

Blueprint for Water

WATER PEOPLE NATURE

CHANGING COURSE

A resilient future for water through the 25 Year Environment Plan



Wildlife and
Countryside



www.blueprintforwater.org.uk

Image Credit: ZSL

Summary

- All life depends entirely on water. Yet, reflecting broader climate and ecological crises, the current state of England's water environment is poor and declining. We go from floods to drought without a long-term strategic plan to adapt to and manage new climatic extremes – urgent action is needed.
 - The 25 Year Environment Plan (YEP) states that clean and plentiful water will be achieved, improving at least three quarters of our waters to their natural state 'as soon as is practicable' by; reducing abstraction, minimising pollution and leakage and maximising water efficiency. The plan sets out good direction for the future but the targets are not ambitious enough considering the challenges ahead and strategic actions need to be identified and delivered to achieve the plan's ambitions.
 - The introduction of the Environment and Agriculture Bills provides a once-in-a-lifetime opportunity to set the foundations for delivery of the 25 YEP and ensure positive on-the-ground environmental outcomes for current and future generations.
 - There is a risk that we fall short of achieving the desired outcomes without a clear and accountable roadmap for strategic delivery by Government and partners. This paper sets out some overarching strategic principles which we recommend the government adopts to underpin such a framework, including: catchment governance; a focus on nature-based solutions; intelligent financing and resources; regulation, enforcement and advice; robust monitoring; and behavioural change. We recognise this is just a starting point and there will need to be holistic long-term actions set in place for delivery beyond the 25 YEP to secure the future of sustainable management of our water environment and freshwater biodiversity - protecting our local rivers, streams, lakes, ponds, and all other waterbodies.
 - The paper describes eight key strategic actions for government, which have been identified to deliver this framework and enable the required transformation:
1. Ensure that Local Nature Recovery Strategies integrate water priorities, opportunities and data into their development and delivery, with the integral support of Catchment Partnerships.
 2. Treble the funding for the Catchment Based Approach (CaBA), including for local Catchment Partnerships, providing funds on a multi-year basis.
 3. Ensure the forthcoming Environmental Land Management (ELM) Scheme is effective for the water environment, providing incentives for farmers and land managers to deliver multiple public goods relating to water, using a strategic policy and regulatory framework.
 4. Require water companies to spend much of their £1bn annual National Environment Programme on nature-based solutions for people and nature.
 5. Commit sufficient funding for the enforcement of regulatory standards and implementation of the polluter pays principle in order to ensure that environmental regulations applying to agriculture can be effectively and consistently enforced.
 6. Improve water security through delivery of abstraction reform by 2021, introduction of water efficiency targets in the Environment Bill and requirements for water efficient development in the Future Homes Standard & National Planning Policy Framework.
 7. Ensure greater coherence and integration of monitoring and evidence across climate, air, soils, water, biodiversity, and other functions in Defra and throughout government to deliver the 25 YEP. To support this, Government should Commit £1-2 million annually to establish and maintain a national monitoring co-operative, making data available to all practitioners.
 8. Fund a national campaign delivered by NGOs locally to change consumer behaviour with regard to water use and the way people dispose of items and chemicals down drains and toilets

Background

All life is dependent on water. Every day we each drink, flush, wash, cook, spray, and hose 141 litres¹ of water in the UK. The economy depends on plentiful supplies of clean water being readily available for countless agricultural, food processing, health care and manufacturing purposes. Water is vital for wildlife and the foundation of healthy ecosystems.

And yet, collectively, we treat this vital resource with disregard. We pollute it with untreated human and animal waste, mountains of plastic, a cocktail of chemicals and millions of tonnes of soil containing nitrogen and phosphorus². Issues around water quality are also being compounded by a challenge for water quantity and supply. Despite England having less rainfall per head of population than almost any other European country, we continue to waste billions of litres of water every day.

Our careless treatment of water, combined with increasingly extreme weather patterns makes it apparent that the current climate and nature crises are closely tied to the water crisis where, *'we risk a future without enough water for people, business, farmers, wildlife and the environment'*³.

This winter, the sheer scale of flooding across the UK has put thousands of homes and people at risk and will cost hundreds of millions of pounds in emergency response, clean up, and recovery. These costs will only continue to rise.

