water use. Delegates wanted to see much more action taken to change building regulations to mandate water efficiency, caps on water use, and the installation of water-smart technologies. In Wales, a focus on innovation was emphasised, with ideas including having water monitoring sensors

on domestic taps that send data to customers through a Wi-Fi-based app, along with benefits to incentivise water reduction.

SUPPORT FOR PROACTIVE SMART METERING

There was nuanced discussion around the issue of smart metering. This was witnessed in the voting, where although 72% were supportive of this measure, 12% remained neutral, and 17% disagreed. While many agreed in principle, there was real concern in the North West and the Midlands that lower income households less able to invest in water efficient products would end up being penalised for higher use, and in turn be even less likely to be able to afford water-saving technologies. A key comment here was: 'We can't fall into that cycle of punishing people on the breadline again and again and again.'

This regional concern was reflected in the electronic voting: when the data was broken down by utility, those served by United Utilities and Severn Trent Water were least in favour of smart metering (3.7). While metering was seen as useful in penalising 'superusers', stakeholders cautioned that it shouldn't be seen as a panacea, particularly when so much water is currently lost to leakage. In a similar vein, some delegates saw smart meters as too much of a blunt instrument, involving manual labour and construction materials that add costs and generate carbon emissions, and instead urged WRW to focus on smart solutions, such as smart sensors on shower heads. Others, however, particularly in Wales, saw the two-fold benefit in smart meters being able to precipitate the behavioural change necessary to reduce consumption and more accurately determine the sites and locations of leaks on supply pipes and at properties.

On a much wider level, delegates from environmental groups felt that while nudge tactics, price mechanisms, regulation, and smart metering were all critical pieces of the puzzle, WRW needed to think much more holistically about how water was being lost, with the degradation of peatlands and over farming meaning that catchments are leaking water and carbon out to sea at vastly increasing rates. Stakeholders urged WRW to make connections here between environmental restoration and demand management: by restoring peatlands and woodlands, and thus making the land spongier and able to retain more water, greater sustainable abstraction can be achieved.

SUPPORT FOR AN INCREASE IN CUSTOMERS' BILLS TO SOLVE DEFICITS BY REDUCING DEMAND

Stakeholders across all regions saw this as a politically tough sell, with this comment neatly encapsulating the dilemma: 'It's hard to pitch paying more for less.' The electronic voting reflected the variation in support for this measure, with 48% agreeing, 35% disagreeing, and 17% remaining neutral. As with the points made under smart metering, managing peatlands more effectively for a joined-up

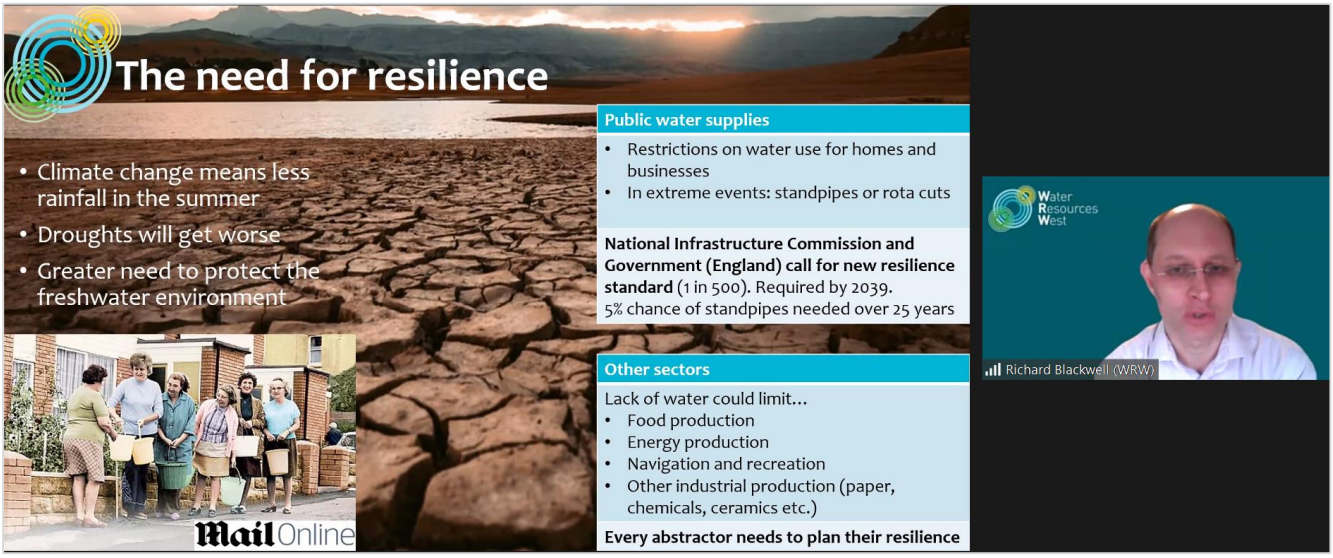
approach was seen as a way to effectively create more supply to mitigate the growth in demand. Many stakeholders noted that it was more costly to transport water to rural locations and asked whether there could be a location-based element to any bill increases, or a tariff similar to council tax, where the bigger your property, the more you pay.

ACHIEVING THE DROUGHT RESILIENCE STANDARD EARLIER THAN 2039

There were mixed views on bringing the standard forward to 2025, and this was reflected in the voting, where 58% agreed with bringing the standard forward, 19% disagreed, and 23% remained neutral. Stakeholders with more frontline experience of drought and the effects of climate change, such as those working in agriculture, wanted to see much more urgency on the issue, and agreed a more ambitious target should be instated. However, others felt that although they might like to see the target brought forward, 2039 was a reasonable compromise on the issue, particularly when measured against strategies to reduce flooding.

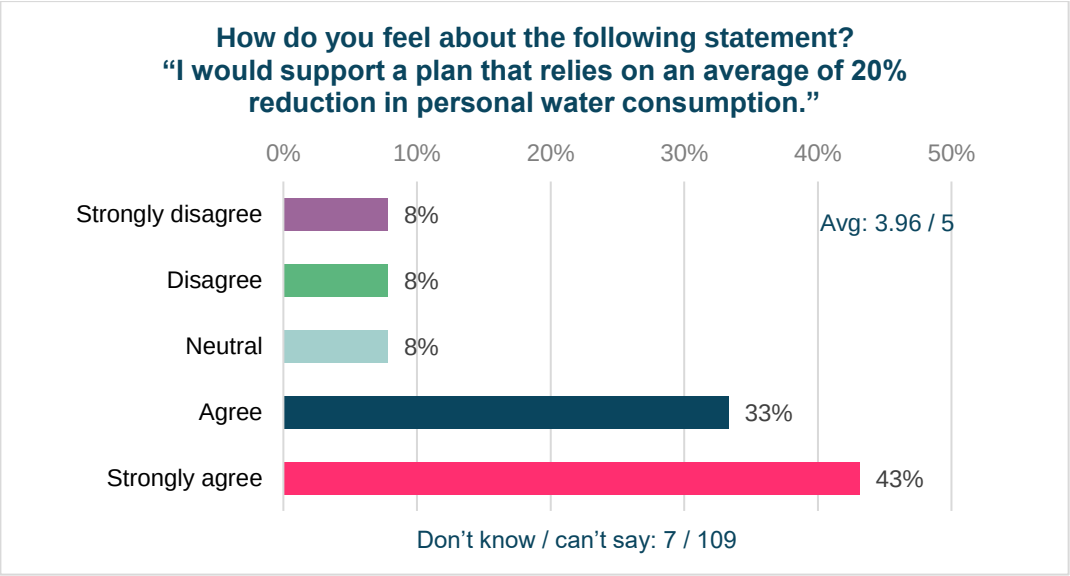
When breaking the voting data down by stakeholder type, local authorities were most in favour of bringing the target forward (4.13) and trade associations were least in favour (2.67). For stakeholders in the Midlands, a more pressing concern was on education around drought and water resilience to provoke behavioural change, with suggestions for WRW to create a contact point that gives out advice to customers, with additional specific information about drought resilience tailored to specific groups.

When stakeholders were asked if they would accept an increase in bills to bring the drought resilience standard forward to 2025, the responses were fairly split. 28% of delegates said no, 41% said they would accept an increase of £4, while 24 delegates said they didn't know or couldn't say.



VERBATIM COMMENTS AND ELECTRONIC VOTING RESULTS

1. Do you support a plan that relies on an average of 20% reduction in personal water consumption?



NORTH WEST

- "My problem is that I don't know how achievable all of this will be. Do we have figures about average water uses in other countries, and do we know how they have progressed with similar kinds of projects? I support the 20% reduction aspiration of course." Environmental group
- "As many people are not metered, it's hard to engage them around this, as they don't know their current level of usage. I was able to do this personally, as I have a meter and am water literate, but lots of people won't be in the same position as me." Government body
- "I support this plan, as it is achievable and the PCC data backs this up, as it shows lots of areas in the operating patch using small amounts of water already. Therefore, I would say that you should be looking to focus on the areas where there are higher levels of usage and find out what's driving that." Charity
- "It's got to be achieved. It's an easy target to say and it's one that you want, but achieving that behavioural change is critical for water resources in this country." Government body
- "Lots of people will be resistant to using less water as they see it as their basic right to use water. There will be a big stick in the form of higher tariffs from water companies and government. However, I think water companies need to look at their own leakage before they start putting the onus on consumers. I'm in North Manchester and we had an aqueduct burst in Bury. It's affected the water supply to 200,000 homes. There are a lot of issues going on that need to be addressed. Water companies need to change their behaviours first and lead by example before coming to us, the consumers." Environmental group
- "The best way to get an answer from people is to visualise what this 20% reduction looks like. When you start to translate it so that people can visualise then more people will understand. I

am familiar with the standard figures but I'm trying to be conscious of a customer point of view. I would support it from a personal point of view, but I'm biased." Domestic customer

- "I fully support it. We're with United Utilities and on our bill every month it tells you how many baths, etc., that you're using. People relate to that stuff. It would be useful to have some figures that help customers." Domestic customer

MIDLANDS

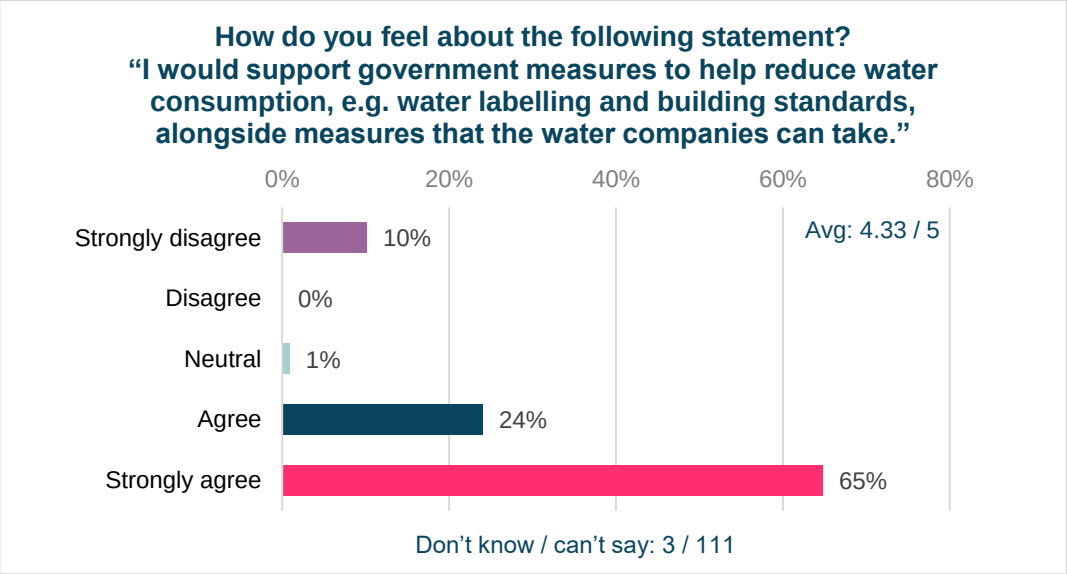
- "I think that is fair, as water efficiency has not been high up on the agenda traditionally. As knowledge around the climate impact of water usage increases, people would be more willing to play their part." Local authority
- "From a customer perspective, I don't have an issue with the number. My concern is that this plan is built on sand, as I don't have an incentive to reduce my usage. I went on a meter a few years ago and I don't know how I've been charged, as only 50% of my bill is based on water usage. How can I really gauge where I'm at and how can I be encouraged to bring it down?" Domestic customer
- "I would also see leakages tackled, as there are lots of savings here that can contribute to the overall savings." Domestic customer
- "Perhaps even more than 20% would be good if times get hard and the drought is long." Local authority
- "I come back to what I said before: if we can encourage people to reduce their usage then that may be a way forward. But again, the water companies are trying to ignore the issue, which is that they've got really poor targets in terms of reducing leakage. They're only trying to reduce leakage by 2% every year." Charity

WALES

- "Yes, as I think that this level is more than realistic and more than doable. For example, when other water companies have been exploring this water-reduction issue, some companies have been going for 100 litres and the ambitious end of the scale was in fact set at 85 litres, so I would be inclined to say that you could go even further. We would also endorse demand management." Business customer
- "We would agree with reducing water use. However, we would strongly oppose creating new infrastructure and we would prefer more demand management." Business customer
- "20% is doable and requires intervention, education and ensuring that the right regulations are in place to achieve it. I would advise you to throw everything at it that you can." Local authority
- "We support educating customers about the value of water and about how to use it mindfully. We would support a water efficiency approach." Utility

- “People won’t be cautious about a resource that is not costly to use. It’s uncomfortable but we have to think about it.” Local authority
- “I think it’s a must. We all need to use less water. It’s been difficult recently, though, because during the pandemic the narrative has been ‘wash your hands’. I know water companies typically have clear messaging and they do it well with messaging like ‘flush less’ and ‘take shorter showers’. It’s about doing more of that, really.” Environmental group
- “The target of 20% is not ambitious enough. Essential water use per person is just 40 litres – that covers the absolute essentials such as bathing, drinking and cooking. Drain water can be used in gardening and things like that. You can use grey water for things like flushing, car washing, etc. I’d support grey water reuse being involved as part of this reduction plan.” Academic institution

2. Would you support government measures to help reduce water consumption (e.g., water labelling and building standards) alongside measures that the water companies can take (e.g., leakage)?



