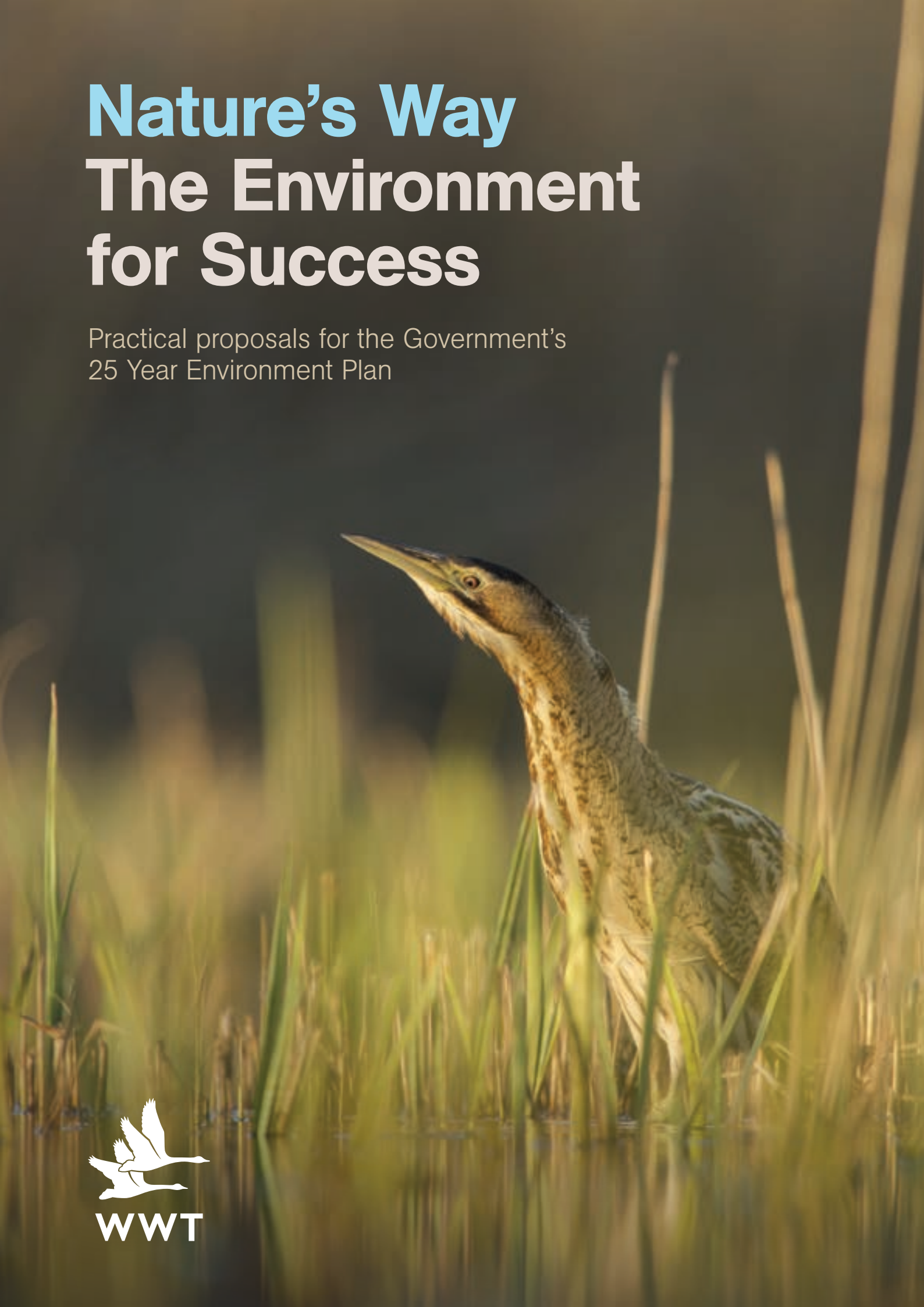
# Nature's Way
# The Environment for Success

Practical proposals for the Government's 25 Year Environment Plan



WWT

# Contents


**Foreword** 4

**Chapter 1** 10
**A plan to last:**
an Environment Act

**Chapter 2** 24
**A plan to grow:**
investing in nature

**Chapter 3** 36
**A plan for everyone:**
public consultation

**Recommendations** 44

# Foreword

More than any time in my lifetime, it feels like we're at a crossroads in history, a time of great import, and a time to show our quality. Our environments and wildlife are under unprecedented onslaught. The choices we make now will decide how our world looks and works for our children and their children. WWT's vision for the forthcoming 25 year plan is a statement of intent, of great determination, an empowering mode of attack that will put the tools for positive change back in our hands.

Some of the finest minds I know have sweated over the ideas found in these pages.

Please please get behind it, for all our futures.

**Steve Backshall**

Photo Credit: Discovery

# Introduction

**We are at a turning point.**

Take the wrong path and leaving the European Union could be ruinous for our environment.

But bold leadership can take us the right way – Nature's Way – down a road that will make individuals, our country, and the whole world a healthier, more prosperous place.

Nature's way means recognising that our environment is a common good that belongs to everyone: rich, poor, urban, rural, today and tomorrow, whatever culture, ethnicity or community you belong to. The wonders of our natural world must be preserved for everyone forever.

Nature's way means understanding that investing in nature is the only way to achieve a sustainable economy. The costs of squandering our natural wealth are huge, while the price of protecting and restoring our habitats and species will be paid back many times in cash and in kind. Wetland habitats alone are estimated to provide more than £7bn each year in benefits, including reducing floods and pollution.

Nature's way means elevating Defra from a Department that's last in line for Government attention, putting the importance of our environment at the heart of political decision-making.

The Government has promised us a 25 Year Environment Plan to deliver a green Brexit and to make ours the first generation to hand on our environment in better condition.

We offer this report as support and challenge to Government in drawing up a 25 year plan that will create an environment for success in the UK: ecologically, socially and economically. We identify three features of a strong plan: it should be a plan to last, committing to a new Environment Act to set legally-binding objectives for nature; it should be a plan for investment, using new mapping and market techniques to drive the public and private finance needed; and it should be a plan for everyone, based on full public consultation.

We hope our proposals will inspire you to add your own ideas for a plan that will point us in the right way at this crucial turning point—nature's way.

**Martin Spray**
CEO, Wildfowl & Wetlands Trust

Photo Credit: Teri Pengilley

# Summary of Recommendations

In this report, we make the following recommendations for the Government's 25 Year Environment Plan:

## 1. Commit to a new Environment Act

a. Setting long-term objectives for nature
b. Establishing environmental principles in law
c. Creating a new *Environment Commission* and a new *Office for Environmental Responsibility*

## 2. Scale up public and private investment in natural resources to maintain and restore natural assets

a. A scientifically-based budget for farming funding, with catchment-specific contracts for environmental investment.
b. A new planning designation for ecological opportunity areas, with financial incentives for networks of natural benefits—including green infrastructure, access to nature, and sustainable drainage.
c. A focus on multiple benefits, guided by new markets for nature and ecological opportunity mapping at the catchment level.

