



A FRESH WATER FUTURE

**AN INDEPENDENT REVIEW OF
WATER SECTOR PERFORMANCE AND
GOVERNANCE AND A CO-CREATED
EXPERT, STAKEHOLDER AND
PUBLIC VISION FOR FUTURE WATER
MANAGEMENT IN THE UK**

EXECUTIVE SUMMARY

OVERVIEW

OUR FRESHWATER SYSTEMS ARE UNDER GRAVE PRESSURE. THEY NEED AN URGENT, REFRESHED APPROACH TO THEIR MANAGEMENT

The United Kingdom faces wide-ranging water challenges, impacting our ability to be resilient to climate change in the context of drought, flood, as well as heat. Various pollutants and practices are degrading all forms of water body, from the headwaters of our river systems to the sea, leading to extensive poor ecological condition.

Policy and regulation has failed to keep on top of a wide range of activities and their impacts. Water company performance is of great concern to both the public and professionals, and governments have failed to ensure enough investment in maintaining and upgrading infrastructure. Sewage discharges cause bacteriological, nutrient, fungal, litter and chemical pollution beyond levels of public acceptability. Water supply leakage rates are at a level that makes it difficult to ask people to use water more efficiently in their homes. Abstraction of water from the environment is above sustainable levels, demand is increasing and droughts becoming more severe. We face the very real prospect of water supply interruptions in the near future.

Likewise water management in the urban setting is fragmented, poorly-resourced and failing to prevent water pollution from traffic as well as chemicals we use in our homes. In the rural setting intensive, high-input farming has resulted in nutrient overload of soils and waterbodies, soil degradation and erosion and the devastating decline of rivers like the Wye and lakes like Lough Neagh. Risks from pesticide and antibiotic use continue to grow.

Throughout the water system flooding and drought are addressed in isolation, neither silo integrating with quality or wider environmental impacts effectively. This is inefficient with too many expensive, single-outcome solutions.

Combined, these pressures place a grave load on the health of our freshwater systems and there is widespread and growing public as well as expert anger that they have not been managed adequately in the past. There is growing concern over public health risks associated with pollution.

This has to change. Polling for A Fresh Water Future shows 81 per cent of people are concerned about the health of the environment. The majority believe it is getting worse and that water is central to this. Three quarters of the public consider government must bear responsibility for action. Three quarters of water experts consider stronger policy and regulation is critical to solving water challenges. Over three quarters of people told us water reform should be a, or the priority for the next government.

We need a fresh water future.

“Over three quarters of the public polled believed water reform should be a priority, or the main priority for the next government.”



A FRESH WATER FUTURE IS POSSIBLE

Received wisdoms pit good water management against affordable development, food production and public freedom of choice. But experience of both time and practice elsewhere in the world show this is wrong.

Water gets everywhere. It is essential to most things in life and is interconnected so an action somewhere usually impacts somewhere – and someone – else. This is why there is growing emphasis on managing water as a system.

Water companies in England and Wales have proposed almost £100 billion to be spent in their next investment plans. When spending such large amounts of money, the interests of the public and the environment should be paramount. Above all this means investing money well so it unlocks the most value to society. It means being transparent about how and why it is being spent and being democratic in understanding local context, pressures and priorities.

This needs good monitoring and understanding of the systems involved. Good governance so investment is well-targeted and not wasted. Good policy which is mutually reinforcing not conflicting. Robust regulation and enforcement so those who over-exploit or pollute water know there is genuine consequence to doing so. And, strong leadership because water management needs a long-term approach against which water companies and others can plan and invest with confidence.

The way water management is currently delivered is inefficient. It is centralised yet siloed within segregated responsibilities and funding streams that lead to often expensive, single-outcome solutions. Instead, a more adaptable, distributed approach to governance and interventions is needed, which harnesses nature where possible and works with water not against it.

This new approach must be founded on sufficient evidence and understanding of environmental as well as infrastructure condition and pressures, to identify the best set of interventions for any given challenge and context. This needs better use of existing data, as well as additional monitoring.

There is extensive knowledge and evidence of how to manage water well. Good practice exists both within these shores and overseas. It shows good water management needs care, leadership and ambition. But with the right social safeguards in place, it can be affordable and unlock considerably wider value to society than we do now.

This work and its recommendations have been co-created by engaging the public through focus groups, immersive and deliberative research and a major, nationally-representative poll of over 4000 people to understand their concerns and preferences. Hundreds of expert practitioners and stakeholders have been engaged through interviews, a detailed survey and several workshops to refine positions on how to drive ambitious and lasting improvement in water health and resilience.

Combined, they call for a wide range of individually deliverable changes across the water cycle. Some build on an emerging direction of travel which needs an injection of pace. Others will need detailed consideration and/or primary legislation.

