

## Water Policy Briefing Paper, 16 March 2022

Institution of Environmental Sciences (IES)

*This is a briefing paper on environmental policy relating to water resources and systems. In particular, with a number of critical policy developments in environmental governance, punctuated by the Environment Act 2021, there are multiple opportunities for positive engagement.*

*The paper is intended for IES members to encourage awareness of relevant policy issues, support horizon scanning for environmental professionals, and identify opportunities to engage with decision makers and the public on emerging issues linked to water and the environmental sciences.*

### Long-term legally-binding targets

The long-term legally-binding targets framework under the [Environment Act](#) provides a key opportunity to set up the next decade of policy decisions around water and related systems. Decisions, such as what targets to set, their indicators, and how they should fit together with other targets, will be determinative in the future of these systems.

The Government's [consultation on the targets](#) proposes an approach which is broadly similar to the one set out in the Government's [policy paper in 2020](#). The most significant changes to the target framework affecting water have been driven by recent media coverage relating to wastewater and sewage water, as well as ongoing work on the long-term effects of abandoned mines by bodies including the Environment Agency and Natural Resources Wales.

While it is possible that the Government will make further amendments to the targets based on responses to the consultation, the short timeframe of the consultation suggests that changes will be minimal. The most likely scenario is that there will be three targets addressing water: one on quantity (to “*reduce the use of public water supply in England per head of population by 20% by 2037 against a 2019/20 baseline*”), and two on quality, with the first addressing nutrient pollution from both agricultural run-off and wastewater (to “*reduce nitrogen, phosphorus and sediment pollution from agriculture to the water environment by at least 40% by 2037 against a 2018 baseline [and] reduce phosphorus loadings from treated wastewater by 80% by 2037 against a 2020 baseline*”) and the second addressing the specific issue of pollution from abandoned metal mines (to “*reduce the length of rivers and estuaries polluted by target substances from abandoned mines by 50% by 2037 against a baseline of around 1,500km*”).

These targets would present both opportunities and challenges. One of the most significant opportunities for environmental science will be translating technical ideas around water efficiency and nutrient pollution into the meaningful consequences they could have for environmental, social, and economic systems to support environmental improvement through the targets framework. Similarly, robust water science will be crucial during the consultation period, particularly in terms of scrutinising the selected indicators and ensuring the delivery of the targets.

Based on the consultation, there are also likely to be other long-term targets which are relevant to water systems. Targets seeking to control waste have the potential to directly and indirectly affect the quality of watercourses. The proposed biodiversity targets include one which covers marine habitats, while indicators for the targets addressing biodiversity on land are strongly-implied to include freshwater habitats, potentially with significant consequences for the future of both marine and freshwater ecosystems. It will be critical during the upcoming consultation that those targets are designed to work cooperatively, with an embedded understanding of the complex interactions between the relevant systems.

### Governance, regulation, and the Environment Act

As part of the shift from governance arrangements under EU directives to a UK-driven framework of environmental regulation, the Environment Act has made significant changes to the regulation and enforcement of water-related issues. Between [licensing reviews](#) and [drainage and sewerage management plans](#) for the water sector, there is the potential to better protect against risk and manage capacity issues, but this will rely on careful scrutiny and whether or not arms-length bodies such as the OEP are properly able to challenge failures.

Whilst some regulation around water resources in the UK is still governed by historic regulation, such as the UK's implementation of EU Directives, there is a possibility of the governance framework changing further. In the context of the Government's proposed '[Brexit Freedoms Bill](#)', several areas of environmental regulation are likely to be revisited to further promote the concept of a UK-led approach to environmental regulations. Although significant changes to water regulation are unlikely given the changes which have already been made through the Environment Act, there is an ongoing need for engagement and awareness of potential ramification for regulation of water resources.

The success of regulatory changes which affect water will be highly reliant on the quality of their implementation. For example, the new [water resources charge proposals](#) which are due to take effect next month have the potential to be a satisfactory improvement on past charges, though whether or not they will drive positive improvement still depends on effective enforcement and application in practice.

Scrutiny of the implementation of these measures will be especially important in the context of a relaxed target framework for water, with proposed long-term targets setting a lower standard than those which existed under the [Water Framework Directive](#), particularly in terms of large-scale strategic factors such as the overall health of rivers.

Ongoing engagement with DEFRA and relevant regulatory bodies will therefore be increasingly important as the Government works to implement and action key areas of the [25 Year Environment Plan](#). In the process of moving towards a second Environmental Improvement Plan, engagement with Ofwat, the Environment Agency, and the OEP will be crucial to ensuring that challenges linked to regulation, implementation, and enforcement are properly addressed in Government policy.