## 3. Give the public and Parliament a voice in the 25 year plan process

a. Commit to open consultation and regular reporting on results across Government Departments
b. Require all Clinical Commissioning Groups to collaborate with local public health authorities to produce Green Prescription guidelines

# A plan to last: a new Environment Act

***"I believe we need to put our natural world at the heart of our political agenda and push forward to create a more vibrant, healthy environment. We need a new Environment Act—a new law setting out the way we want our country to be for the next generation, and for generations to come."***

**Miranda Krestovnikoff**

Ten years ago, the Climate Change Act changed the world. With cross-party support, the UK became the first country to set legally-binding targets for reducing carbon emissions.

The effect was transformational: businesses were given the certainty to invest, driving funding and innovation; Government was united, bringing cross-Departmental energy to the effort of decarbonisation; and communities and local authorities were inspired to take their own action. Governments around the world have recognised the UK's leadership and followed suit.

The result has been massive growth in clean energy markets. In 2016, £15bn was invested in renewables in the UK, overtaking investment in North Sea oil and gas. In 2017, renewable energy broke the 50% barrier, providing more than half of the UK's electricity.

Now, it is time to do for our environment what the Climate Change Act did for carbon—setting long-term, legally-binding objectives that can drive action and investment across Government and the private sector, putting the UK at the forefront of environmental action.

The need could not be clearer. Since 2008, the number of rivers, lakes and streams classed as in poor or bad condition has increased. This poses a threat to wildlife, with wetland bird counts continuing to fall. Declines are caused by changes in land management, such as drainage, intensification of grassland management and conversion of floodplain grazing marshes to arable land. But it is not only wetlands that are in trouble.

- **Wildlife** – 12% of species are extinct or threatened with extinction from Great Britain
- **Water** – only a fifth of English water bodies are in good ecological condition
- **Air** – pollution contributes to about 40,000 early deaths a year in the UK

Continuing down this path would be disastrous for our natural world, for our economy and for the health and prosperity of our communities.

But we have a chance for change.

The Government has promised a 25 Year Environment Plan to turn round the state of nature, and our changing relationship with the European Union brings with it opportunity as well as risk.

In this moment of political change, we have the opportunity to put environmental objectives at the heart of decision-making across Government. We can replace outdated subsidy systems with a new model of environmental investment. We can create state-of-the-art institutions that provide expert advice, map ecological opportunities and hold polluters to account.

By investing in our environment, we can create an environment for success. A healthy environment will be the foundation of a thriving economy, prosperous communities and a country rich in nature.

To achieve it, the Environment Plan should include a commitment to a new Environment Act.



# Actions for the Government:

**1. Commit to a new Environment Act, which would:**

**a) Set clear, legally-binding objectives:**
for wildlife, water, air and natural assets.

**b) Establish environmental principles in law:**
sustainable development, polluter pays, integration, and the precautionary principle

**c) Create new institutions—an Environment Commission and an Office for Environmental Responsibility—to fill the "governance gap":**
delivering world-leading environmental accounting and reporting and access to environmental justice.

# Environment Act: objectives

To be credible, the Environment Plan must include long-term, measurable objectives to give certainty to the public and to investors that the Government is serious about restoring our natural world. In order to ensure that these targets survive the ups and downs of short-term politics, they should be set out in law.

The Government's own independent economic and scientific advisors agree. The Committee on Climate Change has recommended "a long-term plan for the natural environment" with "associated targets, actions, and a monitoring and evaluation framework", while the Natural Capital Committee has called for "clear evidence-based targets" as part of a long-term strategy which should be "given effect in legislation".

This is particularly pressing as we leave the European Union. EU law has established more than 130 environmental targets for the period up to 2050. As we leave the EU, it will be necessary to replace these targets with new objectives and milestones tailored for the UK and a new process for setting ambitious objectives for the future.



Clear objectives are essential in two ways: successive Governments can be held to account; and they create quantifiable obligations that can be passed on to businesses to drive investment. There should be four headline targets set out in law to ensure:

## 1. Wildlife is more diverse and abundant by 2040

Today, 56% of UK species are in long-term decline; 15% are extinct or threatened with extinction from Great Britain.

A species target should be set to increase the abundance of species (according to an agreed measure like the State of Nature "Watchlist Indicator"), combined with a target for saving the most threatened (such as the IUCN Red List).

## 2. A network of healthy habitats spans the UK

In 2017, 60% of our finest wildlife habitats are not in good condition.

By 2040, all protected sites should be in favourable condition, connected up by a national network of functioning wildlife corridors on land and at sea.

## 3. We are living within our environmental means

We are "asset stripping" our natural world beyond its ability to regenerate. For example, soil degradation caused by intensive agricultural production costs £1.2 billion per year in lost productivity, flood damage and reduced water quality.

Renewable assets should be protected from over-exploitation by clear limits on abstraction or use. These should include improved soil health (based on organic matter), water management (based on quality and over-abstraction risk) and sustainable fisheries (including maximum sustainable yields for fisheries).

## 4. We are contributing to a sustainable Earth

The UK is not on course to meet many of its international obligations, such as halting the loss of biodiversity, protecting the biodiversity of the Overseas Territories, or contributing to the achievement of the Sustainable Development Goals. We are "offshoring" environmental damage to other countries.

International commitments should be reflected in UK law, including the Aichi targets for nature and the UN Sustainable Development Goals, with milestones for delivery.

# Environment Act: institutions

**Advising and reporting on objectives for nature is just one of the new institutional functions necessary to deliver the plan. Leaving the European Union could create an institutional vacuum, where essential tasks currently carried out by EU institutions cannot easily be replaced—a Brexit "governance gap".**

To achieve the aims of the Environment Plan, the UK will need not only to fill the Brexit governance gap, but establish new institutions to lead the world in environmental enhancement. We recommend two new institutions: an Environment Commission to provide access to justice and accountability; and an Office for Environmental Responsibility to perform monitoring, reporting and advisory functions.

### Justice and accountability

The EU Commission's enforcement powers culminate in action before the European Court, which can levy financial penalties on Member States if they do not abide by EU environmental law. There is currently no equivalent in the UK. The EU also upholds a complaints process that allows any citizen to challenge government for infringement of environmental obligations, free of charge. In 34 environmental cases brought before the European Court by the Commission against the UK, 30 resulted in judgment against the UK.

