



HM Government

25 Year Environment Plan Annual Progress Report

April 2020 to March 2021

October 2021

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1. Executive summary

Introduction

This is the Government's third annual report since the 25 Year Environment Plan was published in 2018. The 25 Year Environment Plan recognises that delivering our vision of a healthier environment requires strong foundations: comprehensive, reliable data; strong governance and accountability; a robust delivery framework, and for all of society to play a role.

The progress report covers the period from April 2020 to March 2021. During this period, the UK completed its transition out of the European Union and the world was fighting the global battle against COVID-19. As we build back our economy and society from the pandemic, this report takes stock of the action taken to halt and reverse declines in the natural environment and to tackle climate change.

The report spans a year in which the Prime Minister published a 10 point plan to create a fairer and more resilient economy through a green industrial revolution. The UK supported a new global framework to reverse biodiversity loss, signing up to new commitments including the Leaders' Pledge for Nature, and continuing to champion a target to protect 30% of land and ocean globally for nature by 2030 (the 30by30 target). We recognise that more needs to be done – both domestically and internationally – if we are to deliver a nature positive future. As the Dasgupta Review emphasised, a failure to engage conscientiously with the natural world has led nature to the point of crisis.

The report will account for how Government is implementing its commitments toward the ambitions set out in the 25 Year Environment Plan against each of the goals and the cross-cutting themes. We have made some changes to the Annual Report this year including more in-depth view of progress against the outcome indicators and goals.

The passage of the Environment Bill and preparations for international conferences on biological diversity and climate change are underway. We refer to progress beyond March 2021 to give an accurate picture of activity.

The full report has been structured in the following sections:

- An Executive Summary that provides a summary view of key progress toward the 25 Year Environment Plan across legislation, indicators and goals.
- Outcome indicator progress and summary view of progress by goal
- A detailed Goal by Goal report that provides a detailed view of the scale of challenge, state of natural environment, action over the last year and long-term approach, including a selection of case studies highlighting implementation, delivery and partnership activity to achieve the 25 Year Environment Plan.
- Our response to the recommendations made by the Natural Capital Committee following the 2020 Annual Progress Report. Alongside the Annual Progress Report is the Outcome Indicator Framework which provides detail statistical information against all published 25 Year Environment Plan Indicators.

Legislation and governance

The legislative framework and powers required to underpin progress toward the 25 Year Environment Plan goals have been significantly strengthened in 2020/21.

Two of the most significant legislative reforms of a generation were agreed by Parliament in November 2020: the landmark **Agriculture and Fisheries Acts**. These laws will fundamentally change the way we manage the land and the sea.

Under the Agriculture Act, farmers and land managers in England will be rewarded with public money for environmental outcomes such as better air and water quality, thriving wildlife and soil health. These incentives will provide a powerful vehicle for achieving the goals of the 25 Year Environment Plan and our commitment to reach net zero emissions by 2050. The Agricultural Transition began on 1 January 2021.

The Fisheries Act helps to support a thriving and sustainable fishing industry and safeguard the environment. The wasteful practice of discarding fish will be tackled. A new 'Climate Change Objective' will recognise and combat the impacts of fishing on the health of our ocean and planet. The Fisheries Act gives the Fisheries Administrations a new power to develop Fisheries Management Plans. These Plans will set out policies and measures to manage fishing activity to restore fish stocks to sustainable levels.

The Environment Bill sets a new and ambitious domestic framework for environmental governance. Through the Bill, we will set long-term, legally binding environmental targets, and establish the Office for Environmental Protection.

The Bill underpins the goals of the 25 Year Environment Plan by enhancing wildlife, tackling air pollution, transforming how we manage our resources and waste, and improving the resilience of water supplies in a changing climate.

The Environment Bill has returned to Parliament with a firm expectation that it should complete its parliamentary passage later this year. Since last year, significant improvements have been made to the Bill that include amendments such as to:

- Require a historic, new legally binding target on species abundance in England for 2030;
- Reduce the harm from storm overflows to our rivers, waterways, and coastlines;
- Require that new Nationally Significant Infrastructure Projects in England, such as future transport and energy projects, provide a net gain in biodiversity and habitats for wildlife

Other improvements include new powers to refocus the Habitats Regulations on biodiversity, with more detail to follow in a Green Paper. This policy paper will also include measures to reverse declines of species, including iconic British species like the hedgehog, red squirrel and water vole.

In August 2020, we published more detail on the scope of the legally binding environmental targets required under the Environment Bill. In March 2021, we invited views on the draft Environmental Principles Statement and on how these principles should be interpreted and proportionately applied.

The Office for Environmental Protection will be a new, independent, statutory body. It will have the principal objective to contribute to environmental protection and the improvement of the natural environment and will hold government to account. The OEP has been operating as an interim body since 1 July 2021, and will be formally established as a body corporate shortly after Royal Assent of the Environment Bill. A Chair and Non-Executive Directors have been appointed. Its headquarters will be based in Worcester.

The Defra-led 25 Year Environment Plan Board was established in December 2020. It is responsible for overseeing, co-ordinating and driving forward action across departments to implement the Plan and the Environment Bill once enacted. The Board is chaired by Defra's Director-General for Environment, Rural and Marine with a Director-General level membership from all departments with a stake in delivering the 25 Year Environment Plan. The Board meets every 2 months.

Summary of key progress points

Clean air

- The **first Clean Air Zone** was launched in Bath in March 2021.
- The UK committed to **ending sales of new petrol and diesel cars and vans** by 2030. All new cars and vans must be 100% zero emission at tailpipe from 2035. This will put the UK on course to be the fastest G7 country to decarbonise cars and vans.
- Government has launched a ground-breaking **Transport Decarbonisation Plan** to create cleaner, quieter cities and communities for better quality of life and to improve the way people and goods move around as we build back greener.

Clean and plentiful water

- New funding has been secured to **expand Catchment Sensitive Farming** to provide advice to farmers on how to reduce pollution.
- A **Storm Overflows Taskforce** has been established to develop proposals to significantly reduce the volumes of sewage discharged into our water courses.
- A new **Slurry Investment Scheme** is being developed to help livestock farmers avoid endangering water and air quality.
- Funding has helped to address pollution that occurs when **abandoned metal mines** are closed.
- The River Wharfe at Ilkley became England's **first designated bathing water river site** in December 2020.

Thriving plants and wildlife

- The **Agricultural Transition Plan** set out the changes and new schemes that will reward sustainable and nature-friendly practices on farms.

- Five **Local Nature Recovery Strategy pilots** have tested our spatial mapping and planning tools. Now completed, we are evaluating ahead of a national rollout.
- A new **National Delivery Partnership** has begun, led by Natural England, to support delivery of the **Nature Recovery Network** across England.
- Nine **biodiversity net gain pilots** are underway and will tell us more about how we effectively deliver biodiversity net gain within development and infrastructure.
- The **UK Marine Strategy** (Part 2) sets out the monitoring programmes we will use to assess progress towards our updated Good Environmental Status targets.
- **Sustainable fishing** and management of **Marine Protected Areas** will be supported by the provisions of the Fisheries Act 2020. We will begin introducing **Highly Protected Marine Areas** by identifying a number of pilot locations within English waters.

Beauty, heritage and engagement

- Action on mental ill health through **access to nature** is underway with a multi-million-pound project to test nature-based social prescribing.

Mitigating and adapting to climate change

- Legislation has been laid for the **UK's sixth carbon budget**, proposing a world-leading target to reduce greenhouse gas emissions by 78% by 2035.
- Investment in new jobs through the **Green Recovery Challenge Fund** will see new woodlands planted and peatland restored across England.
- **800,000 trees are expected to be planted** and the Green Recovery Challenge Fund is on track to support 2,000 jobs across England by the end of 2021.
- Our [England Trees Action Plan](#) will ensure that we have at least 12% woodland cover by the middle of the century, supported by over £500 million of the £640 million Nature for Climate Fund.
- Our England [Peat Action Plan](#) sets out our plans to restore, sustainably manage and protect our peatlands.

Reduced risk of harm from environmental hazards

- During 2020/21, **flood defence schemes** were completed, and new commitments made to better protect thousands of homes from flooding.
- Under the **Natural Flood Management programme** 58 projects have benefited reducing flood risk to over 15,000 homes and improving habitats in England.

Minimising waste

- New policy proposals on **deposit return schemes, extended producer responsibility** and greater consistency in **waste collections**.
- New restrictions on the supply of **single-use plastic straws, stirrers and cotton buds** came into force from October 2020.

Managing exposure to chemicals and pesticides

- The UK went live on its own **domestic chemical regulatory regime** on 1 January 2021, maintaining high standards outside of the EU.

Enhancing biosecurity

- New pathway action plans to reduce the number of **invasive non-native species** have been published.
- The launch of the **Trees Outside Woodlands Project** is testing innovative ways of planting trees in our cities, towns, and countryside.

Protecting and Improving our global environment

- The **Integrated Review of Security, Defence, Development and Foreign Policy** made tackling climate change and biodiversity loss its top international priority

Green finance

- HM Treasury has increased the requirements on **environmental reporting**, including extending the use of natural capital appraisal within the Green Book.
- The **Public Value Framework** was published in November 2020 including a new cross-Government environment outcome.
- Plans to issue the inaugural **Sovereign Green Bond (Green Gilt)** in 2021, was announced in November 2020, and the first issuance is expected before COP26.
- At least £3 billion (over 5 years) of the **UK's International Climate Finance** will be spent on climate change solutions that support nature and help the poorest.

Environmental Outcome Indicators and Natural Capital

As part of our annual reporting on progress toward the 25 Year Environment Plan, we produce an Outcome Indicator Framework. The framework is a comprehensive set of indicators describing environmental change that relates to the 10 goals within the 25 Year Environment Plan.

The framework contains 66 indicators, arranged into 10 broad themes. The indicators are extensive; they cover natural capital assets (for example land, freshwater, air and seas) and together they show the condition of these assets, the pressures acting upon them and the provision of services or benefits they provide.

The 2021 report includes data for 45 of 66 indicators including statistics for 7 indicators which were newly reported on this year.

For the first time, we are publishing these data this year in an [online dashboard](#) to improve how we share our evidence and indicators, thereby improving transparency and enabling a much greater degree of user interaction by offering direct access to the underlying indicator data. Work is also underway to develop a methodology for assessing environmental change drawing on appropriate statistical techniques.

Alongside the development of indicators for the 25 Year Environment Plan, the Government is increasing the use of Natural Capital to assess environmental impact.

The Office for National Statistics continue to develop and report the **UK Natural Capital Accounts** driving new modelling and measurement of services provided by natural capital, for example water purification and flood regulation.

The UK accounts bring together information on ecosystem condition and ecosystem services by broad habitat and, by estimating the value of services and assets, add explanatory power. They can provide standard ways of aggregating indicators within or across ecosystem types, as well as providing a basis for developing new indicators relevant to the wider economy.

Alongside the UK Natural Capital Accounts, Defra's [Enabling a Natural Capital Approach](#) (ENCA) resource collates a vast range of natural capital evidence on the benefits of natural capital, and cross references all the relevant outcome indicators and natural capital accounts. ENCA was refreshed and expanded in August 2021 and forms part of the Government's Green Book appraisal guidance.

In November 2020, a further £20 million of investment was announced to develop the **Natural Capital and Ecosystem Assessment**. The Natural Capital and Ecosystem Assessment is in a pilot phase, testing approaches and developing a transformative programme to understand the extent, condition and change over time of environmental assets across England's land and water environments. NCEA will take a systems approach to ensure all elements of our natural capital are produced to the same time, the same quality and the same spatial scale.

Environmental Outcome Indicator progress assessment

In this year's Outcome Indicator Framework report, we updated trends for 30 of the 38 indicators reported in 2020, reflecting the most recent available data. The remaining 8 indicators presented in 2020 were not updated as no new data were available for inclusion in the 2021 report at the time of analysis. The report also included data for 7 additional indicators newly reported in 2021.

Over the last 12 months we increased our understanding of the extent to which we have made recent outcome progress in halting and reversing decline across the natural environment. The scale of action is huge and requires long term concerted action to halt the decline. Not all indicators are heading in the right direction with some areas of significant concern. An overview of latest changes is set out on page 9.










Outcome indicator improvements











- **Clean Air** - The most recent data (2019) continue to show a downward trend in overall roadside concentrations of NO₂ in England. However, there are hotspots of NO₂ exceedances which are being addressed through the NO₂ plans.
- **Clean Water** - The most recent data (2019) continues to show an increase in the percentage of designated bathing waters in England in excellent condition. The number meeting at least the minimum standard has remained relatively stable over the last 4 years.
- **Sustainable Natural Resources – fish stocks** - Overall, there is evidence of a positive trend towards a greater proportion of stocks fished sustainably and within safe biological limits. In the most recent year of assessment (2018), there was a sizeable (11 percentage point) increase in the percentage of stocks with fishing pressure below levels capable of producing maximum sustainable yield.
- **Waste - recycling** - Latest data (2019/20) shows that the recycling rate for 'waste from households' continued to increase compared to previous years. Latest data (2019) show that residual waste sent to landfill continues to decrease while waste sent for incineration continues to increase. Overall residual waste has increased since 2014, but still remains lower than it was in 2010.
- **Waste – illegal waste** - The total number of active illegal waste sites in England fluctuates from year to year but fell considerably in the latest year (2019/20). The number of active high-risk sites has continued to fall gradually since 2014/15.
- **Enhancing Beauty, Heritage and Engagement** - The latest data (2018) shows a continued short-term increase in volunteer time spent on the natural environment since 2014.









Overall performance towards the goals and outcomes of the plan are actively managed at the cross-Government 25 Year Environment Plan Board and Defra Environment Committee.

2. Outcome indicator progress

The Outcome Indicator recent trend updates below are a performance management assessment and are not solely based on the datasets represented by the [Outcome Indicator Framework 2021 update](#).

Title	Qualitative Summary Assessment	Annual Progress Executive Summary
Clean air		
(A1) UK emissions for 5 key air pollutants	 Mostly Desirable	Latest data for sulphur dioxide (SO ₂) and nitrogen oxides (NO _x) emissions (2018) show a continuing downward trend.
(A1) UK emissions for 5 key air pollutants	 Mostly Undesirable	Latest data for fine particulate matter (PM _{2.5}), non-methane volatile organic compounds (NMVOC) and ammonia (NH ₃) (2018) suggest that the downward trends have levelled off and progress may be stalling.
(A3) Concentrations of fine particulate matter (PM _{2.5})	 Mixed Picture	Population-weighted annual mean concentrations of PM _{2.5} in England have fallen by 21% over the latest 8 years for which data are available (up to 2019), but there has been limited change in the most recent data.
(A4) Rural background concentrations of ozone (O ₃)	 Mixed Picture	Average maximum daily 8-hour mean concentration of O ₃ has fluctuated since the beginning of the time series in 1987. Some variance from year to year is expected due to fluctuations in the occurrence of hot summer weather conditions which are associated with high O ₃ concentrations. The most recent data (2019) show a slight decrease compared to the previous year but overall levels remain elevated since the beginning of the time series.
(A5) Roadside nitrogen dioxide (NO ₂) concentrations	 Mostly Desirable	The most recent data (2019) continue to show a downward trend in overall roadside concentrations of NO ₂ in England. However, there are hotspots of NO ₂ exceedances which are being addressed through the NO ₂ plans.
(A6) Exceedance of damaging levels of nutrient nitrogen deposition on ecosystems	 Mostly Undesirable	The most recent data (a three-year moving average covering 2016-2018) continues to show that the percentage of sensitive habitats in England where nutrient nitrogen deposition exceeded critical load remains high (95.1%).
(A7) Area of land exposed to damaging levels of ammonia (NH ₃) in the atmosphere	 Mostly Undesirable	The percentage of land area exposed to concentrations of NH ₃ that exceed critical levels has decreased slightly over the full time series from 88.9% in 2009-11 to 87.9% in 2015-17, but the most recent data (2015-2017 3-year moving average) continues an upward trend started in 2012-2014.
Clean and plentiful water		
(B2) Serious pollution incidents to water	 Mixed Picture	The most recent data (2019) continue to show a downward trend in serious pollution incidents but the data fluctuates over short time periods
(B4) Condition of bathing waters	 Mostly Desirable	This indicator was not updated for the 2021 publication due to COVID-19 restrictions, but the most recent data (2019) continue to show an increase in the percentage of designated bathing waters in England in excellent condition. The number meeting at least the minimum standard has remained relatively stable over the last 4 years.

Enhanced beauty, heritage and engagement with the natural environment		
(G5) People engaged in social action for the environment	 Mostly Desirable	Latest data (2018) show a continued short-term increase in volunteer time spent on the natural environment since 2014.
Enhancing biosecurity		
(H1) Abatement of the number of invasive non-native species entering and establishing against a baseline	 Mostly Undesirable	Latest data (10-year period 2010-2019) for the number of invasive non-native species established across 10% or more of the land area or coastline of Great Britain continue the upward trend for all habitats (freshwater, marine and terrestrial).
(H2) Distribution of invasive non-native species and plant pests and diseases	 Mostly Undesirable	The number of additional tree pests and diseases becoming established in the most recent 10-year rolling time period (2010-2019) has remained relatively stable since the 2004-2013 time period.
Managing exposure to chemicals and pesticides		
(H3) Emissions of mercury and persistent organic pollutants to the environment	 Mixed Picture	Latest data for the UK emissions of 7 persistent organic pollutants (2016) show that only Dioxin-like Polychlorinated biphenyl and Pentachlorophenol have seen clear reductions. The emissions of other persistent organic pollutants remain relatively stable, with the exception of Hexachlorobenzene which continues to increase since 2013.
Minimising Waste		
(C1) Clean seas: marine litter	 Mixed Picture	The most recent data (2015) suggest beach litter has continued to increase in recent years. The most recent data (2015) suggests that the levels of plastic in fulmar stomachs have fluctuated from year to year but remained relatively constant over time.
(J3) Municipal waste recycling rates	 Mostly Desirable	Latest data (2019/20) shows that the recycling rate for 'waste from households' continued to increase compared to previous years.
(J4) Residual waste arising by type and sector	 Mostly Desirable	Latest data (2019) show that residual waste sent to landfill continues to decrease while waste sent for incineration continues to increase. Overall residual waste has increased since 2014, but still remains lower than it was in 2010.
(J6) Waste crime	 Mixed Picture	Total number of active illegal waste sites in England fluctuates from year to year but fell considerably in the latest year (2019/20). The number of active high-risk sites has continued to fall gradually since 2014/15. Fly tipping incidents have been gradually increasing since 2013/14.
(J1) Carbon footprint and consumer buying choices	 Mostly Desirable	Latest data (2017) show that total consumption-based emissions have continued to decline since 2008
Mitigating and adapting to climate change		
(A2) Emissions of greenhouse gases from natural resources	 Mixed Picture	The latest data (2018) show that emissions of greenhouse gases from natural resources in England are continuing to fall. This overall downward trend has primarily been driven by reductions in the waste sector.

Thriving Plants and Wildlife		
(D2) Extent and condition of protected sites – land, water and sea	 Mixed Picture	Latest data for the extent of protected sites at sea (2020) show a large increase, continuing the upward trend. However, data for the extent of protected sites on land and water show little change. The latest data (2020) for the percentage of SSSIs in a favourable condition shows little change while the percentage of SSSIs in an unfavourable recovering condition continues to decline.
(D4) Relative abundance and/or distribution of widespread species	 Mixed Picture	While there is volatility in this data, the latest (2019) smoothed indices for the relative abundance of widespread bats in England shows a continuing upward trend. Latest data for the relative abundance of farmland and woodland butterflies in England show a continuing recovering trend. However, the latest data for the relative abundance of farmland and woodland birds show a continuing downward trend.
(D6) Abundance and distribution of priority species	 Mostly Undesirable	Overall relative abundance of 149 priority species in England continues to decrease with the latest data (2018). The distribution of 181 priority species also shows a continuing downward trend. The long and short-term trends for relative abundance show a strong decrease for the majority of species within the index, however a very small number of species are increasing.
(D7) Species supporting ecosystem functions	 Mostly Undesirable	Overall distribution of 377 species of pollinators in the UK has remained stable in the latest data (2017); and remains a large decrease since 1988. The long-term trend for UK pollinators shows that the distribution is not changing or is decreasing for the majority of species; and is increasing for a very small number of species.
(C10) Productive seas: fish and shellfish stocks safe and environmentally sustainable	 Mostly Desirable	Overall, there is evidence of a positive trend towards a greater proportion of stocks fished sustainably and within safe biological limits. In the most recent year of assessment (2018), there was a sizeable (11 percentage point) increase in the percentage of stocks with fishing pressure below levels capable of producing maximum sustainable yield.
Using resources from nature more sustainably and efficiently		
(E2) Volume of agricultural production	 Mostly Desirable	Latest data (2019) shows that the overall volume of agricultural production (outputs) in the UK continues to remain relatively stable, with some variation from year to year.
(E8) Efficient use of water	 Mixed Picture	Most recent data (3 year moving average covering 2017/18-2019/20) shows that the water leakage in England has stayed relatively stable at 2,897 megalitres/day in the latest period. Water consumption in England has also remained fairly stable.
(J2) Raw material consumption	 Mixed Picture	Latest data shows that in 2017, England generated approximately 15.9% more economic value (gross value added per unit of raw material consumption) than in 2001, but there was little change in the latest year (2016 to 2017).