Together these can enable sustainable growth, prosperity and wellbeing both for current and future generations: The fresh water future the public now wants to see.

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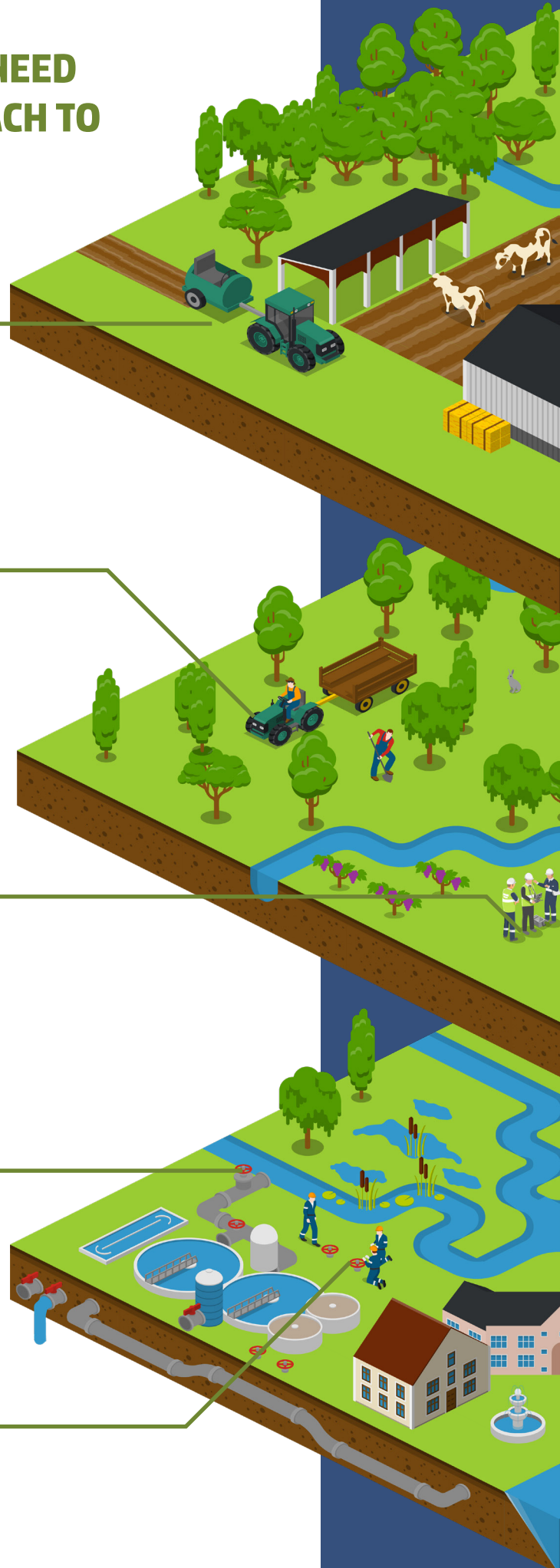
Deliver a statutory nutrient management programme **7**


Improve advice and support for nature- and water-friendly farming, mirrored by increased enforcement against poor practice, unlocking a fair balance between enforcement and support **6**

Increase the level of monitoring through a National Environmental Monitoring Strategy and Programme **4**

Governance and regulation of water companies: Purpose-led organisations compliant with the law **3**

Invest in maintaining water systems so infrastructure upgrades endure **8**





2 Review, and if necessary reform, regulators so that they can discharge their responsibilities effectively

9 Adopt a 'sponge cities' approach to our villages, towns and cities to unlock regeneration, resilience, prosperity and a fresh water future

5 Introduce ambitious Catchment System Management

1 The next government should commission a comprehensive, independent review of water management, to report within its first twelve months

10 Nurture society's value of water through greater awareness of usage

RECOMMENDATIONS

WE CALL ON THE NEXT GOVERNMENT TO:

1 COMMISSION A COMPREHENSIVE, INDEPENDENT REVIEW OF WATER MANAGEMENT, TO REPORT WITHIN ITS FIRST TWELVE MONTHS

There are widespread system and governance issues at the root of the current water pollution and resilience challenge that need detailed review beyond the capacity of this project. Water's regulatory framework is based around decades-old pressures and drivers. It has evolved over time into a complex and at times conflicting set of drivers, checks and balances.

Pressures on the water environment have changed and grown over this time and their management needs extend across government. The configuration and prioritisation of this framework, the organisations who deliver against it and their capacity to do so needs thorough review to ensure it is fit for purpose.

The Cabinet Office should commission an independently-chaired review to report inside the first 12 months of the next government's term. This will enable recommendations to be implemented across the remainder of the term.

We recognise an independent review of water will come to its own findings and recommendations. However, this work has identified the following as priorities for improved water management. We urge the next government to make these changes swiftly, bringing about a confident transition to a bolder approach to water management against which investment and finance can be mobilised.