NORTH WEST

- “I think that we really need to ensure that water efficiency devices are included in building standards. One of the reasons that these water targets have not been met is a reluctance among housing developers to install them in houses. It has been a similar story around flood modelling and planning, but we are seeing improvements emerge slowly there. So, I would agree that building regulations need to be beefed up and we need more government interventions shaping building policies.” Charity
- “I think water companies should use the billing system to better target those customers that need to be better behaved with water reduction. Another thing we should be looking at is

building regs and capping a limited amount of flow that can go into a customer's property. Something realistic." Domestic customer

- "I think it's a massive struggle to get consumption down that way unless the government interferes in a very substantial way. And the increase in working at home has had a massive upward impact on water demand which will make it even more difficult." Domestic customer
- "We can be even more ambitious, with usage monitoring updated using sensors." Academic institution
- "People need access to more efficient technology. People need to be helped by national standards and product manufacturers." Local authority
- "We need better building regulations, and the equipment manufactures need to design their products to save water. It's about giving the manufactures a stake in this and getting them involved in product redesign." Trade association
- "There's clearly going to be an emphasis on levelling up in the North West, especially in more industrial regions, which will lead to increasing consumer demand with the increase in housebuilding. Have these factors been considered? Are we looking far enough ahead in terms of the impact on water? We ought to be talking keenly with government about what they think the levelling up agenda is going to do for the region. We've already heard someone say that the South will get priority with water being redirected. I think water harvesting, for example, is a key priority for our region." Local authority
- "As somebody who is vice chair of a planning committee and involved in a local plan, we aren't making enough noise to government about changing building regulations. We need the tools to insist developers do things. We can insist with EVs, but with anything else we have very little leverage." Local authority

MIDLANDS

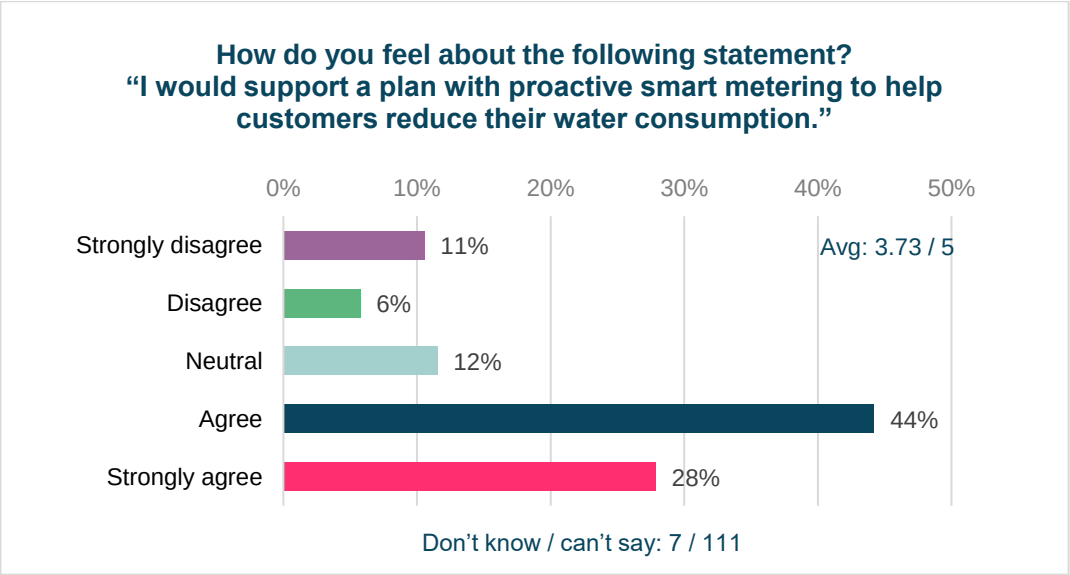
- "I think there'll need to be grant programmes to help homeowners to retrofit water appliances." Business customer
- "I would support this, as we believe that everyone needs to be involved in this drive to reduce water usage. We have helped the government with consultations around water labelling for white goods and I think that the government should tie in its metering drive with these building regulation changes, as, together, I think that all of these initiatives could have a real impact." Environmental group
- "In Redditch and Bromsgrove, we adopted plans in 2017 for the 110-litre target. Both plans are being reviewed at the moment and we are hoping this target can be rolled out. From a planning point of view, for ambitions like this it's easier to put them into building standards because it's easier to control that way. If it can't be put into those then we would try and push reduced water consumption measures through the plans." Local authority

- “Yes, I completely agree and support government measures. I think the issue will be that it has to be enforceable. Is there a department set up to enforce it?” Government

WALES

- “What I propose for the Welsh part of the area is water monitoring sensors on all the different taps in houses, so the data is sent to customers through a Wi-Fi-based app and then they are given benefits to incentivise water reduction. Can’t we use satellite technology to monitor water consumption or something like that?” Academic institution
- “I think that government interventionalist action needs to be built into this approach, on top of educational campaigns around water.” Government
- “I think that some kind of government intervention is required. Education is good but having some kind of incentive would really drive the process forward. You would be able to achieve even bigger wins through retrofitting the oldest housing stock, so you really should think about that too.” Local authority
- “Modern toilets only use 1 or 2 gallons of water to flush, whereas older models used up to 5 gallons, so there are measures you can take to reduce freshwater usage.” Business customer
- “Rainwater collection, for example through water butts used by local residents, can be enhanced. This can help with flooding too if managed on a local level.” Environmental group
- “Rainwater for toilet flushing would be good.” Business customer

3. Would you support a plan with proactive smart metering to help customers reduce their consumption, with charges based on the amount used being a fair way to pay for water?



NORTH WEST

- “As a water industry professional, I would support proactive smart metering. Giving people as much information as possible that they could use would really empower them.” Government body
- “I support the ambition around the 20% reduction, but we need to be careful around affordability and around how you intend to enforce the reduction. Everyone wants to do their bit, but people on lower salaries can’t buy the best equipment to achieve it in the same way that more affluent households could. That means that these poorer households would more likely be penalised under these reduction plans, meaning that they have even less money to spend on new efficiency devices. We can’t fall into that cycle of punishing people on the breadline again and again and again.” Domestic customer
- “The amount of water needed is the amount lost in leakage, so that’s a difficult argument to ask consumers to reduce their consumption. With smart metering, maybe you could use this to penalise superusers of water, though. Have a sliding scale, like with taxes, so the people who are actively using less aren’t being overcharged.” Environmental group
- “A lot can be done with flood resilience. Water meterage isn’t a panacea. There are lots of homes where it’s impossible to retrofit a water meter.” Environmental group
- “I agree about the price mechanism, nudges, metering – use them all. Also, regulation has a part to play. We’re still talking too one-dimensionally. We must look at what is happening in catchments. In Wales catchments are leaking carbon and water far faster than they should be. Water is running out to sea. We need to restore the peat lands, have more woodlands, hold water back, make the land spongier and increase our abstraction. There are multiple benefits, and it joins up to climate change adaptation, sequestration and would reduce grazing levels emissions and methane. Join it up, don’t just look at demand management at the end of the pipe.” Environmental group
- “Absolutely right. We’ve been working with the Welsh Government to try and raise awareness of changes to land management that will lead to reduced water usage or more efficient water use. There are more discussions to be had on that.” Environmental group

MIDLANDS

- “In the South East, people off meters use about 60 litres a day more than metered customers, so I’m in favour of smart meters.” Domestic customer
- “You end up paying more. If you have a leak that you don’t know about, you’ll end up getting hit in the pocket. It’s almost that those who are forced to or choose to go on a water meter are actually carrying the can for others.” Domestic customer
- “I think that it’s a good idea, as charging should all be based on the premise of consumption. We have a bit of hybrid situation at the moment: the government can’t understand whether it’s

on the basis on consumption or on customer ability to pay. Lots of people will not move to smart meters, as they know that they will lose out and be charged more." Domestic customer

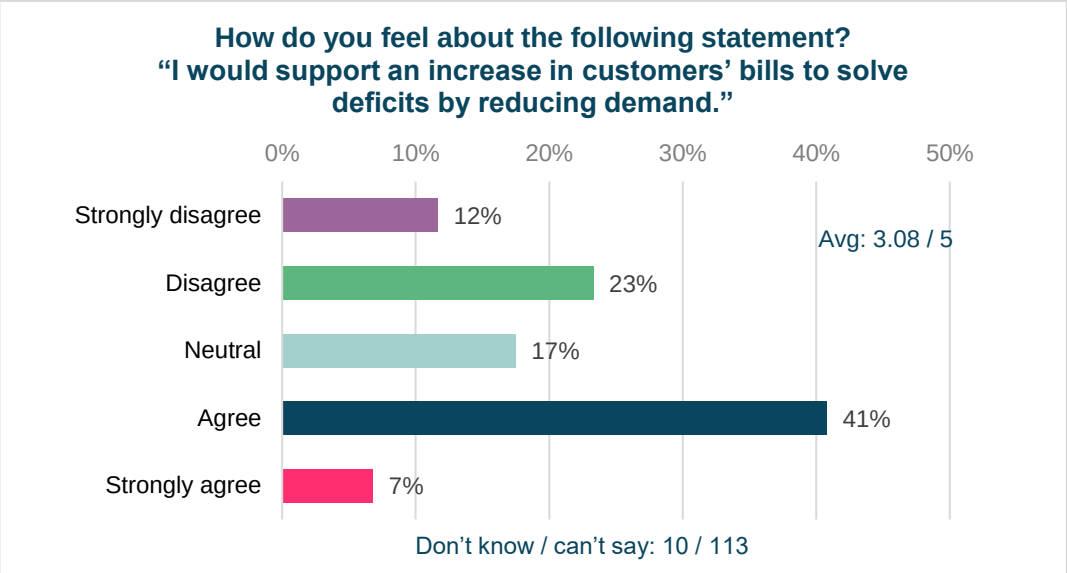
- "This suggestion sounds eminently sensible to me. Not only will smart meters more effectively measure water usage, but they will also give people a picture of how the water distribution system works and how they are charged. As many people don't understand this and that you even pay for water in the first place, they could play a really useful role in public awareness-raising." Local authority
- "There are real benefits to moving over to smart meters, so we would support that. They will also help with leakages on properties and supply pipes, so they will have a two-fold benefit." Environmental group
- "I'm a bit wary of pushing all the responsibility onto the consumer. Behaviour change takes such a long time. If you look at plastic pollution and recycling, many people still don't recycle for whatever reason. With water saving techniques, there will be pushback from people, and you'll get people saying, 'why should I?' and 'what is the provider doing to help?'. If you put this requirement into building regulations instead, you might get the results sooner." Charity
- "Smart metering is good but how we are doing it is the essential thing. It's a huge affair, involving manual labour and construction materials. This adds costs and generates carbon emissions; it's never-ending. Instead, you can do things like using nano-sensors on the pipe itself. For me, this is the way forward. You can also monitor personal water use by installing smart sensors on shower heads, for example. I don't support the cost attached to hard engineering solutions; I want to see smarter solutions." Academic institution

WALES

- "This is a good thing. In Wales there is no mandatory water metering. The water companies take a view that it should be voluntary but will look to persuade people that this is the way to go. We are working towards water efficiency measures." Government
- "We need to speak more with people and engage. We need a different type of engagement to inform demand management techniques." Government
- "I agree that messaging will be key. We could tie this in with the cost-of-living crisis: 'if you reduce your energy use, you could save money too'. Smart metering is something we will be looking at. You have the dual benefit of reducing leakage this way too." Utility
- "Meters can be good as they can help you manage consumption, but it can be bad as it can mean you are charged more. As an educational thing it can be good, but more needs to be done to help people understand how to use the information." Business customer
- "If you look at other European countries, they have water metering as standard. It's a British thing to think that it's a choice. People also need to realise that metering often actually leads to a reduction in cost." Environmental group

- “If you don’t have metering, people won’t understand how much water they use. Metering is the best method for reducing consumption.” Business customer

4. Do you consider an increase in customers’ bills acceptable to solve deficits by reducing demand?



NORTH WEST

- “Using price increases as a tool to reduce consumption hits the poorest hardest.” Domestic customer
- “Maybe look at dynamic pricing by the postcode. For more rural postcodes with big houses and richer people, it costs more to deliver water to them. It’s cheaper to deliver water to poorer high-density areas. Maybe charge the richer areas more?” Trade association

MIDLANDS

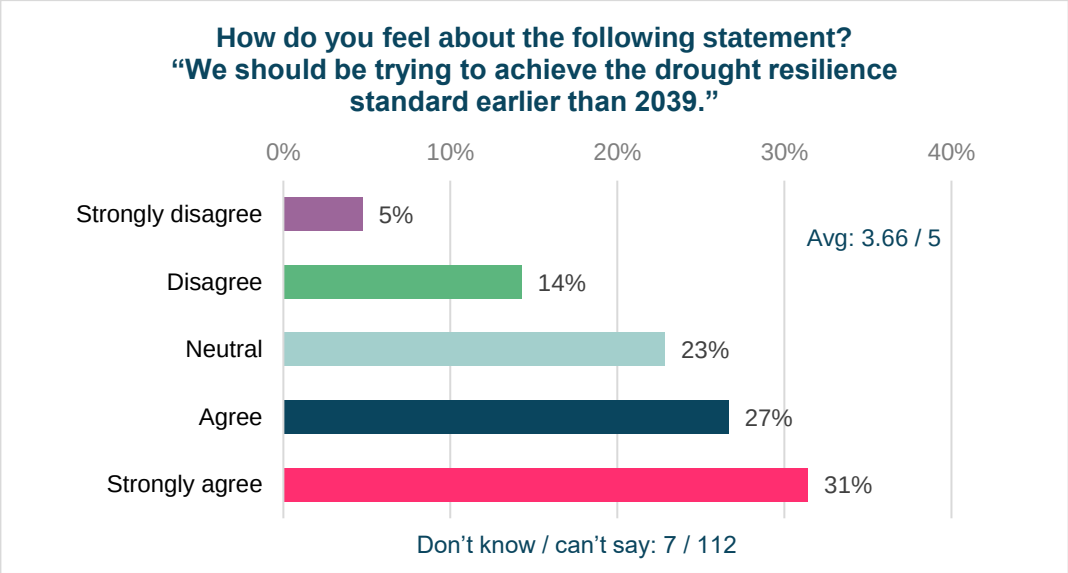
- “This is difficult to sell politically. If it was explained clearly what the process involved and why customers paid to use less, that could work. It needs to be politically progressive.” Local authority
- “It’s hard to pitch paying more for less. Managing peat better in a joined-up approach to catchment management can be fruitful too.” Business customer
- “It costs more money to transport water out to a detached house in an affluent, rural location but that property doesn’t pay more for the water. I’d look at location-based payments. It’s cheaper to deliver water to urban areas, which are typically more deprived, so I don’t see why those areas should be penalised and have to pay more for their water.” Trade association
- “There are rural communities that are struggling too, though. Agricultural communities tend to suffer the most when there is supply drop off.” Trade association

- “I’m thinking of a scheme like council tax, so if you have a huge property, you pay more. There is a fluctuating price depending on the size of house.” Trade association
- “The company seem to be focusing on costing the users more rather than it costing the company a little more.” Charity