Further detail and interactive outcome indicator data is available here:
<https://oifdata.defra.gov.uk/>

3. Summary assessment by environment goal

Clean air

<p>Ambition</p> <ul style="list-style-type: none"> We will achieve clean air by meeting existing legally binding targets set through the National Emissions Ceilings Regulations to reduce emissions of 5 damaging air pollutants and nitrogen dioxide (NO₂) concentrations <p>Examples of how we are monitoring progress</p> <ul style="list-style-type: none"> Emissions of 5 key air pollutants against targets set through the National Emissions Ceilings Regulations 2018. Average concentrations of nitrogen dioxide (NO₂) at the roadside in England Area of sensitive habitats in England where nutrient nitrogen deposition has exceeded critical load 	<p>Examples of trends in condition of natural environment</p> <p>Latest data for sulphur dioxide (SO₂) and nitrogen oxide (NO_x) emissions (2018) show a continuing downward trend. (A1 Indicator)</p> <p>Latest data for fine particulate matter (PM_{2.5}), non-methane volatile organic compounds (NMVOC) and ammonia (NH₃)(2018) suggest that the downward trends have levelled off and progress may be stalling. (A1 Indicator)</p> <p>Population-weighted annual mean concentrations of PM_{2.5} in England have fallen by 21% over the latest 8 years for which data are available (up to 2019), but there has been limited change in the most recent data. (A3 Indicator)</p> <p>The most recent data (2019) continues to show a downward trend in overall roadside concentrations of NO₂ in England. However, there are hotspots of NO₂ exceedances which are being addressed through the NO₂ plans. (A5 Indicator)</p> <p>The percentage of land area exposed to concentrations of NH₃ that exceed critical levels has decreased slightly over the full time series from 88.9% in 2009-11 to 87.9% in 2015-17, but the most recent data (2015-2017 3-year moving average) continues an upward trend started in 2012-2014. (A7 Indicator)</p>
<p>Summary of key actions being taken to achieve ambition</p>	

Preparing to publish a UK National Air Pollution Control Plan in September 2022 that sets out policies and measures to achieve compliance with 2030 emission targets.

Reviewing the Local Air Quality Management framework for publication by March 2023, and the national and Local Air Quality Strategy by June 2023.

Delivering key parts of Clean Air Strategy through the Environment Bill, such as:

- Introducing a duty to set an ambitious, legally binding target for PM_{2.5}, alongside at least 1 further long-term air quality target
- Launching a public consultation on new legal targets for air quality in early 2022, with the requirement of bringing forwards targets by October 2022.
- Providing new powers to enforce environmental standards for vehicles and Non-Road Mobile Machinery.

Introduced 1st phase of legislation to restrict sale of wet wood for domestic burning in England, put limits on emission of sulphur and smoke from manufactured solid fuels, and phase out sale of bituminous coal (traditional house coal).

Consulted on options to reduce ammonia emissions from urea fertiliser; and preparing to publish response later this year.

Preparing to consult on options to reduce ammonia emissions from storage and the of manure, digestate and slurry by the end of 2021.

Consulted on approach for deciding Best Available Techniques to regulate industrial emissions; and preparing to publish response later this year.

Announced an end to the sale of new petrol and diesel cars and vans by 2030, with all new cars and vans needing to be zero emissions at the tailpipe by 2035.

Committed £1.5 billion to support the early market and remove barriers to zero emission vehicle ownership. Pledged a further £2.8 billion to support industry and drivers to switch to cleaner vehicles. Announced a further £5 billion in funding to deliver cleaner buses, improved services and to boost cycling and walking.

Supporting 61 local authorities, with £880 million to develop and implement measures to address NO₂ roadside exceedances in the shortest possible time. Of which, allocated over £550 million to local authorities to take forward NO₂ plans

Delivered first Clean Air Zone (CAZ) for Bath in March 2021 and the required digital, service, and legal infrastructure for delivery of CAZs over next 2 years.

Reviewing and improving the Daily Air Quality Index, the aim being to develop more practical messaging on the impacts of air quality on public health, targeted to all, but especially towards vulnerable groups such as children with asthma.

Clean and plentiful water

<p>Ambition</p> <ul style="list-style-type: none"> We will achieve clean and plentiful water by achieving at least 75% of our waters to be as close to their natural state as soon as practicable <p>Examples of how we are monitoring progress</p> <ul style="list-style-type: none"> Bathing waters meeting conditions sufficient to minimise the risk of harm Waterbodies achieving ‘Good Ecological Status’ Biological quality measures relating to rivers, lakes, saltmarshes, groundwaters, drinking water and surface water. Terrestrial and freshwater protected sites in a favourable condition, securing their wildlife value for the long term 	<p>Trends in condition of natural environment</p> <p>The most recent data (2019) continues to show a downward trend in serious pollution incidents to water but the data fluctuates over short time periods. (B2 Indicator)</p> <p>The bathing waters indicator was not updated for the 2021 publication due to COVID-19 restrictions, but the most recent data (2019) continue to show an increase in the percentage of designated bathing waters in England in excellent condition. The number meeting at least the minimum standard has remained relatively stable over the last 4 years. (B4 Indicator)</p> <p>There is a long-term trend showing an increase in the extent of principal salmon rivers deemed to be at risk. Most recent data (2019) continues this trend. There has been a slight but consistent increase in rivers classed as high and good ecological status for fish between 2009 and 2015 and a small decrease in rivers in poor or bad categories. (B7 Indicator)</p>
<p>Summary of key actions being taken to achieve ambition</p> <p>Considering legally binding targets through the Environment Bill covering wastewater, agriculture, water demand, and pollution from abandoned metal mines</p> <p>Amended the Environment Bill to help to reduce sewage discharges from storm overflows through legally binding obligations on water companies and Government.</p> <p>Introducing reforms through the Environment Bill to vary or revoke abstraction licences without the liability to pay compensation to protect the environment from damage. This will strengthen environmental protection from over abstraction.</p> <p>Developing a Slurry Investment Scheme to realise the productive potential of slurry without letting it endanger water and air quality. Multi-year scheme launch in 2022.</p>	

Funded, through Water and Abandoned Metal Mines programme, the ongoing running costs of 3 water treatment schemes which treat 7.4 billion litres of mine water each year, preventing 800 tonnes of metals entering and polluting rivers.

Established Storm Overflows Taskforce to develop proposals to significantly reduce the volumes of sewage discharged into our water courses. The taskforce has agreed a long-term goal to eliminate harm from storm overflows.

Publishing Third Cycle River Basin Management Plans for public consultation by December 2021 to focus on themes such as nature recovery networks, environment land management, and natural flood management.

Designated England's bathing water river site at River Wharfe in Ilkley. Monitoring taking place in 2021 on water quality, testing for intestinal enterococci and E. coli.

Co-hosted summit to inform actions to return chalk streams to their natural state. The Chalk Stream Restoration Strategy will be published later in 2021.

Formed a Water Industry Natural Environment Programme (WINEP) Taskforce, along with Ofwat that requires water companies to reduce pollution through adopting more innovative, nature-based catchment approaches. The WINEP is valued at £4.6 billion, covering the period 2020-25.

Supported 5 water companies for proposals worth over £850 million which will benefit the environment and create jobs. Final decisions to be confirmed shortly.

Delivering forecast 674 kilometres of enhanced water environment, 219 kilometres of protected water through the Water Environment Improvement Programme.

Supporting 94 projects undertaking activities such as improving water quality on farmland during 2019 to 2022 through the Water Environment Grant (£31 million).

Publishing a public consultation on the proposed Environmental Permitting Regime amendments to include abstraction and impounding licensing

The Government set out its [response](#) to the consultation on measures to reduce personal water usage, proposing measures to meet the ambitions set out in the [National Framework for Water Resources](#) to reduce average personal water consumption to 110 litres per person per day by 2050.

Thriving plants and wildlife – terrestrial and marine

<p>Ambition</p> <ul style="list-style-type: none"> We will achieve a growing and resilient network of land, water and sea that is richer in plants and wildlife. <p>Examples of how we are monitoring progress</p> <ul style="list-style-type: none"> Protected sites in a favourable condition Hectares of land on which we are creating or restoring priority habitats. Area of woodland cover in England Abundance and distribution of priority species in England Distribution of species supporting ecosystem functions Seafood coming from healthy ecosystems, produced sustainably 	<p>Trends in condition of natural environment</p> <p>Latest data for the extent of protected sites at sea (2020) show a large increase, continuing the upward trend. Data for the extent of protected sites on land and water show little change. (D2 Indicator)</p> <p>Latest data (2020) for the percentage of Sites of Special Scientific Interest (SSSIs) in a favourable condition shows little change while the percentage of SSSIs in an unfavourable recovering condition continues to decline. (D2 Indicator)</p> <p>The overall relative abundance of 149 priority species in England continues to decrease with the latest data (2018). The distribution of 181 priority species also shows a continuing downward trend. The long and short-term trends for relative abundance show a strong decrease for the majority of species within the index, however a very small number of species are increasing. (D4 Indicator)</p> <p>The overall distribution of 377 species of pollinators in the UK has remained stable in the latest data (2017); and remains a large decrease since 1988. The long-term trend for UK pollinators shows that the distribution is not changing or is decreasing for the majority of species; and is increasing for a very small number of species. (D7 Indicator)</p>
<p>Summary of key actions being taken to achieve ambition</p> <p>Considering which legally binding targets to set through the Environment Bill to cover improving the condition of protected sites, increasing species populations, and restoring and improving the quality of habitats outside protected sites. Developing a 2030 target for species abundance, aiming to halt the decline of nature, to the same deadline in 2022.</p>	

Using new powers in the Environment Bill to establish spatial mapping and planning tools to inform decisions about nature recovery, create duties and incentives to support it. Requiring development of conservation strategies for protected sites and species.

Completed 5 Local Nature Recovery Strategy pilots, which will be used to inform the development of Regulations and Statutory Guidance ahead of national rollout.

Supporting IT systems and monitoring and evaluation requirement for biodiversity net gain. Market analysis assessed the potential for supply and demand of biodiversity units and set out recommendations. 9 pilot projects are informing the approach to selling statutory biodiversity credits and investing associated revenues

Setting out plans to publish a Green Paper later in 2021 setting out our ambition for nature recovery, including consideration of how we best protect species and important habitat in order to meet our ambitious targets.

Extending protected areas or identifying other effective conservation measures to over 400,000 hectares, taking action to drive up their value for biodiversity.

Implementing the final phase of the UK review of Special Protection Areas - areas classified to protect habitats of certain wild birds including migratory species.

Published England Peat and Trees Action Plans in May 2021, setting out the Government's vision for management, protection, and restoration of peatlands and treescape.

Awarded £37.5 million to 69 projects through Round 1 of the Green Recovery Challenge Fund. Round 2 of the fund was launched in March 2021 and successful grantees were notified in July 2021, with nearly £38m awarded to 90 nature projects across England. 800,000 trees due to be planted in Round 1, supporting 2,000 jobs across England by the end of 2021, rising to over 2,500 by projects completion in March 2023.

Launched National Delivery Partnership to develop an action and delivery plan, drawing on new tools and incentives in the Environment Bill to implement it.

Committed to creating a Species Reintroductions Taskforce to build collaborative projects to restore numbers of declining species and grow opportunities for reintroductions.

Successfully released beavers in Devon in advance of a consultation that will outline the approach and our management of beavers.

Published the updated UK Marine Strategy (UKMS) Part Two, setting out monitoring towards Good Environmental Status targets. We are currently reviewing the UK Marine Strategy Part Three, which will set out a comprehensive programme of measures to help achieve Good Environmental Status in UK seas, including measures to tackle marine litter, protect marine biodiversity and reduce contaminants entering our seas.

Publishing remaining marine plans for England by summer 2021. A report on the effects of the East Marine Plan has been published and is available on gov.uk.

Establishing measures for Marine Protected Areas (MPAs), using Fisheries Act to extend current management tools. For the remaining 40 offshore MPAs, announced a 3-year timetable to put in place fisheries management measures to protect the sites.

Published Benyon Review into Highly Protected Marine Areas (HPMAs) which recommends that Government introduce HPMAs in English waters. We will begin introducing **Highly Protected Marine Areas** by identifying a number of pilot locations within English waters.

Launched £500 million Blue Planet Fund to support developing countries to sustainably manage the marine environment and reduce poverty.

Committed, through the Resources and Waste Strategy, to consult in 2022 on measures such as an Extended Producer Responsibility Scheme for fishing gear.

Carried out a Call for Evidence to better understand shark fin trade and its impact both in the UK and overseas. Used evidence to develop legislation to ban the import and export of detached shark fins, to be included in the Animals Abroad Bill

Preparing an English Seabird Conservation Strategy to be published in summer 2022 that assess the vulnerability of seabird species; and actions to address them.

Published new sensitivity assessments focussed on potential climate change impacts on protected features of MPAs and role in enhancing climate resilience.

Launched Offshore Wind Enabling Action Programme to increase understanding of the environmental impacts of offshore wind and find solutions to reduce barriers to offshore wind in English waters whilst also protecting the marine environment.

Reduced risk of harm from environmental hazards

<p>Ambition</p> <ul style="list-style-type: none"> We will reduce the risk of harm to people, the environment and the economy from natural hazards including flooding, drought, and coastal erosion. <p>Examples of how we are monitoring progress</p> <ul style="list-style-type: none"> The 25 Year Environment Plan outcome indicator framework includes indicators relating to drought, flood, and coastal erosion risk management in development 	<p>Trends in condition of natural environment</p> <p>Between 2015 and 2021 we invested £2.6 billion to better protect 314,000 homes involving over 700 projects also benefitting agricultural land, thousands of businesses, and major pieces of infrastructure from the effects of flooding and coastal erosion.</p>
<p>Summary of key actions being taken to achieve ambition</p> <p>Published a Policy Statement on Flood and Coastal Erosion Risk Management which set a long-term ambition to create a nation more resilient to future flood and coastal erosion risk.</p> <p>Published an updated National Flood and Coastal Erosion Risk Management Strategy which sets out a vision for “a nation ready for, and resilient to, flooding and coastal change – today, tomorrow and to the year 2100.”</p> <p>Enhancing water industry planning processes through the Environment Bill to increase resilience to extreme weather events, sewer, and surface water flooding.</p> <p>Committed to investing a record £5.2 billion over 6 years from April 2021. This investment will deliver around 2,000 flood schemes, benefitting every region of the country, and will better protect 336,000 properties from flooding. This will reduce national flood risk by 11% and it will help avoid £32 billion in future damages</p> <p>Undertaking an assessment of the benefits of the 2015-2021 programme linked to its intended social, economic, and environmental impacts. This will help to understand what was achieved and will provide evidence to improve future programmes and policies. The final report is due to be published later in 2021.</p> <p>Completed construction of several flood defence schemes that contributed to better protecting over 57,000 properties from flooding,</p> <p>Publishing the outcome of a Call for Evidence on frequently flooded communities, that explored how we can strengthen our flood and coastal defence investment programme through better assessment of local circumstances.</p>	

Closed the £15 million Natural Flood Management (NFM) programme that over 6 years had supported. 58 projects across England to reduce flood risk to more than 15,000 homes and improve 4,000 hectares of habitat.

Undertaking an evaluation of the NFM programme to inform an update of the NFM Evidence Directory in 2022, strengthening the evidence base through case studies

Consulted on potential changes to the Property Flood Resilience Recovery Support Scheme that aims to improve its efficiency and effectiveness and encourage greater uptake of Property Flood Resilience among households at high risk of flooding across the UK. A Government response will follow in due course.

Announced the 25 places which will benefit from a share of £150 million from the Flood and Coastal Resilience Innovation Programme. Local authorities, businesses and communities will test and demonstrate resilience actions locally.

Published an independent review into surface water and drainage responsibilities.

Publishing an update on progress against Surface Water Management Action Plan and publishing a Government response to the independent surface water review.

Piloting the Sustainable Farming Incentive before it launches in 2022. The Local Nature Recovery scheme will also begin piloting in 2022, with a phased launch from late 2023. From 2022 the Landscape Recovery scheme will begin piloting by launching at least 10 projects, with the scheme's rollout accelerating from 2024.

Consulted on changes to the National Planning Policy Framework to strengthen environmental policies, including clarifying aspects of policy concerning planning and flood risk. The Government's consultation response will follow in due course.

Using resources from nature more sustainably and efficiently

<p>Ambition</p> <ul style="list-style-type: none"> Increasing our resource productivity in order to do more as natural resources become more scarce <p>Examples of how we are monitoring progress</p> <ul style="list-style-type: none"> Marine fish (quota) stocks fished below maximum sustainable yield Annual volume of softwood and hardwood timber brought to market in England Gross Value Added per unit of Raw Material Consumption (RMC) 	<p>Trends in condition of natural environment</p> <p>Overall, there is evidence of a positive trend towards a greater proportion of stocks fished sustainably and within safe biological limits. In the most recent year of assessment (2018), there was a sizeable (11 percentage point) increase in the percentage of stocks with fishing pressure below levels capable of producing maximum sustainable yield. (C10 Indicator)</p> <p>Latest data shows that in 2017, England generated approximately 15.9% more economic value (gross value added per unit of raw material consumption) than in 2001, but there was little change in the latest year (2016 to 2017). (J2 Indicator)</p> <p>Latest data (2019) shows the overall volume of agricultural production (outputs) in the UK continues to remain relatively stable, with some variation from year to year. (E2 Indicator)</p> <p>Latest data (2019) shows that the percentage of annual growth in English woodlands that is harvested is remaining stable at around 43%. (E4 Indicator)</p> <p>Latest data (2019) shows that there is a continuing decrease in the volume of hardwood and softwood removed from forests managed by Forestry England, and a continuing increase in the volume removed from other English sources. (E5 Indicator)</p>
<p>Summary of key actions being taken to achieve ambition</p> <p>Introduced Fisheries Act that sets out a legally binding framework, to create policies to protect and recover fish stocks, support a thriving sustainable fishing</p>	

industry, and safeguard the environment. This includes preparing a UK wide Joint Fisheries Statement and implementing fisheries management plans for long-term.

Drafting Joint Fisheries Statement through UK Fisheries Administrations detailing the policies we will take to deliver the fisheries objectives set out in Fisheries Act.

Publishing UK Seabird and Cetacean Bycatch Plans of Action in summer 2021 that will outline actions to tackle cetacean bycatch in UK waters through the implementation of risk-based mitigating actions. Launching a Bycatch Mitigation Hub to provide information on mitigation options by species and fishing gear.

Published England Trees Action Plan that includes measures to encourage supply and demand for UK grown timber, including a new Forestry Innovation Fund which will provide financial support to develop innovative timber products, and use of procurement policies to increase demand for sustainably sourced timber.

The Environment Bill includes an amendment to require due diligence from businesses, making it illegal for UK businesses to use key commodities if they have not been produced in line with local laws protecting forests and other natural ecosystems.

Developing the Government Food Strategy that will cover the entire food chain from field to fork, building on work already underway in the Agriculture Act, the Fisheries Act, the Environment Bill, and the Childhood Obesity Plan.

Agreed in principle the annual fisheries negotiations that enable percentage of fish stocks of interest to the UK at maximum sustainable yield to be calculated for 2021

Developing a healthy soils indicator where soil carbon is being considered as 1 of many key soil variables. This indicator will feed into the soil monitoring scheme and potentially inform a future target for soil health under the Environment Bill. The Sustainable Farming Incentive Scheme, which opens from spring 2022, will offer 2 soils standards. This acknowledges the role that healthy soils play in delivering a range of environmental benefits, as well as production.

Established UK Fisheries Science Advisory Panel to enable coordination of advice and ensure use of best science to support the UK as an international coastal State

Developing 3 schemes that reward the delivery of environmental benefits and alongside other policies outlined in our Agricultural Transition Plan, contribute towards achieving 25 Year Environment Plan goals. The 3 schemes are the Sustainable Farming Incentive, Local Nature Recovery scheme and the Landscape Recovery scheme.

Delivering a programme of tests and trials, the priorities for which are the building blocks we will need for the scheme pilots. The pilots will provide a critical opportunity to test and refine the design of each scheme prior to its launch.

Published Part 1 of the Henry Dimbleby independent review of the food system. Responded to Part 1 of the review, reaffirming commitments to upholding our high food safety, environmental and animal welfare standards in all future trade deals.

Part Two of the report has focused on the entire UK food system from farm to fork, outlining recommendations for the UK Government that will be considered in the development of a Government White Paper.