Poor management of water and land is costing our nation tens of billions of pounds every year in flood damage, poor crop yields, water treatment costs, ill-health, lost opportunities and countless other areas. In 2016, several of our globally-rare chalk streams ran dry, and unsustainable abstraction prevented at least 6% and possibly up to 15% of river water bodies from meeting good ecological status or potential⁴. Restoring even the proposed three-quarters of rivers, lakes and wetlands in England to good ecological status by 2027 would boost the economy by a total of £8.4 billion through increased tourism, recreation, improved



flood resilience and enhanced quality of life⁵. Whilst we support prioritising the proposed 75% of waters identified as 'easier wins' first, 100% of waters must be restored to good ecological status by 2027, in line with Water Framework Directive targets, now transposed into UK law.

Poor management in the context of escalating threats is also contributing to the alarming decline in aquatic wildlife, with many species now threatened with extinction. IPBES reported that the increasing intensity of agriculture and forestry were the main causes of biodiversity decline across Europe. Amphibians are particularly threatened, with 40% at risk of global extinction⁶. In the UK, salmon, one of our most iconic aquatic species, had the lowest reported rod catches on record in 2018 due to a lack of a healthy freshwater and marine environment. Climate change threatens to deepen this unfolding environmental crisis and, moreover, our plans to build a million new homes with associated infrastructure will add substantial pressures on an already threatened system.

¹ [Waterwise \(2017\) Water Efficiency Strategy for the UK](#)

² Soil nutrient balances published by Defra show that 44% of nitrogen and 20% of phosphorus added to England's farmland is lost to the natural environment. Source: [Defra \(2019\) Soil nutrient balances, 2018, England](#)

³ [Environment Agency \(2018\) The state of the environment: water resources](#)

⁵ WWF, The Rivers Trust and Angling Trust (2018) Saving the Earth: A sustainable future for soils and water.

⁶ [IPBES \(2019\) Global Assessment Report on Biodiversity and Ecosystem Services](#)



Strategic principles to achieve the 25 Year Plan

In 2006, the Blueprint for Water coalition (within the wider Wildlife & Countryside Link coalition of 58 non-government organisations) set out 10 headlines for a sustainable water environment⁷, each with a suite of specific, time-limited actions for the government.

More than a decade later, successive governments have failed to implement nearly all these actions and, furthermore, have continuously reduced funding across their environmental portfolios, including to the Department for Environment, Food and Rural Affairs (Defra), the Environment Agency and Natural England, reducing their effectiveness significantly⁸. This has reduced the agencies' capacity for monitoring, enforcement and on-the-ground delivery to critical levels. As a result, the overall health of our water environment and freshwater biodiversity has declined significantly, despite some notable local success stories.

We are pleased to see that the 2020/21 Budget announcement has provided new funding for nature through the new Nature for Climate Fund and are keen to see much of this used for delivery of the 25 YEP and restoring the water environment.

We have set out a series of overarching strategic principles which we recommend the government adopts in order to underpin a new and improved approach to management of the water environment, as well as eight specific strategic actions which would enable this transformation.



An improved approach to Catchment Governance

Rivers reflect the land through which they flow and river catchments are natural ecological units. Responsibility for water is currently split between many organisations with different geographical remits and scales. There has been a plethora of multiple overlapping plans produced over the past few decades, yet the actions have rarely been implemented due to lack of investment and/or drivers. The Sustainable Development Goal 6.5 states that signatories should "implement integrated water resources management at all levels, including through transboundary cooperation as appropriate" by 2030.

Members of Blueprint for Water are advocating for a National Nature Recovery Network, putting nature at the heart of planning and farming systems and creating a joined-up UK-wide habitat for wildlife. Nature Recovery Maps should be produced to achieve key Government targets for increasing the extent and quality of natural habitats¹⁰.

The new Local Nature Recovery Strategies should be designed with an ecosystem approach and therefore incorporate the evidence and strategic plans produced through the catchment management planning approach, so that water management is seamlessly integrated. The involvement of CaBA partnerships will be integral to Local Nature Recovery Strategies. This will ensure that planning and spending decisions are integrated well at the catchment level.