The UK is obliged to provide access to environmental justice as a result of binding commitments under EU and international law. To replace the functions currently provided by the EU courts and Commission, the UK must ensure that:

- **There is affordable access for all citizens to bring environmental cases to court.** In the UK, the costs of litigation remain extremely high and uncertainty has been increased by new flexibility in the caps on claimants' cost recovery in judicial review. However, this potential gap could be addressed in the existing courts system, such as reform of the rules for judicial review to cap costs for environmental public interest cases, appropriate training for judges, and an expanded role for First Tier Environment Tribunals to provide lower-cost access to justice.
- **Agencies and authorities responsible for front line enforcement are properly resourced.** The Environment Agency, Scottish Environment Protection Agency, Natural Resources Wales, Natural England and Local Authorities all require the powers, funding and special knowledge needed to uphold good environmental practice.
- **An expert, independent body can—at its own initiative—bring cases against the Government.** Where the Government is failing to fulfil its legal duties, there is no UK independent, expert arbiter with the responsibility to bring a challenge in court, as the EU Commission would for failure to comply with EU law. A future system should create an independent body to challenge Government. It should have a hierarchy of powers from negotiation and formal notice to court proceedings, with an array of remedies including fines for Government. This will require a new institution: an Environment Commission.

### Monitoring and reporting

The legal obligation for government to provide regular reports on implementation of environmental laws has been a distinctive contribution of EU environmental law. Many EU laws include regular reporting requirements, both on process and delivery. These provide important opportunities for the public to scrutinise whether governments are achieving their environmental commitments.

When we leave the EU, many reporting requirements could be lost. The 25 year plan is a chance to rationalise and improve on the system of environmental reporting by making it more coherent and more open. To ensure the plan is delivered, the UK will need a system of public and Parliamentary reporting, including:

- **Parliamentary reporting in an annual progress statement—a "natural wealth statement".** Parliamentarians should have the chance to hear a clear progress report on the full range of environmental objectives, delivered alongside the Budget Statement. This could easily be arranged under current Parliamentary procedures.
- **Public reporting on progress.** Transparent progress reports on implementation and delivery of domestic and international objectives should, in future, be provided by an expert, independent, fully funded body. These should be in a format that is easily comparable across the UK and with other countries. This should be part of the role of a new Office for Environmental Responsibility.

***"If Britain is to be any kind of player on the global stage in coming decades it won't do it on the basis of a denuded environment… This plan must therefore have the weight of law behind it – it must be rooted in statute. That's red line number one."***

**Alastair Chisholm**
Director of Policy, CIWEM

### Coordination and advisory functions

The science of environmental protection is complex and often inherently international—for example, at WWT, we work with scientists all along the flyway of important bird migration routes to understand the lives of migratory species and the risks they are facing. Many of the problems we face require international collaboration, like shared efforts to reduce carbon emissions. The EU has played an important role in creating and sharing scientific work, and in coordinating international objectives.

To ensure fair, cost-effective planning, and to make sure that the UK continues to lead in environmental improvement, the UK's institutional arrangements should provide:

- **Expert advice, information and coordination.** Some EU functions would be costly and complex to replicate, such as the REACH repository of chemicals data, or the European Environment Agency's role in providing information and coordination. In these cases, the UK should seek third party collaboration with the EU institutions. Other functions could be taken on by established agencies and local ecological record centres with the right powers for data acquisition and additional funding to support these new roles.
- **Target-setting and future planning.** An independent, expert committee should be tasked with setting appropriate milestones for environmental recovery and "budgets" for wise use of natural resources. It should be empowered to report to Government on the impact of new law and policy on the delivery of the UK's environmental targets, requiring a formal explanation from a Secretary of State when a change is not "net nature positive". This should be part of the role of a new Office for Environmental Responsibility.

# Environment Act: principles

The heart of an Environment Act should be the internationally-agreed principles of environmental protection:

- **Sustainable development** – meeting the needs of the present without compromising the ability of future generations to meet their own needs
- **The polluter pays principle** – those who cause environmental harm should be responsible for putting it right
- **The precautionary principle** – where there are threats of serious or lasting damage, lack of full scientific certainty is not a reason for postponing action to prevent environmental harm
- **Access to environmental justice** – there should be fair, affordable opportunities for anyone to bring environmental cases in court and seek appropriate remedies
- **The integration principle** – the need for environmental protection should inform policy, spending and decision-making across Government

These principles are paramount to strong environmental legislation and action.

Today, these principles of environmental law are set out in the Treaties of the European Union. They are essential guidelines for courts, businesses and Government decision-making. They have been instrumental in decisions that protect the environment and the public, like the EU ban on imports of hormone-fed beef; the EU moratorium on neonicotinoid pesticides; and controls of the release of Genetically Modified Organisms.

When we leave the EU, it will no longer be possible to challenge the actions of Government Departments or public bodies in court if they contravene these principles. Nor will public bodies be obliged to take the principles into account in the way they make decisions and fulfil their duties.

There is no general statement of environmental principles in UK law equivalent to the commitment in the EU Treaties. Existing environmental duties applying to public authorities are extremely weak, such as the duty to conserve biodiversity set out in Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006. This duty is rarely applied because of a lack of environmental expertise and the stronger mandate of other statutory duties.

As a first step, the Environment Plan should commit to establishing the environmental principles in law, as other countries like France and Germany have done. However, the UK should not be satisfied with replicating the way the principles apply in EU law: we should go further, and make them a guiding code for the way we do business. They should inform action across Government and the private sector.

The Environment Act should take a clearer position and require all public authorities—regulators, agencies, courts, and Government Departments—to comply with the environmental principles in the way they carry out their functions.

Government Departments should formally report to the Office for Environmental Responsibility on the way they exercise their regulatory functions in accordance with the principles and how this is contributing to the delivery of the environmental objectives established in the Act.

By establishing the environmental principles in law, the Government can make sure that the spirit of the 25 Year Environment Plan can inform action across all Departments now and in the future.

# Turning point: a focus on ecosystems

**A strong 25 year plan must take an ecosystem approach, focusing on the needs of a range of habitats and wildlife, not just on a few "star species", services, or causes célèbres.**

**At WWT, we think the plan should include ambitious goals for creation and restoration of all kinds of natural marvels: wetlands, woodlands, uplands, lowlands, grass, heath, rock and shore. For example, there is a strong economic case for creating or restoring 100,000 hectares of wetland, with benefit to cost ratios of up to 9:1. The 25 Year Environment Plan should set in motion an ambitious programme of habitat creation and restoration, from small networks of green and blue spaces in our cities, to landscape-scale restoration around our coasts and countryside.**

## Working wetlands

### Wetlands are the sponges of our uplands, the filters in our farmland, and the sinks in our cities.

Upland wetlands can slow and store flood waters helping protect communities downstream. Farmland wetlands can filter out pollutants from our water more cheaply than chemical methods and they can filter out run-off that would silt up our streams and rivers. Urban wetlands, like sustainable drainage systems, can help to make communities more resilient to flood risk.