Enhanced beauty, heritage and engagement with the natural environment

<p>Ambition</p> <ul style="list-style-type: none"> We will conserve and enhance the beauty of our natural environment, and make sure it can be enjoyed, used by, and cared for by everyone <p>Examples of how we are monitoring progress</p> <ul style="list-style-type: none"> Population of adults visiting the natural environment at least once a week 	<p>Trends in condition of natural environment</p> <p>The most recent data (2018-19) continue the long-term trend of a slight increase in visits to the natural environment at least once a week. No new data are available this year as the source survey data are no longer collected. The MENE survey has been replaced with the new People and Nature Survey which will give us comparable insights going forward. Annual results from People And Nature Survey should be available for reporting in the Outcome Indicator Framework from next year. (G4 Indicator)</p> <p>We continue to refine our ability to monitor progress against ambition and are establishing baseline data for further key indicators, such as for monitoring the condition of heritage assets.</p>
<p>Summary of key actions being taken to achieve ambition</p> <p>Preparing to lay legislation during 2021 to streamline the process of recording and changing rights of way. A deadline for recording unrecorded historic rights of way will be brought into force which will finalise the legal record of rights of way.</p> <p>Launched the Green Social Prescribing programme to test nature-based social prescribing in 7 test and learn sites, run national research work to understand its scalability, and deliver an evaluation.</p> <p>Continued delivery of the Nature Friendly Schools and Community Forest and Woodland Outreach projects working with over 140 schools in disadvantaged areas. A further 82 primary schools, plus 5 secondary schools, 10 special schools and 3 Alternative Provision Institutions will be receiving delivery during 2021/22.</p> <p>Continued delivery of the Growing Care Farming Project to support care farmers and health professionals to provide therapeutic, mental health, social and educational care services. Ongoing uptake of the code of practice for care farms.</p> <p>The Farming in Protected Landscapes programme (part of Defra's Agricultural Transition Plan) will offer funding to farmers and land managers in Areas of Outstanding Natural Beauty (AONB), National Parks and the Broads.</p>	

Developing a National Framework of Green Infrastructure Standards to be launched in 2022, to show what good green infrastructure looks like and to help local authorities, developers and communities improve provision in their areas

Extending Urban Tree Challenge Fund to support planting and establishment of trees in urban and peri-urban areas. Thousands of trees will be planted near schools, healthcare centres and in areas with fewer trees, higher social deprivation

Delivering Trees for Climate, which is forecast to deliver 6,000 hectares of new woodland by 2025, building on 500 hectares in 2020/21 through £12.1 million.

Delivering the England Coast Path, with over 1,520 miles now approved as England Coast Path, and 431 miles already open for the public to enjoy. A number of new stretches of the path will open throughout 2021 and, other than where planning decisions or legal issues are still being considered, we aim to have all stretches either open, or with establishment works started, by the end of 2021.

Developing a new northern National Trail between Cumbria and North Yorkshire, a 192-mile trail that aims to showcase 3 of the UK's most scenic National Parks.

Refreshed the Countryside Code as part of a wider campaign to support people's safe enjoyment of the outdoors and aligned with the COVID-19 restrictions lifting.

Preparing for the Government response to the Glover Review of landscapes is underway. A [Ministerial Statement](#) was released in 2021, with a full response anticipated to be published later in the year.

Considering designation of 2 new Areas of Outstanding Natural Beauty (AONB) and extensions to 2 existing AONBs. Designations will contribute substantially towards improving 30% of our land for nature by 2030 safeguarding these areas for future generations and bringing more people within closer reach of nature.

Commissioned 2 new social research projects to review existing evidence and provide new qualitative evidence on experiences of, and engagement with, national landscapes. This evidence will inform a more targeted approach to addressing the barriers to inclusive access of our national landscapes.

Mitigating and adapting to climate change

<p>Ambition</p> <ul style="list-style-type: none"> We will take all possible action to mitigate climate change, while adapting to reduce its impact. <p>Examples of how we are monitoring progress</p> <ul style="list-style-type: none"> Emissions of greenhouse gases from natural resources Area of woodland cover in England 	<p>Trends in condition of natural environment</p> <p>Latest data (2018) show that emissions of greenhouse gases from natural resources in England are continuing to fall. This overall downward trend has been driven by reductions in the waste sector. (A2 Indicator)</p>
<p>Summary of key actions being taken to achieve ambition</p> <p><i>Climate Change Mitigation</i></p> <p>Putting nature at the heart of COP26, championing and driving forward the protection of the marine environment and nature-based solutions for climate,</p> <p>Laid legislation for the UK's sixth carbon budget, proposing a target which would reduce greenhouse gas emissions by 78% by 2035 compared to 1990 levels.</p> <p>Committed to completing the F-gas Regulation Review by no later than 2022 and assessing how we can go further.</p> <p>Publishing a new Biomass Strategy that reviews what amount of sustainable biomass could be available to the UK, and how this resource could be best utilised</p> <p>Published the England Peat and Trees Action Plans, setting out the long term vision for the management, protection and restoration of our peatlands and treescape, including how we will support their resilience to future climate change risks and provide a wide range of benefits to wildlife, people and planet</p> <p>Undertaken 2nd consultations on collection and packaging reforms to the waste system. Preparing to publish Government responses on next steps in due course.</p> <p>Developing the Government Food Strategy that will cover the entire food chain from field to fork, building on work already underway in the Agriculture Act, the Fisheries Act, the Environment Bill, and the Childhood Obesity Plan.</p> <p>Developing 3 schemes that reward the delivery of environmental benefits and alongside other policies outlined in our Agricultural Transition Plan, contribute towards achieving 25 Year Environment Plan goals. The 3 schemes are the Sustainable Farming Incentive, Local Nature Recovery scheme and the Landscape Recovery scheme</p>	

Announced £640 million Nature for Climate Fund that will provide funding towards the creation, restoration and management of woodland and peatland habitats. For example, it supports the establishment of 30,000 hectares of woodland annually in the UK by 2025 and restoration of 35,000 hectares of peatland across the UK.

Awarded £37.5 million to 69 projects through Round 1 of the Green Recovery Challenge Fund. Launched Round 2 of the Fund, with awards due in July 2021. 800,000 trees due to be planted in Round 1, supporting 2,000 jobs across England by the end of 2021, rising to over 2,500 by projects completion in March 2023,

Climate Change Adaptation

Published first Adaptation Communication at the Climate Ambition Summit in December 2020. This sets out what is being done to prepare for the effects of climate change at home and to support those facing climate impacts overseas.

Continuing to deliver the second National Adaptation Programme through actions from across the economy, including the natural environment, infrastructure, people and the built environment, business and industry, and local government.

Published the Green Book supplementary guidance on Accounting for the Effects of Climate Change, to include updated information on climate change evidence and assessments. This will support Government departments and other organisations to consider climate risks in project appraisals and investments.

Established a project with the OECD which seeks to tackle the challenges faced in the UK and internationally on monitoring progress in adapting to climate change.

Responding to the Climate Change Committee's recommendations in their 2021 Progress Report on Adapting to Climate Change in statutory Government response by October 2021.

Minimising waste

<p>Ambition</p> <ul style="list-style-type: none"> We will minimise waste, reuse materials as much as we can and manage materials at the end of their life to minimise the impact on the environment <p>Examples of how we are monitoring progress</p> <ul style="list-style-type: none"> Number of illegal waste sites in England Municipal waste recycled 	<p>Trends in condition of natural environment</p> <p>Latest data (2015) suggests beach litter has continued to increase in recent years. (C1 indicator)</p> <p>Latest data (2019/20) shows that the recycling rate for 'waste from households' continued to increase compared to previous years. (J3 Indicator)</p> <p>Latest data (2019) show that residual waste sent to landfill continues to decrease while waste sent for incineration continues to increase. Overall residual waste has increased since 2014, but still remains lower than it was in 2010. (J4 Indicator)</p> <p>The total number of active illegal waste sites in England fluctuates from year to year but fell considerably in the latest year (2019/20). The number of active high-risk sites has continued to fall gradually since 2014/15. (J6 Indicator)</p> <p>Fly-tipping incidents have been gradually increasing since 2013/14. New reporting methodology since 2018/19 shows a decrease in the overall number of incidents compared to the old methodology with a small increase between 2018/19 and 2019/20. (J6 Indicator)</p>
<p>Summary of key actions being taken to achieve ambition</p> <p>Utilising the Environment Bill to drive resource efficient product design and product information requirements that support durability, repairability and recyclability.</p> <p>Consulting on a new Waste Prevention Programme for England which sets out 3 cross cutting themes: improved product design; supporting local systems and services; and improving access to data to enable use of secondary materials. It also proposes action across 7 sectors ranging from construction to textiles. Preparing to publish the final revised Waste Prevention Programme later in 2021.</p>	

Developing a proposal for an Extended Producer Responsibility scheme for textiles, towards consulting with stakeholders on options by the end of 2022.

Agreed to work with the Green Construction Board to publish a road map to achieving Zero Avoidable Waste in the construction sector by 2050 later this year.

Undertaken 2nd consultations on collection and packaging reforms to the waste system. Preparing to publish Government responses on next steps in due course.

Published a revised Waste Management Plan for England, bringing current waste policies under 1 national plan.

¹ Restricted supply of single-use plastic straws, stirrers, and cotton buds. continuing to gather evidence to support further action on single-use items, including bans.

Increased the single-use carrier bag charge to 10 pence and extended it to all retailers to build on its success and create a level playing field for all businesses.

Published response to call for evidence on standards for bio based, biodegradable and compostable plastics, including intention to consult on banning oxo-degradable plastics in due course.

Developing proposals for the reform of the waste Carrier, Broker, and Dealer regime. Preparing to consult towards the end of the year on the proposed reforms. Intending to consult on the introduction of mandatory electronic waste tracking.

Published guidance on binrastructure (the provision of litter bins) for local authorities and Business Improvement Districts.

Launched a grant scheme for local authorities in England to apply for grants to purchase new litter bins. Awarded approximately £1 million to 44 projects. These new bins should help local authorities reduce litter through targeted interventions.

Carrying out research into effective measures to tackle smoking related litter, which is the most prevalent in the UK, including extended producer responsibility.

Preparing to consult on mandatory reporting of food waste and loss in 2021.

Supported WRAP with £4 million to prevent and reduce food waste across the food chain and help consumers waste less. This included nearly £1 million funding for a field force to help businesses with the Food Waste Reduction Roadmap.

Managing exposure to chemicals

<p>Ambition</p> <ul style="list-style-type: none"> We will make sure that chemicals are safely used and managed, and that the levels of harmful chemicals entering the environment (including through agriculture) are significantly reduced <p>Examples of how we are monitoring progress</p> <ul style="list-style-type: none"> UK emissions of Persistent Organic Pollutants (POPs) to air UK emissions of mercury to air 	<p>Trends in condition of natural environment</p> <p>Latest data for the UK emissions of 7 Persistent Organic Pollutants (POPs) (2016) show that only Dioxin-like Polychlorinated biphenyl and Pentachlorophenol have seen clear reductions. The emissions of other POPs remain relatively stable, with the exception of Hexachlorobenzene which continues to increase since 2013. (H3 Indicator)</p> <p>New evidence in the Outcome Indicator Framework H4 indicator has demonstrated the exposure of wildlife to chemicals. Further development work will seek to address data gaps and consider methods for reporting the exposure and effects of chemicals on wildlife.</p>
<p>Summary of key actions being taken to achieve ambition</p> <p>Developing a Chemicals Strategy that will set out immediate priorities alongside any actions that will need to be taken to achieve safer and more environmentally sustainable management of chemicals for present and future generations.</p> <p>Consulted on update to UK National Implementation Plan for POPs, which reports on previous actions and proposes further actions for the next 2 to 3 years.</p> <p>Publishing updated National Implementation Plan, which sets out new actions to reduce and eliminate POPs in the environment, including the removal of Polychlorinated Biphenyls contaminated equipment from use by 2025.</p> <p>Consulted on a revised National Action Plan for the Sustainable Use of Pesticides. that sets plans to minimise risks and impacts of pesticides to human health and environment, while ensuring pests and pesticide resistance are managed effectively.</p> <p>Preparing to issue a summary of responses to the consultation on the National Action Plan for Sustainable Use of Pesticides, followed by a final National Action Plan later in the year which will update and supersede the 2013 version.</p> <p>Launched the UK Registration, Evaluation, Authorisation & restriction of Chemicals (UK REACH); which is working to maintain the UK's existing high standards in the safe and effective regulation of chemicals.</p> <p>Tested our Prioritisation and Early Warning System to identify emerging chemical issues across water, air and soil that will inform chemical management in the UK.</p> <p>Consulted on UK proposal to list certain Medium Chain Chlorinated Paraffins (MCCPs) as a POP under the Stockholm Convention. Submitted a proposal to Stockholm Secretariat that these MCCPs are POPs.</p>	

Enhancing biosecurity

<p>Ambition</p> <ul style="list-style-type: none"> We will enhance biosecurity to protect our wildlife and livestock; and boost the resilience of plants and trees <p>Examples of how we are monitoring progress</p> <ul style="list-style-type: none"> Additional tree pests and diseases becoming established in England 	<p>Trends in condition of natural environment</p> <p>Latest data (10-year period 2010-2019) for the number of invasive non-native species established across 10% or more of the land area or coastline of Great Britain continues the upward trend for all habitats (freshwater, marine and terrestrial). (H1 Indicator)</p> <p>The number of additional tree pests and diseases becoming established in the most recent 10-year rolling period has remained relatively stable in the latest 10-year time period. (H2 Indicator)</p>
<p>Summary of key actions being taken to achieve ambition</p> <p>Published Pathway Action Plans for recreational boating, angling, and zoos. A further plan will tackle horticulture escapes and contaminants of ornamental plants. Consulting on all plans by 2022, before finalising and implementing actions.</p> <p>Commissioned a review of the Great Britain Invasive Non-Native Species Strategy which due to report later this year. Preparing to publish the new strategy in 2022</p> <p>Consulting on the Great Britain Plant Biosecurity Strategy and publishing a new strategy by 2022, that will set out our GB biosecurity approach from 2022-2027.</p> <p>Acted to eradicate Asian hornet and investigate reports of raccoon, raccoon dog, gibel carp and banded newt. Commenced and continuing to eradicate the Chinese mystery snail, topmouth gudgeon, various-leaved watermilfoil, water primrose, ruddy duck and monk parakeet.</p> <p>Held Invasive Species Week involving 265 organisations to raise awareness of invasive species and improve biosecurity through behaviour change.</p> <p>Scoped the role of a non-native species inspectorate. Piloting some of its key functions during 2021 to inform the need for, and functioning of, an inspectorate.</p> <p>Established statutory bodies to advise ministers about listing species of special concern, providing a comprehensive regulatory regime to tackle these species</p> <p>Working with international partners towards agreeing a global target on invasive species at the 15th Conference of the Parties to the Convention on Biological Diversity in China in October 2021 and will reflect this in our refreshed strategy.</p>	

Introduced strengthened measures against 8 tree pests and diseases, 6 of which were previously unregulated. We have also taken action to strengthen measures against major threats including from *Xylella* and emerald ash borer,

Launched a campaign to raise awareness of the importance of plant biosecurity with over 15 organisations. This included the first U.K. National Plant Health Week.

Continued to work with industry to support the development of the Plant Healthy Management Standard and Plant Healthy Certification Scheme aimed at improving biosecurity standards across sectors and along supply chains.

Supported domestic nurseries to increase their supply of healthy, disease-free domestic saplings as well as to drive up biosecurity standards more generally.

Continuing to implement the Tree Health Resilience Strategy by launching the Trees Outside Woodlands project, which will test methods for planting or encouraging trees outside woodlands, as well as looking for ways to improve the survival, cost effectiveness and biosecurity of trees in towns, cities and countryside

Launched the Local Authority Treescapes Fund to establish more trees in non-woodland locations and in landscapes that had previously been neglected, ecologically damaged, or affected by tree diseases like ash dieback.

Continuing to deliver and strengthen the GB Plant Health Regime, including increasing plant health inspectors at the border.

Providing up to £10.5 million to support the nursery sector to increase UK domestic production of diverse, high-quality tree planting material to meet England Tree Planting Programme targets and to enhance biosecurity

Launching a new Centre for Forest Protection to identify future threats and develop novel approaches to their management.

Launching a pilot to test and refine future tree health grants. The future grants will improve and expand upon current support provided to land managers to treat and/or fell diseased trees and to restock for resilience in response to pest or disease instances. Details to be published ahead of applications from August 2021

4. Clean air

What is the challenge?

Air pollution poses the biggest environmental threat to public health and can cause irreversible biodiversity loss. It shortens and reduces quality of life, especially for the most vulnerable. Everyday activities such as manufacturing, transport, farming, heating homes and generating energy contribute to poor air quality.

Air pollution has reduced significantly since 2010 – emissions of nitrogen oxides have fallen by 33% and are at their lowest level since records began – but we know there is more to do. [Latest projections](#) show that we are off-track against 2020 emissions targets for ammonia (NH₃) and fine particulate matter (PM_{2.5}), and at risk of not meeting 2030 targets.

The most immediate air quality challenge is tackling the problem of nitrogen dioxide (NO₂) concentrations around roads – the only statutory air quality limit that the UK is currently failing to meet.

Why is it important that we take action?

Air pollution is a major public health risk ranking alongside cancer, heart disease and obesity. A review by the World Health Organization concluded that long-term exposure to air pollution reduces life expectancy by increasing the incidence of lung, heart and circulatory conditions. The health and social care costs of air pollution in England are predicted to reach £5.3bn pa by 2035. In December 2013 Ella Adoo Kissi-Debrah died of asthma – she was just 9 years old when she passed away. A Coroner's investigation concluded that exposure to air pollution materially contributed to the asthma that killed Ella and identified 3 matters of concern which we have taken decisive steps to address and responded to.

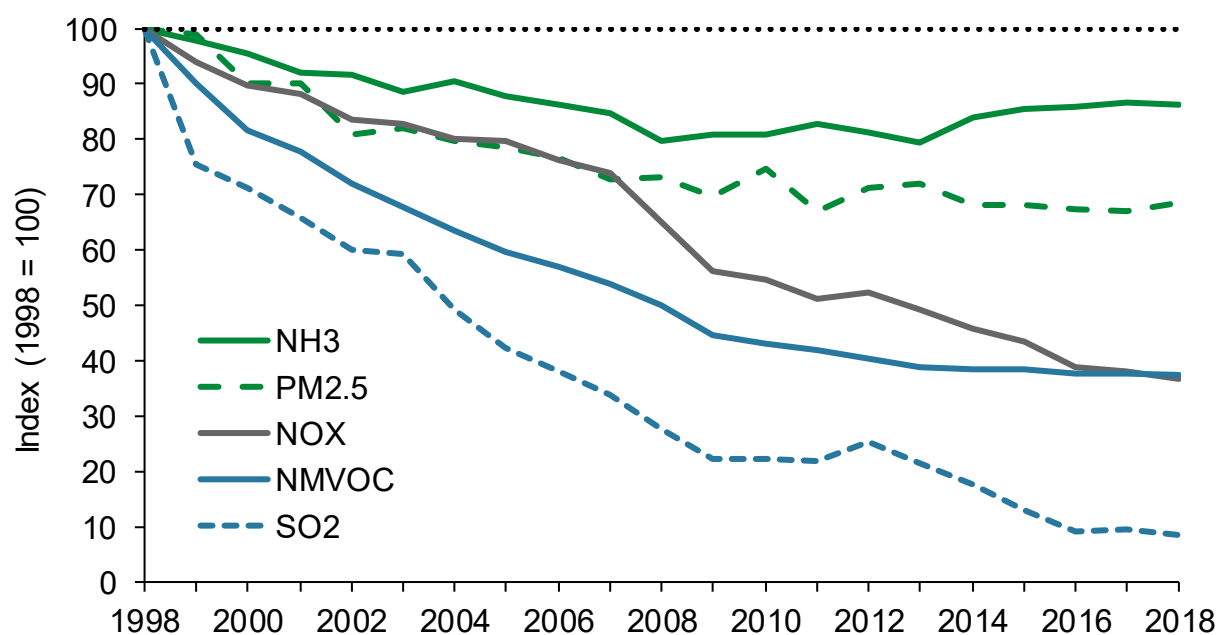
PM_{2.5} is released through friction and combustion. Domestic combustion is a major source, driven by the increased popularity of wood burning stoves. PM_{2.5} concentrations are highest in the urban environment where most people live. The impacts of living with cardiovascular and respiratory diseases caused or exacerbated by long term exposure to this pollutant will cost billions between now and 2030.

Most UK NH₃ emissions (approximately 88%) come from agriculture, mainly from manure, slurry and mineral fertilisers. NH₃ is a precursor to some PM_{2.5}. Delivering against the UK's legally binding 2030 ceiling for NH₃ will be important in enabling us to be ambitious in setting new air quality concentration targets for PM_{2.5} to improve public health.

NH₃ is toxic even in low concentrations to some plant species and is the main contributor to excess nitrogen deposition onto sensitive habitats, causing long-term changes to soil chemistry and leading to biodiversity loss. Significantly, 95% of England's nitrogen-sensitive habitats receive damaging amounts of [nitrogen](#). Control of NH₃ plays a vital role in the UK being able to achieve its 25 Year Environmental Plan biodiversity ambitions, including new targets to be set under the Environment Bill which will include a target on species abundance for 2030.