In the context of such threats, the government has made a commitment to leave our environment in a better state for the next generation. The introduction of the Government's, 'A Green Future: Our 25 Year Plan to Improve the Environment' (25 YEP) is a step in the right direction. It states that "clean and plentiful water" will be achieved by improving at least three quarters of our waters - by reducing damaging abstraction of water from rivers and groundwater, reaching or exceeding objectives for specially-protected waters, supporting Ofwat's ambitions on leakage, incentivising water efficiency and improving the cleanliness of bathing waters. The introduction of new domestic legislation through the Environment and Agriculture Bills provides a once-in-a-lifetime opportunity to set the foundations for delivery of positive environmental outcomes into the future. However, this can only be achieved if we transform the way that we manage water and the land through which it flows.

- Clean air
- Clean and plentiful water
- Thriving plants and wildlife
- Reduced risk of harm from environmental hazards such as flooding and droughts
- Using resources from nature more sustainably
- Enhanced beauty, heritage and engagement with the natural environment
- Mitigating and adapting to climate change.

However, there is a risk that we will fall short of achieving the desired outcomes without a clear roadmap for strategic delivery by Government and partners. This paper sets out what specific strategic actions the Government should take in the short term in order to restore, increase the resilience of, and provide more and better ecosystem services across the water environment. We recognise this is a starting point and there will need to be holistic long-term actions set in place to deliver the 25 YEP. Implementing the strategic principles listed would help to secure the longer term sustainable management of our water environment and freshwater biodiversity; protecting our local rivers, streams, lakes, ponds, and other waterbodies for future generations to come.

The Environment Bill provides a mechanism for the 25 YEP to become a statutory document. This has significant positive implications for the water environment and freshwater biodiversity through delivery against the goals and targets set out in the 25 YEP, with linkages cutting across many of the Plan's themes:

⁷ The water environment includes coastal zones, estuaries, rivers, streams, lakes, ponds, ditches, groundwater, and the surrounding habitat where we can find many of our protected and vulnerable species.
⁸ Key environmental agencies have experienced huge cuts to their funding over the last ten years – with Natural England and the Environment Agency both seeing real-terms reductions of over 60%.
⁹ www.gov.uk/government/news/letter-to-the-times-from-emma-howard-boyd-chair-of-environment-agency
¹⁰ The Wildlife Trusts (2018) Towards a Wilder Britain – Creating a Nature Recovery Network

Strategic Action:

Ensure that **Local Nature Recovery Strategies integrate water priorities, opportunities and data** into their development and delivery.

Guidance issued by the Secretary of State should confirm that the development of LNRS should incorporate the evidence and strategic plans produced through the catchment management planning approach, so that water management is seamlessly integrated with delivery of improvements across the whole natural environment, and planning and spending decisions are integrated well at the catchment level.

The Catchment Based Approach (CaBA) initiative¹¹, set up in 2011, provides the foundations for a consistent framework for on-the-ground delivery across the 105 river catchments in England. To strengthen the partnership with the Environment Agency, Natural England and the private sector for on-the-ground outcomes to successfully address the climate and nature crises, CaBA needs a substantial uplift in the current level of funding and official recognition by government as the mechanism of choice for delivery of improvements in the water environment locally, with national coordination.

The use of CaBA as a formal delivery vehicle would require robust governance reinforced through the

Environment Bill and strong investment to improve the standard of implementation and to drive action across the country. CaBA should be a central part of an integrated catchment system approach, incorporating all levels of government, regulators, water companies and the private sector, and should be closely involved in the development and integration of strategies for flood risk, water resources, and land management. This partnership working approach will help to reduce pressure on public funding and provide direction for delivery against targets and outcomes in the 25 YEP. Strengthening investment in CaBA will enable engagement across all scales of governance, culminating in local, grassroots delivery. Trading of nutrient emissions and water resources between different sectors must be coordinated at a catchment scale if we are to develop markets to drive more efficient resource use and innovation.

Strategic Action:

Treble the funding for the Catchment Based Approach (CaBA), including for local Catchment Partnerships and secure funds on a multi-year footing to allow for longer term planning and greater leveraging of matched funding.

This investment needs to include support for the coordination of volunteers from all interests and backgrounds who have a shared passion for ensuring our river systems become healthier.