## Ancient wetlands

### Wetlands are the "rainforests" of the UK.

Inch for inch, UK wetlands like peat can store more carbon than the Amazon rainforest. Peatlands cover less than 3% of the land surface of Earth in total, but store twice as much carbon as the world's forests. The Flow Country is the largest area of blanket bog in the world—it has been developing since the last Ice Age, more than 10,000 years ago. However, emissions from drained soils accounts for 5.5 megatonnes of UK CO2 emissions per year. Restoring 140,000 hectares of peatland in upland areas could deliver net benefits of £570 million over 40 years in carbon values alone.

## Wetlands for wildlife

### Wetlands are the life support system for UK wildlife.

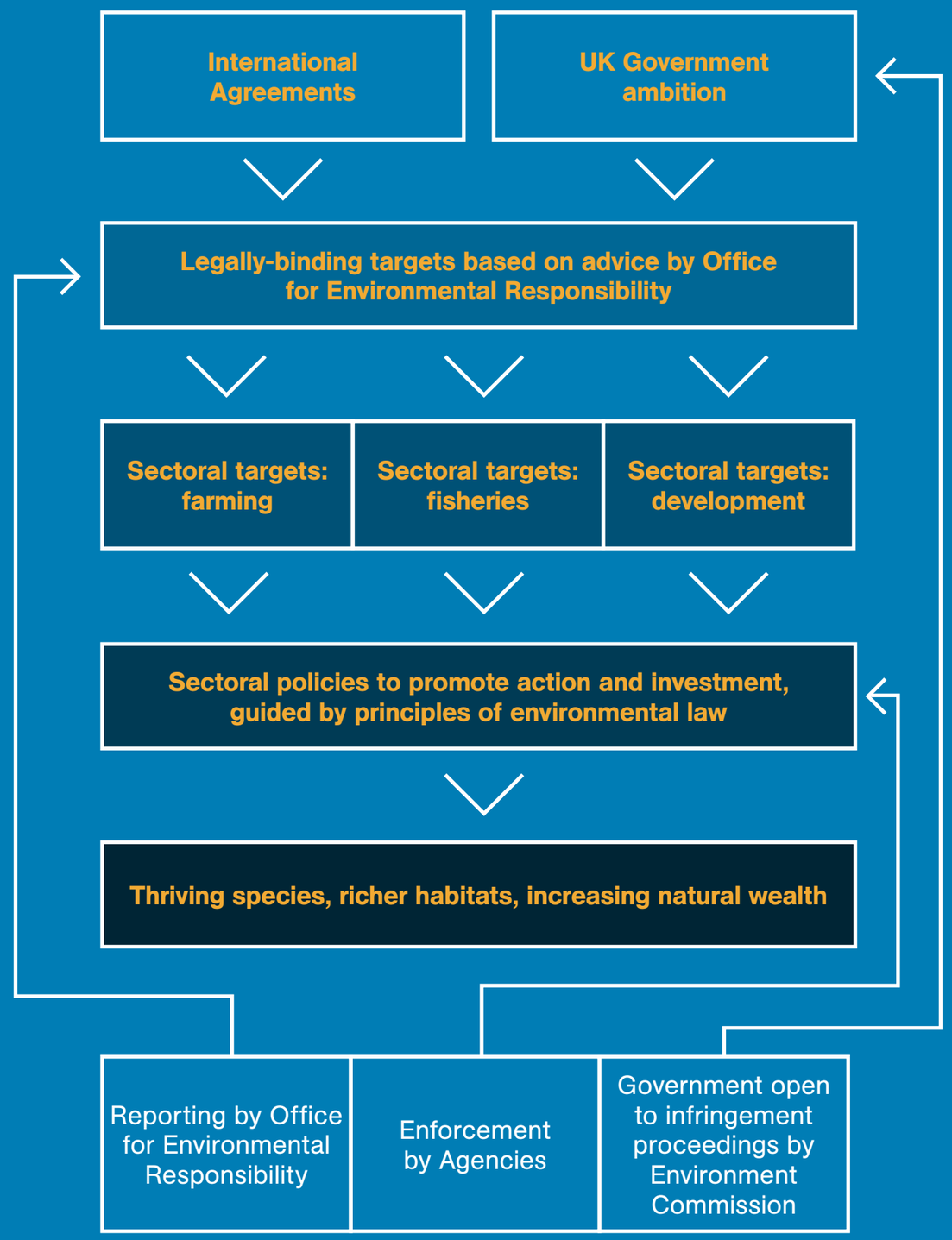
More than 100,000 species rely on freshwater ecosystems alone. This richness means that even small wetlands can be a vital haven for wildlife amid a changing landscape. For example, the latest research suggests that farm wetlands are essential for supporting insects. As the number of pollinators falls in the UK as a result of pesticide use and intensive agriculture, farmland ponds can be essential for pollinating species like bees, butterflies and moths, as well as providing a food source for farmland birds.

## Wetlands for wellbeing

### Wetlands are good for people.

As society faces growing challenges of chronic physical and mental health problems, and growing costs of social care, access to wonderful natural places can play an important role in improving people's quality of life. For example, WWT has created a new wetland in Somerset, Steart Marshes, which is expected to deliver health benefits worth up to £3.5 million in the next 10 years.

# Future governance: bringing the plan to life



# A plan to grow: investing in nature

***"To reverse the current degradation of the natural environment by 2040, we need to move quickly to make enhancement of natural assets a cross-government priority, so that projects to improve the state of natural assets such as a peatland, wetlands or water catchment areas are seen by businesses and public bodies as mainstream investments."***

**Nick Molho**
Executive Director, Aldersgate Group

# A plan to grow: rich in nature

## Delivery of the 25 Year Environment Plan must be supported by investment in nature.

In 2015, the UK government spent an estimated £14.7 billion on environmental protection, 1.8% of total government spending. However, the vast majority was devoted to waste management, including handling nuclear waste. Only a tiny £0.6 billion was spent on protecting biodiversity and landscape.

At the same time, our natural environment continues to be habitually under-valued or ignored in decision-making. The Environment Department continues to be underfunded and direct investment in nature falls well below the levels needed to maintain or restore our natural world.

At WWT, we think nature is priceless. Our mission is to protect natural wonders like wetlands and wildlife regardless of any economic value they represent.

But nature is also hugely valuable in economic terms and the benefits it provides could grow if we invest, or be squandered if we continue to strip our natural assets. The Office for National Statistics has estimated the value of the UK's natural capital to be around £500 billion. Even such large numbers can only ever represent a partial view of the value of our natural wealth and the bounty it provides for our economy and our lives.

The richness of our environment directly sustains many of our most important economic sectors. In 2014, for example, environmental services supported 16% of profits from agricultural production, 37% for public water supply and 87% for fish production. However, the condition of our natural assets is in decline. Indicators for biodiversity, soil carbon and the condition of protected areas have all shown decreases over the 1998 to 2014 period, putting the sustainability of the UK's economy at risk.