What is the condition of the natural environment?

Figure 1. Emissions for 5 key air pollutants in England, 1998 to 2018



Source, Ricardo Energy and Environment (reported as A1 indicator in the Outcome Indicator Framework).

For more information refer to the [Outcome Indicator Framework](#) - A1 Indicator.

Emissions for 5 key air pollutants (ammonia (NH₃), nitrogen oxides (NO_x), non-methane volatile organic compounds (NMVOC), fine particulate matter (PM_{2.5}) and sulphur dioxide (SO₂)) in England have fallen over the latest 20 years where data is available (between 1998 and 2018). Over the last 5 years of the time series the trends in annual emissions of PM_{2.5} and NMVOC have levelled off, and NH₃ has increased. There are emission ceilings in place for the UK, which we were comfortably within in 2018, as well as agreed ceilings for 2020 and 2030. However, there are no separate ceilings for England only that this indicator can be compared against.

What are our long-term plans to improve the natural environment?

We are committed to meeting the UK's ambitious targets to reduce emissions of 5 damaging air pollutants by 2030, aiming to cut early deaths from air pollution by half.

By June 2022, we will publish a UK National Air Pollution Control Plan to set out the policies and measures that need to be deployed across the UK to achieve compliance with 2030 emission targets. We will review the Local Air Quality Management (LAQM) framework by March 2023, and the national and local Air Quality Strategy by June 2023.

Our Clean Air Strategy, which the World Health Organisation praised as 'an example for the rest of the world to follow', sets out how we will go further and faster than the EU in reducing people's exposure to particulate matter pollution. This collaborative programme enables Government to tackle a range of cross-cutting issues such as health inequalities

and fuel poverty, as well as aligning our action on air quality with other environmental goals such as net zero. Greater understanding is needed across Government on the impacts of net zero policies on all 25 Year Environment Plan outcomes.

The landmark Environment Bill will deliver key parts of the Clean Air Strategy. It will:

- introduce a duty to set an ambitious, legally binding target for PM_{2.5}, alongside at least 1 further long-term air quality target
- launch a public consultation on new legal targets for air quality early next year, to be brought forward by 31 October 2022
- enable greater local action by ensuring responsibility for tackling air pollution is shared across local Government structures and with relevant public authorities
- enable local Government to better tackle emissions from domestic burning
- provide Government with new powers to enforce environmental standards for vehicles and non-road mobile machinery

What actions have we taken to improve the natural environment?

In 2020/21 we ran a call for evidence seeking views on which public authorities should be considered for designation as 'Relevant Public Authorities'. We aim to formally consult on the first tranche designation later this year to broaden the range of bodies required to partner with local authorities in Air Quality Action Plans.

Local authorities have a key role to play in delivering targeted pollution reduction measures at a local level. Our annual Air Quality Grant scheme provides funding to local authorities to carry out projects in local communities and has awarded nearly £70 million since it started in 1997. We awarded over £5 million to local authorities in March 2021. We will open the £9 million 2021/22 grant fund for applications in the autumn. This will partly be dedicated to improving public awareness in local communities about the risks of air pollution and steps to minimise exposure.

Domestic combustion

In 2020/21 we introduced legislation for England to restrict the sale of wet wood for domestic burning, put limits on the emission of sulphur and smoke from manufactured solid fuels, and phased out the sale of bituminous coal (traditional house coal). The first phase of these measures came into force on 1 May 2021.

Agriculture

The Clean Air Strategy outlined the policies needed to reduce NH₃ emissions from agriculture. In 2020/21 we consulted on policy options to reduce NH₃ emissions from urea fertiliser and will publish our response later this year. We are planning to consult on measures to reduce NH₃ emissions from storage and the spreading of manure, digestate and slurry by the end of 2021. From 2022, Defra plans to offer a slurry investment scheme, which we are working with farmers and industry experts to design.

Industry

Having left the EU we are now in the process of implementing a UK mechanism for regulating industrial emissions by developing Best Available Techniques to determine new technologies and methods that operators should put in place to reduce emission

limits within environmental permits. In 2020/21 we consulted on our proposed approach for deciding the Best Available Techniques and will publish our response later this year.

We are working with the Department for Business, Energy and Industrial Strategy (BEIS) to ensure alignment between net zero and air quality, both in terms of policies and finance for businesses. For instance, the Industrial Energy Transformation Fund (IETF) incorporates both equipment emissions standards and local air pollution considerations, and the projects are also assessed on their wider environmental impacts and benefits.

Transport

Through the Clean Air Strategy, we put in place a £3.8 billion plan to improve air quality through cleaner transport. The Defra/Department for Transport Joint Air Quality Unit (JAQU) are supporting 61 local authorities, with a fund of £880 million specifically to develop and implement measures to address their NO₂ roadside exceedances in the shortest possible time.

In 2020/21, through the NO₂ Reduction programme, we:

- Continued delivery of targeted local action, providing funding and support to local authorities to implement NO₂ targeted measures, as set out in the 2017 NO₂ plan for tackling roadside NO₂ emissions
- Delivered the first Clean Air Zone for Bath in March 2021 and the required digital, service and legal infrastructure to enable the delivery of future planned Clean Air Zones over the next 2 years
- Continued to fund Clean Air Fund grants to encourage fleet turnover to newer, less pollutant vehicles, with specific grant types depending on the type of Clean Air Zone being implemented
- Continued engagement with Highways England to bring compliance to as many routes on the Strategic Road Network as possible, including but not limited to, 6 speed limits having been implemented with 2 further limits planned
- Allocated over £550 million to local authorities to take forward their NO₂ plans

As part of the Prime Minister's 10 Point Plan for a Green Industrial Revolution, the UK will end the sale of new petrol and diesel cars and vans by 2030, 10 years earlier than originally planned. From 2035 all new cars and vans must be zero emissions at the tailpipe. Government has already committed £1.5 billion to support the early market and remove barriers to zero emission vehicle ownership. Alongside the new phase out dates we have pledged a further £2.8 billion package of measures to support industry and drivers to make the switch to cleaner vehicles. A further £5 billion has also been announced by the Prime Minister to deliver cleaner buses, improved services and to boost cycling and walking.

The Transport Decarbonisation Plan provides a world-leading 'greenprint' to cut emissions from our seas and skies, roads and railways, setting out a credible pathway for the whole transport sector to reach net zero by 2050. As part of this Government is consulting on ending the sale of all new non-zero emission HGVs by 2040, or earlier if a faster transition seems feasible.

Public health

Public Health England currently supports health professionals to understand the links between air pollution and health, including working with the National Institute for Health

and Care Excellence (NICE) to develop a quality standard in 2019 on air pollution. In 2020, Public Health England developed an online training module on air pollution for health and care professionals.

Defra, Public Health England, the Department of Health and Social Care (DHSC) and clinical and air quality experts are currently collaborating to review and improve the Daily Air Quality Index, with the aim of developing more practical messaging leading to impact, targeted to all, but especially to vulnerable groups such as children with asthma.

Defra and DHSC ministers have agreed that our departments will work together on understanding how exposure to air pollution could be considered as part of wider consideration of health inequalities.

5. Clean and plentiful water

What is the challenge?

Our water environment is essential for all life. Clean, thriving water bodies are an integral part of the natural environment and provide us with clean drinking water, healthy biodiversity and ecosystems that in turn support human health, wellbeing and enhance our resilience to climate change. The COVID-19 pandemic has meant more people are swimming in rivers and the sea and enjoying the natural environment for their physical and mental wellbeing.

Why is it important that we take action?

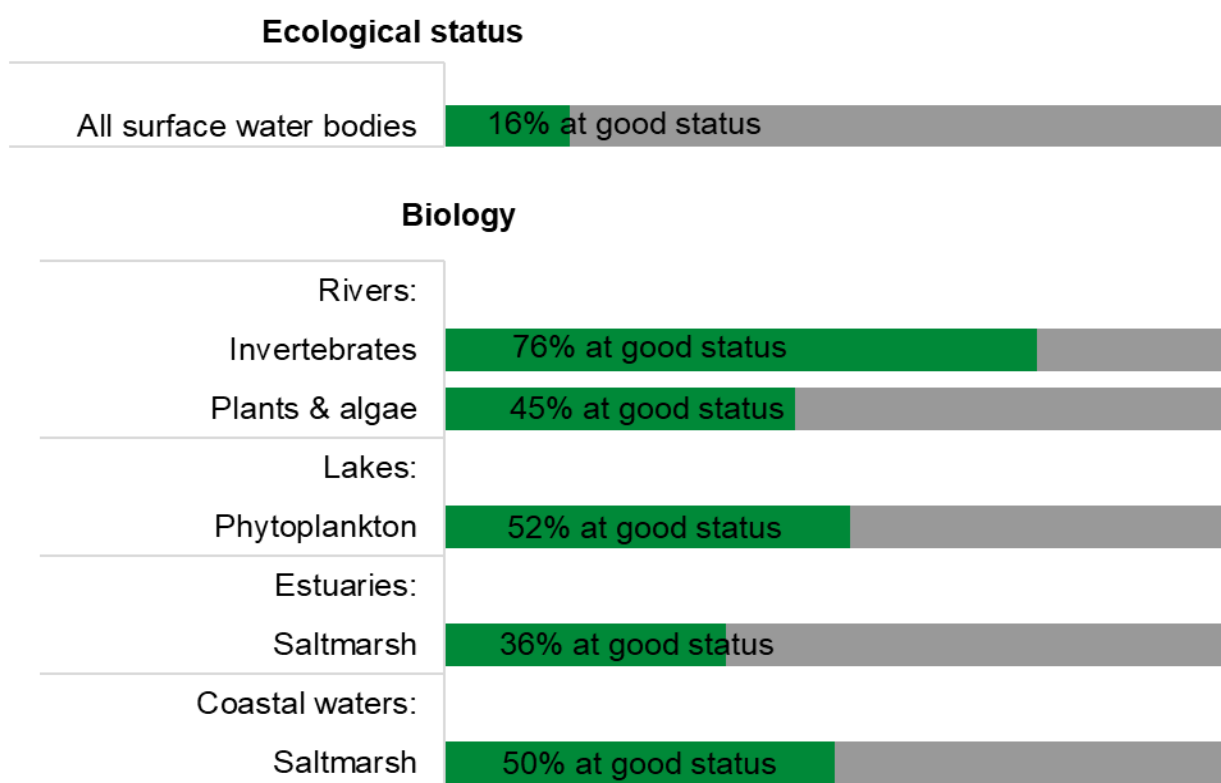
Our water environment and its quality is under increasing pressure from human activity, climate change and population growth. Due to these growing pressures and the scale and complexity of some of the challenges, the number of waterbodies achieving 'Good Ecological Status' has remained essentially unchanged since 2009, at 16%. While this is consistent with similar countries that share the same ambition, the 25 Year Environment Plan sets the ambition to deliver clean and plentiful water. Water Quality classifications were published in September 2020. While they show little change over the 2016 figures, we have made a significant effort in preventing deterioration which demonstrates the high degree of challenge in meeting water targets.

What is the condition of the natural environment?

In 2019, 16% of all surface waters met the 'Good Ecological Status' standard, compared with the 25 Year Environment Plan objective of 75% as soon as is practicable. This objective will clearly be challenging to meet. The most common pressures impacting water bodies that cause them to fail to achieve good status are physical modification (affecting 41% of water bodies in England), diffuse pollution from rural areas (40% of water bodies), from waste water (36% of water bodies), and from towns, cities and transport related pressures in 18% of water bodies.

The selected metrics below illustrate the status of surface waters in England in 2019. (Source: Environment Agency).

Figure 2. Status of surface waters in England, 2019



Source, Environment Agency, (published as B3 indicator in the Outcome Indicator Framework)

For more information refer to the [Outcome Indicator Framework](#) – B3a Indicator.

What are our long-term plans to improve the natural environment?

The water environment is complex and strongly interconnected across the goals of the 25 Year Environment Plan. Meeting our clean and plentiful water ambition is possible but it relies upon contributions from others that we cannot control with certainty. There is scope to achieve further water benefits through an integrated approach across farming, nature recovery, local delivery, land use and air quality.

We will develop policy and support actions that deliver multiple benefits, including through the [National Framework for water resources](#), River Basin Management Plans and England Trees Action Plan and through our Flood and Coastal Erosion Risk Management policy. We will take further targeted action to protect chalk streams which are some of our most valuable water habitats.

The impacts of a changing climate and a growing population on our water resources affect not only the public water supply but also water available for business, energy, agriculture and the environment. Our ambitious programme of abstraction reform will make the abstraction system more equitable and protect the environment from damaging over-abstraction, both through our [Abstraction Plan](#) and the Environment Bill.

What actions have we taken to improve the natural environment?

River Basin Management Plans

River Basin Management Plans (RBMPs) are the overarching mechanism used to manage our water environment and describe the detailed objectives we want to achieve for water to protect nature, biodiversity, fisheries and protect critical uses such as water supply. They include standards and goals for all rivers, lakes, estuaries, coastal water and groundwaters and the actions to be taken to achieve them. They are therefore in effect an 'asset management plan' for our waters.

River Basin Management Plans set water body objectives and detail how investment can support natural capital over the long-term. The Water Environment Improvement Fund supports the second Cycle River Basin Management Plans from 2016 to 2021. In 2021-22, £23.75 million is available through the Water Environment Investment Fund and is forecast to deliver 674 kilometres of enhanced water environment, and 219 kilometres of protected water environment. The Environment Agency will publish the Third Cycle RBMPs for public consultation by December 2021.

Environment Bill targets

We are considering a suite of legally binding targets on water as part of the Environment Bill. In our policy paper published in August 2020, we set out the objectives for targets currently under consideration. For water, potential objectives include reducing pollution from agriculture, wastewater and abandoned metal mines and reducing water demand (which includes leakage and domestic and non-domestic use). The targets we are developing focus on driving action to address some of the most challenging pressures on the water environment and complement our overarching goals.

Agriculture

The agriculture sector is one of the leading pressures on the water environment, responsible for nutrient pollution, sediment loss, physical modification and other issues. We are committed to encouraging farmer behaviour change through minimum regulatory standards, advice on the most effective voluntary actions for the location, and targeted financial support.

We are expanding the Catchment Sensitive Farming programme to provide advice to more farmers in more parts of England. This has been demonstrably effective in reducing pollution and helping farmers make best use of environmental incentives and grants.

We are developing a Slurry Investment Scheme, which will enable us to direct funding towards helping livestock farmers realise the productive potential of slurry without letting it endanger water and air quality. This multi-year scheme will launch in autumn 2022.

We are developing environmental land management schemes that will benefit water quality, including the arable, horticultural and grassland soil standards within the Sustainable Farming Incentive. These schemes will reward farmers for improving soil health, a crucial step towards reducing and avoiding the sediment run-off that carries nutrients and other harmful substances into water bodies.

We are seeking the advice of leading experts on agricultural pollution of water as part of the robust, evidence-led process to develop long-term targets.

Abandoned Metal Mines

The Water and Abandoned Metal Mines (WAMM) programme operates to address the pollution of abandoned mines. Waters discharged into surface water bodies cause metal pollution. Half of the lead, cadmium and zinc entering rivers come from abandoned mines.

The WAMM programme has funded the ongoing running costs of 3 water treatment schemes which successfully treat 7.4 billion litres of mine water each year and prevent 800 tonnes of metals from entering and polluting rivers. It has also funded interventions to control inputs from mine wastes into river waters and landscapes. We have funded innovative research to establish the best and most cost-effective treatments for priority sites.

Wastewater

Water and sewerage companies are developing non-statutory Drainage and Wastewater Management Plans, the drafts of which will be consulted on from spring 2022. This will become a statutory planning process through the Environment Bill. These plans will assist companies in comprehensively understanding the current capacity of, and demand for, their networks and systems.

The Storm Overflows Taskforce was established in August 2020 to develop proposals to significantly reduce the volumes of sewage discharged into our water courses. The taskforce has agreed a long-term goal to eliminate harm from storm overflows. It has already taken steps to improve monitoring and transparency and commissioned new research.

The Government has amended the Environment Bill to help to reduce sewage discharges [from storm overflows](#). These legally binding obligations on water companies and Government will help to reduce pollution in both inland and coastal waters, protecting wildlife and public health.

In December 2020, the River Wharfe at Ilkley became England's first designated bathing water river site. We expect further applications to be made for designating rivers in the coming years. Ofwat have approved funding for Severn Trent Water and South West Water to improve river quality and trial the creation of 2 new bathing river areas as part of the Green Recovery scheme.

Development can create a tension between wastewater treatment and the desire to improve the condition of protected sites. We are working with other Government departments to reduce emissions from municipal wastewater treatment to move toward net zero.

Protecting our chalk streams

We will take further targeted action to protect chalk streams which are some of our most valuable water habitats. Regional water [resources groups](#) and stakeholders are taking action to address water resource management needs and specific issues for chalk streams. In October 2020, the Environment Minister, Rebecca Pow, co-hosted a summit

with the Chiltern Society to bring together the key partners whose actions are needed to return chalk streams to their natural state. The Chalk Stream Restoration Strategy will be published later in 2021.

Abstraction licencing

Our 2017 Abstraction Plan has increased the availability of water and encouraged collaborative working to find solutions to water scarcity. The Environment Bill will introduce new provisions in relation to water abstraction. The government will look to work with abstraction licence holders to indenting ways of improving the water abstraction regime whilst recognising the importance of access to water to critical sectors like the food and farming industry.

Water consumption

Demand for water needs to decrease in order to protect the environment. In July 2021, the Government set out its [response](#) to the consultation on measures to reduce personal water usage. The proposals announced will balance the growing demand on national supplies with the ambitions in the 25 Year Environment Plan, as well as being key to the Government's 2050 net zero target by reducing energy consumption in homes as heating water accounts for approximately 17% of an average household's energy use.

We will support increased water efficiency by:

- Asking water companies to develop a consistent approach to addressing leakage on customers' own supply pipes
- Introducing legislation which prescribes for a mandatory water efficiency label
- Encouraging local authorities to adopt the optional minimum building standard of 110 litres per person per day in all new builds where it is appropriate to do so
- Developing a roadmap towards greater water efficiency in new developments and retrofits in 2022

We support the commitment made by Ofwat and water companies to deliver a 50% reduction in leakage, and the action plan to sustainably reduce businesses' water use. We secured strong commitments from water companies, a 16% reduction in leakage by 2025 and 50% by 2050. Leakage reduced by 7% in 2019/20.

Investing in water to support recovery

We are investing in water improvement to support our green recovery from the pandemic. Water regulators are accelerating planned investment that will benefit the customers and communities served by water companies. These include:

- The Water Industry National Environment Programme Taskforce with the Environment Agency and Ofwat that requires water companies to reduce their pollution through adopting more innovative, nature-based catchment approaches. The WINEP is valued at £4.6 billion for 2020-25
- Five companies have received initial backing from Ofwat for ambitious proposals worth over £850 million which will benefit the environment and create jobs
- New schemes will be delivered alongside £1.9 billion which has been brought forward by 12 water companies across England. Several water companies are

also accelerating parts of their existing 2020-25 plans, investing hundreds of millions to support the economic recovery, at no additional cost to customers

- The Water Environment Grant has a total budget of £31 million, with 94 projects being delivered during 2019 to 2022. Delivered mainly by environmental charities, they are undertaking activities such as re-meandering river channels, peatland restoration, tree planting, and installing interventions on farmland to improve water quality

6. Thriving plants and wildlife (terrestrial)

What is the challenge?

Nature is in long-term decline. Many ecosystems or habitats remain fragmented and in poor condition, and the benefits they provide have been reduced. There are multiple, interacting pressures on our remaining sites and species: habitat loss and degradation, environmental pollution, climate change and invasive species.

Why is it important that we take action?

[People value nature](#) and its components underpin our wellbeing and [economic prosperity](#), including climate change mitigation and adaptation, pollinating crops, providing recreation, and alleviating the risk of flooding.

