AVOIDING WIPEOUT

Water scarcity is fast becoming a serious business risk. Waterscan's new event for the self-supply community put resilience at the centre of discussions.

"Activism is my rent for living on the planet." Chris Hines MBE – founder and director of Surfers Against Sewage (SAS), sustainability director of the Eden Project and owner of positive change advocacy A Grain of Sand – offered this quote from author and social activist Alice Walker in a rousing keynote speech at a new annual event hosted by Waterscan for the self-supply community last month.

It was part of his pitch to promote "intelligent activism" – positive, multi-faceted campaigning to drive purposeful change. Hines told the compelling story of founding SAS and its meteoric rise in effecting cleaners seas. Borne from his personal disgust at "surfing in a toilet" in Cornwall in the early 1990s, the campaign group quickly learned to combine spectacular media stunts with rigorous scientific evidence and pragmatism.

Within ten months of being founded, SAS was giving evidence in the House of Commons. It persuaded first Welsh Water and then Wessex Water to voluntary adopt a full sewage treatment policy. By 1997, a Select Committee recommended that all sewage should be treated by 2002. In the years that followed, all continuous discharges from wastewater works became subject to treatment.

Today, SAS is concerned with another issue of adjacent relevance: untreated discharges from storm overflows. But in his address, Hines expanded his case to argue that clean water is also in need of attention: water is so fundamental to life and society that over abstraction could have catastrophic consequences – from crop failure to fire hydrants running dry when they are needed.

While he stopped short of directly calling on the self-supply community to demonstrate "intelligent activism", he suggested they consider the future. "You are responsible businesses or you wouldn't be in the room."

Water Matters

In convening Water Matters, the new annual event, Waterscan adopted a leadership role in this space. The express purpose of the meeting, which took place in London in June, was to "bring like-minded professionals together to explore how best to accelerate action and ultimately achieve water resilience. The aim is to learn from one another, inspire collaborative, coordinated action and drive innovation for a sustainable water future."

Waterscan pointed out in the agenda: "Water security across the UK is under threat. Security is fast approaching scarcity, increasingly creating challenges and consequences for every business in every sector, all of which need a reliable water supply to operate."

Speakers at the event fleshed out the detail. Defra's head of water resources, drought and water demand Aaron Burton pointed out that a 4bn litre a day deficit is forecast by 2050 should we not actively tackle it, and half of the action planned is centred on demand reduction.

Defra has responded, Burton reported, by setting the target of a 20% per person demand reduction by 2038, together with sub and interim targets. For the non-household (NHH) market, these are a 9% reduction by 2038, on the way to a 15% reduction by 2050.

Dr Louise Bardsley, a senior adviser at Natural England, passionately presented the consequences of water scarcity for nature. Insufficient water in the environment, she said, will hinder nature recovery (the apex target of the Government's new Environmental Improvement Plan) and climate resilience and adaptation. The UK is already nature depleted – at the bottom of the G7 in fact. And all new water supply options take water from the environment.

Reducing wastage and achieving water resilience are therefore paramount – but how?

Three main ideas were discussed at Water Matters.

1. Smart metering

Waterscan managing director Neil Pendle argued first and foremost that any calculation of water efficiency delivery should be underpinned by actual consumption data collected by meters, rather than estimates or extrapolations – for instance, from the number of leaky loos fixed or efficient shower heads given way. The targets "could lose credibility" otherwise, he warned.

The self-supply community already performs highly on meter-related metrics. Only 0.83% of the meters Waterscan manages are long unread, and its meter portfolio operates at what Pendle described as a "quite excellent" 95% performance rate. He highlighted that the community collectively saved 1bn litres of water in the financial year just passed. Pendle further shared that Waterscan is now in discussion with some of its customers about undertaking a behaviour change project in 2024, the efficacy of which would be underpinned by actual consumption data from meters.

However, the meeting heard that a roll-out of smart meters that are capable of capturing consumption data hourly or more often would be transformational for the market and its water-saving potential. Less than 10% of meters in even Waterscan's high performing portfolio are smart, and across the market the rate is around 1%.

Trisha McAuley, chair of the Strategic Panel, shared that 'water efficiency is core' is one of three overarching priority outcomes the Strategic Panel is championing, and that smart metering is recognised as one key enabler of a healthy supply demand balance. "Water efficiency can no longer be seen as an add-on," she said, adding "we really need to crack this now" ahead of AMP8. Or: "We're going to run out of water; that's not scaremongering."

Hence in April the Strategic Panel published an Interim Metering Strategy. This championed the business case for smart metering and recommended water wholesalers accelerate their plans for smart meters.