In economic terms, a worsening natural environment is hugely expensive. The cost of floods and treatment for water pollution already amount to around £2.4 billion a year. There are billions of pounds worth of infrastructure and assets at risk from flooding. This bill will only increase as our climate changes and as natural defences like flood plains are weakened by intensive agriculture and development.

By contrast, investing in nature is extremely good value for money. The Natural Capital Committee has found evidence of a good economic case for creating up to 100,000 hectares of new wetlands, with benefit to cost ratios of up to 9:1—so, for every pound we spend on wetlands, we can deliver £9 of benefits.

Today, though, we still have a 19th Century approach to valuing the environment: we treat nature as if it is a free, unlimited resource to be exploited. We have no clear account of the value or condition of natural assets, or the investment needed to maintain and restore them. We have few mechanisms for making the polluter pay, or for linking up demand for environmental improvement with the landowners and businesses who can deliver improvement. This is a major market failure and an abdication of strategic planning.

A new approach is needed to channel public and private capital to investment in ecological opportunities, large and small.

# Actions for the Government:

**2. Scale up investment in natural resources to maintain and restore natural assets**

**a)** A scientifically-based budget for post-CAP farming funding, with catchment-specific contracts for environmental investment.

**b)** A new planning designation for ecological opportunity areas, with financial incentives for networks of natural benefits—green infrastructure, access to nature, and sustainable drainage.

**c)** A focus on multiple benefits, guided by new markets for nature and ecological opportunity mapping at the catchment level.

# Investment: farming

Today's markets are failing farmers and failing nature.

Market volatility, combined with a long-term price pressure, make it difficult to earn a reasonable income. Small, mixed farms are the most vulnerable, with thousands going out of business. In 2014–2015 only the dairy, pigs, poultry and horticulture sectors were profitable without subsidy, while the cereals and grazing livestock sectors made significant losses.

By parcelling out money with relatively weak environmental conditions, the EU's Common Agricultural Policy (CAP) partially insulates farmers against the ups and downs of markets, but does very little to direct resources to the most environmentally and economically efficient options. This has led to high-spending on farming and exorbitant land prices, but chronic under-investment in the natural resources that sustain our farmed environment.

As a result, there is little support for farmers to choose products and processes that make most environmental sense, or enhance the agricultural "asset base"—soils, water, and biodiversity. In many areas, UK soils are parched of nutrients, waters are over-abstracted and bedevilled by farm pollution, and farmland species like birds and insects are in decline.

Future markets should be calibrated to direct public and private investment in the products and processes we need today. Replacing the CAP is a prime opportunity for investing in our natural environment and creating a thriving, sustainable countryside.

### Catchment Commissioners

Last year, in our Rich in Nature report, we recommended new Catchment Commissioners with powers to map, coordinate and commission the best ecological investments.

Working locally, they would ensure that different funds and policy initiatives like flood defence, public access, and wildlife protection are no longer treated separately.

Instead, they would use modern mapping and open data to identify projects with the biggest benefits for a range of different objectives.

Natural flood mitigation is an excellent example. Wetlands large and small can create value in public amenity, health and well-being, wildlife and water quality, at the same time as protecting properties from flooding.

- Defra budgets for post-CAP payments should be based on expert assessment of investment needed to maintain a thriving natural asset base to support wildlife and a sustainable rural economy. **Until the assessment is complete, Government should commit to maintain the level of funding currently provided by the EU—£3.1billion per year.** Future funding needs are likely to be greater. For example, today the total spending on environmental measures is less than £400m, while the Environment Agency has estimated that biodiversity protection alone requires £734m a year. Defra's core budget should be increased accordingly.

- **When a new Agriculture Bill is introduced in Parliament, it should include metrics for sustainable farming linked to the Government's overall environmental objectives.** The measures matter: they shape incentives and drive delivery. Alongside output, farmers should be rewarded for good water management (such as reconnecting rivers with floodplains), wildlife-friendly farming and public amenity—the public benefits that farmers deliver for everyone and for which they are not currently properly paid. For example, the Agriculture Bill should include sectoral equivalents of the four main targets:
  - **A species target** — based on indicators such as the farmland bird index
  - **A habitats target** — based on quality and diversity of ecosystems
  - **A natural assets target** — based on the condition of assets such as water courses
  - **An international impact target** — such as a measure of soil carbon

- **Payments should be awarded through long-term contracts, targeted at the catchment level.** New Catchment Commissioners should be appointed to award long-term contracts for environmental improvement—all payments would be made through this single, simple system including system payments (like organic support, or soil conservation), capital payments (for green investments or large-scale habitat creation) and targeted actions (for particular habitats and species). They should link up national and international priorities with local circumstances, based on data-driven Ecological Opportunity Mapping, with a menu of options, including options for wetland creation, organic farming, agro-forestry and horticulture.

- **A strong baseline of environmental protection in trade and across the farmed environment.** Any trade agreements relating to agriculture should match or improve upon the standards of environmental protection and animal welfare in place today. Domestically, a strong baseline for good land management should underpin any payments and the "polluter pays" and "prevention" principles should guide strong regulation and enforcement across the farmed environment.

Catchment Commissioners should be able to aggregate and disburse a number of different funding sources including public money (farm and flood funding), polluter pays penalties (hypothecated for reinvestment in nature) and private capital (paying for benefits like flood risk reduction). Contracts and grants could be awarded through a mixture of market means, such as reverse auctions.

# Investment: cities

Cities can be amazing places for nature: the dragonfly on the urban pond, the peregrine on the cathedral spire, the hedgehog rooting around for city slugs. But our cities are becoming standardised and sanitised and green and blue spaces are being squeezed ever tighter by denser development. Fewer spaces are left for wildlife and only a third of English local planning authorities have access to an in-house ecologist for advice.

This is a problem for nature, but it is also a problem for people. In 2014, Defra estimated 45 million people in England lived in urban areas, 83% of the population. Greenspace is essential for improved quality of life and green infrastructure is an important part of urban resilience, such as the ability to cope with surface water flooding, which now accounts for over a third of flooding costs each year.

Unless we guide urban growth along a greener path, urbanisation will mean more people living in unhealthy environments, it will mean more loss of habitat, and it will mean that the UK's natural resilience is weakened.

Intelligent planning and investment in green infrastructure can make cities a place where our environment thrives. Properly planning for investment and maintenance of natural infrastructure as part of the UK's infrastructure plan could set UK cities among the global frontrunners in sustainable development.

### Planning for people

Less than half of local authorities have up-to-date green space strategies for management, or for creation of new natural spaces. Even fewer have clear plans for blue spaces—incorporating water and wetlands in the built environment. Some cities, such as Birmingham, Manchester and London, are taking a lead. But natural infrastructure often remains an afterthought in the planning process.