Nature-Based Solutions

Healthy water requires a new approach to managing land in urban and rural areas alike to slow the flow, increase aquifer recharge and dramatically reduce erosion and pollution. The water environment provides the ideal landscape and opportunity for delivery of nature-based solutions for climate change. Nature-based solutions such as natural flood management, creating and restoring wetlands, ponds and healthy soils, planting trees and hedgerows, removing man-made barriers and re-connecting rivers with their floodplains can all significantly contribute to reducing flood risk and pollution while also safeguarding water supplies from drought and prioritising high-value habitats.

Floodplains, ponds, wetlands and aquifers are an integral part of a resilient river which can moderate flows, absorb excess nutrients, enhance biodiversity, and sequester carbon emissions. Government should require the use of nature-based solutions to complement and replace engineering solutions where practical and to make provision for space for water in the landscape. We would like to see natural flood management as a mandatory component for accessing the new £5.2bn announced as part of the 2020/21 Budget for flood defence.

The use of nature-based solutions, such as natural flood management, also provides multiple opportunities for providing community health and wellbeing outcomes, through increased engagement with nature, thereby delivering targets and action under the 'enhanced beauty, heritage and engagement with the natural environment' theme of the 25 YEP through provision of more sustainable public access to ensure recreational and social connectivity.

The introduction of the Environment and Agriculture Bills, provides an opportunity for Defra to integrate different policy areas better to deliver nature-based solutions, especially through implementation of the Environmental Land Management (ELM) Scheme¹². ELM has the potential to ensure multiple benefits for biodiversity, air, soils, water, and future farming, whilst ensuring the development of the synergies and cost efficiencies needed for the activities and interventions of the department and its agencies. As an example, ELM could support the establishment of 25 metre riparian corridors, including grasses, scrub and trees either side of rivers wherever feasible as part of the Nature Recovery Network, restoring natural riparian processes to moderate floods and drought and reduce pollution.

There is a strong business case for ELM to help to deliver outcomes for nature and the water environment¹³. However, the National Audit Office has suggested that Defra needs to make this case to Treasury to justify the current annual CAP budget of c£3 billion on a long term basis¹⁴. While the funding has now been confirmed until the end of the current Parliament, there are no guarantees for the level of future funding. Ministers should set budgets before Parliament for the proposed multi-annual financial assistance plans that reflect the scale of financial need associated with the aims of the Agriculture Bill. If Defra fails to do this the consequence would be that Treasury repurposes the current budget and 'Defra will need to find alternative ways to achieve the scale of environmental outcomes it intends', resulting in extra costs to taxpayers.

To ensure ELM delivers cross-cutting public goods for public money across local catchments, the scheme must bring together local planning authorities and relevant stakeholders, including farmers. This will be beneficial in identifying outcomes for managing future climate extremes, including floods and droughts, and outlining linkages with the Nature Recovery Network. In turn, the plan can outline measures to reduce pressure on public funding and provide direction for delivery against targets and outcomes in the 25 YEP at a catchment level.

Strategic Action:

Ensure the forthcoming ELM scheme is effective for the water environment, providing incentives for farmers and land managers to deliver multiple public goods relating to water.

All tiers of the ELM scheme must deliver action above high baseline standards protecting the environment and must be integrated with policies like farm advice, catchment management and Environment Bill targets, especially where there is not a 'polluter pays' driver. Delivering the 25 YEP will need the scheme to be attractive to a wide range of land managers, including the most environmentally impactful tiers (2 and 3), which should attract the majority of the budget. Ministers should set budgets before Parliament for the proposed multi-annual financial assistance plans that reflect the scale of financial need associated with the aims of the Agriculture Bill. The ELM Scheme could contribute to the establishment of riparian corridors – rivers fringed by high-nature value habitats including, but not limited to, woodlands, wetlands and grasslands.



¹¹ The Catchment Based Approach (CaBA) is an inclusive, civil society-led initiative that works in partnership with Government, Local Authorities, Water Companies, businesses and more, to maximise the natural value of our environment. CaBA partnerships are actively working in all 100+ river catchments across England and cross-border with Wales, directly supporting achievement of many of the targets under the Government's 25 YEP.

¹² The Government's ELM Scheme will be introduced as the new UK agricultural policy. It will transform support for the agricultural sector by rewarding farmers, foresters and other land managers with public money for public goods.