WALES

- “These are political questions that the officers amongst us cannot answer. You get into cost-of-living issues and our regions have substantial levels of poverty. It would depend on how much more people value their day-to-day living costs compared to their environmental commitments.” Environmental group
- “Increasing bills is a tricky one, as costs are rising higher and higher all the time.” Local authority
- “Are you trying to define a position and approach through a stakeholder room? We shouldn’t be making those decisions.” Government
- “The cost shouldn’t be what defines what the solutions are.” Government
- “It’s difficult because we’re talking anything up to £10, almost like a tariff, so everyone gets it across the board. People who are good at managing water and those who are bad at it get treated equally. There may be scope for banding – for example, if you have been good at saving water you get a rebate.” Business customer
- “Increasing cost is OK as long as there is a safety net for those who can’t afford it.” Business customer

5. Should we be trying to achieve the drought resilience standard earlier than 2039?



NORTH WEST

- “In isolation, I think that we should be trying to achieve this drought resilience standard earlier than 2039, but we need to think about it in tandem with the flip side of floods. Flooding is far more common and has far greater impacts on our lands and our health than droughts do, but we only normally think about floods when they happen. Therefore, we should be looking to strike a balance and should be pursuing drought resilience targets in line with flooding policy, so that the measures are appropriate for both phenomena.” Environmental group
- “This is a sensible timeframe. We’d like to see it earlier but in reality, it will be difficult to get there. I support the target as a good compromise.” Charity
- “[You should aim for] much earlier. We always seem to put everything off until tomorrow.” Business customer
- “I’m going to be controversial but saying we won’t have an issue except for once in 500 years is an unrealistic first-world attitude. If we had to use standpipes in the 70s, who decided that it’s going to be once in 10 generations? That’s absolutely not in touch with what’s happening in the rest of the world.” Environmental group

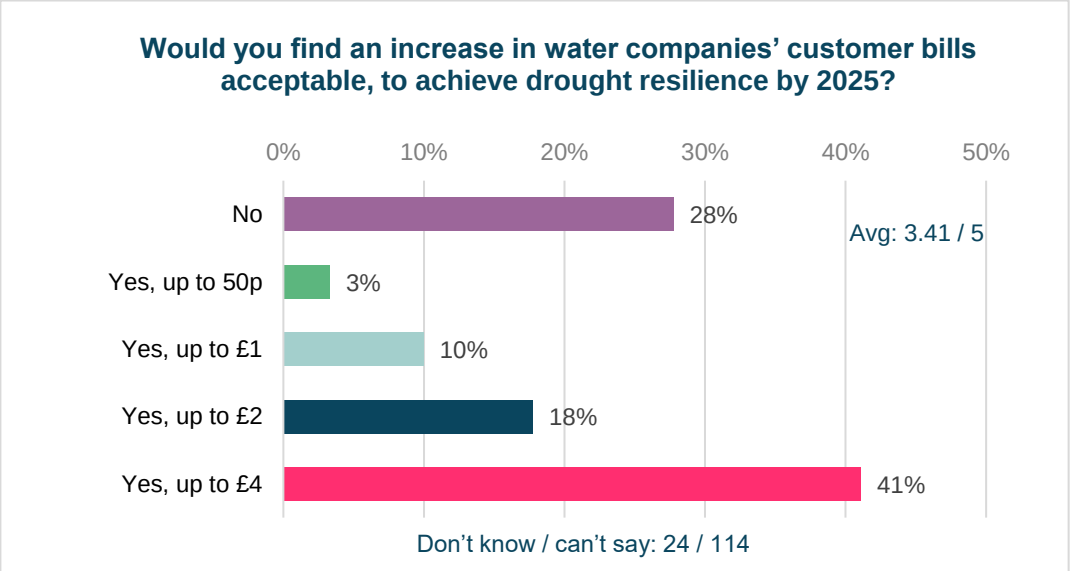
MIDLANDS

- “I think that the target should be as ambitious as possible.” Local authority
- “Moving to a 1-in-500-year scenario will require infrastructure and other construction. You’d struggle to get it before then, but I think 2039 is realistic.” Government
- “I can’t imagine the political fallout if we did go to standpipes, as I remember them as a child! Generally speaking, I think that more education is needed around the dangers of droughts and the need for drought resilience. I agree that we need to be ambitious, but we need to bring people with us in the same way that we have with carbon previously.” Local authority
- “I think that WRW could create a contact point which gives out advice to customers. In addition, tailoring any specific information about drought resilience to specific groups would be really useful.” Local authority
- “Possibly, but for me it comes back to behavioural change to reduce consumption. The earlier we can start that education campaign to get people to understand their water usage, the better. I was looking into the situation in Cape Town recently. A lot of people there didn’t know what their water consumption was until they had to start thinking about it. It rains a lot here and people don’t think they need to consider their water usage. We need to educate the public on what these connections are in the system before we end up in the emergency drought situation we’ve seen in Cape Town.” Charity

WALES

- “My feeling is that one in five hundred years is a very high standard. We haven’t had a standpipe since 1976 and my concerns are more around wet winters than dry summers. On that basis, we just need to think about the cost and whether it would be worth it to bring the date forward.” Utility
- “As a farmer, I’m very concerned about droughts. We’re going to have to think about hosepipe bans at the rate we are going. Farming is on the very frontline of climate change, and we had a drought very recently in 2018.” Academic institution
- “In terms of the customer research we’ve done in the South Staffordshire area, customers have supported the drought resilience target but have said that there should be more frequent bans on hosepipe use rather than allowing people to water their gardens during the summer. We are doing some more research into what customers think is appropriate. If hosepipe bans are the way forward, the caveat is that water companies need to communicate that they are implementing them and explain why. It can’t just be something that’s imposed on customers without explanation.” Utility
- “We have to really target the big water users during droughts.” Academic institution
- “We can also use smarter technologies to grow crops less water intensively. I’d want to see a focus on this.” Academic institution
- “I would like it to be earlier, if possible, but it’s probably realistic.” Environmental group

6. Do you consider an increase in water companies’ customer bills between 50p and £4 as acceptable, to help us achieve this resilience standard from 2025 rather than the statutory target of 2039?



NORTH WEST

- “I agree that we need to be sensitive in how we would increase costs around this area on customer bills.” Government body

MIDLANDS

- “I think that all of this depends on how you present it to customers. A one-in-five-hundred-year event seems far away and a remote possibility and unless a drought really was on the horizon, people wouldn’t accept it or understand how it could benefit them.” Charity

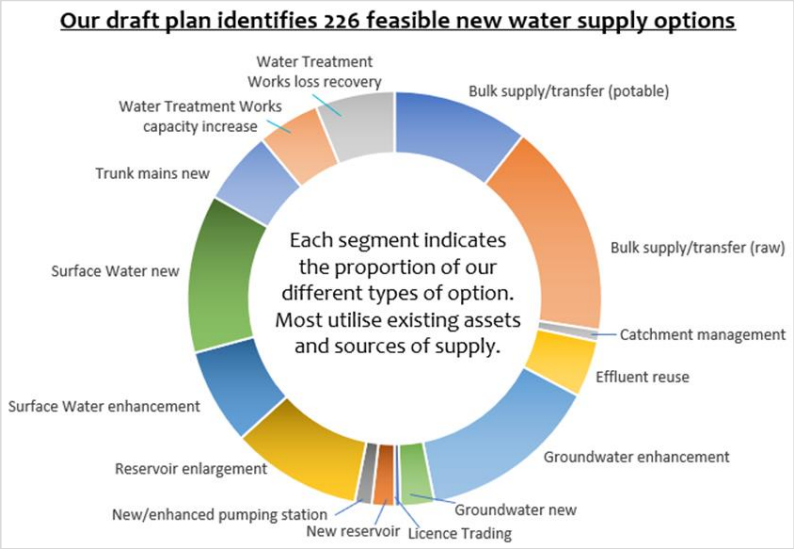
WALES

- “It’s acceptable, but subject to results being shown, i.e., published data on reductions.” Business customer
- “A small amount on bills may be acceptable.” Environmental group
- “We need to look for alternative ways of paying for what’s needed.” Environmental group

WORKSHOP 3: WATER RESOURCES OPTIONS

Stakeholders were shown some of WRW's 226 feasible new water supply options, shown below. After reviewing and commenting on these, they were asked for feedback on the options presented and for suggestions on other partner organisations that WRW can collaborate with to enhance supply. Stakeholders were then asked for their views on water transfers, whether this was acceptable to them, and, if so, what protections and benefits they would expect.

VIEWS ON NEW WATER SUPPLY OPTIONS



Overall, delegates felt that WRW had presented a good range of water options, with 81% agreeing or strongly agreeing that this was the case. Reservoirs, catchment management, bulk water transfers, and effluent reuse were the most widely discussed options across the three workshops. Perhaps unsurprisingly, there were often region-specific concerns expressed in the face of some of these options, given that the potential fallout from, for example, mismanagement of reservoirs, or water transfers, would affect certain areas more severely than others.

In the North West and Wales, there was potentially a more discernible sense of unease with the ramifications of flooding from reservoirs, particularly in the Lake District and around the Clywedog reservoir. Some delegates wanted to see excess water taken away from these regions and used to supply new reservoirs further south, or replenish groundwater supplies elsewhere. However, for other delegates, while they could see the potential short-term necessity of water transfers, there was a political sticking point, particularly in the transfer of water to the South East. There were concerns here that this policy worked against the levelling up agenda in the North West, with problems becoming more acute if economic activity is concentrated southwards. A key comment here was: 'There are deep societal questions regarding where this country focuses its investment.'

For others, the issues were environmental, with those representing environmental groups and charities in the North West concerned at the volume of hard engineering solutions – the 'harder end of the pipe approach' – proposed by WRW. They wanted to see a much greater focus on catchments and the benefits of environmental land management: for instance, persuading farmers to do things differently,

plant more trees and stop polluted water entering the system. There was also concern about actions that reduce the sustainability of the Lake District to the benefit of the South of England. For these delegates, natural flood management was seen as a much more effective, long-term solution, preferable to 'treating river systems as just conduits for getting water out'.

In the Midlands, which has fewer reservoirs and export water options and more industry, farming, and urban conurbations, there was more support for the broad range of options, and more interest in reusing effluent and rerouting surface water drainage from the sewer system. Rainwater abstraction from both farmland and new developments was advocated, and there was a call for the industry and the food sector, as big water consumers, to set an effluent reuse target of 85%.

MOST AND LEAST SUPPORTED NEW WATER SUPPLY OPTIONS

Broadly speaking, delegates were in favour of options that delivered multi-benefits, and for this reason, across all three workshops, there was strong support for greater catchment management and surface water enhancement, which were seen to have both economic and environmental benefits. This was reflected in the electronic voting. When asked to vote on the proposition "I think WRW should prioritise options that make best use of existing water resources and assets within the region before looking to create new sources of water supply", an overwhelming 88% either agreed or strongly agreed. Similarly, when asked to rank their top novel water resources, catchment management was top (21%), followed by water treatment works loss recovery (15%) and surface water enhancement (10%). To be able to make even better decisions, stakeholders suggested that WRW weigh up the costs for each option against the benefits, and then rank the benefits so that they can make an informed choice. Furthermore, there was a call to equate each of these categories to the volumetric contribution that they make, and for each option to spell out the biodiversity and carbon benefits.

Overall, 'hard engineering' options such as bulk water transfers and new reservoirs were the most contentious. Delegates in the North West wanted assurances that transferring water south was done in a way that protects the environmental and economic priorities of the north. Coming back to the 'levelling up' agenda, a key comment was: 'the fact that we have more water in the North West should be an economic driver that should attract investment rather than giving that resource away to the South.' Similarly, those representing businesses in the Midlands expressed the view that they wouldn't want to see water being transferred upstream, away from power stations downstream that are relying on that supply, as it could compromise electricity security and reduce the viability of those sites. New reservoirs were also controversial: while some delegates were in favour, citing stackable benefits and biodiversity gains, most felt very strongly that resources should be spent on maintaining existing infrastructure and enhancing natural capital solutions.

OTHER OPTIONS OR OPPORTUNITIES FOR CONSIDERATION

Stakeholders suggested a range of other water supply options, such as industrial and domestic reuse of grey water; the enhancement of peat bog for water storage; smaller licences trading for water transfers, particularly between farm businesses; larger community SuDS; and more work to restore rivers by curving them and taking out the old Victorian culverts to reduce flood risk and maintain supply in cases of drought.

SECTORS OR ORGANISATIONS TO ENGAGE WITH

Stakeholders presented a variety of sectors and organisations that WRW should consider working with to enhance both demand and supply options and protect the environment. Some of these included flood groups, the Rivers Trust, farmers, local communities, housebuilders and planners, car manufacturers, the military (as large landowners) and food production sites. In terms of best practice, delegates cited Northumbrian Water as having a good approach to partnership working and community inclusion. Another suggestion was to engage with the education sector to improve learnings around the topics of climate change, water use and waste management.

SHARING WATER RESOURCES OUTSIDE OF THE REGION TO REFLECT NATIONAL CHALLENGES

Voting electronically, there was majority support for sharing water resources, with 75% agreeing with the proposal. However, as with the discussions around new reservoirs and bulk water transfers, this was a contentious issue that often reflected regional concerns and differences.

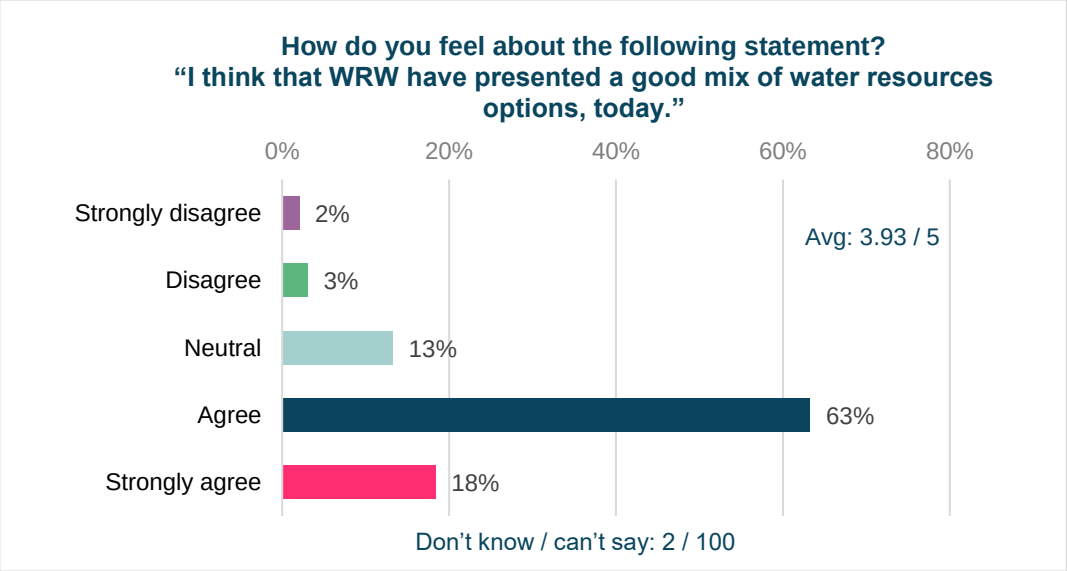
For those stakeholders less supportive of sharing water resources, the issue was political, and one of perception. Stakeholders in Wales cited a ‘real issue with giving their water over the border to England’ just for the benefits to be felt elsewhere. Those in the North West cited a perception issue for communities in Carlisle, for example, to see increased local abstraction only for it to be transferred out of the region. Stakeholders from the Midlands raised the issue of the ‘levelling up’ agenda and took issue with resources from their region fuelling more growth in London. According to them, ‘levelling up should involve moving populations closer to the water rather than vice versa. It doesn’t make sense to move resources to the South East; we should encourage people to move instead.’ Others felt that the idea of bulk transfers ‘doesn’t scream resilience’ and perceived them as fixing an issue temporarily rather than addressing the root cause of stretched water resources.