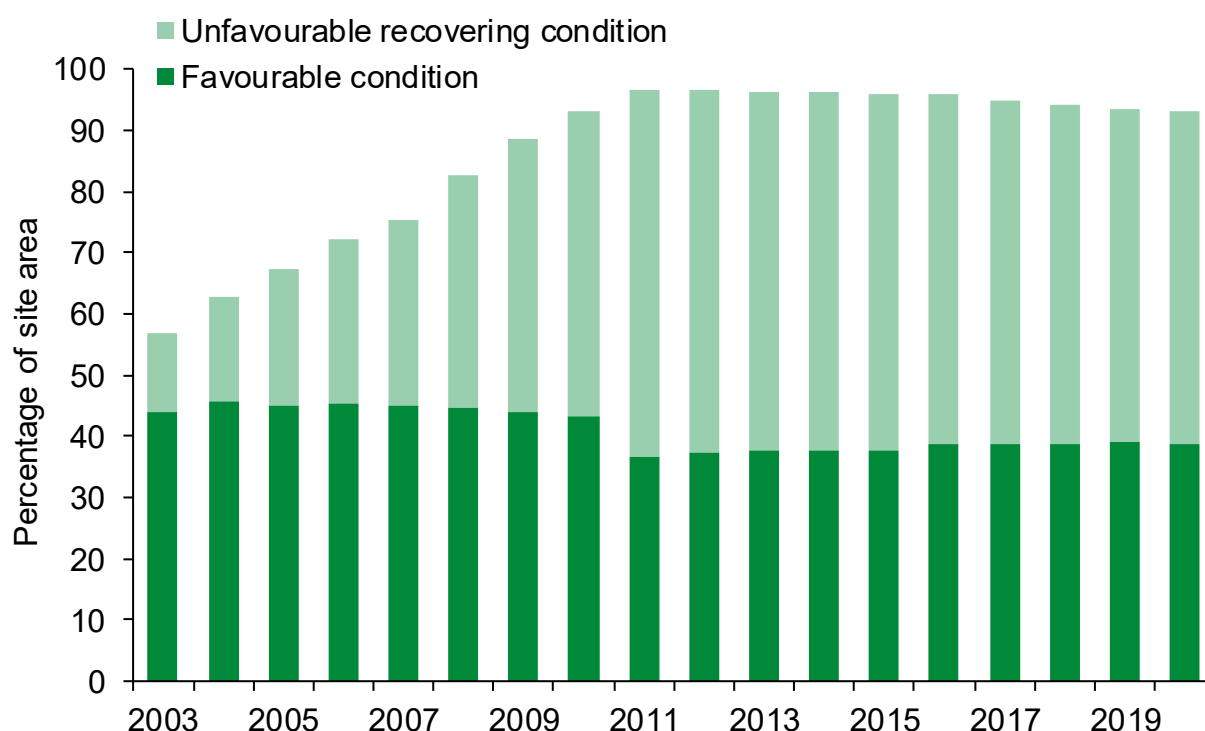
Some species are on track for recovery, such as the red kite, but we still see ongoing declines, including for farmland birds, butterflies and pollinating insects. We have seen modest increases in the proportion of Sites of Special Scientific Interest (SSSIs) - protecting our most precious wildlife habitats and geological features - in favourable condition (from 36.6% in 2011 to 38.9% in 2020).

The Government has a duty to set ambitious targets to halt species loss. Deterioration reversal requires a change in action to meet these targets and secure benefits. We may expect to see different rates of progress across our goals. For example, habitats on protected sites can take many years to respond to changes in management. Our initial focus is on putting in place measures for recovery, so that we deliver in the long term.

What is the condition of the natural environment?

There has been a net decrease in the area of SSSIs in favourable condition; down from 44.0% in 2003 to 38.9% in 2020. The sudden drop in the area of SSSIs in favourable condition from 43.2% in 2010 to 36.6% in 2011 was largely due to a more rigorous application of the 'Common Standard for Monitoring' protocols in assessing feature condition. However, since then, the area recorded as being in favourable condition has increased. The area of SSSIs in unfavourable recovering condition in 2020 (54.2%) is considerably higher than the 13% recorded in 2003.

Figure 3. Condition of Sites of Special Scientific Interest in England, 2003 to 2020



Source, Natural England, (reported as D2 indicator in Outcome Indicator Framework).

For more information refer to the [Outcome Indicator Framework](#) – D2b Indicator

The 25 Year Environment Plan outcome indicator framework includes metrics for protected sites, woodland, 'priority' or declining species, and pollinators.

- The total area of woodland in England has increased from 1.24 million hectares in 1998 to 1.31 million hectares in 2020
- The index of abundance for priority species shows a long term decline since 1970, although with some recent improvements for a small number of individual species
- The UK pollinators index has declined by 30% compared to its value in 1980

What are our long-term plans to improve the natural environment?

Our 25 Year Environment Plan committed to securing a growing and resilient network of land, water and sea that is richer in plants and wildlife. We have since announced that we will set a new legally binding target on species abundance for 2030. This is in addition to long-term legally binding environmental targets to be brought forwards under the Environment Bill.

We have also committed to protecting 30% of land for biodiversity by 2030. To meet this commitment, we are: introducing a legal framework for recovery; maintaining and extending key protections; developing new funding streams; supporting partnerships; and working across Government to secure broad action.

What actions have we taken to improve the natural environment?

A legislative framework for recovery

The Environment Bill creates a power to set long-term, legally-binding environmental targets. It requires Government to set, and achieve, at least 1 target in 4 priority areas, which includes biodiversity. These targets need to be brought forward by 31 October 2022. We will develop and bring forwards the new, additional 2030 target for species abundance to the same deadline.

Further legislative measures in the Environment Bill

The Environment Bill lays the foundation for nature recovery. It sets a framework for legally binding targets, establishes spatial mapping and planning tools to inform decisions about nature recovery, and creates duties and incentives to support it. Amendments to the Environment Bill allow development of conservation strategies for protected sites and species to safeguard those at greatest risk. We have developed draft guidance so landowners and organisations can start creating conservation covenants soon after Royal Assent.

In August 2020, we launched 5 Local Nature Recovery Strategy pilots. The pilots completed at the end of May 2021 and we are reviewing lessons to inform the development of the Regulations and Statutory Guidance ahead of national rollout.

A public consultation on the implementing regulations for Biodiversity Net Gain was published in 2019. Work has started on supporting IT systems and a new monitoring and evaluation framework for biodiversity net gain. Market analysis of biodiversity net gain assessed the potential for supply and demand of biodiversity units and set out recommendations for policy to support establishment and effective operation of the market. 9 pilot projects are underway to inform our approach to selling statutory biodiversity credits and investing associated revenues.

Extending and improving protected areas

In England we will extend protected areas or identify other effective conservation measures to over 400,000 hectares, taking action to drive up their value for biodiversity.

We are developing an implementation plan for the final phase of the UK review of Special Protection Areas - areas classified to protect habitats of certain wild birds including migratory species. Implementing the review in England will aid conservation of bird species in urgent need of habitat conservation.

New investment

In May 2021 we published our England [Peat](#) and [Trees](#) Action Plans, supported by the new £640 million Nature for Climate Fund. These plans set out Government's vision for the management, protection and restoration of peatlands and how we will deliver our aim to at least treble tree planting rates in England by the end of this Parliament, reflecting England's contribution to meeting the UK's overall target of planting 30,000 hectares per year by the end of this Parliament. Reference to delivery of these policies can also be found in the Climate Change chapter.

The £80 million Green Recovery Challenge Fund kickstarted nature-based projects in all regions of England to restore nature, support climate change mitigation and adaptation, connect people with the natural environment, and create or protect jobs in the environmental sector. The fund was delivered in 2 rounds, each with a budget of up to £40 million. Round 1 launched in September 2020. In total, 69 projects were funded £37.5 million. Round 2 launched in March 2021 and grants will be awarded in June/July 2021. We expect 800,000 trees to be planted in Round 1 and the fund is on track to support 2,000 jobs across England by the end of 2021, rising to over 2,500 by projects completion in March 2023.

The Natural Environment Investment Readiness Fund will stimulate private sector investment to support goals, creating projects that generate repayable investment from a range of ecosystem services. These will provide valuable learning opportunities as we seek to channel more private investment into nature.

We are introducing 3 schemes that reward the delivery of environmental benefits: the Sustainable Farming Incentive, the Local Nature Recovery scheme and the Landscape Recovery scheme. These schemes will reward for sustainable farming practices, improving animal health and welfare, reducing carbon emissions, creating and preserving habitat, and making landscape-scale environmental changes. This is an important step towards achieving our 25 Year Environment Plan ambitions and our carbon net zero goals. For example we have committed to launching at least 10 Landscape Recovery projects between 2022 and 2024 to support the delivery of landscape and ecosystem recovery. These large-scale, long-term projects will contribute towards the delivery of our ambitious national targets and commitments, such as the pledge to protect 30% of land by 2030 and the establishment of a Nature Recovery Network.

Developing a healthy soils indicator where soil carbon is being considered as one of many key soil variables. This indicator will feed into the soil monitoring scheme and potentially inform a future target for soil health under the Environment Bill framework. The Sustainable Farming Incentive Scheme, which opens from spring 2022, will offer 2 soils standards. This acknowledges the role that healthy soils play in delivering a range of environmental benefits, as well as production.

New partnerships

We launched a national Nature Recovery Network delivery partnership, led by Natural England, to bring together business, landowning and conservation organisations to support the establishment of the Nature Recovery Network.

The creation of a Species Reintroductions Taskforce will bring together experts, landowners, and Non-Government Organisations to build collaborative projects to restore numbers of declining species and grow opportunities for reintroductions. The taskforce will encourage cooperation and engagement, including with Devolved Administrations. This will complement the Reintroductions Code that provides best practice on assessing benefits and impacts for release and reintroduction, or conservation translocation of species.

After the successful release of beavers in Devon, we are considering the reintroduction and further releases of this iconic species in England. Our consultation, to be issued later in 2021, will outline the approach and our management of beavers. We will consider a

range of evidence related to the benefits and impacts of the species across UK and other countries in setting out our approach and management in the consultation.

Defra works closely with the Department for Levelling Up, Housing and Communities (DLUHC) on planning reform. The Natural Capital and Ecosystems Assessment tool pilot will support better use of environmental data within the planning system.

New Greening Government Commitments will set out Government's ambitions to improve the environmental performance of its estate and operations, including a stronger focus on nature. This framework will ensure continued reduction of environmental footprint, alignment with commitments in our 25 Year Environment Plan and be consistent with a trajectory to achieve net zero greenhouse gas emissions by 2050.

Case Study: Dearne Valley Wetlands, South Yorkshire – nature recovery for local communities at a landscape scale (NE)

The closure of the coal mines in the 1980s left behind a scarred industrial landscape in the Dearne Valley. Barnsley Metropolitan Borough Council, along with The Yorkshire Wildlife Trust, Garganey Trust, Environment Agency, representatives of the local community and the RSPB began to look at regeneration opportunities which would benefit the local communities and improve the wildlife. This culminated in the formation of the Dearne Valley Green Heart Partnership.

The Dearne Valley was selected as a Nature Improvement Area (NIA) in 2012-2015. Land has been transformed into wetland habitats that now support nationally important bird communities. The scrub developing on former pit tips and railway lines provides valuable habitat for the willow tit, (the country's most threatened bird) which has a stronghold in the area. In May 2021, a string of sites connected via the River Dearne and tributaries were notified by Natural England as a Site of Special Scientific Interest (SSSI). The new SSSI is 650 ha in size which indicates the big scale of nature recovery in the area.

The Dearne Valley story is truly one of local people and partners working together, with new opportunities for the local community to connect with the rich wildlife of the valley through paths, cycle trails and visitor facilities at several locations. Additional benefits of the wetland creation are that several are also used as washlands storing water during high river flows, protecting homes from flooding and mitigating potential impacts of climate change.

The SSSI notification is now a springboard for further nature recovery as the work of the Partnership continues to support the restoration and enhancement of more areas spilling out from the SSSI and ensuring the cultural heritage of the Dearne Valley is preserved.

7. Thriving plants and wildlife (marine)

What is the challenge?

The ocean is in long-term decline due to serious and increasing pressures from over-exploitation, climate change, pollution, and invasive alien species. As a consequence, the benefits we derive from a healthy ocean are under threat. There is significant work to do to continue to recover fish stocks, the wider marine environment, and protect and rebuild habitats such as coral reefs, saltmarshes and seagrass beds. Unless we change the trajectory on ocean health, we risk irreparably damaging one of our greatest sources of food and the world's climate regulator.

Why is it important that we take action?

The ocean is an integral part of our coastal communities, economy, and way of life. A healthy ocean provides enormous benefits to our societies and supports our most important needs: the ocean provides [50% of the oxygen we breathe](#), absorbs 25% of all anthropogenic CO₂ emissions every year, and is the source 17% of the animal protein that we eat globally. In lower income and island countries this is even more pronounced with fish consumption making up around [50% of protein intake](#).

We have relied on the ocean to help regulate our changing climate: it has absorbed around a quarter of anthropogenic carbon dioxide emissions since the mid-1980s and approximately 90% of the excess heat in the earth's system between 1971 and 2010. Moreover, the ocean and its ecosystems play a critical role in climate change adaptation with habitats such as coastal wetlands providing key flood defences.

Not only is a healthy ocean rich in biodiversity critical for food security and tackling climate change, it is also a central pillar of our economy and livelihoods. The ocean supports the livelihoods of [1 in 10 people globally](#) and ocean services can be valued at [\\$2.5 trillion each year](#). In the UK, the long-term stream of services derived directly from marine natural capital assets is [valued at an estimated £211 billion](#).

These benefits are at significant risk from anthropogenic pressures. That is why we are taking strong action in the UK and internationally to protect the ocean.

What is the condition of the natural environment?

The [UK Marine Strategy Part One](#) (UKMS Part One) update report published in October 2019 showed we have made good progress towards achieving Good Environmental Status in some areas but that further action is necessary to achieve that ambition for all eleven descriptors assessed. Further details can be found on the Government's [Marine Online Assessment tool \(MOAT\)](#). MOAT provides access to the integrated assessments and indicator assessments used to assess progress towards Good Environmental Status, it supports the [updated UKMS Part One](#) and makes the science underpinning the assessments readily available and easily accessible to all.

The UKMS Part One assessment for 1994 to 2014 concluded that because of declines in Scotland, Good Environmental Status had not been achieved for harbour seal abundance in the UK Greater North Sea sub-region. The proportion of seabird species meeting thresholds for breeding abundance in the Greater North Sea and Celtic Seas

has remained stable since 2012 but remains below the 75% target (59% in the Greater North Sea in 2014 and 63% in the Celtic Seas in 2015). The UKMS (2019) assessment concluded GES for breeding seabirds has not been achieved in the Greater North Sea or Celtic Seas while Good Environmental Status for wintering water birds has been achieved in the Greater North Sea but not in the Celtic Seas.

In the central and southern North Sea and on the shelf edge to the west of Scotland, the balance of species within demersal communities, relative to the early 1980s, has shifted towards smaller species (low Mean Maximum Length), indicating this community is in poorer health. There has been no long-term change in Mean Maximum Length of demersal fish communities in the northern North Sea. Within the southern and central North Sea, the Mean Maximum Length of pelagic fish communities is declining suggesting the proportion of large or slow growing species is declining. There is no long-term change in the Mean Maximum Length in the northern North Sea.

In the Celtic Seas, there is no overall trend in mean maximum length, which has varied greatly over time, between surveys, and between sub-divisions, especially for demersal fish. But in some areas of the Celtic seas, there are increases in mean maximum length, which may indicate the start of the recovery due to a recent reduction in fishing mortality.

What are our long-term plans to improve the natural environment?

In our 25 Year Environment Plan we committed to protecting and enhancing England's biodiversity on land, in freshwater and at sea, and increasing the proportion of protected and well-managed seas. In the UK, we are already at the forefront of marine protection with 372 Marine Protected Areas protecting 38% of UK waters.

We will maintain work towards delivering GES through the UKMS and efforts which support effective species conservation. We will put in place measures for offshore Marine Protected Areas, bycatch mitigation plans, and the Offshore Wind Enabling Actions Programme. We are committed to supporting the delivery of the Government's offshore wind targets in a way that protects and enhances the marine environment, they are also an important part of meeting our net zero target.

We will use the implementation of the Fisheries Act to deliver world class sustainable fisheries and protect and recover the marine environment to deliver these outcomes. This will be through the UK Joint Fisheries Statement and using Fisheries Management plans.

2021 is a Super Year for Ocean Action internationally. The UK is championing the ocean through our presidencies of the G7 and the 26th UN Climate Change Conference (COP26) as well as through our ambitions for the 15th Conference of the Parties to the Convention on Biological Diversity (Convention on Biological Diversity COP15) and the new 10-year strategy for the North East Atlantic through The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR).

The UK is championing efforts to achieve ambitious outcomes at the Convention of Biological Diversity COP15 and is leading calls for a target to protect at least 30% of the land and ocean globally by 2030. The UK is actively working to see negotiations concluded on a new legally binding agreement under the UN Convention on the Law of the Sea to conserve and sustainably use biodiversity in areas beyond national jurisdiction.

What actions have we taken to improve the natural environment?

UK Marine Strategy

Our statutory UK Marine Strategy (UKMS) sets out a vision for UK waters to achieve clean, safe, healthy biologically diverse and productive seas, which are used sustainably. The Strategy provides a legal framework, agreed with the Devolved Administrations, for assessing and monitoring the status of our seas and to put in place the measures needed to achieve Good Environmental Status, covering marine biodiversity, non-indigenous species, commercial fishing, nutrient pollution, contaminants, underwater noise and marine litter.

The updated UKMS Part Two was published in March 2021, setting out the monitoring we will use to assess our progress towards our updated Good Environmental Status targets, published in the updated UKMS Part One in 2019. We aim to publish an update to the UKMS Part Three by the end of 2021, which will set out actions to achieve or maintain Good Environmental Status for UK seas.

Marine plans

The Government is committed to marine plans that support sustainable development for our marine area, and on-going protection of the marine environment. Marine plans reflect national policies at a local (marine plan) level and in response to local circumstance, providing a framework to inform decisions on what activity takes place.

The English inshore and offshore regions are divided into 6 marine plans. The East Marine Plan was published in April 2014 and the South Marine Plan in July 2018.

The remaining marine plans for England are being brought forward in parallel and are well progressed. These will be in place by summer 2021. [A report](#) on the effects of the East Marine Plan has been published and is now available on gov.uk.

Marine Protected Areas and Highly Protected Marine Areas

We are putting in place measures for designated Marine Protected Areas, using new powers through the Fisheries Act to extend current management tools. For the remaining 40 offshore MPAs, the Marine Management Organisation (MMO) has announced a three-year timetable to put in place the fisheries management measures to protect the sites. In addition, the Government published its response to the Benyon Review into HPMAs on World Ocean Day 2021 accepting the central recommendation that we should take forward some pilot sites. Defra and its ALBs have now started to identify possible locations for pilots. Highly Protected Marine Areas (HPMAs) are areas of the sea that allow the protection and recovery of marine ecosystems. They prohibit extractive, destructive, and depositional uses, allowing only non-damaging levels of other activities to the extent permitted by international law.

Climate change

The UK is committed to ensuring that climate change adaptation, resilience and mitigation is fully considered in our domestic marine and fisheries policies. Our National Adaptation Programme outlines our commitment to address marine climate risks by

introducing a Sustainable Fisheries policy, considering climate change in marine planning, building ecological resilience at sea and protecting natural carbon stores.

Blue Planet Fund

Approximately 3 billion people rely on the ocean for their food security and livelihoods, with poor people particularly dependent on the ocean. One third of marine mammals are threatened with extinction and we are at risk of losing over 99% of coral reefs as a result of 2°C of global atmospheric warming. Recognising the link between ocean health and its effect on the development prospects of many of the most disadvantaged communities, the Government launched the £500 million Blue Planet Fund in June 2021. The Blue Planet Fund is being jointly delivered by Defra and the Foreign, Commonwealth and Development Office (FCDO), and, building on the success of other existing marine Official Development Assistance programmes such as the Commonwealth Marine Economies programme, will support developing countries to sustainably manage the marine environment and reduce poverty.

Marine litter

[It is estimated](#) that between 4.8 and 12.7 million tonnes of plastic enter the ocean globally every year. We aim to eliminate all avoidable plastic waste by 2042 and deliver the Osaka Blue Ocean Vision commitment to eliminate additional plastic pollution entering the ocean by 2050.

Through our G7 presidency we have put the spotlight on abandoned, lost or otherwise discarded fishing gear, also known as ghost gear. We have delivered community-led pilot projects in partnership with the Global Ghost Gear Initiative to tackle ghost fishing gear and commissioned a report to the Organisation for Economic Cooperation and Development (OECD) on further action G7 countries could take. In the Resources and Waste Strategy we committed to consult on measures such as an Extended Producer Responsibility Scheme for fishing gear with a consultation in 2022.

With [science](#) estimating that plastic flow into the ocean will triple between 2016 and 2040, the UK has supported starting negotiations on a new global agreement on marine plastic litter and microplastics at the United Nations Environment Assembly in 2022.

