

Introduction

Water is essential to people, the economy, and the planet. More than ever, people across the UK are aware of the challenges facing water quality, water resilience, and the systems which rely on effective water management. The public has high expectations, which can be met as long as we take an approach which recognises the depth and complexity of water systems.

In the long-term, a systems approach to sustainable water resource management would help provide water quality and water security. Before that can be achieved, there are many urgent challenges facing UK water, which require immediate triage to lay the foundations of a sustainable approach. Water stress, compounding challenges for freshwater quality, and water security in the wake of climate change are all immediate priorities to safeguard to health of UK water.

By the middle of the century, we can achieve a water system which is healthy, sustainable, and resilient, delivered over the coming decades by efficient, robustly-informed regulators and a water industry focused on providing the most benefits to people and the planet.

Asks for the next UK Government

1. Adopt a 'systems' approach to water, prioritising strategic network solutions and common sense reforms which transform the UK water system as a whole.

1. Deliver the commitments in [DEFRA's Integrated Water Plan](#) to review the implementation of the [WER 2017](#) and transform management of the whole water system, embedding a strategic approach to the multiple causes of poor water quality and water stress.
2. Work with the water industry to shift priorities towards water services which deliver multiple benefits for multiple stakeholders, meeting public expectations while recognising that the industry is part of a wider water system and that scrutiny and criticism cannot come at the expense of wider systemic transformation.
3. Overhaul the Environment Agency and Ofwat to make water system transformation a core principle of their long-term strategies, ensuring that both organisations have sufficient access to expertise in science and engineering, as well as the resources to take a robust approach to enforcement and regulatory oversight.

2. Take a holistic approach to tackling water quality and providing healthy rivers and bodies of water, securing multiple benefits for people, the economy, and the planet.

1. Restore the health of UK rivers, addressing highway runoff, sewage overflows, and runoff from agriculture and food production as distinct parts of a combined challenge. Avoid isolated responses that do not address the full problem, or that displace the burdens of environmental harm to other aspects of the environment which cannot support them.
2. Fully deliver existing targets and policies on freshwater conservation, ecological status, and water quality, committing to no further delays or reversals of commitments. Carry out periodic reviews of the integrated water plan, identifying opportunities to scale up ambitions for water quality wherever possible.
3. Make a long-term commitment to the sustainability of wastewater and its effects on the water environment, supporting the UK's strategic approach with a new Chief Scientist for Wastewater responsible for ensuring the delivery of the strategy across government.

3. Deliver sustainable water resource management at the catchment scale, developing necessary infrastructure with transparent and reasonable plans for implementation.

1. Work with the water industry and delivery organisations to implement sustainable water management at a catchment scale, supporting local delivery of nature based solutions,

engineering works, and pipeline solutions as appropriate for the context of the local catchment.

2. Provide sufficient resources and skills to deliver sustainable water management at the catchment scale across regions. Work with academia to support key priorities for research and innovation, such as wastewater-based epidemiology and novel contaminants of concern.
3. Increase capacity for stakeholder engagement and public awareness to facilitate local decision making about sustainable water management, developing realistic expectations for water resources and their benefits, including the social, economic, and environmental benefits of inland and coastal bathing waters.

4. Integrate the UK's approaches to water and climate change, providing water security and flood resilience, while maximising co-benefits for people, the economy, and the planet.

1. Support strategic planning for water stress and insecurity at a catchment level, identifying high risk areas and developing joint emergency response plans with delivery organisations and the water industry.
2. Implement the recommendations of [DEFRA's review](#) of the implementation of Schedule 3 to The Flood and Water Management Act 2010, rolling out Sustainable Drainage Systems (SuDS) across the UK, within and beyond the planning system, providing delivery organisations with the skills to ensure their design and maintenance to national standards.
3. Identify and adopt opportunities for co-benefits between water management and addressing climate change, such as the potential role of wastewater in enabling a transition to shared networks for heating buildings.

5. Modernise the Government's approach to evidence through purpose-built standards and indicators for water, supported by clear guidance for Ministers and delivery organisations.

1. Conduct a comprehensive review of water quality standards, indicators, and targets, ensuring they are robust, appropriate for the purposes for which they are used, and deliverable in practice. Work with the OEP and regulators to ensure a joined-up approach to the use of evidence from governance through to implementation.
2. Adopt a cross-government approach to the appropriate use of evidence in decision making, supported by guidance for Ministers and civil servants on how evidence should be used and primers on water quality data and its environmental implications for those working with water systems.
3. Support the delivery of a systems approach to water by ensuring that strategic decisions and policy reviews are informed by models of the integrated water system at a water body level aligned with the UK's implementation of the Water Framework Directive.

About the Foundation for Water Research

The Institution of Environmental Sciences (the IES) is at the forefront of uniting this interdisciplinary field around a shared goal: to work with speed, vision and expertise to solve the world's most pressing environmental challenges, together. As the global professional membership body for environmental scientists, we support a diverse network of professionals all over the world – and at every stage of their education and careers – to connect, develop, progress and inspire.

The FWR Community was launched following the IES inheriting the mission of the Foundation for Water Research (FWR) in 2022. The Community is a cohesive, innovative, and independent-thinking community of water professionals offering guidance and strategic thought leadership for the IES's water activities. The FWR Community uses an integrated, systems-thinking approach to water issues and their interactions with land and air.