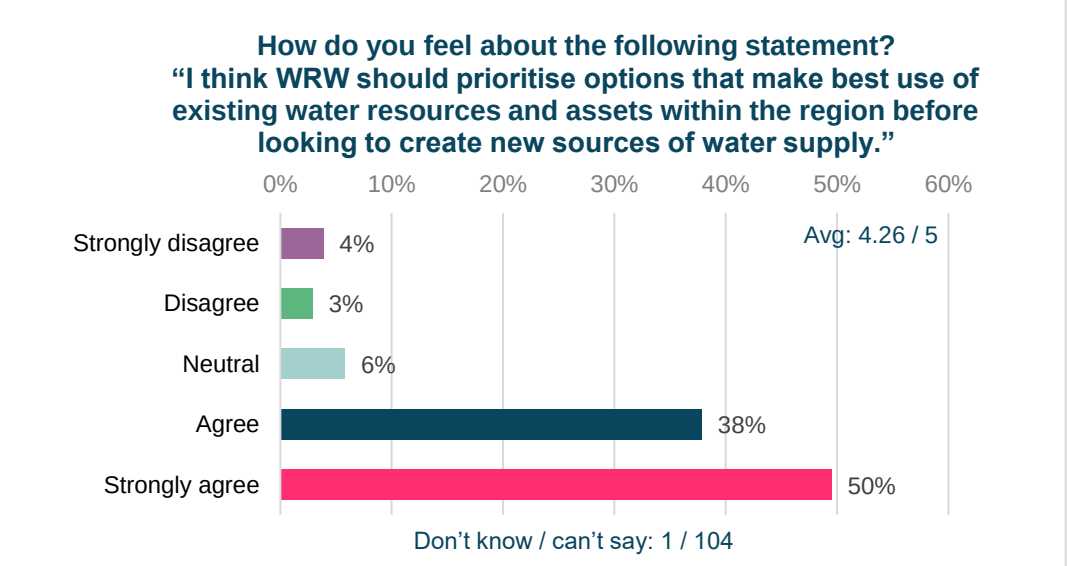
However, on the other side, there were many stakeholders who adhered to the approach of: ‘we’re one island and we need to work together to tackle this problem.’ For these delegates, while bulk transfers might not be ideal, they were seen as unavoidable, and if one region was facing shortages, the ethical thing to do was share. For some stakeholders this was also a political issue, and they expressed

concern that by looking for economic benefits under water transfer arrangements, water was becoming a trading commodity rather than a necessity of civilised living, penalising those areas without water in a way that was damaging to national cohesion. The key benefits to safeguard for most stakeholders pertained to the environment and biodiversity, such as by ensuring that natural differences and flows in rivers and water bodies were protected. This was reflected in the voting, and when asked to rank the benefits of water transfers, enhancements to the environment was first, with 3.5 (out of a possible 5), followed by improvements to water supply and resilience, investment into the area (new jobs), with 3.39.

VERBATIM COMMENTS AND ELECTRONIC VOTING RESULTS

1. What do you think about the options we included in the plan?





NORTH WEST

- “Some of these feel like big political questions, particularly the transfer of water to the South East. One of the fundamental principles we need to apply here is ‘the polluter pays’. This plays into the levelling up agenda. The problems will become more acute if society’s activity is concentrated in the South East. There are deep societal questions regarding where this country focuses its investment.” Local authority
- “This slide doesn’t mention anything about rainwater capture. If every household did this, that would be helpful for effective water supply as well as water treatment. I don’t see any such initiatives here.” Academic institution
- “It’s essential that there is a benefit to the donor regions that are making water available to other parts of the country, both environmentally and economically. A bill rebate scheme to customers would be a good way of doing this.” Charity
- “I’m shocked at the size of the new reservoir chunk compared to the water treatment works loss recovery. I’m starting to be more in favour of investment in what we’ve got rather than building new ones. There should be a greater emphasis on maintaining existing infrastructure.” Domestic customer
- “The devil is in the detail. Looking at the pie chart of possible of options, if they are all happening in the Midlands then it won’t affect me in the Lake District. I’d be concerned about actions that reduce the sustainability of the Lakes to the benefit of the South of England. We have a fair number of rivers in Cumbria which are Special Areas of Conservation, and I’d feel very strongly about protecting them. Development can’t carry on unchecked.” Environmental group
- “I’m frankly appalled at catchment management having such a small part. I find it extraordinary that WRW plan to invest so heavily in hard infrastructure with all the embedded carbon that entails. This looks extremely backward and contrary to the way we’ve fought to move and to Ofwat’s overview, which is move toward softer infrastructure catchment management rather than the harder end of pipe approach. I’m gobsmacked, frankly.” Environmental group
- “I completely agree. It’s typical in most of these things that when engineers get involved it becomes about hard solutions rather than what we can do for nature and what nature can do for us.” Charity
- “I notice new reservoirs get a very small mention. In some areas where there is an over-plentiful supply of rainfall it would be useful to take some of that water away to be stored elsewhere in an area where it is going to be needed. It is conceivable in the Lake District to take additional water down south rather than leave it up here to flood homes. That water can be transported away and put into new reservoirs somewhere or poured into ground to provide groundwater supplies elsewhere. We would prefer to have some of it taken away rather than it being a wasted asset.” Vulnerable customer representative
- “I was interested to hear what the speaker said about the Vyrnwy reservoir. He didn’t mention

Clywedog reservoir. A lot of the landowners in the Severn catchment areas are extremely unhappy with how that one is being managed because when there is heavy rainfall, all of their land gets flooded. I notice that you haven't mentioned Clywedog, and I wonder why not." Trade association

- "It's brief but I would add that I see a lack of policy integration. I find it extraordinary that the benefits of environmental land management to persuade farmers to do things differently, plant more trees and stop polluted water entering the system are not integrated in this package. Why? What's going on?" Environmental group
- "I'm worried about management and the flood side of things. If we can manage the water and get it into the ground and into reservoirs more slowly than it can help cut down the flooding risk. We need to integrate that into releasing water more slowly. That allows water to seep into the system slowly and would reduce demand." Trade association
- "It's worthwhile saying that if we use natural flood management then we won't need to worry as much about flooding and moving water around because it will be stored naturally. It's the same situation where we're treating nature as being there for us and it's not just there for us. Water systems are also diverse ecological systems. We can't treat river systems, for example, as just conduits for getting water out. We're just kicking the can down the road." Charity

MIDLANDS

- "I'm assuming that 'surface water new' means gathering water at the point of development. Harvesting water where it's falling is pretty fundamental and has been pushed by the farming industry. We have to look at the big picture and consider all implications." Local authority
- "All surface water drainage currently goes into sewers and is a real problem. Perhaps taking that water on a different journey into the consumption side is something interesting I've not heard of before." Environmental group
- "I think it's really good that you have a broad mix in case an aspect becomes unfeasible." Business customer
- "The options are really impressive and there are numerous options on the table. We can lift different benefits by looking at how things are designed and delivered." Environmental group
- "It's difficult for the farming sector. For a farming business making a surface water abstraction, it's difficult to see where the benefit is. What we'd like to see is license trading and local resilience. We want businesses to be able to trade water between themselves." Trade association
- "I'd like to see us do more with rainwater. With new developments, we should have infiltration first and sustainable abstraction. I was trying to see what this would fall under here. For me, it's about optimising the capture of rainwater in those local catchments. This will have benefits for all sorts of things." Local authority

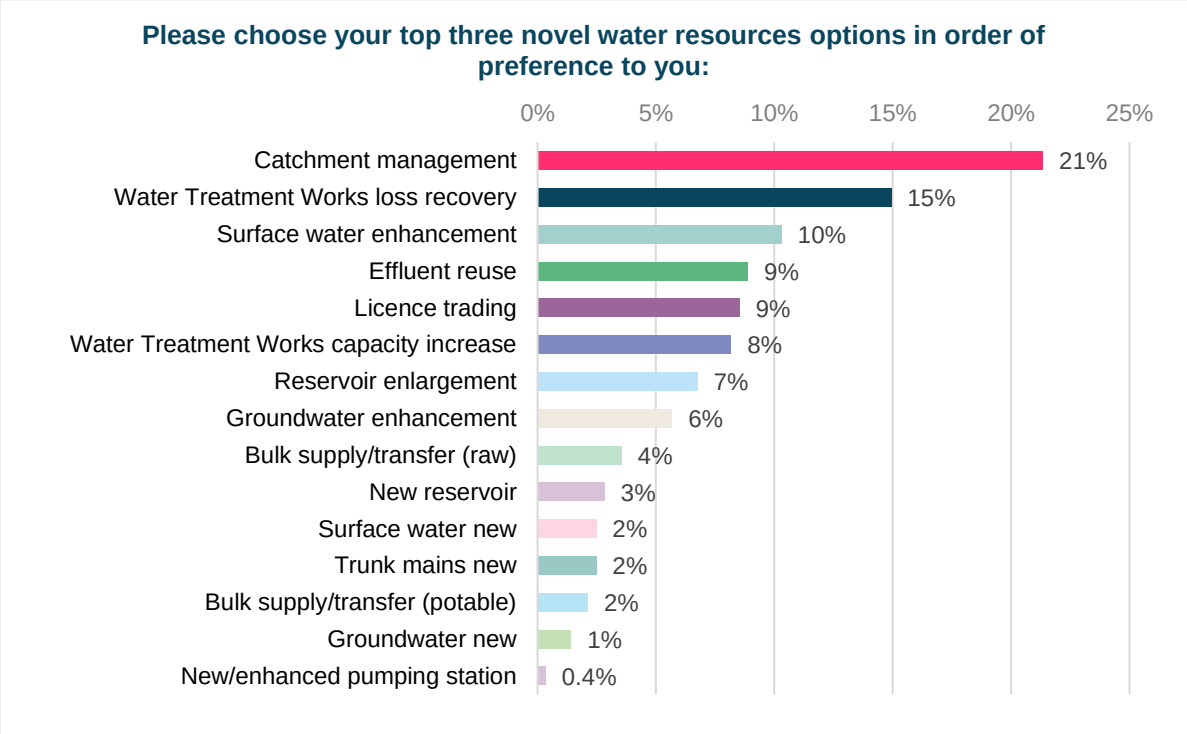
- “I think effluent reuse should be better represented on this chart. Industry and the food sector consume a lot of water. Each industry needs to set a reuse target of around 85%. This should be across the board. These companies have the money to do it, so they should do it.” Academic institution
- “I’d like to see more effort on effluent reuse. Effluent water is everywhere, but it’s a very small segment. They keep saying they’re investigating it, but as a long-term option at the moment it’s pretty small when you think that a lot of the water we supply ends up as effluent. There are issues with re-using effluent water – for example, microplastics – but a lot of other countries are doing it now. For example, I know that in San Francisco they are working on a project to reuse effluent water.” Customer body
- “A concern is that enhanced pumping stations consume lots of energy. Where are you getting the energy from? There’s too much expense, too many carbon emissions and too much power used. And what does ‘enhanced’ mean?” Academic institution

WALES

- “In the earlier presentation, Richard referred to the importance of customer engagement, so I would really put this into action for the water resources options in the plan. You need to test customer preferences about the different options being considered so that they are taken along on this journey.” Utility
- “I think that it’s a good mix and I agree with engaging with customers and getting more of them on board.” Local authority
- “Anything providing natural flood management benefits should be considered.” Local authority
- “Did anyone consider impact on communities when preparing the options? Some of the public service boards in Wales which are formed of NRW, local planning and resilience authorities are quite active. Has anyone engaged with these groups that are making plans through area statements? This is not just WRW, it’s the whole western group.” Government
- “Surface water new could also refer to licence trading. The water is being accounted for but not necessarily used. If we could persuade people to give it up it could be used for other things.” Government
- “I like the approach where there are things that are going to benefit the natural environment. These aspects also have the potential to bring a demand benefit, too; when people go out and explore new water reserve environments, they become more educated on the water lifecycle and in turn are more inclined to consider their personal water use. It helps provide a holistic understanding.” Environmental group
- “I think in future – in light of climate change risks – new reservoirs and storage solutions should play a bigger part really, because you won’t necessarily have the river supplies to rely on in the

summers. I appreciate that there is red tape there around planning for reservoirs, but perhaps there could be more of a push toward reservoir construction." Utility

2. Which of these options are you most supportive of?



NORTH WEST

- "The catchment-management slice is very small in the chart, and I would like WRW to explore that more deeply, as you can save huge amounts through these kinds of schemes." Charity
- "I think that land management projects can give you a lot more bang for your buck compared to huge infrastructure projects. They can also deliver far more environmental benefits, so I would advocate considering these land management projects." Charity
- "Catchment management and license trading seem to be fairly small. I expected catchment management to be larger. There are quite a few underused licenses. In general, though, it seems to be a reasonable mix." Government body

➢ Are there any types of option that you do not approve of?