The role of green infrastructure in urban water management is a good example. The Environment Agency estimates that over 3 million homes are at risk of surface water flooding. This will increase with growing urban areas, climate change and increased in-filling and paving over in established communities.

Sustainable drainage systems (SuDS) are a nature-based drainage option, using natural engineering such as vegetated filter strips, swales and ponds to mimic natural drainage. The cost of SuDS is often less than hard engineered alternatives. Despite a planning presumption that SuDS systems should be included in all new developments, loopholes often mean they are not included and, where they are, they are often of the lowest quality. There is no national plan at all for retrofitting SuDS in established developments.

### Planning for wildlife

Creating pathways and pockets of water or greenspace can be essential for wildlife to survive. In the countryside, this can be achieved through maintaining hedgerows or open streams. But in the city a different kind of planning is needed to stitch together a patchwork of natural spaces.

The UK's planning system recognises our most important wildlife sites, like Sites of Special Scientific Interest. Designations like the EU Natura 2000 network have helped to safeguard internationally important sites. Closer to home, local wildlife sites are increasingly important for protecting precious pockets of water and wildlife. However, there remains an important gap for the "wild-life-lines" that link these important areas.

Government should create a new planning designation for ecological opportunity areas—priority areas for improving access to greenspace; catchments most vulnerable to flooding; and important wildlife corridors—where special planning consideration is afforded to green and blue infrastructure. Within these areas, development and redevelopment would be subject to a net nature-positive standard and capital grants, loans and tax incentives should be provided for households and businesses to invest in green infrastructure.

*"You and I might feel insignificant amongst the billions of people, past and present, who are collectively responsible for the mess the planet's in. But that doesn't mean we're powerless. We can – and must – urge our governments to reshape the legal frameworks within which we all operate, to make it possible for us to live nature-friendly lives"*

**Amy Mount**
Head of Greener UK Unit, Green Alliance

# Investment: mapping and markets

Successful delivery of the plan will require new markets and modern mapping tools.

These should form the basis for intelligent investment in ecological opportunities in the countryside and in urban areas.

Making the most of investment opportunities will require a combination of private and public capital. There is a role for Government in helping to establish these markets. In particular:

- **Stimulating demand:** by creating new obligations for investment in the natural environment, based on the polluter pays principle and a principle of no net loss. These should divvy up responsibility for achieving national nature targets among public utilities, developers, land managers and abstractors such as fossil fuel companies.
- **Facilitating markets:** by linking up supply and demand at the catchment level through new institutions such as Catchment Commissioners, helping to aggregate small-scale opportunities for investment, as well as identifying the most economically and environmentally effective options for each area.
- **Creating certainty of supply:** by developing a menu of standardised options for environmental investment, based on long-term contracts and ecological opportunity mapping, with certification and validation to give confidence to investors.

### Ecological opportunity mapping

Spatial planning will be essential for the development of environmental investment "products" that make sense ecologically and economically.

Detailed mapping can identify where there are opportunities (such as alleviating flood risk, poor air and water quality, or a lack of quality green space) and which environmental investments can realise those opportunities most effectively (such as wetland creation or tree-planting).

Crucially, ecological opportunity mapping can coordinate investment to deliver multiple benefits. By stacking up different data, it can help locate the areas where a single environmental improvement can improve productivity, store water or carbon, or create wonderful habitats for wildlife. For example, in the right place, wetland creation can simultaneously reduce flood risk, filter out diffuse pollution, provide habitat, and give local people a wonderful new place to enjoy.

Sometimes, a positive investment in one place is counterproductive in another. For example, tree planting can sometimes increase flood risk if it causes synchronisation of flood flows. That's why detailed mapping, combined with practical local knowledge is essential for high-value investments.

Understanding how a catchment works is essential to ensuring the right interventions are made—how water flows, how habitats connect, and how people interact with and impact on their surroundings.

# Turning point: a focus on farming

There are plenty of options for environmental improvement available under the Common Agricultural Policy. For wetlands alone, farmers can be paid to construct leaky woody dams, ditches, dykes and rhines, create scrapes, bogs and fens, or to work on re-wetting, buffer strips and flood mitigation.

At WWT, much of the land on our wetland reserves is farmed, a working wetland demonstration of the possibility to combine productive farming with wildlife-filled wetland landscapes. Surely, then, the countryside should sparkle with productive wetlands?

Unfortunately, the gradual process of wetland draining, burning and degradation continues. There are many reasons for the underperformance of environmental payments, but three stand out:

1) **Not enough money is spent on environmental options:** payments based on income foregone do not create the right balance of reward to risk for farmers to invest in ecological choices.

2) **Applications and administration are too complex:** sometimes farmers on WWT land have even resorted to paying local experts hundreds of pounds for help filling in forms, or turned to professional consultants to justify simple environmental changes.

3) **Higher level schemes are poorly targeted:** unfocused menus of options mean easy choices crowd out the most environmentally beneficial choices.

As area-based payments are phased out in a new system, it is essential that adequate funds are directed toward environmental investments—so that farmers are paid properly for the services they deliver.