The strategy followed the publication of wholesalers' draft Water Resource Management Plans (WRMPs), which in some cases did not even mention smart meters for NHH customers and in many cases were light on enthusiasm for smart metering more generally.

McAuley has heard the feedback has been taken on board and the final WRMPs will be more ambitious. This was confirmed by Lee Dance, organisational director at Water Resources South East, who said: "Certainly when you see those revised draft plans you will see there's an awful lot more in there about NHH."

Nonetheless there remains uncertainty. This was shared at the meeting by MOSL's chief executive Sarah McMath, who highlighted the risk that even if the WRMPs become enthusiastic and PR24 business plans contain smart metering investment, this is not a guarantee of meters actually going in the ground (see p35). Ofwat would need to approve the plans at a time when there is serious political pressure to invest in wastewater infrastructure and pressure on bills. There are physical supply chain constraints too, and smaller companies in particular might struggle to engage communications platform providers who have bigger fish to fry.

McMath added that MOSL also has its eye on making granular data from smart metering available to all, so has produced a data standard for the explosion of data that could come down the line.

From the floor, there was a question about the potential for green tariffs, given the need to push demand reduction. Ofwat director Shaun Kent said the regulator could facilitate this, were companies to suggest it. McMath argued the industry needs to work together and come up with a compelling proposition; there was zero take up for such tariffs when they were trialled by Severn Trent and Thames Water, principally due to complexity.

2. Innovation

The Water Matters delegates were united in agreement that innovation very much needs to be part of the picture in driving water resilience.

Some contributors shared good practice examples:

Marc Hannis, principal for the Ofwat Innovation Fund, told the story of the regulator's £200m innovation competition, set up at PR19. So far, £105m has been allocated across 57 projects and five competitions. The fund has evolved rapidly, taking in changes in IP policy and entry requirements, including most recently to open to innovators without water company links (including the self-suppliers).

Hannis highlighted that "customers have to be the primary beneficiaries" of the awards, because they ultimately fund the competition through their bills. In AMP8, the fund will increase to £300m. He said Ofwat was open to suggestion on the design of the next phase, and invited self-suppliers to feed any ideas in. He signalled Ofwat was interested in "doing behaviour change on a big scale" as well as potentially bringing more coherence to the wider sector innovation landscape and doing more to support the adoption and upscaling of successful innovations.

Shaunna Berendsen, chief innovation officer at Anglian Water, also told the self-supply community: "We want to work with you in novel ways." Demonstrating that not all water companies fit the stereotype of conservative and risk averse, she showcased the spectrum of innovative initiatives Anglian has underway, many of which are concentrated in its Newmarket 'Shop Window' – its place-based innovation hotbed.

Among the examples Berendsen shared were: a trial to test customers' water-saving motivations (a community gift v an individual reward v a bill cut v recognition/acknowledgement); a challenge to 'fill the Newmarket clocktower with water five times' by turning the tap off when brushing teeth – tapping into a very local visualisation aid; and using waste heat from Anglian's treatment processes to support the growth of 22m tomatoes, a great example of innovative "sustainable low carbon food production".

Barry Millar, Waterscan's operations director, hand picked some exciting technologies and approaches from around the world to share with the forum. These included: Sydney Water's "fantastic and really simple" idea of linking charging to reservoir levels (charges rise if levels sink below 60%); San Fransisco's decision to make water recycling mandatory in all new developments; and gadgets like Chimera which can attribute water use to particular fixtures in a building.

Back home, Millar reflected that "it's hard to argue the direction is anything but positive" on innovation, and that rather than seeing Ofwat's innovation fund as a product of failure (because the market needs artificial stimulation), it is better to "think about it as expediting the process".

That said, there is clearly a need for more innovation, and more quickly. "Today, we're solving problems from five years ago," he reflected – a comment on the pedestrian pace of innovation. Millar also said we need more innovations to

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progress beyond the project stage, and a culture of maturity to develop.

On the prospect of a smart meter roll-out, the risk of delay or derailment poses a challenge for business users and Waterscan: do they sit tight and await wholesaler delivery, of take matters into their own hands? Engaged customers can only wait so long.

Some of the themes emerging from these presentations were picked up and discussed at more length during a panel session (see box).

3. Supportive policy and regulation

Defra's Burton argued the Government has accepted it has a role to play in spurring greater water efficiency and water resilience. Alongside its overarching Plan for Water, it has taken a suite of actions to drive this, including:

- Setting demand reduction targets under the Environment Act.
- Writing to water companies to direct them to ramp up smart metering.
- Defining a roadmap for water efficiency in new developments and retrofits.
- Preparing to introduce mandatory water labelling for appliances and minimum product standards.