Species protection

The UK plays a leading role in championing increased protections for sensitive marine species including cetaceans (whales, dolphins and porpoises), seabirds, seals, turtles, elasmobranchs (sharks, skates and rays), and corals, both in the UK and around the world. We work through multilateral environmental agreements, international bodies and regional Fisheries Management Organisations to strengthen international protection for vulnerable marine species. Notable progress and plans for the forthcoming year include:

- The UK Government led a 10-year contract for the continuation of our widely respected UK Cetacean Strandings Investigation Programme. This scheme investigates the causes of death of stranded cetaceans around the UK coast, improving our understanding of, and ability to tackle, key threats to cetaceans

- We continue to call on all whaling nations at every appropriate opportunity to cease their whaling activities in favour of well-managed, responsible tourism such as whale-watching. In January 2021, the Prime Minister publicly reaffirmed this by pledging to take a stand against ongoing whaling practices in Japan and other whaling countries such as Norway and Iceland.
- We launched a Call for Evidence, which closed in January 2021, to help us better understand shark fin trade and its impact both in the UK and overseas. We have used the evidence received to develop legislation to ban the import and export of detached shark fins as set out in the Action Plan for Animal Welfare, which will be introduced when parliamentary time allows.
- We established a Collaborative Coral Reef Working Group to help combat Stony Coral Tissue Disease. We have provided £1.5 million to help stop the progression of the disease, and £1 million to highlight the value of coral reefs, build capacity for protection and increase coastal resilience within Caribbean and Western Atlantic Overseas Territories
- With Natural England, we are developing a comprehensive English Seabird Conservation Strategy to be published in summer 2022. This will assess the vulnerability of each seabird species; and propose actions to help address them
- In collaboration with the Seal Alliance, we launched the ‘Give Seals Space’ campaign, in spring 2021, to reduce the impact of human disturbance on seals. We will undertake a review during 2021 to determine if legislation should be strengthened
- The Conservation of Seals Act 1970 was strengthened through Fisheries Act 2020 to prevent intentional or reckless killing of seals in English, Welsh, Northern Irish waters

Monitoring

We have continued to develop and invest in our world-leading science to further understand the key areas of ocean climate research. We will focus on the evidence base on carbon stock and sequestration services of marine habitats (“blue carbon”) to improve understanding and qualification of potential mitigation co-benefits. In May 2020, we published new sensitivity assessments focussed on potential climate change impacts on protected features of Marine Protected Areas and their role in enhancing climate change resilience.

Offshore wind

Reflecting the Prime Minister’s announcement in his [10 Point Plan for a Green Industrial Revolution](#) that the sector will produce enough offshore wind to power every home, we have launched a two-year [Offshore Wind Enabling Actions \(OWEA\) Programme](#). This will increase understanding of the environmental impacts of offshore wind and find solutions to reduce barriers to offshore wind in English waters whilst protecting the marine environment.

8. Reduced risk of harm from environmental hazards

What is the challenge?

Natural hazards including flooding, drought and coastal erosion pose risks to lives, livelihoods and the natural environment. These risks are increasing due to climate change, as rising temperatures are resulting in more frequent extreme weather events such as storms and heatwaves.

Why is it important that we take action?

The UK Climate Projections 2018 show an increased chance of milder, wetter winters and hotter, drier summers, together with an increase in the frequency and intensity of extremes, such as heavy rainfall and high temperatures. The UK's third [Climate Risk Independent Assessment](#), published on 16 June by the Climate Change Committee, sets out 61 risks across a range of sectors, including risks to businesses, communities, infrastructure, and natural habitats from drought, flooding, storms and high waves – the majority of which are in the highest urgency category.

As weather extremes become progressively more severe it is important that we act now to prevent future disruption to infrastructure, properties, health, wellbeing, land, and natural habitats.

What is the condition of the natural environment?

The 25 Year Environment Plan includes outcome indicators relating to drought, flood and coastal erosion risk management which are currently in development. There is a growing body of observational and modelled evidence on how climate change has affected the probability of significant weather events. The [Met Office State of the UK Climate Report](#) shows that:

- UK winters in the most recent decade (2010 to 2019) have been 5% wetter than 1981 to 2010, and 12% wetter than 1961 to 1990.
- Four of the top 10 wettest winters recorded have occurred since 2007, and 7 since 1998.
- Since 1884 the UK's 10 warmest years have all occurred since 2002, and 2020 was the third warmest year.

What are our long-term plans to improve the natural environment?

Our goal is to create a nation more resilient to future flood and coastal erosion risk. In doing so, we will reduce the risk of harm to people, the environment, and the economy.

To achieve this, we are committed to continued investment in protecting communities, as well as boosting the long-term resilience of our homes, businesses, and infrastructure. We will continue to strengthen the national approach to tackling flooding and coastal erosion, implementing our policy reforms and delivering our investment programmes.

What actions have we taken to improve the natural environment?

Flood and Coastal Erosion Policy and Strategy

In July 2020, the Government published a [Policy Statement on Flood and Coastal Erosion Risk Management](#) which set a long-term ambition to create a nation more resilient to future flood and coastal erosion risk. The Policy Statement outlines 5 ambitious policies and over 40 supporting actions which will accelerate progress to better protect and prepare the country against flooding and coastal erosion in the face of more frequent extreme weather.

Alongside the Policy Statement, the Environment Agency published an updated [National Flood and Coastal Erosion Risk Management Strategy](#) which sets out a vision for “a nation ready for, and resilient to, flooding and coastal change – today, tomorrow and to the year 2100.” The Strategy includes objectives and shorter-term measures to guide the delivery of activities by those involved in flood and coastal erosion risk management on the ground.

Flood and Coastal Erosion Investment Programmes

In March 2020 we committed to investing a record £5.2 billion over 6 years from April 2021. This investment will deliver around 2,000 flood schemes, benefitting every region of the country, and will better protect 336,000 properties from flooding. This will reduce national flood risk by 11% and it will help avoid £32 billion in future damages – providing economic benefits to the nation as a whole and supporting job creation.

To support this, we will publish further details of what we expect to achieve from the programme and how it is to be managed. The Environment Agency will publish an updated programme of flood and coastal defence capital projects.

We will undertake an assessment of the benefits of the 2015-2021 capital programme linked to its intended social, economic, and environmental impacts. This will help us understand what was achieved and will provide evidence to improve future programmes and policies. The final report is due to be published by the end of 2021

During 2020/21 we completed construction of several flood defence schemes that contributed to better protecting over 57,000 properties from flooding.

We will publish the outcome of a Call for Evidence on frequently flooded communities, that explored how we can strengthen our flood and coastal defence investment programme through better assessment of local circumstances.

Natural Flood Management

The £15 million Natural Flood Management programme formally ended on the 31st of March 2021, after 6 years. 58 projects across England have benefitted from this programme to reduce flood risk to more than 15,000 homes and improve 4,000 hectares of habitat.

We will undertake an evaluation of the Natural Flood Management programme to inform an update of the Natural Flood Management Evidence Directory next year, bolstering the evidence base with successful case studies. This will enable better quality Natural Flood Management, and better outcomes for the communities they serve.

Flood recovery

The Property Flood Resilience Recovery Support Scheme was extended by 9 months for both the November 2019 and February 2020 floods. Under this scheme, eligible properties can access up to £5,000 of funding as a contribution towards making the property more flood resilient.

To further improve flood recovery, we consulted on potential changes to the scheme that aim to improve its efficiency and effectiveness and encourage greater uptake of Property Flood Resilience among households at high risk of flooding across the UK. We are now considering the responses.

Reservoir safety

To ensure our reservoirs continue to be safe we commissioned an independent review of reservoir safety legislation and its application. A report was published in March 2020, and the Government accepted 22 recommendations for improving the reservoir safety regime and strengthening roles and responsibilities. The second part of the review considered the wider application of current legislation for reservoir safety and whether the regulation of reservoirs remains effective and robust. The Government will now work with the industry to explore these recommendations further.

Resilient Places Programme

In March 2021, we announced the 25 places which will benefit from a share of £150 million from our Flood and Coastal Resilience Innovation Programme. Local authorities, businesses and communities will test and demonstrate innovative practical resilience actions in their area, reducing the cost of future damage and disruption from flooding and coastal erosion.

Surface Water and Drainage Assets

We have made progress against the delivery of the Surface Water Management Action Plan. We commissioned an independent review into surface water and drainage responsibilities which looked at some of the complexities in determining responsibility for surface water and drainage assets. The review was published in August 2020 and the Government accepted 12 of the recommendations, which will help to make these arrangements more efficient, and effective.

Later this year we will publish an update on progress against the Surface Water Management Action Plan and publish a Government response to the independent surface water review.

Regenerative and sustainable farming

Our new environmental land management schemes will include support for farmers and land managers to manage land and water in a way that reduces flood risk to local communities. The Sustainable Farming Incentive will begin piloting in 2021 before it launches in 2022. The Local Nature Recovery scheme will also begin piloting in 2022, with a phased launch from late 2023. From 2022 we will begin piloting the Landscape Recovery scheme by launching at least 10 projects, and we will accelerate its wider rollout from 2024.

Planning policy

Defra is working with the Ministry of Housing, Communities and Local Government on proposals to streamline and modernise the planning system. The proposals will bring a new focus to design and sustainability, improve the system of developer contributions to infrastructure, and will maintain and enhance existing planning policies that direct new development away from areas at risk of flooding. They will help to ensure that new properties and infrastructure are resilient to flooding and coastal erosion.

In January 2021, the Government published a consultation on changes to the National Planning Policy Framework. The revised text seeks to strengthen environmental policies, including clarifying some aspects of policy concerning planning and flood risk. The consultation is now closed, and the Government will respond in due course.

In addition, through enhanced long-term water industry planning processes the Environment Bill will support our ambition to increase resilience to extreme weather events and the risk of sewer and surface water flooding.

Drought resilience

The Government's National Infrastructure Strategy reaffirmed the twin track policy of new sustainable water supplies alongside demand management. It also confirmed that Government will require water companies' water supplies to be more resilient to extreme (1 in 500 year) drought events.

We have supported regional groups and water company implementation of the National Framework for water resources. This includes revising guidance on water company statutory drought and [water resources management plans](#).

We will continue to support the implementation of the National Framework for water resources. This includes supporting water companies to plan regionally and with other sectors to achieve the right balance of measures to increase drought resilience for drought and water resources planning consultations in 2021 and 2022.

Case Study: Two Valleys – Slow the Flow (WWT)

In 2018, the Wildfowl & Wetland Trust (WWT), initiated a Natural Flood Management (NFM) project in the Two Valleys area in West Somerset. One of 15 Government funded pilots, we are working with farmers, landowners, businesses and the wider community to reduce flooding affecting the town of Williton and surrounding communities, increase local biodiversity and water quality.

Partnering with the Wessex Area Environment Agency team, WWT has restored natural features across the whole length of the river catchments emulating the natural functions of the catchment, floodplains and rivers. We are involving local communities to install wetland features to manage the flow of water and reduce flood risk.

NFM measures were constructed between January 2019 and March 2021. They include 10 new open water wetlands, 1 wet woodland, floodplain reconnection, 169 'leaky dams' and the planting of over 3,650 trees across 27 locations.

A significant part of the project involved community engagement to empower local communities to take ownership of these natural flood measures. The project also involved working with farmers to adopt practices which help reduce flood risk, improving soil health and creating natural barriers. Community engagement included workshops, school field trips and training for monitoring riverflies.

Green Recovery Challenge Funding has been secured to continue the project. The aim is to work with local communities to restore wetland habitats, safeguard flagship species and support a transition towards supporting regenerative land management that will increase biodiversity, enhance ecosystem services and celebrate cultural heritage.

9. Using resources from nature more sustainably and efficiently

What is the challenge?

Our natural environment provides us with tangible goods such as food, timber and fish. Modern life and a healthy, vibrant economy depend on these valuable natural resources. However, we need to guard against consuming finite raw materials and causing adverse environmental impacts through unsustainable land and fisheries management practices.

Why is it important that we take action?

Resources are intermediaries of environmental impact that can arise across their lifecycle, including at the point of extraction, transformation, use or disposal. Increasing our resource productivity means doing more with fewer resources. This can help us conserve our stock of natural capital and biodiversity as well as reduce the pollution and waste we generate. Moving towards a more circular economy in which primary raw material consumption is reduced and materials are kept in use for longer can help improve our resource security, cut carbon emissions from extraction, processing and manufacture, increase our international competitiveness and save consumers money.

Fisheries

Our ambition is world-class fisheries management to achieve sustainable fisheries, safeguarding stocks and the environment for the long-term. The objectives in the Fisheries Act, the Joint Fisheries Statement and Fisheries Management Plans collectively reaffirm our commitment to achieving sustainable fishing and protecting the

marine environment while tailoring our approach to our unique seas and the needs of our fishing industry.

Timber

We understand that not only do we need to plant trees, but we also need to make good use of those felled - both hardwood and softwood. We therefore committed in the Clean Growth Strategy and the 25 Year Environment Plan to increase the use of timber in construction. This could reduce embodied carbon in construction while also locking away carbon long term and driving investment into tree planting and establishment.

Soil

Healthy soil underpins a range of benefits, including food production, biodiversity and flood mitigation. Once degraded, the ability of soil to perform these benefits is reduced. We are committed to protecting and enhancing our soils so that they function better to deliver a wide range of ecosystem services.

Food and farming

The impact of farming on soil, air quality, biodiversity and climate change raises questions about how we can make food production more sustainable, alongside continuing environmental improvements. The Government is committed to developing a food strategy that will support the development of a food system that is sustainable, resilient and affordable, that will support people to live healthy lives, and that will protect animal health and welfare.

What actions have we taken to improve the natural environment?

Resource productivity

We set out the strategic ambition in the Resources and Waste Strategy to, at least, double resource productivity by 2050. In 2017, England generated approximately a sixth (16%) more economic value per unit of raw material consumed (excluding fossil fuels) than in 2001, with resource productivity rising from £1.63 of national Gross Value Added (GVA) per kg of raw material consumption to £1.89 in 2017. Resource productivity measured on this basis peaked in 2009 as a result of a sharp drop in raw material consumption relative to economic activity during the recession. It subsequently declined but remains above pre-recession levels. Since 2015, resource productivity increased again. We plan to publish an update to this in the 2021 Resources and Waste Indicator Framework.

Global resource initiative

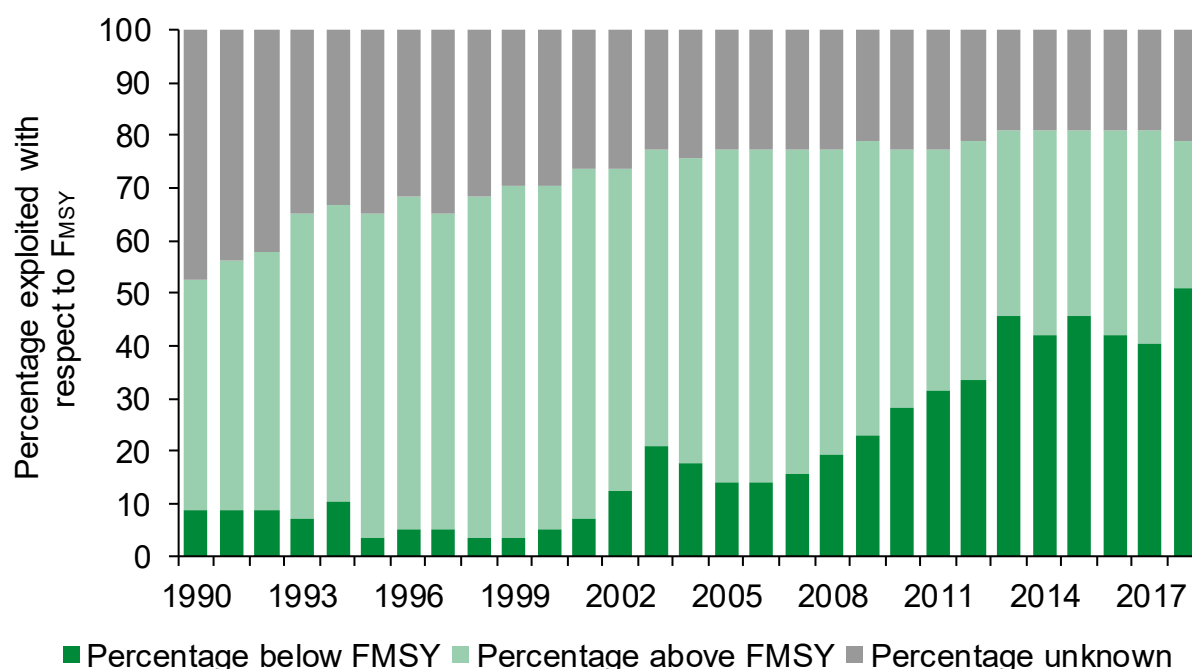
As part of the 25 Year Environment Plan the Government commissioned an independent taskforce – the Global Resource Initiative - to provide advice on how the UK could reduce the global environmental footprint of UK supply chains. The taskforce's report included 14 recommendations addressing a range of areas including trade, finance, food and diets and global partnerships. These recommendations highlighted and have helped us understand the importance of addressing the UK's global environmental footprint and tackling deforestation by supporting sustainable supply chains.

The Government's response sets out our intentions with regards to each recommendation and is designed as an interlocking package of measures which we are

working on with partners across Government to deliver. Combined, these will aim to: support producers in moving to more environmentally and economically sustainable land use; increase market demand and strengthen price signals for sustainably produced commodities; and forge strong partnerships to support collective global action.

Fisheries

Figure 4. Marine fish (quota) stocks of UK interest harvested sustainably, 1990 to 2018



Source, Centre for Environment, Fisheries & Aquaculture Science; International Council for the Exploration of the Sea

For more information refer to the [Outcome Indicator Framework](#): C10a Indicator.

Overall, there is evidence of a positive trend towards a greater proportion of stocks fished sustainably and within safe biological limits. The percentage of fish stocks (including Nephrops) fished at or below levels capable of producing maximum sustainable yield (FMSY) has increased from 9% in 1990 to 51% in 2018. The percentages fished above FMSY and at unknown levels relative to FMSY have both decreased over the same time period. In the most recent year of assessment (2018), there was an 11 percentage point increase in the percentage of stocks with fishing pressure below FMSY.

The UK has now left the EU and is no longer subject to the Common Fisheries Policy (CFP) which is the principal legal mechanism for managing fish stocks in EU waters. The UK is now an independent coastal state conferring the responsibility for designing domestic fishing policies on Defra and the Devolved Administrations. These policies can now represent the best interests of fishermen in the UK and which allows our fishing industries to thrive.

Fisheries statement

The UK Fisheries Administrations are currently drafting a Joint Fisheries Statement detailing the policies we will take to deliver the fisheries objectives that are set out in the Fisheries Act 2020. The statement will ensure we fish sustainably, deliver our existing environmental commitments and adopt common approaches to fisheries management where appropriate, while securing the social and economic sustainability of the sector in the long run.

Fisheries Management Plans

Now that the UK has left the EU, the Fisheries Act 2020 together with retained EU law provides a comprehensive legal framework to manage our fisheries sustainably. Fisheries Management Plans (FMPs) will set out policies and measures to manage fishing activity to restore fish stocks to sustainable levels. Plans will help us achieve the fisheries objectives set out in the Act. Plans will be legally binding on the Fisheries Policy Authorities.

Plans will be flexible and tailored to tackle the specific/local needs of our stocks, fisheries or geographic areas. They will be more comprehensive than the EU Multi-Annual Plans (under the Common Fisheries Policy), with each FMP setting out the detailed fisheries conservation measures necessary to manage individual fisheries and fish stocks. Many stocks and fisheries are shared between two or more countries in the UK and hence require joint action by relevant administrations.

The policy for implementing FMPs will be set out in the Joint Fisheries Statement, which will also set out the first list of those plans the authorities will produce and a timetable for their publication. All FMPs will be subject to consultation and will be subject to regular reviews - at least once every 6 years. Stakeholders will be actively involved in preparing plans to establish shared ambitions for a sustainable fishery over the long term.

Fisheries monitoring and advice

A UK Fisheries Science Advisory Panel has been established comprising of Chief Fisheries Scientists across the Fisheries Administrations to enable coordination of advice and therefore ensure the use of best science to support the UK as an international coastal State.

As an independent coastal State we are now representing ourselves as independent members at relevant international forums, including Regional Fisheries Management Organisations and the International Council for Exploration of the Seas (ICES). The signing of a Memorandum of Understanding between the UK and ICES signifies the UK's ongoing commitment.

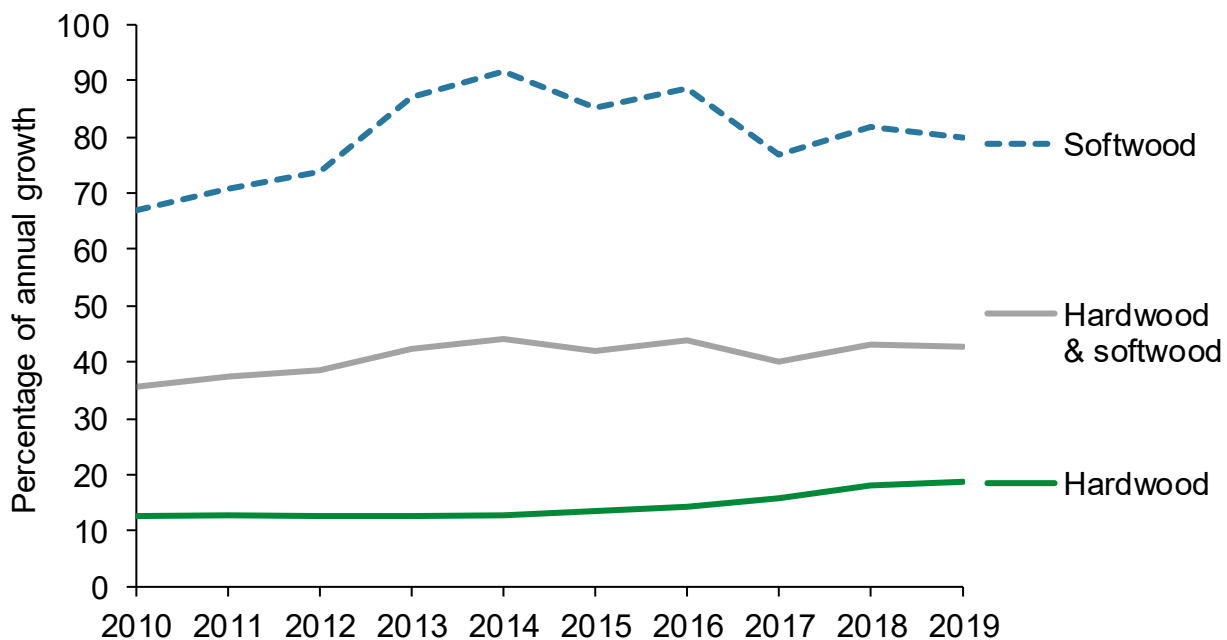
Bycatch

We are developing a UK Bycatch Mitigation Initiative which we will be publishing later this year. Using a coordinated, stakeholder-led approach, this initiative will outline the actions that will be taken to tackle the bycatch of sensitive species in UK waters in a practical and risk-based way. In November 2020 we launched our programme of work on 'Protected, Endangered and Threatened Species' bycatch (Clean Catch UK) which supports a more ecosystem-based approach to fisheries management and monitoring.