2 REVIEW, AND IF NECESSARY REFORM, REGULATORS SO THAT THEY CAN DISCHARGE THEIR RESPONSIBILITIES EFFECTIVELY

Robust regulation is essential to protecting the environment. This involves properly monitoring performance and enforcing legislation and regulation. Environmental and economic regulators of water activities have struggled to keep on top of the performance of the industries they regulate. More sectors need to be brought into the permitting regime (e.g. dairy) and regulators need more powers and resources to take action on sectors which are not regulated by permits.

Regulators should be independently reviewed through the overarching review of water management to ensure that their scope, resource and capacity is appropriate to the range of activities they are required to regulate.

Practitioners are clear there must be a clear increase in regulatory capacity to drive an expectation amongst all regulated activities that environmental performance will be monitored through a robust process and infringements enforced. Operator self-monitoring of wastewater performance should be paired with robust inspections at least as frequent as before self-monitoring was introduced.



3 REFORM GOVERNANCE AND REGULATION OF WATER COMPANIES TO CREATE PURPOSE-LED ORGANISATIONS, TRANSPARENT AND COMPLIANT WITH THE LAW

A Defra-led water assurance taskforce should be established to fully review and drive forward reform of water company performance and transparency as a means to restore public confidence and the industry's social licence to operate.

This should have the remit to establish baseline corporate governance standards which reposition water companies as purpose-driven organisations, focused on public purpose, as a condition of their license. This should be built around priorities of a fair price for water, resilience, service reliability, customer and employee engagement and involvement, sustainability and environmental performance, corporate structure and 'open book' transparency. Action is required to ensure that investors take a long term view, rather than milking companies for short term dividends, or stripping their assets. Once achieved, this should enable a move towards a more outcomes-based approach to regulation and companies to be able to position themselves as an attractive, long-term green investment.. The regulator Ofwat should also be given duties reflecting this range of purpose.

If the cost to water companies of performance improvement and compliance results in their failure, then the findings of the independent review should inform how they might be constituted (in terms of structure and financing) in future. Consistent and comprehensive support for people struggling to afford their bills is sorely needed to help the affordability of investment as the water infrastructure challenge grows.

4 INCREASE THE LEVEL OF MONITORING THROUGH A NATIONAL ENVIRONMENTAL MONITORING STRATEGY AND PROGRAMME

We do not have a clear picture of pressures on the environment that can enable properly targeted, prioritised and efficient solutions across catchments. A lack of clarity fuels a lack of accountability for action. So, the next government should develop and implement a national environmental monitoring strategy to create this picture.

Catchment monitoring – overseen by environmental regulators – should unlock the potential of trained citizen science, and set out a framework for open data transparency on all appropriate aspects of water company, local government and wider operations.

It should deploy a range of monitoring approaches alongside making better use of existing data to understand the overall health of water bodies. It should also help to track and improve understanding of contaminants such as microplastics and 'forever chemicals'.

The UK should aim to become a centre of excellence in monitoring and modelling technologies, developing the use of AI, machine learning, data interrogation and digital twin technology to better-understand infrastructure asset health and performance, as well as river systems. This expertise and innovative products could then be exported internationally.

5 **INTRODUCE AMBITIOUS CATCHMENT SYSTEM MANAGEMENT**

The next government should implement a catchment system management approach which recognises that challenges and needs vary with local and regional economic, landscape and climate context. This should bring together the most appropriate authorities and regulators, businesses, landowners and other stakeholders across food, farming, energy, nature, health, infrastructure, finance, local and national government and more.

Overseen by multi-stakeholder management boards and independently chaired, these groups should develop overarching plans for local and regional water management priorities, drawing from existing plans and frameworks. They should use enhanced catchment system data and models to identify efficient, targeted water investment priorities that achieve value for money and multiple benefits for local and regional communities.

From the outset the approach should blend funding for natural flood management, catchment partnerships, and water industry national environment programme activities, to targeted, multi-beneficial interventions. This should then be expanded to wider funding and finance including flood risk management and environmental land management. Catchment partnerships should be closely involved on planning, engagement and delivery.

6 **IMPROVE ADVICE AND SUPPORT FOR NATURE- AND WATER-FRIENDLY FARMING, MIRRORED BY INCREASED ENFORCEMENT AGAINST POOR PRACTICE TO UNLOCK A FAIR BALANCE BETWEEN ENFORCEMENT AND SUPPORT**

Water is at the heart of many serious challenges for farmers, including soil erosion and crop damage through flood or through drought. Equally farming has considerable impact on the health of the water environment through irrigation and the impact of rain washing slurries, manures, sediment and crop protection products into watercourses.