Ofwat's Shaun Kent said regulation was aligned to this vision. For example, the PR24 methodology features a NHH demand Performance Commitment for the first time, an expectation of smart metering as the default, and a new £100m Water Efficiency Fund – early details of which are expected to be released this month. On top, he said MOSL had a suite of supportive activities underway, including Market Performance Framework reform and a central data cleanse.

Waterscan's Pendle shared that he did not think the 9% NHH goal is ambitious enough, remarking many self-suppliers "outperform that target already". Burton responded that Government would welcome voluntary initiatives on top, a point endorsed by Chris Hines who pointed out that in his opening story, Welsh Water and Wessex Water did not wait for regulation to pioneer UV treatment. "Some of you will be the pioneers," he told the room.

Natural England's Bardsley also endorsed the message. "Be the change you want to see," she told the self-supply community. She challenged them to consider what they can do as companies to reduce consumption, reuse water, and possibly even put some back. She championed: building water wise; buying water wise; boosting water wise behaviours including among end users; and de-risking operations using nature-based solutions such as rainwater harvesting.

Self-supplier reflections

Wrapping up with some reflections on the day's discussions, Whitbread's Ross Greenhalgh, a founding member of the Waterscan self-supply community, offered the following:

- Reliable water metering is a basic requirement – we need to "get that nailed on" and the industry has a tendency to be slow. He continued: "Smart metering is not innovation. You need that to manage things that are innovative."
- The 9% Defra target will help galvanise action. For Whitbread, investing in water efficiency is very much worth it, but beyond that, there are two areas of challenge. First, trying to drive end-user behaviour change. "As a hospitality business, it's hard to say 'you can stay with us, but don't do this and don't do that'. Greenhalgh said societal change is needed to shift attitudes comprehensively. Second, the business case for more intrusive interventions such as rainwater or grey water harvesting does not stack up. "We'd need regulations for that," he said. TWR

INNOVATION PANEL HIGHLIGHTS

Q1 Would it be beneficial to talk less about water efficiency and more about water security?

Sarah McMath and Trisha McAuley said they would support such a shift. McAuley said a similar move proved beneficial in energy market. McMath reflected that the water efficiency messages can carry connotations of blaming customers, which can be unhelpful or counter-productive; water security has a more existential undercurrent – as seen in South Africa.

Q2 With increases in water prices running below the rate of inflation, where does investment for innovation come from? Is there enough funding going in?

Shaunna Berendsen offered the reassurance that the research and development budget at Anglian Water has not been cut since her time there, and no cuts are expected. She added that innovating can involve working smarter and more collaboratively (– why are water companies running the same trials with the same technology?–) as well as investment.

Marc Hannis agreed. He said Ofwat was keen to avoid "death by a thousand trials" and that the Innovation Fund is helping to improve coordination and reduce duplication of innovation activities. He said even a small per household investment into water R&D can yield major benefits.

McMath noted a sector-wide tendency to focus on technology and advocated some focus on other kinds of innovation, like tariff innovation.

Barry Millar called for stronger water efficiency incentives for end users, something akin to the incentives for installing solar power that were made available.

McAuley argued we need to encourage the right market conditions to embed innovation, rather than relying on external funding pots/pushes, such as those from Ofwat.

Q3 Is the pace of change in the water market fast enough?

Millar said no. In his view, a key barrier to change and innovation is heavy regulation; while this is often for good reasons (such as health and safety), it does make it more difficult to roll out large scale innovation. He said we also need to get quicker at transitioning from ideation to implementation.

Hannis acknowledged that Ofwat probably should have pushed innovation harder ten to 15 years ago. Now there's an ongoing question about how much Ofwat needs to (and should) intervene to stimulate innovation. The priority must be to make innovation impactful, or it risks being a waste of time and resources.

McMath advocated greater engagement with supply chains and taking inspiration from overseas and other sectors, given water companies can be risk averse.

McAuley argued that the emphasis is consistently on household customers – there needs to be a culture shift from water companies at board level towards prioritising innovation in the NHH market.

Q4 How can opportunities for innovation be opened up and customers empowered to do more?

Millar said smart metering is absolutely crucial; "data is key - it's the lifeblood of this industry." There was general consensus that customer insights and engagement would be welcome, with opportunities for self-suppliers via both the Market Improvement Fund that MOSL oversees, and Ofwat's open access Water Discovery Challenge.

From the floor, a delegate questioned whether trust is a barrier, given the water industry's current public reputation. McMath responded that it is the biggest barrier right now. Berendson added that a paradox needs to be clarified: many customers are confused about why a water company would want them to use less water when this is their source of revenue.