¹³ RSPB, National Trust & The Wildlife Trusts (2018) *Assessing the costs of Environmental Land Management in the UK: Briefing for policy makers*

¹⁴ National Audit Office (2019) *Early review of the new farming programme*



Image Credit: Mike Dodd

Intelligent finance and resourcing

Present levels of funding for the environment portfolio are inadequate, with the Environment Agency and Natural England currently unable to deliver their statutory and regulatory duties. Despite some positive announcements in the current Budget to meet the UK Government's environmental commitments, it is still not enough. We would like to see the forthcoming Comprehensive Spending Review reverse the past core funding cuts to the environment portfolio and enable existing and new bodies to deliver on their statutory requirements and functions.

In order to achieve positive outcomes for the environment and address climate change, existing and emerging sources of public and private funding need to be combined to ensure much greater impact and coherence. There are many opportunities for green finance to support nature-based and catchment management measures and the £10 million announced for a new Natural Environment Impact Fund designed to stimulate private investment and market-based mechanisms to improve and safeguard our environment is a welcome step in the right direction. Water companies also need to be allowed to spend a significant portion of the £1 billion per annum Water Industry National Environment Programme (WINEP) allocation to deliver the improvements needed through integrated catchment management instead of solely end-of-pipe treatment.

Strategic Action:

Require water companies to spend much of their £1 billion annual Water Industry National Environment Programme (WINEP) on nature-based, catchment solutions for people and nature, and to work in partnership with key land managers and environmental organisations through incentives and the Strategic Policy Statement.

Additionally, investments in nature-based solutions, complemented by the ELM Scheme and funding sourced from green finance, including innovative market mechanisms and biodiversity net gain from developers, should be used to fund critical catchment management.

Fines raised by the Environment Agency and other civil bodies need to be channelled into a fund to restore the water environment that was damaged by associated incidents. Where it is felt that enforcement undertakings are more effective, the level of money awarded needs to be proportionate to the damage caused and directed to the related issue and any subsequent enhancements. By integrating these and other sources of funding, and spending money on the highest priority actions – identified and addressed through CaBA – improved value for money can be secured for taxpayers and water customers and much more progress can be achieved.

Regulation, Enforcement and Advice

A firm but fair baseline of regulation, along with a credible threat of enforcement and provision of sound advice, is fundamental to the successful delivery of the 25 YEP. As an example, agriculture is one of the main sources of pollution, but there is almost no awareness nor enforcement of current regulations such as the Farming Rules for Water. A recent government study on the River Axe found that 95% of farms surveyed were non-compliant with regulations and 49% were polluting watercourses. The huge benefits for society arising from a modest investment of about £6m per annum in the regulation of agriculture by the Environment Agency were set out in the Saving the Earth report¹⁵ in 2018, but no additional funds have been made available. The lack of additional investment since that time, the acknowledgement of the scale of impact upon Protected Areas, and the recognition of the need for increased activity to fill both current gaps in regulation and those that will be created by the removal of cross compliance, means that this figure needs to be significantly higher in order to protect the environment at least to the level expected in law. Sufficient public resources should be allocated to operate a delivery system that involves more advice and engagement than previously, increasing Defra agency budget allocations to take account of potential revisions to their enforcement responsibilities, given more ambitious targets and the current shortcomings noted above. Improved coordination by bodies that regulate the agricultural sector, particularly regarding inspections and data sharing, would also be beneficial. Enhanced regulatory efforts can be supported by prompt delivery of the Government's 2019 Clean Air Strategy commitments regarding the regulation of farm manures and fertilizers to cut ammonia emissions.

A renewed focus on compliance needs to be supported by increased investment in the range of government-funded and voluntary sector schemes provided to farmers and other land managers. Together with targeted advice and supported with access to incentives to reduce pollution, the government can create a level playing field of compliant farmers and land managers. A programme of increased public awareness of food produced to high environmental and ethical standards through clear food labelling should also be introduced.