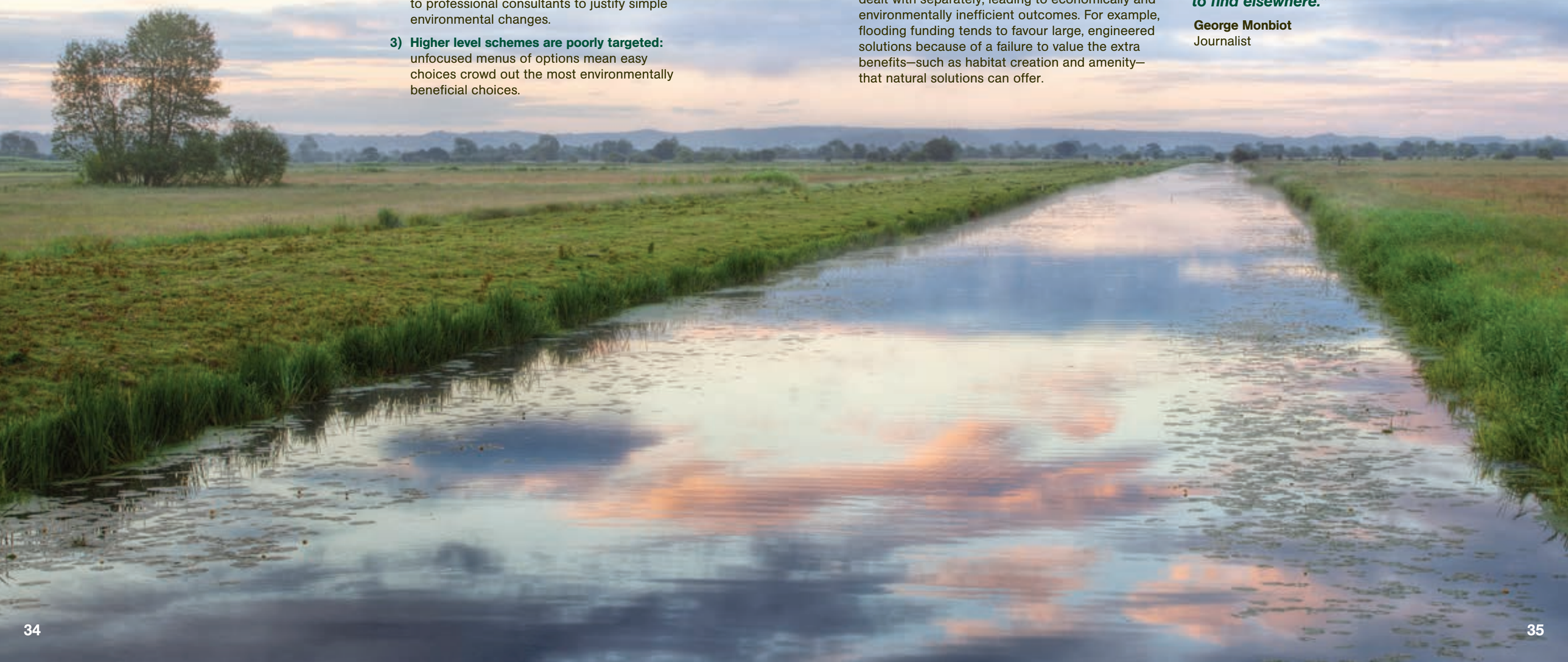
- **Large-scale wetland creation:** paid not just to recover capital costs, but for continued provision of flood alleviation, amenity, carbon sequestration and biodiversity benefits.
- **Wetlands for flood alleviation:** rewarding the creation of networks of small interventions, as well as payments to farmers for storing flood water on their land, to reflect downstream cost savings.
- **Treatment wetlands for pollution control:** today, 60% of nitrates, 75% of sediments and 25% of phosphorous in our rivers come from farms, costing consumers millions of pounds to clean up.
- **And farmland ponds for pollinators and wildlife:** recognising the value of healthy ecosystems for sustainability of the sector. Crop pollination by insects is worth at least £630m annually to the UK agricultural industry.

At the moment, individual policy problems are dealt with separately, leading to economically and environmentally inefficient outcomes. For example, flooding funding tends to favour large, engineered solutions because of a failure to value the extra benefits—such as habitat creation and amenity—that natural solutions can offer.

At WWT, we believe the fairest and most economically efficient change is to ensure that farmers are paid properly for the diversity of benefits that ecological investments provide. For example, in our ongoing review of the UK's working wetlands, we have found that of the projects which have created wetlands to improve water quality, 90% also aimed to improve biodiversity, 52% also aimed to provide wellbeing or learning benefits and 23% also aimed to deliver flood risk reduction. So, at the same time as improving water quality with treatment wetlands, farmers should also be paid for biodiversity and flood risk mitigation benefits.

***"A crucial task is to bring the farming and fishing industries within the ambit of effective environmental control. Though they exert far greater impacts on the living world than any other forms of industry, they are exempt from the need for environmental impact assessments, and from monitoring and enforcement of the kind you would expect to find elsewhere."***

**George Monbiot**
Journalist



# A plan for everyone: public consultation

***"The future of our environment isn't something that belongs to politicians. It's not even a countryside issue that should be left to farmers and experts. It's an issue that involves everyone."***

**David Lindo**
The Urban Birder

# A plan for everyone: full public consultation

Millions of people love nature; everyone needs nature.

Unfortunately, today, many people are disconnected from our natural world and disenfranchised from decisions about its protection.

The reasons are rooted in the history of Britain: the concentration of land-ownership in a few hands; the design of land-management policies to address post-war priorities of food security and independence; urbanisation; even the Industrial Revolution mentality of nature as a commercial resource, rather than a common good.

While the road is a risky one, with many environmental pitfalls along the way, Brexit affords us the opportunity to address these failures of markets and management and design an environmental strategy that supports a thriving economy and communities. To do so, the Government will need a long-term plan that reinforces the strong foundation of environmental law we have developed in the EU with world-leading environment policy.

The Environment Plan should address everyone's need for nature, from nature-deprived communities to the next generation. To be credible, it should be subject to full public consultation—it should be a plan for everyone:

- **for nature enthusiasts:** the millions of people who are part of the nature conservation movement
- **for our diverse society:** urban and rural, rich and poor, black or white
- **for the UK and abroad:** the people affected by our decisions here and across our environmentally interconnected world
- **for today and tomorrow:** for communities now and for generations to come
- **for businesses and communities:** creating sustainable livelihoods and sustainable corporations
- **for all Government Departments:** putting Defra's leadership at the heart of Government.

## Actions for the Government:

**3. Give the public and Parliament a voice in the 25 year plan process:**

**a)** Commit to open consultation and regular reporting on results across Government Departments

**b)** Require all Clinical Commissioning Groups to collaborate with local public health authorities to produce Green Prescription guidelines

# Equality: diversity

## The gap between those who benefit from nature and those who do not is growing wider.

An ever more urban society means the poorest, most marginalised and most vulnerable people are increasingly denied a healthy environment. Losses in biodiversity mean that the next generation may not enjoy the same quality of life as we do.

### Our diverse society

The poorest and most vulnerable people often live in the most degraded natural environments, with least control over how their environment is managed.

People from less wealthy backgrounds, particularly those living in deprived urban areas and Black, Asian and Minority Ethnic (BAME) communities are less likely to live near high quality, accessible, green places and less likely to be engaged with nature. This has significant implications for their health and quality of life. Research suggests that people who live near green space use it; as a result, they tend to be physically fitter, as well as enjoying benefits for mental health. Having a view of green space is even shown to make people recover from sickness more quickly.

The UN Sustainable Development Goals require universal access to safe and accessible public green space by 2030, particularly for women, children, and vulnerable people. Today, however, the most affluent 20% of local authority wards in England have five times the amount of green space as the most deprived 10%.

Public consultation on the plan must be extensive and representative, reaching all the different communities whose lives will be affected by the choices we make.

### The next generation

Government initiatives come and go, but successful environmental action needs long-term stability. It is the next generation that will lose most if we fail.

The implications of our actions today have long lead times, but the costs of inaction are beginning to show as we face the human health costs of "naturelessness" and the stresses this places on public health provision.

The plan should be based around a clear vision of the world we want to pass on to the next generation. That means specific, measurable objectives for the environment: thriving wildlife, clear air, cleaner water.

### Cross-Departmental responsibility

It is right that the Environment Department should develop the plan but to be successful it must guide action across Government.

For example, the Department of Health should lead plans to capitalise on the health benefits of thriving environments. The Treasury will need to oversee plans for investing in nature. The Department for Communities and Local Government must make sure that green and blue spaces are part of the fabric of our communities. Ministers responsible for trade and Brexit must ensure that environmental standards are not bartered away.