- "We would have grave concerns about new reservoirs being built from an environmental perspective and would far prefer for you to look at catchment management instead." Local authority
- "In general, I'm pretty much against abstraction from rivers because it impacts the natural environment." Environmental group

- “I’m still at a bit of a loss as to why bills would rise in the North West to supplement water usage elsewhere. That’s a sticking point for me. In Cheshire, we’ve had utilities selling water storage facilities for housing. We had an excess of storage but now we’re saying there isn’t enough. I’m not against the better use of water but I’m getting a bit entangled in all of the presentations that seem to put the onus on consumers. To be clear, I do believe we should share water resources to meet national challenges but transferring water north to south should be done in a way that protects the environment.” Environmental group
- “The fact that we have more water in the North West should be an economic driver that should attract investment rather than giving that resource away to the South.” Environmental group

MIDLANDS

- “I would like to see things prioritised that deliver more than one benefit. Reservoir enlargement seems sensible, as it would increase the water supplies and deliver recreational areas that people could enjoy.” Local authority
- “Multi-benefit options, where appropriate, would be better. The two options for water treatment works would be useful for us, as that was flagged up for us in a local study. In addition, I like the look of the groundwater enhancement options, as a third of our water is from the ground.” Local authority
- “For us, it would be most important to increase the efficiency of current assets before building new ones.” Local authority
- “You need to weigh up the costs against the benefits, but the benefits are different for different people. I would like to see the benefits for each of these options listed and then ranked so that you can make an informed choice, rather than relying on perception. This cost-benefit analysis with weighting would be so useful.” Domestic customer
- “I would be interested to equate each of these categories to the volumetric contribution that they make. I’m a little bemused that there is so little focus on catchment management too.” Domestic customer
- “I think that these options need to spell out the biodiversity and carbon benefits from these categories and which will deliver the quickest and biggest benefits. I’d also like to see what the long-term strategies are behind them.” Government
- “The most environmentally friendly ones are the ones I’d most support. But the way I see this pie chart, it needs to be flexible and take into account the most sustainable option in the long run. Hopefully, the ground water enhancement and surface water segments on here would get bigger and the bulk transfers would get smaller over time. The pie chart projection needs to evolve over time, rather than stay the same. It’s got to be more localised. One measure could be to reduce the lag time between the rainwater falling and then being used.” Local authority

➢ **Are there any types of option that you do not approve of?**

- "Reservoirs are going to be extremely controversial whatever you do. That is something that would have to be considered in real detail. That is one that is exceedingly complicated." Charity
- "This side of the border we're not going through new reservoirs. It's a sore subject and we don't want to go through it again. A lot of people lost homes and land. It would be highly controversial." Business customer
- "I wouldn't necessarily be against transfers if they were short term and reversible. But I wouldn't want to see water being transferred upstream, away from power stations downstream that are relying on that supply. It could compromise electricity security and would reduce the viability of those sites. If you're taking out water in the summer when water flows are already lower, that could really compromise what power stations can do." Business customer
- "Perception is important. Within our area we're constantly told that the reservoirs are low. Especially with the levelling up agenda, there is a perception that the North East is always running low, but that the South East is positioned as being the priority. It's important to ensure that all customers from all regions are perceiving the plans well. Water transfers aren't always received well from the giving area. People think 'are we going to be short if they share our reserves?'" Local authority

WALES

- "From a developer perspective, I would support waste water management and, building on that, taking damaging chemicals out of water supplies. I'd like to see environmental factors, such as creating new reservoirs, focused on too. It would also be helpful to underpin all of this with cost / benefit analysis, featuring different weightings." Local authority
- "I'm in favour of the reservoir options as they offer a lot of opportunity for stackable benefits and biodiversity. We need to avoid negative environmental impacts." Local authority

➢ **Are there any types of option that you do not approve of?**

- "We would be opposed to reservoir enlargement and new reservoirs. Are we not missing a trick with how we approach this? Could we maybe move people closer to water resources instead of moving water to people? Covid has taught us that we don't have to be in cities to do lots of jobs, so many people have been moving to more rural areas with higher water supplies." Business customer

3. Are there any other options or opportunities that we should consider?

NORTH WEST

- “We’re missing the use of grey water for industry and domestic, not only in new builds but also retrofits. It’s relatively low cost and houses close to rivers could use that river water.” Business customer
- “Water reuse and using peat bogs as water storage.” Trade association

MIDLANDS

- “On the smaller scale, license trading could work. We need to factor in food production for some of these bigger transfers. With farming businesses, they tend to be spread out over quite a large area, and different crops grow on different types of land.” Trade association
- “I spotted it at the bottom, the licensing trading bit. It would be good to see more opportunities there, whether that’s with third parties or private water supply.” Business customer
- “I feel there may be more merit in emphasising the low energy costs of dealing with effluent water, especially where there’s the opportunity to have larger community SuDS. But there is no mention of that so far.” Environmental group

WALES

- “With regard to all the work that’s been going on in slowing the flow, both to alleviate flood risk and maintain water supplies longer in periods of drought, the more we can do on that the better. For example, we should be doing work on rivers, curving them, bending them and taking out the old Victorian culverts.” Business customer

4. Are there any other sectors or organisations we should engage with?

NORTH WEST

- “Flood groups have a high public profile. If you do not engage with them, you will struggle.” Government body
- “Agriculture and the NFU.” Government body
- “Is there a plan to engage with local communities, because obviously these are going to be the people impacted by this. It would be good to get their views. This is probably a good next step after you’ve dealt with partners, or have you done it earlier on?” Local authority
- “Collaboration with housebuilders and planners will hopefully expand quickly to ensure new homes are built to capture water for domestic use as appropriate.” Domestic customer

- “I’ve heard very good feedback from communities and policy about Northumbria Water and their approach to partnership working and community inclusion.” Charity

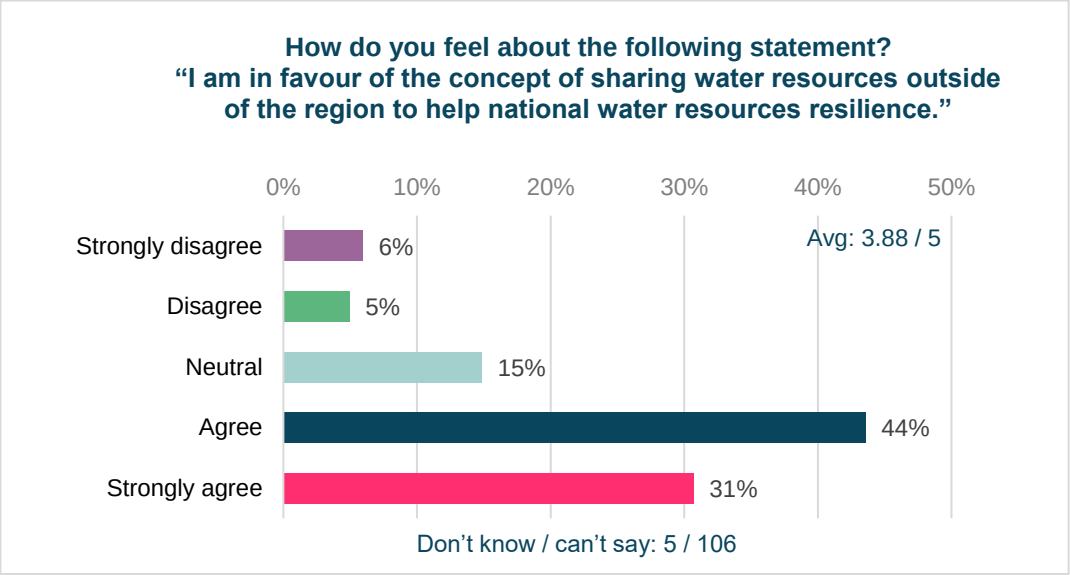
MIDLANDS

- “The Rivers Trust. I really do think that the Rivers Trust is the overarching body, covering river trusts all over the country. They are getting involved in some very good work.” Domestic customer
- “Retailers, of course, as they deal with non-householders in England.” Government
- “Agriculture is missing, but then they may be under landowners.” Government
- “Automobile manufacturers use a lot of energy so we should bring them on board.” Academic institution
- “Space organisations [which can provide satellite images].” Academic institution

WALES

- “Have you engaged with the military? They are a very big landowner in Wales. They are certainly a big player.” Customer body
- “Food production companies are major water users, so they would be good to have involved.” Business customer
- “Going back to the phosphate in rivers, Wales are talking about having nutrient boards in place, so you should consider talking to them.” Local authority
- “The education sector should be engaged with around the topics of climate change, water use and waste management. This should all be in the curriculum.” Academic institution
- “I think the water companies do have their own education programmes, separate from the Regional Plan. They do outreach with schools, I’m sure. However, perhaps the education sector does need to be reflected more here.” Utility

5. Should we share water resources outside of the region to reflect national challenges?



NORTH WEST

- "The general feeling is that the country has enough water, but it isn't distributed correctly. We need to move water from the wetter north to the dryer south, but Natural England is not in favour of this long term, as it's not seen as sustainable. However, I can't see any other way forward. We don't want reservoirs and catchment management won't solve this alone." Domestic customer
- "I am in favour of this process, but you really need to drill down into the information and think about how the different rivers will be affected. For example, transfers from the Elan Valley will have an impact on the Wye." Charity
- "There is definitely a need for this kind of approach, but you need to ensure that the overall national requirement is being captured in any approach. Without that sense of interregional playing out at a national level embedded within this whole plan, it will not get off the ground." Environmental group
- "You're going to struggle to get the public to follow the logic of increasing abstraction in Carlisle and transferring it to another region. The public will say, 'Why on earth can't we store more water for use in Carlisle?' and I have a lot of sympathy with that view." Local authority
- "On water transfers, start to help deliver those water resource improvements with the upgrade of existing infrastructure. The canal network already provides the network for that transport with moderate investment. It's a ready-made route, and we're the only one with the ready-made network to do it. Enhance canal transfer opportunities. Donor water needs to come from somewhere though." Government body

MIDLANDS

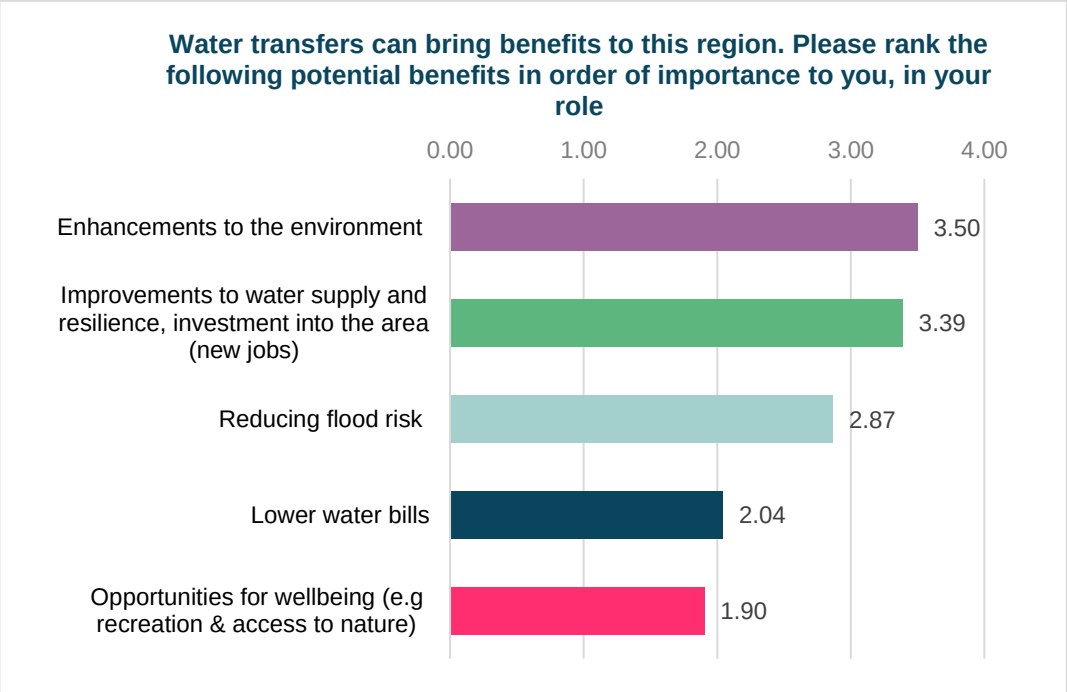
- “I think that it’s unavoidable if I’m honest. We’re all in this together and we shouldn’t be keeping hold of the spare resources that we have. It could help us deal with a very pressing issue.” Domestic customer
- “We’re one island and we need to work together to tackle this problem, particularly when we have too much water in some regions in the country.” Local authority
- “We’re all in this together and you have to share resources nationally. Withholding water when you could transfer it would be a grave mistake. There are places like the South East and London where they don’t have water. Scotland have the resources to pipe water down to London.” Local authority
- “Bulk transfers take a lot of energy. I can see the sense in managing the risk and having the connections between regions. What I’d like to see politically relates to the housing regulations in London; I don’t want resources from mid North Wales fuelling more growth in London. Levelling up should involve moving populations closer to the water rather than vice versa. It doesn’t make sense to move resources to the South East; we should encourage people to move instead.” Trade association
- “I’m not suggesting we don’t share resources at all between regions. If London had an actual challenge rather than a development constraint, I’d of course be all for sharing. But it’s about levelling up the country and I don’t think moving a very heavy resource 500 miles makes sense. In California they pump water from Las Vegas and San Francisco to Los Angeles at huge expense to fuel housing developments rather than having people move to where the water is. Especially with remote working now, there’s no reason for people to move to the big cities.” Trade association
- “I’d share that view. The idea of a bulk transfer doesn’t scream resilience. It’s not solving the problem. It’s fixing an issue but not addressing the root cause. I agree that sending water across the country so London can grow is not a resilient response to things like habitat management. The creation of habitats and wetland can help with things like water treatment, but these doesn’t seem to be covered that much as options. I’d call for more of this.” Charity
- “The challenge that we’re facing is not company, area or region-specific. When you look ahead to droughts, etc., it has to be more than national. That’s a more personal feeling.” Government

WALES

- “Obviously, some of these resources are in Wales and the transfer from Wales to England will have political implications that need to be considered.” Charity
- “Here in Wales, a certain section of the rural Welsh-speaking community has a real issue with giving their water over the border to England. They lose agricultural land to water storage, even though the benefits are actually felt over the border in England.” Trade association

- “I think that water transfers have a role to play, but it would be better to educate customers about how to use water more mindfully.” Utility
- “I wouldn’t be ecstatic about it, but I can see it has a useful role within the water resources plan.” Local authority
- “Coming from Wales, we are used to sharing our water. As long as people in Wales are not going without, why wouldn’t you share it? But there is a major issue about biodiversity here. With the levelling up agenda, everyone is still piling up in London, whereas the North, which is seen as less attractive, is geographically privileged in terms of plentiful water supplies.” Local authority
- “If anything, I’d be one of the areas that would be getting the water, so I’d say yes!” Environmental group

6. If water transfers are to happen, what protections and what benefits would you be looking for?



NORTH WEST

- “From my point of view, I’m happy with transfers happening, but the infrastructure around them would have to deliver a public benefit. If you could do something like a create an aesthetically pleasing canal or public greenway, that would be better than a hidden pipeline.” Charity
- “Water transfers could potentially improve water quality and wastewater systems, which is only a good thing.” Charity
- “It’s right that you are scrutinising all of the different options. For me, the aspects that I need to get reassurance about are who pays, who gets the benefit and where the water will be available.” Government body