In combination with improved enforcement of regulation for agriculture, improvements to abstraction licensing would also provide significant improvements and security to our water resources. Earlier timeframes

Strategic Action:

Commit sufficient funding for the enforcement of regulatory standards, and implement the polluter pays principle to reward compliant businesses fairly. An increase in resourcing for monitoring and compliance will be needed to increase compliance with existing requirements and to accompany any new regulations; this will need to be significantly more than the £6M/year calculated for replicating across England the SEPA system for the enforcement of Scotland's General Binding Rules. The government should recognise the significant cost savings overall associated with investing in enforcement.

must be introduced for the abstraction reform set out in the Environment Bill to limit environmental damage and manage water supplies and flows under future climate scenarios. For example, in 2019, globally rare chalk streams dried up for months, but the Environment Agency failed to act to stop abstraction from depleted aquifers because there were no other options for water supplies available. This situation is likely to become more frequent unless we act now. Bringing forward the 2028 timeframe for abstraction reform (originally promised in 2011) to 2021 would help address the environmental impact of unsustainable abstraction by driving innovation in water storage and efficiency.

To accompany this, all new housing, business and infrastructure developments should be planned with sustainable water use, flood resilience, drainage and wastewater treatment as a top priority and this should be reflected in the Future Homes Standard and National Planning Policy Framework.

Strategic Action:

- Improve water security through
- Delivery of abstraction reform by 2021
 - Introduction of water efficiency targets in the Environment Bill
 - Requirements for water efficient development in the Future Homes Standard and National Planning Policy Framework.

¹⁵ WWF, The Rivers Trust and Angling Trust (2018) Saving the Earth: A sustainable future for soils and water



Image Credit: Yorkshire Dales Rivers Trust

Using enhanced Monitoring to inform local and national action

The current approach to monitoring the water environment is fundamentally flawed and with recent budget cuts has become even less effective. Greater investment in the Environment Agency and Natural England to perform this role is desperately needed. A lack of robust monitoring generates inaccessible, inaccurate and incomplete data leading to poor management decisions and substantial misdirection of resources. A robust, quality-assured data baseline and systems for collecting, managing and using data will become even more important as we need to find innovative ways to measure effectiveness of approaches in the context of managing catchments and water bodies in the face of the climate and nature crises. Government needs to ensure effective monitoring relevant to decision-making will be adequately resourced, and explore how monitoring co-operatives such as Chesapeake Bay's¹⁶ in the USA might augment water sector understanding. Data and meta-data, complying with agreed standards could then be published on open source platforms to form a sentinel network of evidence. The Environment Agency and partners would then be in a position to carry out agile investigations to identify specific pressures, which could be addressed at a catchment scale.

The Government must also implement action outlined in the Environment Bill to complete further investigation and introduce standards for new

potentially hazardous chemicals, such as emerging/emerged threats from narcotics, pharmaceuticals, pesticides and other chemicals (and their combined effects). Many of these are not currently monitored at all, but research suggests they may have significant impacts on wildlife and people.

Strategic Action:

Ensure greater coherence and integration of monitoring and evidence across climate, air, soils, water, biodiversity, and other functions in Defra and throughout government to deliver the 25 YEP. There should be much better alignment between the range of different plans and strategies to encourage integration of objectives and timescales for development.

For example, Government should Commit £1-2 million annually to establish and maintain a national monitoring co-operative to pool existing information about problems and opportunities at a catchment scale and make data available to all practitioners. This would involve mobilising thousands of citizen scientists who could regularly monitor their local water environment to agreed standards, following the model of the Chesapeake Bay Monitoring Cooperative.

Nudging behaviour

As part of the transformation of the water environment, a national water stewardship programme is required to improve understanding of the water environment and how individuals and companies can become part of the solution. As an example, this programme could build on and significantly expand the existing 'Love Water' campaign, encouraging binning non-flushable items, improving water efficiency and re-use through consumer behaviours such as mandatory water labelling and domestic improvements, correcting domestic misconnections, and improving private sewage and wastewater infrastructure. This could greatly reduce costs for water companies while reducing pollution and flooding. Such a programme needs to be driven by government, with support from partnerships such as CaBA, to provide consistency of messaging with an appropriate local emphasis based on priorities identified by better data.



Strategic Action:

Government should fund a national campaign delivered by NGOs locally to change consumer behaviour with regard to water use and the way people dispose of items and chemicals down drains and toilets

¹⁶ www.allianceforthebay.org/our-work/key-program-foci/building-stewardship/chesapeake-monitoring-cooperative/



Image Credit: The Rivers Trust

Thank you to the following organisations for their support:



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