The plan should enable Defra to set unifying objectives for Government environmental action, with specific roles for different Departments in delivery.

# Equality: health and wellbeing

*"Building a more just society means ensuring that everyone, wherever they live, has access to a thriving countryside and can discover for themselves diverse and abundant wildlife"*

**Dr Elaine King**
Director, Wildlife and Countryside Link

At WWT, we welcome a million people through our doors every year because we believe in the intrinsic importance of wonderful experiences in nature. We want to inspire the next generation to care for our world. But there is also a clear functional side to connection with nature.

The public health challenges we face are changing.

Our resilience, response and recovery are dictated less by the standard of clinical care and more by our physical environment and social circumstances. Non-communicable diseases are on the increase, from poor mental health to obesity.

Engagement with the natural environment can improve physical and mental health and reduce risk of cardiovascular disease and other chronic conditions. Public Health England has recognised that 'the design of our neighbourhoods can influence physical activity levels, travel patterns, social connectivity, mental and physical health and wellbeing outcomes'.

According to Natural England, the use of nature-based health solutions could reduce outpatient admissions by a fifth, save time for GPs, and achieve significant cost savings. It found a return on investment of £3.12 for every pound invested in nature-based healthcare. Overall, by harnessing the restorative power of nature, billions of pounds could be saved each year for the NHS, as well as improving quality of life and health for patients.

For example, Government can play a role in helping doctors and healthcare professionals to make better use of our environment to contribute to public health.

GPs can already refer patients for nature-based interventions to ease physical or mental health conditions. The range of activities is growing: farming, gardening, ecotherapy, wilderness therapy; arts and crafts, or just a simple regime of exercise in a park or wetland. Prescriptions are usually delivered by the third sector, in partnership with primary care bodies.

Like other social prescribing options, there is no national accreditation for nature-based prescriptions. This allows local flexibility and choice. However, this lack of national direction has left some areas without a menu of nature-based options for healthcare professionals to consider.

In some areas, cities like Leeds or Clinical Commissioning Group areas like Dorset have established long-term contracts for "nature-on-referral" services, offering patients the chance to benefit from nature-based therapies over the long-term, with recognised expert providers.

However, in other areas, the use of green prescriptions is far lower than other non-clinical options, or "social prescriptions". As a result, some brilliant options fail to be established on a sustainable footing. Not all local areas are benefiting from the cost-savings offered by nature-based care, and not all patients can enjoy the benefits of nature on prescription.

In order to improve access to nature-based therapies without compromising local flexibility, we recommend that Government publishes a template for local authorities, Clinical Commissioning Groups and metropolitan areas to populate with locally-appropriate green prescription guidance.

This will help to ensure that all areas develop the guidance needed for providers to put in place programmes that GPs can call on with confidence.

# Conclusion and recommendations

## We applaud the Government's ambition to pass on our natural world in better condition.

Realising this ambition means elevating environment policy from the periphery to the heart of Government.

We should not pretend that we are starting from a comfortable position. Nature is in long-term decline and society has yet to get to grips with a truly sustainable approach to development. Serious pressures from pollution and overexploitation have been held in check by EU law, but these longstanding safeguards are at risk of dilution during Brexit. At the very least, to avoid accelerating damage to habitats and species, the plan will need to reaffirm the foundations of environmental protection laid out by the European Union.

But the policy puzzle pieces are all in place to design a 25 year plan that really could chart a course for a richer environment and a more prosperous society. Perhaps for the first time, we have the scientific and technical understanding to target investment intelligently and fix long-broken markets. We have a growing appreciation among businesses that the future depends on sustainable practices. We have the policy freedom to use this learning to make environmental improvement integral to action across Government, from healthcare to housing, and planning to food and farming.

In this report, we set out the hallmarks for a credible 25 Year Environment Plan:

1) legally-binding objectives
2) with full public consultation and on-going public reporting;
3) underpinned by principles of environmental law;
4) backed by green farm funding and green infrastructure spending;
5) invested intelligently through new mapping and markets; and
6) overseen by new institutions to fill the post-Brexit judicial and reporting governance gap.

As a first step, we are certain that a credible plan cannot belong to Whitehall alone.

Government must reach out to every corner of the UK, every ethnicity and age group, to ensure that the plan is inspired and supported by everyone's environmental needs and the public conviction that a greener UK is possible. We believe that Government should give everyone an opportunity to have their say.

WWT is ready to support a strong plan that delivers real environmental investment and improvement and we are ready to play our part in delivering it.

We look forward to a plan for a post-Brexit environment for success nature's way: more wetlands, more wildlife, sustainable businesses and a richer natural world for everyone.

### For further information, please contact:

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***"Maybe the biggest challenge for Government is to deal with the little things, the everyday damage. We need a way to make sure that the environment is taken into account in every decision, across every department, at every level, every day… That's why we specifically need legally-binding targets for restoring nature."***

**Chris Packham**

Every now and then, societies realise that the way they've been doing things no longer makes sense. When it comes to the way we look at the natural environment that sustains us, we've reached such a juncture now.

More and more evidence reveals how the way in which we've sought to develop the economy is causing environmental damage with real consequences. It is manifest in flooding, soil loss, the decline of wildlife and pollution impacting on people's health.

All of this is a reflection of how, for centuries, we've treated Nature as an unlimited resource to exploit in pursuit of economic growth. I am not alone in believing that we cannot carry on like this and that the time for change is upon us. More and more people are unwilling to tolerate the filthy air, the unclean streams, the concrete-clad communities that come with unsustainable growth.

I am also not alone in my concern that post-Brexit Britain could find itself in a worse position if important EU environmental standards are removed from UK statute. But while a majority voted to leave the EU, they did not vote to make their country a worse place to live. 80% of us want environmental laws to be as strong or stronger when we leave the EU.

So, with the rule book up for rewriting and a clear majority in favour of making our environment better, now is a moment of opportunity. The Government has promised to pass on our environment in better condition than we found it and to conceive and implement a 25 year plan to do that. To succeed in that historic task, the plan will need to be ambitious, visionary and bold. It will also have to have a clear and robust structure, backed by good science and be able to embrace the full range of policy tools available to Government.

In this report, WWT sets out the architecture for a successful plan: an Environment Act that can catalyse not only good policy decisions but also private sector investment based on the emergence of cleverer markets and the kind of mapping that is now possible with new technologies.

I hope the Government draws on this material to help shape a strong plan and that it will inspire people to get involved and to seize the opportunities at hand—including those created by Brexit. It is vital that all those who see the need for change come together to ensure that Government policy travels the right direction.

The time has come to adopt targets, plans and policies for environmental growth, not only in pursuit of what might be regarded as 'green' goals, but for the benefit of our collective health, wealth and security.

**Tony Juniper CBE**
Author and campaigner

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