- “Environmental protections is vital for me. Reimbursed fees must not be used for increased profit margins.” Environmental group
- “I am concerned that under water transfer arrangements, water is becoming a trading commodity rather than a necessity of civilised living. I feel that this is a politically dangerous route and needs to be dealt with differently. Giving benefit to those areas with water at a cost to those who don’t benefit, I find that a worrying concept.” Domestic customer

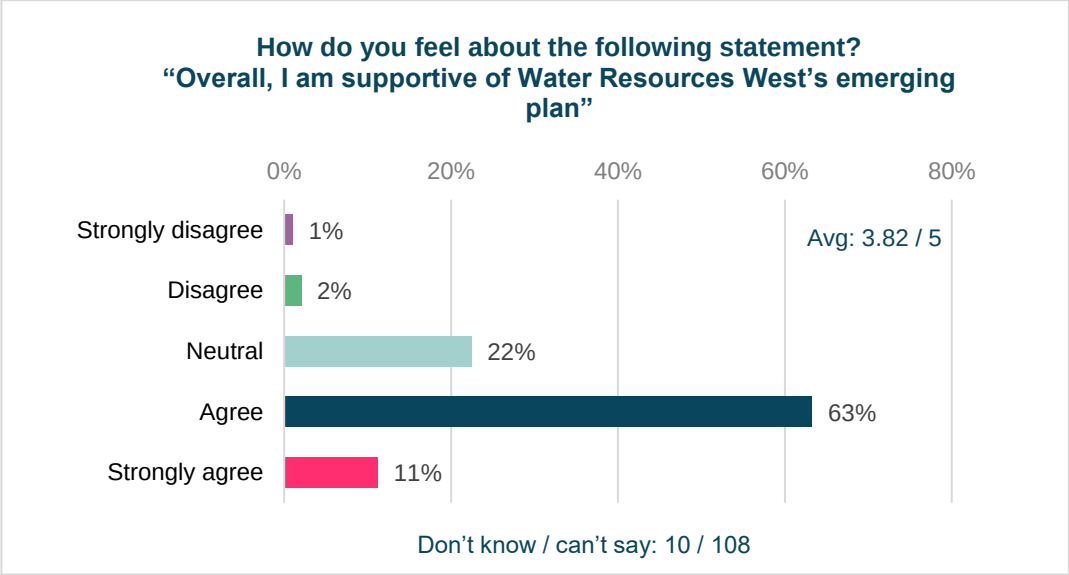
MIDLANDS

- “If they’re underground, water transfers involve some protection mechanisms. Water needs to be shared but transfers need to be designed in a sensitive way.” Environmental group
- “The government could use this as an opportunity to balance the economy in a way that doesn’t simply favour London and the South East.” Environmental group
- “Protection of biodiversity would be my one.” Business customer

WALES

- “In principle water transfers are fine, but the devil is in the detail. Any transfer will have a negative impact, as releasing water will change the make-up and environment of a river, so you really need to think through everything. You need to ensure that the benefits are really worth it and properly engage with communities so that they are aware of the advantages and disadvantages.” Utility
- “From a fisheries perspective transfers will affect flows. It’s not a very natural flow regime for species living in the rivers and mammals on the banks. The unnatural flow regime needs to be managed carefully so habitats are not washed out. You need strict management of the regime so flows can be maintained from Wales to the Thames.” Government
- “Just one thing for me would be making sure that there’s no issues with non-native invasive species and that matters won’t be made worse.” Environmental group
- “You would need to consult the local people affected.” Environmental group

7. What do you think about the plan overall?



WORKSHOP 4: WATER RESOURCES MANAGEMENT PLANS (WRMPs)

Stakeholders were introduced to the WRMPs of each utility in the WRW region: in the first workshop this was United Utilities (UU); in the second, Severn Trent Water (STW) and South Staffs Water (SSW); and in the third, Welsh Water (WW). Delegates were asked which of the following topic areas they would like to discuss: environment, demand management, options, service levels, transfers, water quality, and consultation and engagement.

Stakeholders were presented with a variety of topics for discussion, but from the outset an important point was raised at the UU workshop, which was the critical importance of seeing how these topics align and join up, rather than considering them discretely. For example, the quality of the environment determines how much water, and of what quality, is available for supply, which in turn affects demand, service levels, options and transfers. For the purposes of this report, the topic areas will be separated for analysis, but it is worth keeping in mind the interdependencies of all these categories.

ENVIRONMENT

Environment was picked up for discussion across all three workshops. In the UU workshop, there was a good deal of concern around rivers, due to pollution and harmful runoff, and delegates wanted to see UU take a leading role in lobbying government to prevent environmentally harmful practices. This was another key theme in the STW, SSW and WW workshops, where the overriding issue was pollution of the River Wye by raw sewage discharge, and abstraction from the Wye that had created algal blooms, killing almost all aquatic life in the river. Delegates were of the view that 'water companies have a statutory duty to protect water quality, and this is not taking place in our region'.

Another key concern was over flooding. At the UU workshop, floods were cited in Greater Manchester that could have been avoided if UU had released water from reservoirs in advance. For these stakeholders, there was frustration with the perception that 'the company only sees the benefit when the water can be sold, but not when it's going towards increased flood resilience and benefiting communities'. Many flooding issues were seen to be caused by bad planning, and it was felt that local authorities don't integrate water into planning enough. More integration between the Environment Agency, the government and utilities was strongly advocated here.

Discussing land management, stakeholders across all three workshops wanted to see more done to engage with farmers, large landowners and big industry to reduce harmful pesticides, chemicals and fertilisers. This was seen to feed into a wider picture regarding catchment management and biodiversity and environmental net gain. Delegates urged all utilities to work holistically and to consider how benefits can stack up, such as national flood management, access to nature and carbon sequestration through habitat creation. It was clear that there was much work to be done in recovering lowland and

upland wetlands, reforesting, and regenerating peatlands – all critical natural tools for holding water and releasing it slowly. However, it was also clear that many of the stakeholders involved in these kinds of projects lacked the resources to drive these kinds of environmental projects forward and needed more support from a wide range of partners.

DEMAND MANAGEMENT

This topic was also picked for discussion across all three workshops. In the UU session, the levelling up agenda, growth, heavy industry and manufacturing were all seen as key causes of concern with regard to demand management. A key comment here was: 'I think it's immoral to start looking for new sources of water before addressing options to reduce demand', and options including more stringent building regulations, grey water reuse and reducing leakage were all strongly advocated.

In the STW and SSW session, some stakeholders preferred water optimisation to water efficiency: 'We're moving away from single-use water in the same way that we've moved away from single-use plastic.' Many felt strongly that water should be reused several times before it reaches the ocean, particularly in industry and farming. For these stakeholders, cleaning water in situ was the key to not wasting water, and suggestions were made to include incentives in post-Brexit subsidies for water reuse. This linked up with a similar theme from the WW session, where delegates felt that as well as having a more stringent water reuse policy, compulsory metering should be brought in for agriculture and certain industrial heavy-users, such as beer producers.

WATER QUALITY

Water quality was discussed in the UU and the STW and SS workshops. As with the topics above, there was a great deal of crossover, and algae blooms, pesticide runoff and contaminants were all key issues in the question of water quality. Catchment management and nature-based solutions, such as slowing water flow and environmental management schemes, were proposed, as well as better monitoring around water transfers, such as in the River Wye, where there have been no studies on the impact on migratory salmon. While the Environment Agency, the Rivers Trust and SECAS were cited as best placed to do this kind of work, it was commented that the Environment Agency now has less funding and therefore fewer resources to devote to this kind of critical research.

Other suggestions involved smarter use of technology and processes, such as strategies to reduce the levels of contaminants and pollutants released to the rivers before extraction, putting the right sensors in the right places to detect specific organic and non-organic contaminants as quickly as possible, removing the use of chlorination in drinking water, and better treatment at sewage works.

CONSULTATION AND ENGAGEMENT

All three sessions discussed this topic, and it was clear that the majority of stakeholders felt that workshops such as these were extremely helpful in learning more about the issues, sharing information, problem solving and networking with other interested partners. For most, face-to-face workshops were preferred, given the invaluable richness of human interaction and contact, but it was also felt that a hybrid option, where an online element was offered, was sensible, particularly as we emerge from the pandemic into greater home and remote working. In addition, delegates wanted to see more engagement with schools and future customers, and emphasised the importance of connecting local partners and communities with larger, more nationalised bodies for joined-up working and approaches.

UNITED UTILITIES

ENVIRONMENT

1. How can we sustainably take water from the environment?

- "We should want to integrate all these options rather than looking at them individually. That's where we get it wrong. We need to manage the environment to retain as much water in the land as possible and release it slowly over a longer period. We need to look at our lakes and reservoirs so that we can transfer water from the areas with the highest rainfall and get it quickly into areas that have less. This stops flooding and retains the resource. Then, it's looking at what infrastructure we need to do that, as well as the quality of the water going back into the rainwater cycle." Trade association
- "I'm a little concerned that none of this material contains mentions of flooding. While catchment management delivers environmental and biodiversity benefits and helps to combat flooding, flooding does need to be more prominent within this framework." Environmental group
- "Areas such as the Dee Estuary present opportunities as well as environmental challenges. New water sources need to be environmentally sustainable." Charity
- "I'm looking at this and I think it's very difficult to sustainably take water from the environment when we are talking about rivers. You need to demonstrate that you are doing your utmost to prevent sewage flowing into rivers. You could do a lot more to lobby government to prevent environmentally harmful practices. There's been much publicity about the state of the UK's rivers, and I'd like to see United Utilities get more involved in this." Local authority
- "I'm representing the angling community today. Something that concerns me about this whole process is that in December 2015, we had tremendous floods in Greater Manchester after 12 weeks of bad weather. United Utilities reservoirs were full for 3 months, even though the company has the ability to look at advanced weather forecasts and release water ahead of

flooding events. I'm concerned because after the December floods and on numerous occasions since, I've suggested that United Utilities regularly release water to increase capacity provision for flooding, but they won't do this. They say they don't want to because the water is of value to them, but now they're asking the bill payer to foot the bill for transferring that water to other areas of drought. It's as if the company only sees the benefit when the water can be sold, but not when it's going towards increased flood resilience and benefiting communities." Environmental group

- "The obvious one is that I support any proposal that would get more funding for the Rivers Trust. This is an extremely large topic – any of these areas could merit a five-hour discussion and it's more difficult to discuss these areas in brief over Zoom. Without being site-specific, how do you take water from the environment sustainably? It all comes down to site-specific stuff. The environment needs to be front and centre of this plan. We are all facing the challenges of development versus the environment. If we carry on like this, we won't have any rivers left to protect. It's time to make some hard choices." Environmental group
- "The ground can hold water for us to prevent drought. I don't know how much that presentation touched upon this. River flows must keep sufficient to sustain the water levels within them. We've got to look at what our activity is doing to the wider environment." Domestic customer

2. How can we work with partners to improve land management to benefit water availability and quality?

- "A lot of catchment management work involves liaising with farmers and landowners, particularly around reducing pesticides and fertilisers, and better planning around when chemicals are used. This will all reduce which chemicals and how much of them get washed into rivers. A lot of work can be done to educate and partner with these individuals." Environmental group
- "Water companies cannot singlehandedly deliver all of these biodiversity and environmental improvements, and neither can nature-based solutions. I think that WRW should be looking to engage with farmers around using fewer pesticides. I think that this would be more effective than catchment management." Academic institution
- "I do think we should be urging you to look at how you persuade developers to use more water-efficient building methods. It's OK asking customers to reduce usage but developers need to play their part in this. We need to be confident in our forecasting that we are taking in this move by government to level up and what impact this might have on our future water resilience." Local authority
- "I would hope United Utilities is already lobbying, but they tend to be a rather invisible organisation to their customers and the wider government wheels. They need to do more to

show that they have a more public-facing and responsible approach to be able to tackle issues around the environment and climate change." Local authority

- "There's a societal issue here, in that everyone thinks flooding is someone else's problem. Only one local authority in Greater Manchester has a driveway drainage policy but they don't have the money to implement it. We're getting a lot of people with resin driveways, which is one of the causes of flooding. Most flooding is caused by bad planning. Local authorities don't integrate water into planning enough. They think it's the Environment Agency's problem." Environmental group
- "United Utilities is a private company, but we need the impact of the EA and government. The EA need to be setting the rules on this and enforcing them. It would be nice to have them involved in the conversation." Environmental group
- "I agree with what's been said. Planning and regulatory oversight are key. It goes back to having a holistic approach. For example, how you can engage with landowners? It's difficult in urban areas, especially because you have a whole raft of different interests there. I'd be interested to hear about how you are engaging with industrial stakeholders, for example." Domestic customer
- "Very little has been said about the carbon cost of water transfers. All rivers have their own chemical footprint, so specific habitats, species, etc. What I'd like to see is something on how these transfers are going to be sustainable in terms of the environment and water quality. I'm aware that it's effectively moving acid to alkaline water – presumably that would be part of the treatment process? I would like to see it expressed in these webinars – that would help." Environmental group

3. How can we incorporate biodiversity and environmental net gain?

- "We need to think about reforesting peat lands and other kinds of habitats. This will require engagement with other partners, but it can be delivered." Environmental group
- "We need to achieve environmental net gain if these water transfers are to occur." Charity
- "In terms of climate change, we could be using our surplus water to support marshlands to absorb more carbon. Do you think United Utilities have an interest in promoting the sequestration of carbon through marshland?" Business customer

DEMAND MANAGEMENT

- "How can we increase the efficiency of both household and non-household users?" Local authority
- "We have a high level of manufacturing and industry activity in our area. Capturing surface water and involving aspects of household contribution could be useful avenues. With costs going up, if people can see the benefit in reducing water usage and consumption then that

could be the carrot. The perception of water is quite low amongst the general public so there is work to be done there." Local authority

- "Looking at the levelling up agenda in the longer term and increased development, that will see more growth in our area so it's a question of how we manage that." Local authority
- "We recognise the difficulty of this, which is why we would gravitate towards one large project than tens of thousands of smaller ones." Local authority
- "I think in the longer term to see grey water increase would be amazing. But I think you have to have government direction there." Domestic customer
- "I think it's immoral to start looking for new sources of water before addressing options to reduce demand. I think that we should be looking at increasing the efficiency of household usage and reducing the issue of leaking. We need to be looking at pressuring for legislation that reduces the amount of water used in products that we buy, like dishwashers and washing machines." Environmental group
- "There is a much wider scope of demand management where we look at how homes and houses are built. In other countries clean new water is only used once repurposed water has been used. Water companies need to work with government to look at the best way of using the resources we've already got." Domestic customer