There is a strong opportunity for water science to support work that aligns governance, regulation, and policy to drive environmental improvement throughout water resources and other natural systems. Awareness of regulatory changes linked to these bodies will also be important to maintaining effective horizon scanning so that environmental professionals working or specialising in water are appropriately equipped to take a long-term perspective to environmental monitoring and improvement.

### Water quality

The publication of the Environmental Audit Committee's [report on water quality in rivers](#) has highlighted the challenges facing the quality of watercourses and rivers, evidencing the need for effective policy solutions. While this was expected to shape the water targets set under the Environment Act's long-term legally-binding target framework, current proposals do not include a systems-level target for rivers or the overall state of specific pollutants, instead tackling individual sources on an atomistic level.

Despite these barriers to progress, the Environmental Audit Committee report also presents an opportunity for more proactive engagement in new approaches to monitoring. In the context of increasing awareness of water quality issues, driven by media coverage of compliance cases and enforcement by arms-length bodies, there is a rare public consciousness of the need for improved water quality and a re-imagining of sewerage and agricultural water systems. Flashpoint events such as the pollution of the River Wye and recent sewage water failures have played a critical role in reviving public interest in water quality.

Changes to [pollution rules under the Environment Act](#) are likely to see a loosening of standards compared to the regime under the [Urban Waste Water Directive](#), so it will be especially important to make use of opportunities to engage with the water quality agenda as these issues develop. These new governance arrangements do provide the possibility for environmental improvement, as well as a more effective approach to monitoring, but this depends on whether or not water quality remains a key issue for environmental policy makers in the next Environmental Improvement Plan.

To that end, appropriate presentation of water science will be critical to ensuring governance changes create positive change, rather than increasing the likelihood of degraded watercourses.

### Water security and risk

The recent [IPCC Working Group 2 report](#) demonstrates the significance of long-term planning to address water security and to embed resilience into design-making. In the context of increased appreciation of issues related to energy security, there is a substantial opportunity to increase public literacy in water scarcity and security.

As climate adaptation efforts become increasingly mainstreamed in planning and policy systems, a significant co-benefit could be better water security and catchment-level plans to address risks associated with scarcity and poor water quality. Though not currently reflected

by the proposed water demand target, a systems approach will be crucial to demonstrating the multiple benefits which can be achieved by taking a proactive approach to risk at the design stage, addressing water security alongside forms of risk which are already well-known.

### Net Zero Strategy

The Government's [Net Zero Strategy](#) has a number of potential ramifications for water policy. The most immediate is the potential to secure co-benefits for water and other natural systems in the expected climate transition. The Strategy identifies wastewater and the impacts of waste and resources on water systems as a potential co-benefit of addressing waste management emissions. In particular, it is expected that there will be improvements in both treatment processes and data collection, which may facilitate significant benefits for water quality in the future.

However, there has not been a strong enough commitment in the Net Zero Strategy, or in global commitments at COP26, to address the role of water systems in the climate crisis, either as a solution or for their potential to increase climate risks if unaddressed. For example, the role of marine ecosystems in carbon sequestration has not yet been fully realised in UK or global policy and will be a key area for engagement as the Government's approach develops.

Another potential area for co-benefits with the Net Zero agenda exists at the intersection of consumer behaviours and utility providers. The potential to re-examine relationships with water providers may help to address household water efficiency and the potential for benefits to water security.

There are also a number of specific issues linked to the energy transition. Plans to expand hydrogen energy production are likely to affect the Government's approach to wastewater treatment, with the Net Zero Strategy explicitly referencing trials of electrolyzers in Northern Ireland. Ongoing engagement and monitoring will be important to ensuring no environmental harm comes from innovative approaches to energy, while also maximising the potential for co-benefits to water resources.

### Flooding and Coastal Erosion Risk Management

Now that the Government has confirmed that it is not likely to pursue the Planning Bill that was originally announced, issues around the long-term future of planning systems and the built environment are uncertain. In that context, [Flood and Coastal Erosion Risk Management](#) (FCERM) remains a key avenue of engagement on the risks associated with the interactions between water and infrastructure.

Following the EFRA Committee [Inquiry into Flooding](#) in 2020 and the publication of the [National FCERM Strategy for England](#), there has been an increase in community engagement with planning to address risk in these areas. Following the publication of the [IPCC Working Group 2 report](#) on adaptation, these efforts are likely to increase, and there is a strong opportunity for water science to engage locally in efforts to improve resilience against flood and coastal erosion risk at the catchment scale.