The Environmental Land Management Schemes (ELMS) must drive forward nature-friendly farming approaches which deliver beneficial outcomes for water alongside food production. Farm payments must therefore be linked to good water management, with water quality and resilience a major focus for farm advice. There must be a strong focus on water within standards set out under ELMS to enable farming to move to a model of efficient input, sustainable productivity, greater climate resilience and low environmental impact. This should be supported by a more strategic approach to planning agricultural water resources.

Advice should engage farmers on the local issues impacting catchments, how they can be tackled and how support can be obtained to implement solutions. This service should be set alongside a 2-year ratcheting-up of sanctions and enforcement against farmers who have been identified and engaged with previously on areas of performance improvement need. Regulators must have sufficient resources to conduct a targeted and risk-based – but sufficiently frequent to be effective – programme of inspections.



7 DELIVER A STATUTORY NUTRIENT MANAGEMENT PROGRAMME

Nutrient enrichment represents a major threat to freshwaters whilst appropriate use of nutrients by food producers remains an important component of maintaining production levels. A statutory nutrient management programme should embed soil testing, good practice through nutrient management plans and drive the use of more resource-efficient, low-input approaches to farming, within a wider framework delivered through changes to planning policy, permitting and wider regulation.

Intensive livestock farming is having a particularly severe impact on some catchments. A nutrient management programme should reform planning policy to prevent new intensive livestock units where the catchment is already overloaded with nutrients. They should be incentivised to locate premises in downstream areas rather than headwaters and to areas which are currently applying inorganic fertilisers. Councils must properly scrutinise applications, using open access real-time catchment environmental data sources for new intensive units in already polluted areas and the environmental permitting approach for livestock units must properly assess the waste that is sent offsite. The programme should also embed circular economy approaches to build a renewable phosphorus fertiliser market in the UK.

8 INVEST IN MAINTAINING WATER SYSTEMS SO INFRASTRUCTURE UPGRADES ENDURE

Many current water challenges are exacerbated by chronic under-investment in infrastructure maintenance. The next government must regulate for considerably more investment in ongoing maintenance to ensure adequate upgrade and replacement of sewers, water mains and other existing water assets.

Telemetry, data organisation, cleansing and interrogation to monitor and understand asset condition and target maintenance, can potentially unlock significant improvements in water network condition and asset efficiency. This will be necessary to improve the current poor overall picture of asset condition and maintenance need.

Water running off urban hard surfaces particularly roads, car parks and industrial estates can be highly toxic to the rivers, streams and lakes it drains into, often with minimal or no treatment. Highways authorities should be required to survey their drainage networks for their condition and maintenance need. They should be resourced to deliver a minimum maintenance schedule.

9

ADOPT A 'SPONGE CITIES' APPROACH TO OUR VILLAGES, TOWNS AND CITIES TO UNLOCK REGENERATION, RESILIENCE, PROSPERITY AND A FRESH WATER FUTURE

The next government must embed a 'sponge cities' approach to new development and urban retrofit and regeneration through the planning system, applying existing regulation, changing emphasis in water company investment guidance and building capacity between local authorities and other water management bodies.

Sponge cities are not a new concept and are being delivered across the world as a means to manage demands for growth amidst water – typically flood and drought – crises. In the UK we experience similar challenges alongside declining nature and extreme weather including heatwaves, not to mention the particular pressures of surface water flooding and sewage pollution from storm overflows. We have a housing shortage, health and wellbeing challenges and a need for levelling up and urban renewal.

Greening urban spaces using sustainable drainage and rainwater harvesting is a win-win approach on all these fronts. We must flip the mindset that treats rainwater as a waste product to be got rid of in the urban environment, into one where it is a treasured resource managed via individually small, distributed changes which aggregate into an urban transformation.

10

NURTURE SOCIETY'S VALUE OF WATER THROUGH GREATER AWARENESS OF USAGE

Whilst water companies must improve their performance, the UK's water consumption is high and water efficiency represents a major opportunity to build drought resilience and leave more water in the environment.

The next government should implement a national-level and coordinated near-universal smart water metering programme alongside water efficiency labelling, minimum water-using product standards and variable tariffs that include a highly affordable essential use component. Fears that vulnerable users might be hit by significant bill increases because of metering can be allayed through social tariffs. Strong commitment on water efficiency labelling and product standards for water-using products, together with smart metering could reduce average personal consumption to 82 litres per day by 2065, from 146 litres in 2022 saving almost 2.4 billion litres a day.

Our research has shown that people want to find out more about how they use water, where it comes from and how water services impact the environment. Through a 'water values' fund, water efficiency organisations should be supported to develop creative and highly visible campaigns to build awareness extensively within schools and communities on how to use water wisely. These campaigns should target not only water efficiency, but also how to prevent sewer blockages through disposing only the right things to the sewer. Bans on unflushable wet wipes and other sanitary products which exacerbate sewer blockages should be implemented without delay.



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