SERVICE LEVELS

1. How can we reduce the likelihood of service restrictions compared to WRMP19 levels?

- "I'm interested particularly in service levels and water quality. I can see that's an increasing trend. We're seeing algae in hotter summers; places in the Pennines have been out of action for some time. I'm concerned about how that impacts our service levels. There are inter-company transfers that we at the EA are keen to look into, as well as what the possibilities are to allow better connectivity in the strategic zone to support customers in northern areas and the like." Government body
- "There is a lot to be said for getting the rainfall into the ground and holding it back. The problem is in our particular area, we have steep sided slopes and basically the river pops up quickly and the natural flood management will do a certain amount, but it is not the be all and end all. It is good also from a wildlife point of view. But like it or not, United Utilities have the facility in Thirlmere which can make the difference as to whether Keswick floods or not. Although it's only responsible for 28% of the catchment area, it is a vital 28%." Vulnerable customer representative

WATER QUALITY

1. How can we improve the quality of our raw water?

- "If there are water quality issues in the catchment, these need to be addressed. WRW have to look wider. Catchment groups are where that happens." Government body
- "I would look for a solution from the environmental side of things and use nature-based solutions, such as slowing water flow and environmental management schemes." Charity
- "I think that environmental objectives and catchment management are the way forward. By following through with these two things, you will have fewer contaminants in rural water resources and less purification will be required. I think that innovative solutions around catchment management could really deliver for you here." Environmental group
- "We have a program of transferring water to the River Wye in our area but there have been no studies on the impact of that on migratory salmon. We need more studies that assess how it affects fish. In the Wye it's a fairly specific point for us. We need a much brighter line between the environment and transfers. We need to get data on how it's affecting migratory fish. The EA, Rivers Trust and SECAS are best placed to do this kind of work. Look at water quality improvement." Charity
- "With water quality, there is a problem with the EA. They are losing stuff left right and centre and have less people doing monitoring of water courses. Also, in Thirlmere the EA has a certain amount it can release for the salmon, but the guy who dealt with that is no longer doing it, so my understanding is that work is not being done at the moment." Vulnerable customer representative
- "We had water supplies cut off after Storm Desmond because the water needed cleaning. One realises the value of water when you don't have it. The public need to be educated on the value of water. Without air you die, without water you die. It's a case of promoting water as a valuable thing. People will pay lots for a small bottle, but you can turn on the tap and disregard it as a cost." Vulnerable customer representative
- "Better treatment at sewage works. Improving any storm overflows. This would improve surface water run off." Domestic customer
- "I'm not sure how to tackle this project but we've had a big problem with blue-green algae. I fully expect to see more water quality issues in the future, especially from less frequent, more intense rainfall." Domestic customer
- "I think that you must think about what you are targeting within the water to improve the quality and I think that you should be looking to remove organic and non-organic contaminants. I think that chlorination should no longer be used in drinking water." Academic institution
- "I think that the analysis process needs to lean into the new technology and become far quicker at delivering effective and accurate results. That means putting the right sensors in the right

places to detect specific contaminants as quickly as possible. This means that the quality will be the same from source to tank, which is essential." Academic institution

CONSULTATION AND ENGAGEMENT

1. What are your views on the best methods for engaging with stakeholders?

- "I think that school children should be involved in any engagement process from here on out. We need to make climate change and water science compulsory in the school curriculum, so that we have new ideas coming in during the decades ahead." Academic institution
- "I come from an environmental partnership, and we have a lot of local environmental bodies under our umbrella, so it would be good to invite these kinds of organisations to this type of event. Wildlife trusts across local regions, councils and friends of groups that are quite influential could unlock a great deal for you." Charity
- "Covid is causing real challenges in keeping household water usage down, as we are all spending so much more time at home. We want to see a renewed focus on how this can all be achieved within any engagement approach." Government body
- "These are great, but I really do miss the face-to face stuff that we used to do. I think that's something that I'd like to see the future. I guess there's pros and cons for online. I'd like this format but in a face-to-face setting." Domestic customer
- "I thought today's session has been very helpful and you get the feedback straight away. Obviously, time constraints are the only negative I would say." Local authority
- "We need lots of engagement, but we need it with more detail on specific areas to ensure that we can all understand. It's difficult to make comments when you're not feeling as informed as you should be. I think that work with local authorities, industries and planners is absolutely essential when looking into areas that we should prioritise. Have smaller topic areas in more depth to ensure a greater understanding." Domestic customer
- "Many of the solutions are more localised. Perhaps we need to disentangle those two points so that we can engage at a higher level. You could have geographic-specific and more topic-specific [sessions]. There were a number of points on the attention to demand management, water repurpose and leakage, and we should definitely have more information on this." Business customer
- "I think engaging with people in the community rather than with big organisations tends to get a more immediate impact. I think water quality and availability all depends on the catchments. Community-focused grassroots partners are essential." Domestic customer

SOUTH STAFFS WATER AND SEVERN TRENT WATER

ENVIRONMENT

1. How can we sustainably take water from the environment?

- "Locally for Severn Trent, the overriding issue is pollution of the River Wye by raw sewage discharge. The water companies have a statutory duty to protect water quality, and this is not taking place in our region. Abstracting from the river a few years ago meant that we had algal blooms because of phosphates, which killed almost all aquatic life in the river." Local authority
- "It's a good question. It links so strongly with demand and which sector requires that water. I would just say that our focus in Gloucestershire is that we'll be quite heavily affected by any transfers and won't necessarily feel the benefits. From a wildlife point of view, we're looking at some of the habitats around and whether they will be affected. It's a really complex picture but there's certainly loads we can do around land management. There's some good work going on with farmers and rainwater harvesting. We have a scheme around using grey water in the home but it's the scale of it, the timescales involved and whether it is enough." Charity

2. How can we work with partners to improve land management to benefit water availability and quality?

- "70% of managed land is for farming, so it's critical that you liaise with farmers and encourage measures that address the water quality issue, such as runoff and use of pesticides by farmers. If we could get them to be careful about the fertilisers that they use and when they do so, we would not need to spend so much money on improving water quality." Domestic customer
- "One of the issues around here is the willingness of landowners in offsetting. They are really hesitant. At the moment, land ownership is going through a time of great overhaul, so they really don't want to get involved. However, there are really big business opportunities there if they're willing to embrace them." Local authority
- "We have water quality issues in the River Clun, and we are being told that we can't have any development there by Natural England, as it would make things worse. As a result, we have been told that we need to restore the Special Area of Conservation and work to achieve water neutrality before putting together a development plan. Severn Trent has improved its processing systems, so wastewater is not an issue in relation to the quality of the water. Farming does seem to be the problem and we can't have any influence over land management, even though they seem to be causing a lot of the problems. As a result, the EiP will have to resolve this. We need to have a way forward, and not having any development whatsoever is not politically acceptable." Local authority

- "Regarding Severn Trent we have an ongoing campaign regarding CSO discharge. There's an issue around a river network and catchment system under pressure. This requires a response at a policy and regulatory level." Environmental group
- "There needs to be incentives in post-Brexit subsidies for water reuse, especially in land management." Environmental group

3. How can we incorporate biodiversity and environmental net gain?

- "We have spent a lot of time on projects around biodiversity and net gain. There is a huge potential net gain, and it is expected to deliver on so many levels, so we can get everything right. It's all about addressing concerns around species extinction. I like how the plan is shaping up and will allow benefits to stack up, such as national flood management, access to nature and carbon sequestration through habitat creation. There are huge expectations around this, so we need to really think about how they can be translated into reality." Domestic customer
- "We are constantly trying to recover lowland and upland wetlands. They are good at holding water and releasing it slowly. They're very difficult to create new and there are economic considerations regarding land use renewal. There are a multitude of benefits for water resources." Environmental group
- "We currently lack resources to drive environmental projects forward. We are keen to see a strategic response to water resource provision as a natural benefit. We should look to up our rate of discussion with you. This also feeds into the Severn water partnership under the Severn Valley scheme." Environmental group
- "I'd like water companies to be more involved in the wider land management discussion." Local authority
- "It's very useful that water companies have people like farm advisors, but they only cover part of the catchment. I haven't got any advisors in my catchment. I appreciate it's needed to prioritise areas. If they could roll out the scheme and allow us to access the expertise, that would be great." Local authority

DEMAND MANAGEMENT

1. How can we increase the efficiency of both household and non-household users?

- "I think that we could be doing a lot more in partnership with Severn Trent, particularly as we put together an environmental plan that includes water resources. We can increase the scope of our engagement through this action plan, including educational strategies. I think that Severn Trent could help here, by putting together and issuing standard templates so that we're all working from the same basis." Local authority
- "We're at the end stage of preparing our local plan and are examining proposals. We have a 110-litres-per-day target in my plan and that's been tested through viability assessment

processes. We can only do things if they are evidence-based, so I will be able to put anything that comes from a Severn Trent water resources management plan into my own action plans." Local authority

- "Communications and engagement with Severn Trent can be difficult. For example, one of my planning officers asked me to talk to Severn Trent about water neutrality and their representative had no idea what I was talking about. It would be reassuring to have more expertise available that I could pass on to my officer." Local authority
- "There's always pushback from developers when asking them to be water efficient, as they think that we're going above and beyond. These requests are evidence-based, so that's why any kind of reports drawn up by experts are really important." Local authority
- "We're moving away from single-use water in the same way that we've moved away from single-use plastic. Water should be reused several times before it reaches the ocean. Certainly, we should be doing this in industry. In farming, we could be looking at water reuse. Phosphate recovery is popular and can also slow that water down as it makes it journey to the sea. There is also a bog project in the Pennines which can improve the level of organic elements that get into the water further down the line and eliminate odour issues. Cleaning in situ is the key to not wasting water." Trade association
- "For us, it's more about water optimisation than efficiency. Reducing our water use might have knock on effects i.e., lead to an increase in CO_2 emissions. Most of what we do abstract is discharged back to the river. We do have some consumptive use but the next power station along stream can use that, so there is reuse down the river in that sense." Business customer
- "I read about the US legislation regarding power stations, and they've just tightened the regulations around selenium in wastewater. We don't have as much coal here but there's a case for reusing that wastewater on site for power stations. As long as high-quality water goes back into the catchment, that's not a problem." Trade association
- "In the demand management part, we are targeting the network, working in the field, identifying the leakage, etc. It is very laborious and costs too much. We should fit Wi-Fi sensors on the pipelines and use satellite technology. It is very easy to launch a satellite. I think we should take this as an option for demand management." Academic institution

2. How can we reduce the amount of water each person uses?

- "We can put pen to paper and force developers to implement consumption reduction measures but unless someone does go out to the new-build sites, it's hard to verify. Also, once occupiers move into a new property, they might choose to get rid of all the smart fittings and meters. Building regulations would be more enforceable and would have to be signed off a bit more stringently. Another thing is that new builds pale into insignificance when you look at the level of the existing housing stock, so we need to consider existing houses too." Local authority

- “We are talking about behaviour change. We are talking about the future generations and how this is moving forward. The younger generation really need to be taught how to reduce consumption and have that care for the environment. When I was 7 or 8, we didn’t recycle, but my children do. It’s baby steps but if millions of households are doing this then it will make a difference. I know during lockdown my son did an interactive webinar with a water company through school and really enjoyed it.” Local authority
- “We need more door-to-door surveys by engineers, I think that is essential. It will work better and more effectively.” Academic institution
- “It’s an interesting question of how to reduce the amount of water each person uses. I don’t think it’s the responsibility of the individual. We need more awareness, as I think most people simply aren’t aware, so it’s the government’s responsibility to raise that awareness.” Business customer
- “There needs to be education on the value of water in schools. We need to target the next generation and change the curriculum.” Academic institution

SERVICE LEVELS

1. How can we reduce the likelihood of service restrictions compared to WRMP19 levels?

- “We have done a lot of work on scenario modelling for the future, so you need to make sure this is reflected in the emerging plan. Towards the end of the decade, we expect our water usage to increase and there will be increasing uncertainty around where we will get this from. We’ve definitely got work out there which can help inform the process. Because we are competitive, you might need to talk to individual companies under NDAs potentially. This kind of information is commercially confidential, and it breaches competition law if we talk about it. It’s no one’s fault, but there is a mismatch between the electricity and water sectors.” Business customer

WATER QUALITY

1. How can we improve the quality of our raw water?

- “It’s important to look at the water quality when extracting it from the river to treat it. We need to target pollutants. Is there any strategy to reduce contaminants to rivers before extraction? It also depends on what technology is being used for water treatment.” Academic institution
- “You’ve got different types of areas – the industrial belt, the agriculture belt – and there are lots of contaminants in the river depending on the region. So there needs to be different treatments for the different types of contaminants, which means they need to be separate. There are lots of challenges.” Academic institution

CONSULTATION AND ENGAGEMENT

1. What are your views on the best methods for engaging with stakeholders?

- "I'm a Severn Trent customer and, in terms of customer engagement, I was wondering how often you refresh the list of partners that you work with? In particular, there should be a focus on engaging with farmers around the pesticides that they use and their link to water quality. In addition, there should more efforts to bring us all together, so that we can align our goals." Government
- "Engagement workshops like this are invaluable and having specific contacts for engagement would be really useful. I know that resources are stretched, but people would feel far more supported by having that resource available." Government
- "At the moment, we still use fairly traditional consultation methods, such as citizens panels and crowdsourcing websites. Any avenue for finding people that don't normally engage with us would help, but it's a challenge." Local authority
- "The email newsletters are very useful for engagement and give you a flavour of what's going on." Environmental group
- "Is there not an opportunity for them to engage with customers through water bills?" Domestic customer
- "The presentations this morning were very good, and I got the hang of Slido after a little while. I have things to take away and discuss with other wildlife trusts. We work a lot with Severn Trent and have a good partnership, including funding. I appreciated the opportunity to discuss things at a higher level at this event." Environmental group
- "Today was really useful and interesting." Environmental group
- "With some questions, the answers were polarised. I wonder if additional options in Slido questions could be included to account for caveats." Local authority

WELSH WATER

ENVIRONMENT

1. Beyond meeting statutory environmental obligations e.g., Habs Regs, WFD, what other environmental factors should we consider in our decision making?