Timber

We are committed to increasing tree planting across the UK to 30,000 hectares per year by the end of this parliament. We published our ambitious [England Trees Action Plan](#) on the 18th May 2021 which sets out our plans to at least treble tree planting rates in England as a key contribution to that 30,000 hectare UK commitment – this represents an unprecedented increase in woodland creation in England, supported by £500 million from the Nature for Climate Fund.

Figure 5. Percentage of the annual growth of trees in English woodlands that is harvested, 2010 to 2019



Source, Forestry Commission; Forest Research

For more information refer to the [Outcome Indicator Framework](#): E5 Indicator.

Our England Trees Action Plan includes measures to encourage both supply and demand for UK grown timber, including a new Forestry Innovation Fund which will provide financial support to develop innovative timber products, and use of procurement policies to increase public demand for sustainably sourced timber. We will also work with the Green Construction Board and Homes England to identify actions industry and Government can take to safely increase the use of timber in housing programmes and construction.

Guided by market analysis, fire safety and structural considerations, key opportunities for the safe growth of timber use will be in low-rise buildings using traditional and modern methods of construction, and in a wide range of commercial and non-residential settings.

The percentage of softwood growth in England which is harvested has fluctuated between 67% and 92% over the 10 years for which these data are reported, reflecting sustained active management of softwood resources. The percentage of hardwood growth which is harvested has increased slightly, although it remains much lower

(between 13% and 19% over the same 10-year period), reflecting a lower level of active management of broadleaved woodland for timber supplies.

Soil

To help meet Government's commitment to have sustainably managed soils by 2030, we are considering developing, implementing and supporting actions that enable sustainable soil management. For example, we are developing plans for soil health monitoring that would produce a new robust data baseline for England. We are also developing a healthy soils indicator where soil carbon is being considered as one of many key soil variables. This indicator will feed into the monitoring scheme and may inform a potential future target for soil health.

Separately, we will work with farmers and land managers to develop the means of measuring and monitoring soil structure to enable visual assessments to be carried by across all land use, soil type and climate. This will complement the development of a healthy soils indicator and soil health monitoring scheme by providing a user-friendly way of measuring long-term trends, easily understood by those who manage soil. The [Sustainable Farming Incentive](#) will include many other actions to encourage carbon-friendly farming, for example through soil management.

Farming

Our agricultural sector is vital to our food security and underpins our rural communities. Environmentally sustainable farming is fundamental to our new approach to England's agricultural system. We are introducing 3 schemes that reward the delivery of environmental benefits: the Sustainable Farming Incentive, the Local Nature Recovery scheme and the Landscape Recovery scheme. Through these future schemes, alongside other policies outlined in our [Agricultural Transition Plan](#), we will make a significant contribution to the goals of the 25 Year Environment Plan.

These schemes taken together will achieve the outcomes we're aiming for:

- The Sustainable Farming Incentive will focus on sustainable farming – it will pay for actions that all farmers can do which will help them manage their land in an environmentally sustainable way
- Local Nature Recovery will pay land managers for actions that support local nature recovery and deliver on national environmental priorities in a locally targeted way – making sure the right things are delivered in the right places
- Landscape Recovery will support the delivery of landscape and ecosystem recovery through long-term, large scale projects, including projects to restore wilder landscapes in places where that's appropriate

The Environment Bill introduces measures– including Local Nature Recovery Strategies, Biodiversity Net Gain and Conservation Covenants – to incentivise, steer and secure positive land management practices alongside the new environmental land management schemes.

The 3 new schemes will also help deliver the benefits of the [England Peat Action Plan](#) by paying for sustainable peatland management and restoration. In addition, the future schemes will also play a role in supporting the target to protect 30% of England's land for

biodiversity by 2030, through habitat creation and restoration, or securing long-term management and protection for wildlife-rich habitats.

We are working with a range of environmental and agricultural stakeholders to collaboratively design the new schemes so that they are fit for purpose. We are currently running a programme of tests and trials, the priorities for which are the building blocks we will need for the scheme pilots. The pilots will provide a critical opportunity to test and refine the design of each scheme prior to its launch.

Food

In June 2019, Henry Dimbleby was appointed to lead an independent review of the food system, which will inform Government's Food Strategy. Part 1 of Henry Dimbleby's report was published on 29 July 2020, contained recommendations in the wake of the COVID-19 pandemic and preceding the end of the transition period with the EU, with chapters on trade, health and food insecurity.

The Government responded to Part 1 of the review reaffirming commitments to upholding our high food safety, environmental and animal welfare standards in all future trade deals, and highlighting the newly launched COVID-19 Winter Support Package to provide further support to the economically vulnerable. Part Two of the report has focused on the entire UK food system from farm to fork, outlining recommendations for the UK Government that will be considered in the development of a Government White Paper. The paper outlines 4 main objectives; to escape the junk food cycle to protect the NHS, to reduce diet-related inequality, to make the best use of our land and to create a long-term shift in England's food culture.

We are developing a Food Strategy that will cover the entire food chain from field to fork, building on work already underway in the Agriculture Act, the Fisheries Act, the Environment Bill, and the Childhood Obesity plan. The Government is committed to developing a food strategy that will support the development of a food system that is sustainable, resilient and affordable, that will support people to live healthy lives, and that will protect animal health and welfare.

This year we will develop strategy and policy propositions, building an evidence base and securing agreement across Government. The Government has committed to responding to the review's recommendations in the form of a Food Strategy White Paper within 6 months of the release of the final report.

10. Enhanced beauty, heritage and engagement with the natural environment

What is the challenge?

The interest in, and the evidence demonstrating the value of enhancing engagement with, our natural and historical landscapes continues to grow significantly. The COVID-19

pandemic has shown us that equitable access to high quality natural space is essential for society, yet those communities most impacted by COVID-19 are also those facing the greatest barriers to access. The benefits of engagement with quality outdoor spaces, both rural and urban, for physical and mental health are clear. We can also demonstrate wider social, educational and economic benefits associated with increasing available outdoor space and encouraging more people to use that space.

Our precious landscapes are intrinsically shaped by a long history of human activity, and the historical environment bears witness to how our natural sites have evolved and can therefore inform our decisions about how best to deliver nature recovery. As the Dasgupta Review emphasised, however, a failure to engage conscientiously with the natural world has led nature to the point of crisis. Engaging people and communities is therefore key – both to improve the environment, to empower people to make informed choices about the places where they live, become environmental stewards of the future, and improve their health and wellbeing.

Why is it important that we take action?

The Government is committed to enhancing our accessible green spaces and harnessing them to improve public health. Improving access to the outdoors and enhancing landscapes can support a range of public health, social and environmental outcomes. [Parks and green spaces](#) across the UK provide people with over £34 billion of health and wellbeing benefits, with an estimated saving to the NHS of around £111 million per year (based on a reduction in GP visits).

The [ONS Urban Natural Capital Accounts](#) reveal that urban green spaces support 2.1 million people to meet their weekly physical activity guidelines, wholly or in part. This translates to around 462 million active individual visits a year. This physical activity equated to 90,000 extra Quality Adjusted Life Years in 2017, which translates into avoided health service costs of around £1.4 billion.

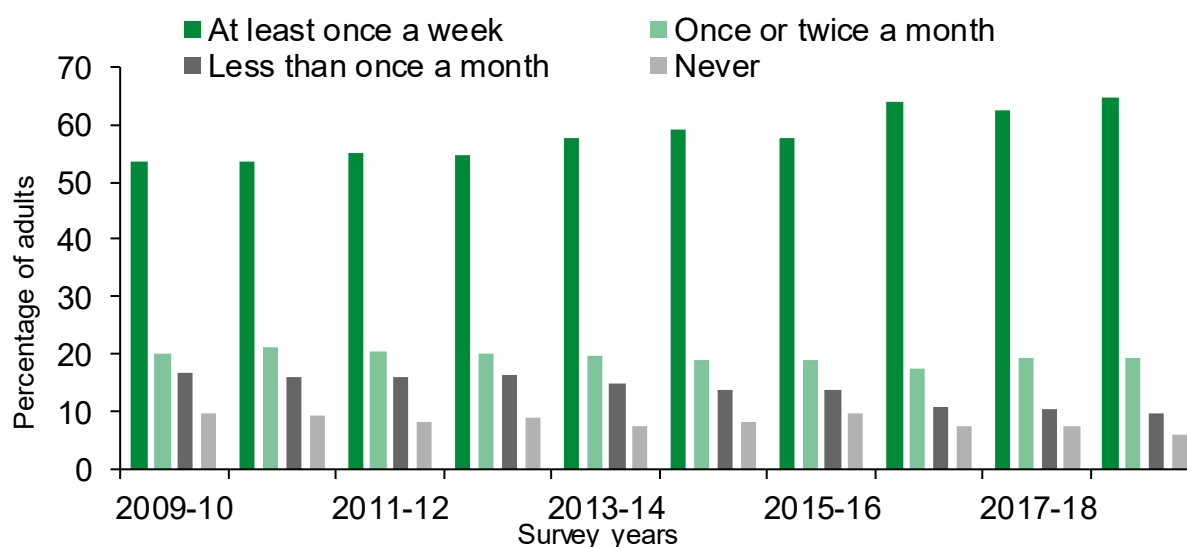
But the same level of access to urban and rural green spaces, both public and private, is not available to all and there are many barriers to certain demographics – including ethnic minorities, children, older people and those with disabilities – benefitting from it. These inequalities in access exacerbate other disparities in quality of life, including health outcomes. As such it is necessary to take action to ensure existing inequalities are addressed.

Furthermore, the current lack of accessible nature for so many in society contributes to a lack of understanding and valuing of the natural environment, which in turn affects delivery of the Government's strategic outcomes for biodiversity recovery and net zero, as well as many of the 25 Year Environment Plan's wider goals including thriving plants and wildlife, clean air and waste reduction. As such further action to increase engagement with nature is essential for effective delivery of our wider aims for environmental and nature recovery.

The COVID-19 pandemic has heightened public appreciation of the benefits of time outdoors, making the link between access to the natural environment and people's physical and mental health and well-being clearer for many. The Government is committed to enhancing our accessible green spaces and harnessing them to improve public health.

What does access to the natural environment currently look like?

Figure 6. Frequency of visits to the natural environment in England, 2009-10 to 2018-19



Source, Natural England

For more information refer to the [Outcome Indicator Framework](#) – Indicator G4

The Monitor of Engagement with the Natural Environment (MENE) survey showed an increase in population of adults visiting the natural environment at least once a week from 54% in 2009-2010 to 65% in 2018-2019. The MENE survey has been replaced with the new [People and Nature Survey \(PANS\)](#) which will give us comparable insights going forward.

What are our long-term plans to improve access to the natural environment?

Our over-arching vision is for more equitable access to enable people from all backgrounds to connect with the natural environment and take steps to conserve and enhance it. We will:

- Help people improve their health and wellbeing by using green spaces including through mental health services
- Encourage children to be close to nature in and out of school, with particular focus on those in disadvantaged areas
- ‘Green’ our towns and cities by creating equitable green infrastructure and planting 1 million urban trees
- Connect more people of all backgrounds with our national landscapes, making them more inclusive, accessible and welcoming to new audiences
- Protect and expand our access network for all users by completing the England Coast Path, developing a new north coast to coast trail and reforming rights of way legislation
- Work across Government to break down the silos in delivering integrated and cost-effective policy on access to the outdoors

What actions have we taken to improve access to the natural environment?

Embedding nature into education and health

We launched 'Preventing and tackling mental ill health through green social prescribing' - a £5.77 million cross-Governmental project to test nature-based social prescribing in 7 test and learn sites, run national research work to understand its scalability, and deliver a robust project evaluation. The project will investigate how to increase use of, and connection to, the natural environment through referral to green and/or blue social prescribing services within communities in England to prevent mental ill health. It will run from October 2020 to April 2023.

Work has continued on the Children and Nature Programme, which aims to support children from disadvantaged backgrounds to have better access to natural environments. The programme had been funded to date by the Department of Education. However, Department for Education were unable to commit to continuing funding for the programme due to spending review decisions made in light of the impact COVID-19 has had on schools. Defra and Department for Education have now committed jointly to funding a reduced version of the programme during a one-year managed closure period until March 2022.

In 2020/21 the Nature Friendly Schools and Community Forest and Woodland Outreach projects worked with over 140 schools in disadvantaged areas, continuing to support many of them during periods of lockdown. A further 82 primary schools, plus 5 secondary schools, 10 special schools and 3 Alternative Provision Institutions will be receiving delivery in year 2 of the Nature Friendly School project (2021/22). The Growing Care Farming project continues to support care farmers and health professionals and brings them together with a common purpose of providing therapeutic, mental health, social and educational care services. Uptake of the code of practice for care farms is continuing (approximately 30% of care farms have received or are working towards accreditation).

Improving green infrastructure and access to nature

Natural England, in partnership with others, are developing a National Framework of Green Infrastructure Standards to be launched in 2022. Green infrastructure includes green space (for example parks and woodlands, street trees, hedgerows), and blue infrastructure (for example canals, rivers, streams, ponds and lakes). The framework has been trialled in 10 different areas of England. It will show what good green infrastructure looks like and help local authorities, developers and communities improve provision in their areas.

We will be extending the Urban Tree Challenge Fund to support the planting and establishment of trees in urban and peri-urban areas. Thousands of trees will be planted near schools and healthcare centres and in areas with fewer trees and higher social deprivation. Across the country 44,000 large trees will be planted in towns and cities. These will support areas to improve health and wellbeing and help connect people to the outdoors.

Through Nature for Climate Fund investment we will enable a new programme of planting by England's Community Forests, called Trees for Climate. This will deliver 6,000 hectares of new woodland by 2025, building on the 500 hectares planted in 2020/21 through our initial investment of £12.1 million. These will be woodlands planted

and managed by, and for the benefit of, local communities. These forests are within reach of 50% of the population of England and in the areas where community forestry can have the most socio-economic impact.

We are working to complete the England Coast Path and to support our network of National Trails. Work on the 2,700-mile route continues at pace, with over 1,520 miles now approved as England Coast Path, and 431 miles already open for the public to enjoy. A number of new stretches of the path will open throughout 2021 and, other than where planning decisions or legal issues are still being considered, we aim to have all stretches either open, or with establishment works started, by the end of 2021.

We will also develop a new northern National Trail between St Bees in Cumbria and Robin Hoods Bay in North Yorkshire. This 192-mile trail showcases 3 of the UK's most scenic and visually stunning National Parks: The Lake District, The Yorkshire Dales and The North York Moors.

Public access is key to connecting people with the environment to improve health and wellbeing. The Rights of Way reform project will protect public access by enabling existing rights of way to be more efficiently recorded and amended where appropriate.

We intend to lay legislation to streamline the process of recording and changing rights of way. A deadline for recording unrecorded historic rights of way will be brought into force which will finalise the legal record of rights of way. This will bring about certainty for users and landowners about where rights of way exist.

Working closely with partner organisations from a range of sectors, Natural England refreshed the Countryside Code as part of a wider campaign to support people's safe enjoyment of the outdoors and aligned with COVID-19 restrictions lifting. The resulting products were launched on 1 April 2021 and received widespread coverage in the media. The campaign will continue in the new financial year to support the growing numbers of people, especially new audiences from more diverse backgrounds, spending time outdoors.

Landscapes

The Glover review made recommendations regarding the need for National Landscapes to strengthen their mission to actively connect with all people for their health and wellbeing. Preparation for the Government response to the Glover Review of landscapes is underway. A [Ministerial Statement](#) was released in 2021, with a full response anticipated to be published later in the year. However, progress has been made on certain aspects covered in the Review.

We have set out an ambitious future programme for new national landscapes and new approaches to landscape designations. Delivering on the Prime Minister's commitment in his [10 Point Plan for a Green Industrial Revolution](#) we will be considering the designation of two new Areas of Outstanding Natural Beauty (AONBs) (Yorkshire Wolds and Cheshire Sandstone Ridge) and extensions to two existing AONBs (Surrey Hills and Chilterns AONB).

These areas could contribute substantially towards the Government's ambitious pledge to protect and improve 30% of our land for nature by 2030. This would deliver over 40%

of the additional 4000 km² required, safeguarding these areas for future generations and bringing more people within closer reach of nature.

The Farming in Protected Landscapes programme (part of Defra's [Agricultural Transition Plan](#)) will offer funding to farmers and land managers in Areas of Outstanding Natural Beauty (AONB), National Parks and the Broads.

We will also explore the potential for a new style of designation that will drive nature recovery and improve people's connection with nature, focusing on our towns, cities and peri-urban areas. A new style of designation will focus on improving quality of life and place, addressing inequalities in access and connection to the natural environment which have been well-evidenced through the COVID-19 pandemic.

In response to the Glover review we have also commissioned two new social research projects: 'Improving the Ethnic Diversity of Visitors to England's National Landscapes' and 'Increasing Children's Engagement with Designated Landscapes'. Both projects will review existing evidence and provide new qualitative evidence on experiences of, and engagement with, national landscapes. This evidence will inform a more targeted approach to addressing the barriers to inclusive access of our national landscapes.

Case Study: How a ground-breaking pilot project helped children connect with nature during the COVID-19 pandemic (Heritage Fund):

Following months of lockdowns, school closures and social restrictions, many children across the UK had fewer opportunities to engage with the natural environment. In autumn 2020, Learning through Landscapes launched a ground-breaking pilot project to connect some of the most disadvantaged children from across the UK with their local natural heritage.

The My School, My Planet pilot worked with over 1,000 children in 49 schools throughout the UK between September and November 2020. The children involved previously had little or no interest in the natural environment.

Over the course of more than 700 hours of in-person teaching, these children learned about climate change, biodiversity or soils, were encouraged to make changes to their school grounds such as building bug hotels and planting trees and discovered how their own actions could contribute to positive environmental change.

By the end of the pilot, an independent evaluation found that the children's knowledge of biodiversity, soils and climate change had measurably improved. Children felt more connected with their local natural heritage and demonstrated better understanding of how local and national action can affect the global natural environment. They also felt more empowered to use this understanding to drive change themselves.

It's essential that this sense of empowerment to engage with the natural environment is felt by all children and young people. Learning through Landscapes is now working to bring the project to over 1,000 schools across the UK and will aim to enhance youth engagement with the natural environment, to tackle social injustices surrounding access to nature and to drive long-term behavioural change.

11. Mitigating and adapting to climate change

What is the challenge?

The global challenge presented by climate change must not be underestimated; the science is clear that global action is vital both to reduce emissions and to adapt to the impacts which a changing climate brings. The UK's role in such action is crucial, and our international climate leadership must be underpinned by robust domestic policy and continued progress at home. This why we have laid legislation for the UK's sixth carbon budget, proposing a world-leading target which would reduce greenhouse gas (GHG) emissions by 78% by 2035 compared to 1990 levels. This is in line with the latest science as the level recommended by our expert advisers at the Climate Change Committee . The target marks a decisive step towards net zero by 2050.

Why is it important that we take action?

Addressing the causes of climate change is essential and we must act to ensure our society and natural environment is adapted and resilient to the effects of climate change. The UK's third [Climate Risk Independent Assessment \(CRIA\)](#), published on 16 June 2021 by the Climate Change Committee, offers up to date insight into the growing risks and opportunities to the UK from climate change and will help inform greater ambition and action on enhancing resilience. It sets out 61 risks across a range of sectors – the majority of which are in the highest urgency category ('more action needed').

The Climate Change Committee identifies 8 priority risk areas which need immediate attention, including a number relevant to the 25 Year Environment Plan, such as risks to terrestrial and freshwater habitats, soil health from flooding and drought, natural carbon stores and sequestration, and supply chains, including food. It [also sets out the importance](#) of integrating adaptation into policies, including for net zero, and in taking early action to prevent lock-in or avoid irreversible changes such as loss of species or ecosystems.