- "We have to take significant flood risks and high phosphate levels in the water into account as part of the decision-making process around the environment. As a local authority, we are a key link here, so we would welcome engagement and could help to facilitate it. This should not just be with landowners and farmers; everyone needs to get around the table ASAP." Local authority

- “I’m a fishery specialist and look after mid-Wales. You’re talking about the older statutory obligations here, but there’s no talk about some the areas covered by the SNMR (Sustainable Management of Natural Resources) approaches and how that can improve biodiversity for the wellbeing of future generations.” Government
- “For Pembrokeshire something we have quite uniquely is we’re surrounded by marine environment. We have the Special Area of Conservation (SAC) designation, which has issues stemming from other causes such as agriculture. We’d be in favour of maximising any possible added value. We need to be working above the statutory requirements.” Local authority
- “Speaking for another SAC in the Wye, special regulations to help the situation are currently laughable given what’s going on. Water companies only have some responsibility. CSOs are important too.” Local authority
- “The Wye catchment starts in Wales and goes through Herefordshire and there’s a lot of flooding because of what happens in the Wye. Considering flood management mechanisms on a cross-border level would be good.” Local authority
- “It’s interesting to hear the plans for reservoirs to help with fish migration. I wonder if any of the Welsh Water plans addressed our conversations on managing sediment from reservoirs below? There’s an issue with reservoirs as sediment is not coming from upstream to replace what moves on.” Government
- “We’re discussing social and environmental justice at the same time. The resilience of some rural areas is not being addressed as population density is prioritised. It’s important to understand that the new zones that you have in deficit are also a result of Covid and Brexit. We have had changes in tourism activity. Whatever you do as Welsh Water or WRW needs to take into account future assessments of water investment post-Covid.” Government
- “You need to be looking at wider factors, as well as options. It’s good to look broader, not just at water resources. You should be looking at all the environmental factors in an integrated way, as sometimes they are linked in ways you wouldn’t expect them to be.” Environmental group
- “Focus on urban catchments and prioritise sites of special interest. With the Water Framework Directive, urban catchments get put in a difficult box, but they need to be brought up to average levels, rather than the best catchments being improved even more. Urban catchments get left behind. There are more people in urban catchments, and it’s totally different to rural settings. The fact that there are more people in urban catchments is even more of a reason to do something. Policy and legislation need to change, and we need to look at the criteria for prioritisation.” Environmental group

DEMAND MANAGEMENT

1. How should we engage with our customers on their water consumption?

- "From a Welsh point of view, there is a water efficiency group in Wales that comprises people from Natural Resources Wales, consumer bodies and water companies, and they are working to find the best approaches for Wales. So, you should be making sure that group is involved as part of the planning process." Environmental group

2. What are your views on the role of metering in reducing the amount of water each person uses?

- "We support metering generally because it doesn't just bring the benefit of water efficiency, but it can also help to identify leakage in properties. Lots of rural properties have very long supply pipes that can be leaking, and if there is no meter then we won't know about it. Metering also helps to reduce your water bill if you are energy efficient. Furthermore, when people start thinking about their water usage, they often start thinking about their electricity usage too, so it's a double win." Environmental group
- "In terms of demand management, metering should be brought in for agriculture. Different crops need different amounts of water, so, say if oranges scientifically need a certain amount of water per hectare to grow, metering could be used to make sure farmers aren't using much more water than the crops need. There needs to be more focus on the agricultural sector and industry – they need to be monitored. For the beer sector, stricter measures are needed, and laxer measures for the milk sector. We need to cut down on producing certain foods during drought periods, such as jelly." Academic institution

3. What options are there in your area / community to increase supply or reduce demand for water?

- "We've not thought about it directly, but it's an important thing for WRW to engage with. The most important thing is targeting the message appropriately at the right people, so that the communications campaign around demand reductions are effective. You need to go further than just telling people that their bills are going to go down and look to incentivise people. The collaboration aspect is critical here." Local authority
- "Collaboration and working in partnership are key, such as partnerships between local authorities and housing developers so that water efficiency devices are fitted on new builds." Business customer
- "I think that engaging with customers around water consumption is important here too. I think that any smart metering used needs to be accurate so that customers can access knowledge about their own usage and be empowered to start to reduce it. This kind of data can build into

an education piece. I would also try to include data about hot water and cold water use, as that has a carbon impact." Business customer

CONSULTATION AND ENGAGEMENT

1. Following pre-consultation, what are the best methods to engage with stakeholders?

- "Eventually, you just need to go out onto the ground and talk to people about what WRW is up to. By making people aware of what is on the agenda, you can bring them on board." Government
- "Personally, I don't have a preference between digital and face-to-face engagement, but more people seemingly prefer to physically meet other stakeholders." Government
- "Face-to-face engagement is better, as you get a richer experience chatting over coffee." Utility
- "Moving forward, you will be talking about much more than just abstraction and obtrusion and will be covering mitigating the impacts thereof. As a result, you will be having far richer conversations and will get a greater range of people involved." Government
- "I prefer the hybrid option of engagement, as membership organisations have limited resources to travel to face-to-face meetings." Business customer
- "Engagement needs to be hybrid; people have got used to being at home now. While face-to-face gives a richer experience, online meetings fit into people's lives better now. I would also look at having them at different times of the day, so that you get a greater range of people attending." Business customer
- "Targeted social media is great for younger people. You should try to initiate a wider discussion, not just one aimed at organisations. Communications and engagement are beneficial." Environmental group
- "Outreach in schools and universities. Also, bringing in celebrities and athletes to promote demand management and to engage the younger generation." Academic institution
- "Another group you need to target is land managers and farmers." Environmental group

APPENDIX 1: ATTENDEES

A total of 133 stakeholders participated in the workshop, representing 84 organisations. The organisations represented on the day are shown below:

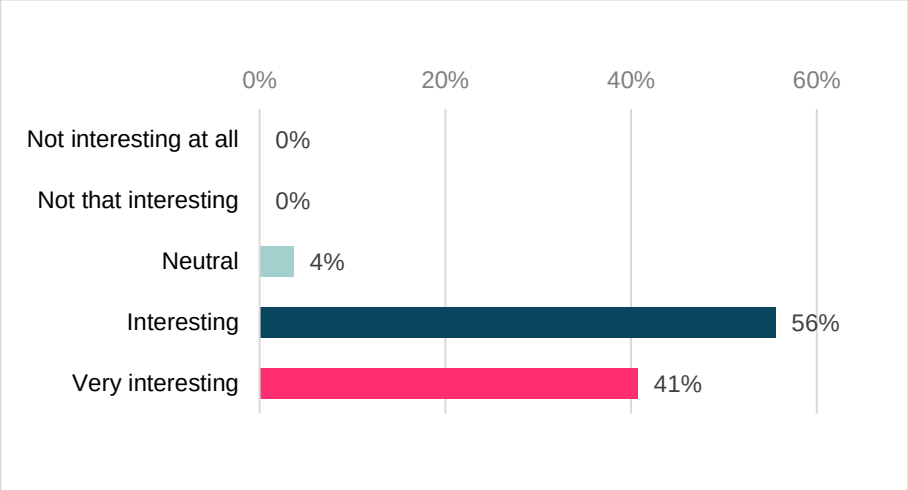
Action with Communities in Cumbria
Afonydd Cymru/Wye and Usk Foundation
APEM Ltd
Association of Greater Manchester Authorities
Atrepo
Brecon Beacons National Park Authority
Bromsgrove and Redditch Councils
Canal & River Trust
Ceredigion County Council
Chemical Industries Association
Cheshire West and Chester Council
Chorley Council
CLA
CLA Cymru
Colliers
Confederation of Paper Industries
Consumer Council for Water
Craig Williams MP
Cranfield University
Cumbria Fire & Rescue Service
Cumbria LEP
Derbyshire County Council
Derbyshire Dales District Council
Dŵr Cymru Welsh Water
Enebio Ltd
Energy UK
Environment Agency
Erewash Borough Council
Farmers' Union of Wales
Flintshire County Council
Forest of Dean District Council
Friends of the Lake District
Gloucestershire Wildlife Trust
Gloucestershire County Council
Halton Lune Hydro
Herefordshire Council
Jacobs
James Cropper Plc
Knowsley Metropolitan Borough Council
Lake District Estates Co. Ltd
Lake District National Park Authority
Lancashire County Council

Lancashire Wildlife Trust
Lanxess Urethanes UK Ltd
Leicestershire County Council
Liverpool City Council
Lune Rivers Trust
Manchester City Council
Meifod Community Council
Mersey Rivers Trust
Middlemarch Environmental Ltd
Mott MacDonald
National Farmers' Union
National Grid
Natural England
Natural Resources Wales
Newcastle University
North Worcs Water Management
Ofwat
P R Gray
Pembrokeshire Coast National Park Authority
Pendle Borough Council
Photonic Measurements
Port of Workington
Progressive Energy
Ribble Valley Borough Council
Ricardo
Salford Friendly Anglers Society
Severn Rivers Trust
Shropshire Council
South Staffs Water
Strine Internal Drainage Board
Telford & Wrekin Council
Thames Water
Trent Rivers Trust
Uniper
Waterforte Consulting Limited
Waterwise
Wessex Water
West Lancashire Borough Council
Windermere Motor Boat Racing Club
Wood Group UK Ltd
Wyre Rivers Trust
Yorkshire Dales National Park Authority

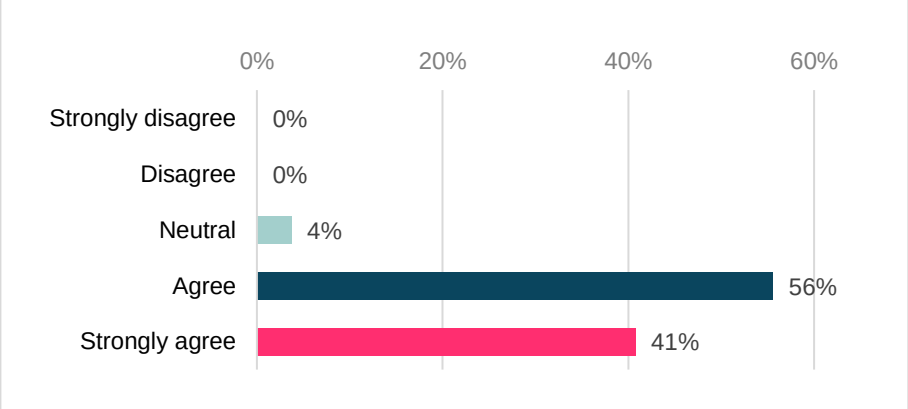
APPENDIX 2: WORKSHOP FEEDBACK

After the workshop, stakeholders were asked to complete a short feedback form. The feedback, combined across the three workshops, was as follows:

1. Overall, did you find this workshop to be:



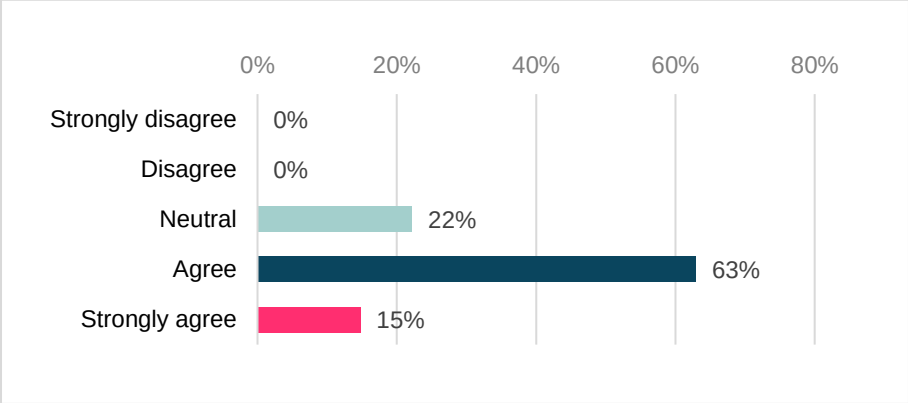
2. Did you feel that you had the opportunity to make your points and ask questions?



Comments:

- “Regular discussion break outs encouraged engagement with content.”
- “Very informative thank you.”

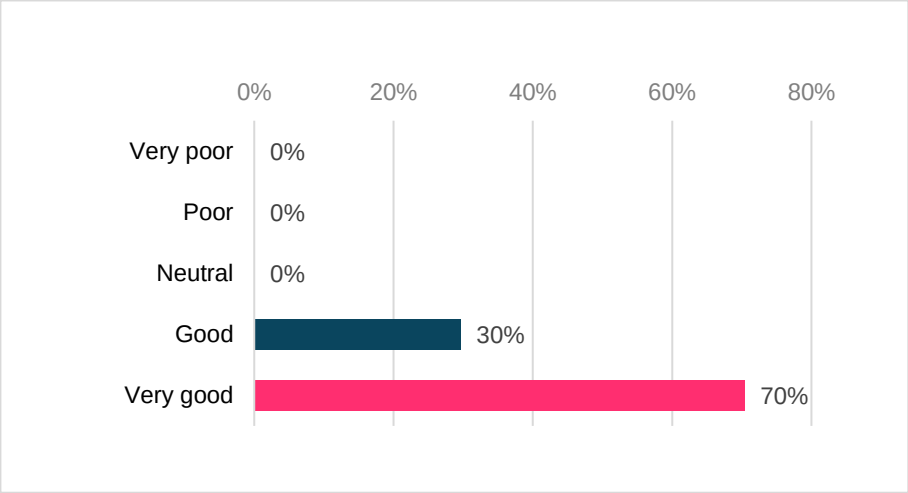
3. Did we cover the right topics for you on the day?



Comments:

- "I am a planner, so I'm interested in the environmental improvement side and think a session on this would be useful."
- "More engaging [when it] related to advanced water and wastewater treatment processes and also net-zero initiative programs."

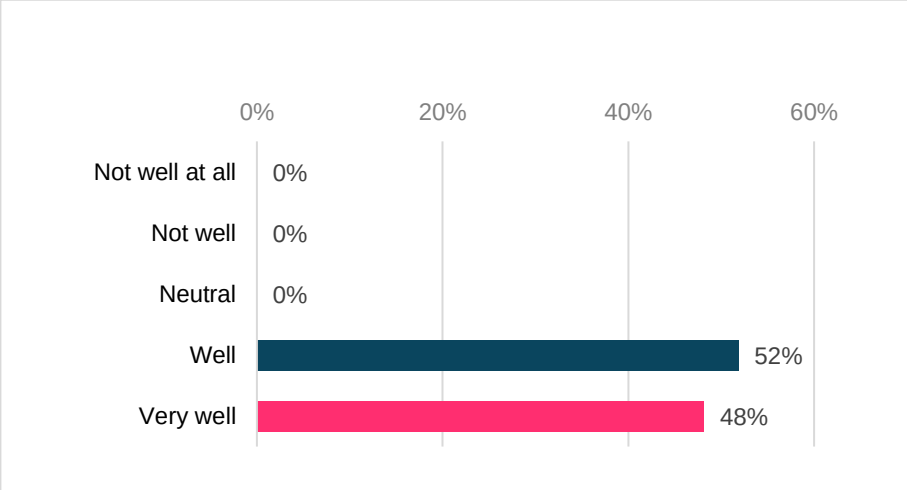
4. What did you think of the way the workshop was chaired by your facilitator?



Comments:

- "Very well managed event."
- "Thank you [facilitator]."

5. How well do you think the online format worked?



Comments:

- "Great mixture of presentations / breakout sessions and voting, worked very well."
- "Covid and travel meant that it was better online."
- "Break-out sessions were good – but inevitably not as good as face to face."

6. Any other comments?

- "Very impressed with [electronic voting] software. Not come across this before and found it very easy to use. It helped to promote engagement and the presentation provided immediate feedback."
- "A very interesting and engaging session. Much more to consider going forward!"