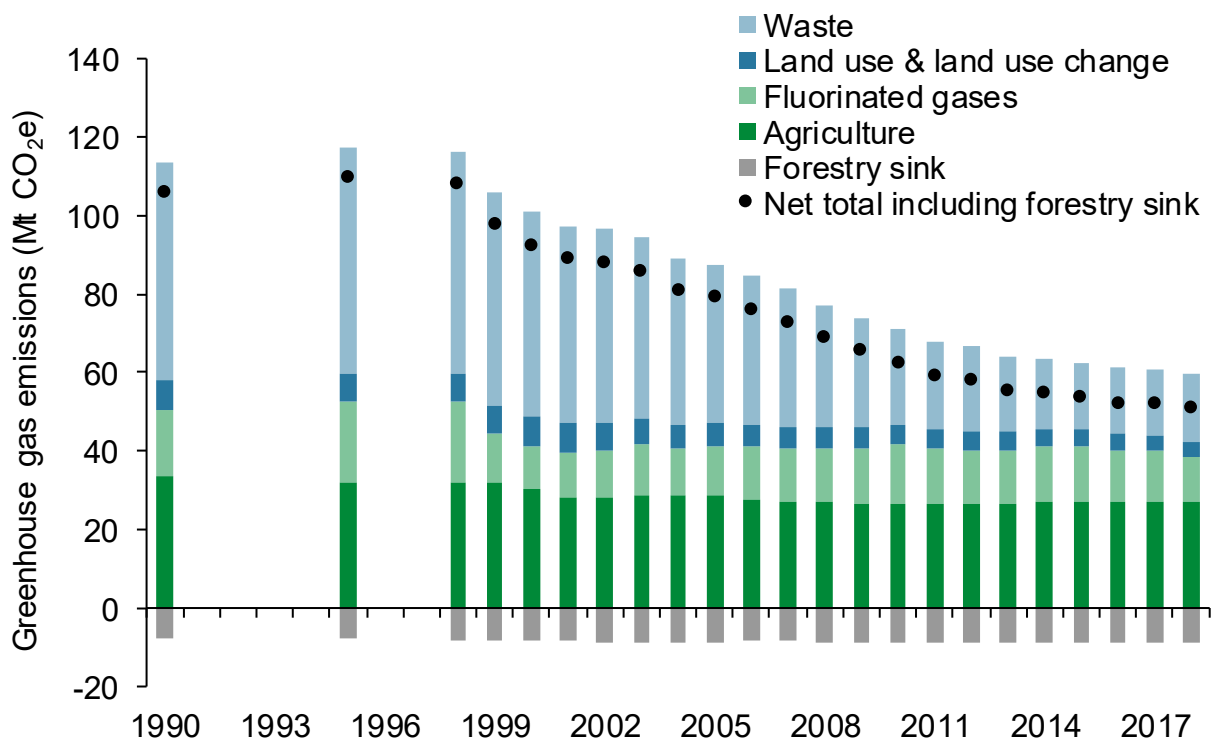
The Climate Change Committee's 2021 Progress Report on Adapting to Climate Change (published 24 June 2021), highlights areas for the Government to go further in embedding adaptation and resilience. The key areas relevant to the 25 Year Environment Plan include farmland, terrestrial and freshwater habitats and species, agricultural productivity, air quality and surface water flooding. The Climate Change Committee also calls for Government planning for at least a 2°C increase in global temperatures above pre-industrial levels, with a consideration towards 4°C.

Climate and biodiversity loss are interconnected challenges that must be addressed together, alongside nature at the core of our climate change response. Climate change is having a devastating impact on our natural environment and ecosystem services, from drought, flooding, loss of non-native species or overheating, and will continue to intensify in the future. Proactive planning and response to these risks will reap far greater benefits than the initial cost, and help to build a more resilient, healthier and interlinked environment and society.

What is the condition of the natural environment?

Emissions of greenhouse gases from natural resources (waste, land use and land use change, forestry sink, fluorinated gases, agriculture, net total including forestry sink) in England have fallen by 52%, from 106 million tonnes of carbon dioxide equivalent (Mt CO₂e) in 1990 to 51 Mt CO₂e in 2018. Net greenhouse gas emissions have fallen from all sectors included within this indicator; however, the greatest reduction has been achieved in the waste sector (38 Mt CO₂e or 69%). While emissions from land use and land use change, fluorinated gases and from agriculture have fallen by 52%, 31% and 19% respectively, and net removals by the forestry sector have increased by 14%, the total net improvements in these 4 sectors combined (16 Mt CO₂e) is less than half of that achieved in the waste sector. More recently, this has continued to fall at similar rates in the latest 10 years; however, improvements in net removals by the forestry sector have slowed and net emissions from agriculture have fluctuated but show little overall change between 2008 and 2018.

Figure 7. Emissions of greenhouse gases from natural resources, 1990-2018



Source, Department for Business, Energy & Industrial Strategy

For more information refer to the [Outcome Indicator Framework](#) - Indicator A2

What are our actions and plans to mitigate against climate change?

2021 is a pivotal year for net zero and the wider climate agenda, as the UK hosts the 26th UN Climate Conference (COP26). We are putting nature at the heart of COP26, championing and driving forward the protection of the marine environment and nature-based solutions for climate, biodiversity, and people. Government departments are

working together to deliver the Net Zero Strategy, which will set out ambitious plans across key sectors of the economy to meet our carbon budgets and net zero.

In December 2020, the UK updated its Nationally Determined Contribution under the Paris Agreement at the 2020 Climate Ambition Summit, which committed to a reduction of 68% of all greenhouse gas emissions against 1990 levels. In April 2021, the Government laid legislation for the UK's sixth carbon budget, proposing a world-leading target which would reduce greenhouse gas emissions by 78% by 2035 compared to 1990 levels. This is in line with the latest science as the level recommended by our expert advisers, the Climate Change Committee.

We have committed to complete the F-gas (Fluorinated Gases) Regulation Review by no later than 2022.

Woodland and peatland

Woodlands and peatlands are two of our largest natural climate-regulating ecosystem types and they need to be managed sustainably. The England Peat and Trees Action Plans, published in May 2021, set out the Government's long term vision for the management, protection and restoration of our peatlands and treescape, including how we will support their resilience to future climate change risks and provide a wide range of benefits to wildlife, people and planet, including carbon emissions reductions and natural flood management.

With only 13% of our peatland in a [near-natural state](#), the [Peat Action Plan](#) sets out our plans to restore, sustainably manage and protect our peatlands. In December 2020 we launched the Lowland Agricultural Peat Taskforce, a group tasked with improving the condition of England's farmed lowland peat, which is responsible for 86% of England's peatland's carbon emissions.

Drained peatlands used as cropland and intensive grasslands occupy only a small fraction of the UK's peat area, but have the highest greenhouse gas emissions per unit area of any [land use](#). In January 2021, we fully included emissions from peat in the 1990-2019 UK Greenhouse Gas Inventory.

Our [England Trees Action Plan](#) outlines a programme of new measures to boost tree establishment and improve woodland management in England, including supporting the resilience of our woodlands to climate risks. It sets us on the path to ensure that we have at least 12% woodland cover by the middle of the century, supported by over 80 announcements and over £500 million of the £640 million Nature for Climate Fund.

Waste

The Government is seeking to make the UK a world leader in using resources efficiently and reducing the amount of waste we create as a society. We want to prolong the lives of the materials and goods that we use and move society away from the inefficient linear economic model of 'take, make, use, throw' to a more circular one.

The 3 Collection & Packaging reforms we are consulting on (extended producer responsibility for packaging; a deposit return scheme; consistency in recycling collections) are estimated to deliver over 30 million tonnes of CO₂ emissions savings between 2023 to 2035 - more than all the emissions of UK heavy goods vehicles in one

year. The delivery of consistent recycling collections plays a key role in reducing greenhouse gas emissions, with carbon savings across the projects' life span of £3.73 billion.

Food and farming

We are looking at ways to reduce agricultural emissions controlled directly within the farm boundary, considering a broad range of measures. The 3 schemes we are introducing will reward environmental benefits: the Sustainable Farming Incentive, Local Nature Recovery and Landscape Recovery. These schemes will help to deliver our commitment to net zero emissions by 2050. Our food strategy will also support the development of a food system that is sustainable and resilient.

What are our actions and plans to adapt to climate change?

We are working towards embedding climate adaptation across Government – with a wide range of policies and plans across Government departments needing to take climate change into account. The second National Adaptation Programme is the Government's programme to address climate risks between 2018 and 2023. It includes actions from across the economy, including the natural environment, infrastructure, people and the built environment, business and industry, and local Government. Government departments work closely together to increase the nation's resilience to climate change using the NAP as a common framework.

We have become one of the first countries in the world to fulfil a key commitment of the Paris Agreement by publishing our first [Adaptation Communication](#) at the Climate Ambition Summit in December 2020. This sets out what we are doing to prepare for the effects of climate change at home and to support those facing climate impacts overseas.

We have been engaging with relevant national stakeholders on climate resilience under the Adaptation Reporting Power. In our third adaptation reporting round, over 90 organisations have agreed to submit a report by December 2021. This includes those responsible for water, energy, transport, environment, heritage, health and finance.

In November 2020, we published [the Green Book supplementary guidance on Accounting for the Effects of Climate Change](#), to include updated information on climate change evidence and assessments. This will support Government departments and other organisations to consider climate risks in project appraisals and investments.

We have worked with the Climate Change Committee and Devolved Administrations in preparing the third UK [Climate Risk Independent Assessment](#), published on 16 June 2021 by the Climate Change Committee. We also continue to work with the Met Office to support and develop the usability of the UK Climate Projections to a wide range of stakeholders, helping Government and organisations integrate considerations of a future climate into their plans and operations

In response to recommendations by the Climate Change Committee, we have also been working on improving the indicators and metrics that we use to monitor adaptation and target improved future action. We have established a project with the Organisation for Economic Co-operation and Development which seeks to tackle the challenges faced in the UK and internationally on the monitoring of adaptation progress.

Adaptation in other 25 Year Environment Plan goals

We have continued to embed adaptation across other 25 Year Environment Plan goals. For example, in July 2020 we published a [Policy Statement](#) setting out our long-term ambition to create a nation more resilient to future flood and coastal erosion risk and the Environment Agency published an updated [National Flood and Coastal Erosion Risk Management Strategy](#). Defra and regulators are also supporting regional groups and water company implementation of the [National Framework for water resources](#).

We continue to develop and invest in our world-leading science to further understand the key areas of ocean climate research including blue carbon, nature-based solutions, ocean acidification, global monitoring systems and climate change impacts on marine ecosystems. In May 2020, Defra published [new sensitivity assessments](#) focussed on potential climate change impacts on protected features of Marine Protected Areas and their role in enhancing climate change resilience.

In May 2020 Natural England published a new edition of the [Climate Change Adaptation Manual](#) with RSPB to support nature conservation in a changing climate, and have been holding workshops with stakeholders. Work by the Forestry Commission and Forest Research to incorporate the UKCP18 climate projections into a [climate matching tool](#) aims to help foresters visualise the extent of changes to the climate that future woodlands will have to accommodate.

Future adaptation action

We will respond to the Climate Change Committee's third [Climate Risk Independent Assessment](#) through the publication of the Government's third UK Climate Change Risk Assessment in early 2022, which will inform an ambitious and effective third National Adaptation Programme to build a more resilient country. We will also carefully consider the Climate Change Committee's advice and evidence, and respond to the recommendations laid out in their 2021 Progress Report to Parliament on Adapting to Climate Change in our statutory Government response in October.

We will continue to invest and engage in crucial analysis on the costs, benefits, risks and opportunities of climate change adaptation. Through 2020, Defra has been working in partnership with Frontier Economics, leading climate change adaptation researcher Paul Watkiss and Associates to provide policy-centred analysis to strengthen readiness for climate change. The project will work closely with policy teams in a number of climate risk areas to develop their analysis and evidence base to identify policies and make the case for action. It will also provide a summary of the economic case for adaptation, including estimates of costs and benefits of adaptation.

We have been working with COP26 Unit and the Foreign, Commonwealth and Development Office (FCDO) on the development of the COP26 Adaptation and Resilience campaign, including on event proposals and climate science. The UK has made increasing ambition and action on adaptation a priority at COP26. At December's Climate Ambition Summit, the UK became one of the first countries in the world to fulfil a key commitment of the Paris Agreement by publishing our first Adaptation Communication.

12. Minimising waste

What is the challenge?

Preventing unnecessary waste safeguards precious resources and reduces our greenhouse gas emissions, which arise from extraction, processing, manufacture, and disposal. The challenge presented by climate change must not be underestimated and by keeping products and materials in circulation for longer, we can reduce emissions, maximising their value, and minimising their environmental impact. Resource efficiency reduces emissions embedded in the products we import – which represent 46.1% of total UK greenhouse gas footprint emissions – and products produced domestically.

Why is it important that we take action?

By improving the efficiency with which we use our resources, we can reduce harm to nature, cut carbon emissions from extraction, processing and manufacture, and increase our resource security whilst supporting domestic growth.

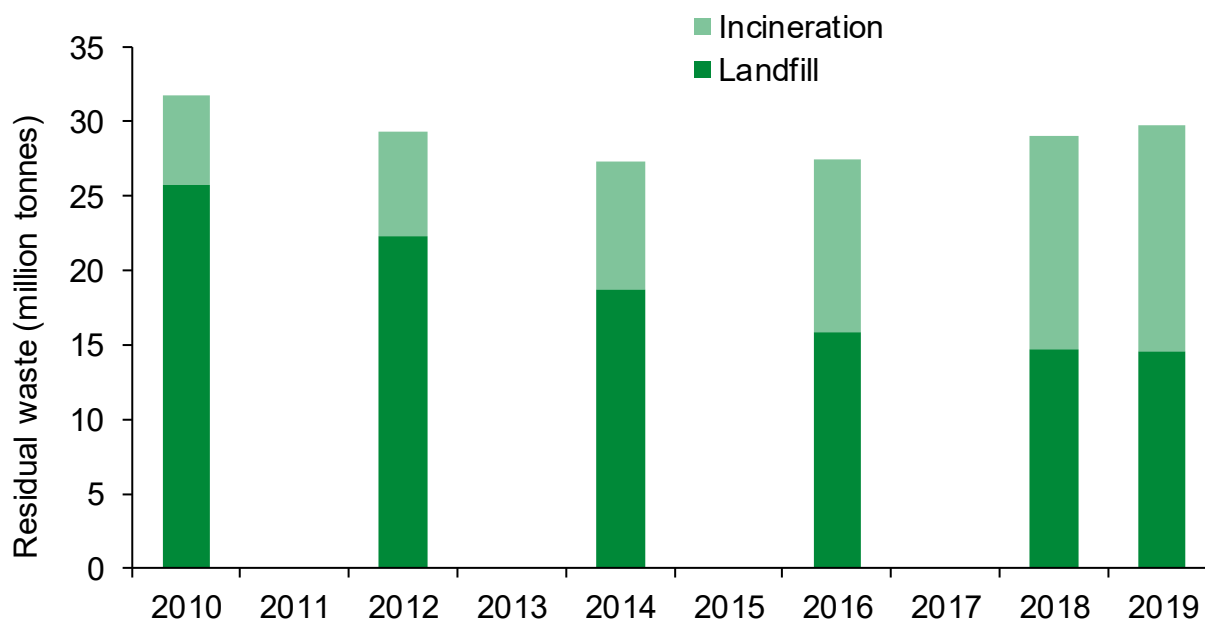
We currently extract [3 times the amount of resources from nature](#) than we did in 1970, and this is estimated to [more than double by 2060](#). The International Resources Panel estimates that resource extraction and processing of materials contribute to about 50% of total global greenhouse gas emissions and 90% of biodiversity loss and water stress.

Preventing waste, by keeping products in circulation, is vital for resource efficiency; the benefits are high and the costs potentially low. Doing so will help embed Sustainable Development Goal 12 on sustainable consumption and production in our economy, which in turn supports the achievement of other Sustainable Development Goals.

To work towards net zero, we are committed through our Resources & Waste Strategy to support waste prevention activities. Our strategy is supplemented by our new Waste Prevention Programme, which sets out a 3-pronged strategy focused on improved product design, better systems and services, and data access.

What is the condition of the natural environment?

Figure 8. Residual waste (excluding major mineral wastes) in England, 2010 to 2019



Source, Environment Agency

For more information refer to the [Outcome Indicator Framework](#) - Indicator J4

Residual waste here refers to waste sent to landfill or incineration in England. In 2019, the total quantity of waste (excluding major mineral wastes) landfilled or incinerated in England was 29.8 million tonnes, a 6.0% reduction against levels in 2010 (31.7 million tonnes). This reduction was due to less waste being landfilled (falling by 43.6% over the period), whereas waste sent to incineration more than doubled, increasing by 156.2% over the same period.

What are our long-term plans to improve the natural environment?

Our goal is to maximise the value of the resources we use, minimise the waste we create and therefore avoid emissions from the waste sector, driving us towards our target of net zero emissions by 2050.

To achieve this, we are committed to eliminating all avoidable plastic waste by the end of 2042, and all avoidable waste by 2050. Targeting use of unnecessary single-use plastics, reducing food waste and waste crime, will maximise the value of resource use and minimise waste impact on the environment. Our [Resources and Waste Strategy](#) sets out the policies that will help achieve its vision.

The strategy contains 5 strategic ambitions: working towards eliminating food waste to landfill; doubling resource productivity; working towards ensuring all plastic packaging placed on the market is recyclable, reusable or compostable; eliminating avoidable waste of all kinds; and eliminating avoidable plastic waste. It sets the framework that will help Government, businesses and the public to play their part in reducing the impact of our consumption and waste on the environment.

The Resources and Waste Strategy includes plans to reduce the amount of waste sent to landfill and the greenhouse gas emissions associated with breakdown of biodegradable waste, and increasing recycling, which results in lower carbon emissions in comparison to manufacturing products from virgin materials. It also announced 3 reforms to the waste system in England, which are the introduction of a deposit return scheme for drinks containers, extended producer responsibility for packaging, and consistency in household and business recycling collections. The strategy also sets out how we will work towards no food waste entering landfill by 2030 and explore policies working towards eliminating all biodegradable waste to landfill by the same date, to reduce harmful methane emissions.

What actions have we taken to improve the natural environment?

Resource efficiency and waste prevention

Over the last year we have been developing and consulting on a new Waste Prevention Programme for England – Towards a Resource Efficient Economy – which aims to help Government departments and others including industry, local authorities and consumers to work together. The consultation, running from 18 March to 10 June 2021, set out 3 cross cutting themes, improved product design, supporting local systems and services, and improving access to data to enable the use of secondary materials.

It also proposes action across 7 sectors – construction; textiles; furniture; electrical and electronics products; road vehicles; packaging, plastics and single-use items; and food. Proposals include the design and manufacture of products for optimum life and encouraging reuse, repair and remanufacturing. Responses to the consultation are being considered with a view to publishing the final revised Waste Prevention Programme for England later in 2021.

Textiles

We will be developing a proposal for an Extended Producer Responsibility scheme for textiles, supported by measures to encourage better design and information, and will consult with stakeholders on options by the end of 2022. Our Environment Bill includes clauses that will enable product design and information requirements to be set through secondary legislation.

Additionally, building on the success of the Sustainable Clothing Action Plan (SCAP) 2020, we are supporting the Waste and Resources Action Programme (WRAP) with 'Textiles 2030'. This is a new phase of the voluntary agreement for 2021-2030 which was launched on 26 April 2021, with commitments from brands and retailers representing about 60% of the UK's clothing retail sales by volume. Ambitious targets include a 50% reduction in the aggregate greenhouse gas footprint of new products by 2030 and net zero by 2050 at the latest; a 30% reduction in the aggregate water footprint of new products sold by 2030 (2019 baseline for targets); as well as the creation of a UK Roadmap for Circular Textiles.

Construction

We have agreed to work with the construction industry through the Green Construction Board to publish a road map to achieving Zero Avoidable Waste in the sector by 2050 in the next few months. We will also be reviewing and consulting on Extended Producer Responsibility, for certain materials in the construction & demolition sector, by the end of

2025, including the potential for supporting eco-design and labelling schemes building on existing industry standards.

Electronic & electrical equipment

In terms of Electronic and Electrical Equipment, we are continuing to work with the Department for Business, Energy and Industrial Strategy (BEIS) on the future implementation of minimum eco-design requirements in Great Britain. We are also taking new powers through the Environment Bill to drive resource efficient product design and product information requirements that support durability, repairability and recyclability by helping consumers make informed decisions.

Collection and Packaging reforms including wider Producer Responsibility regimes

Extended Producer Responsibility for packaging places responsibility on producers for the cost of managing the packaging they place on the market once it reaches its end of life, consistent with the 'polluter pays principle'. A Deposit Return Scheme is another example of producer responsibility. Producer responsibility is about making sure businesses that manufacture, import and sell certain products are responsible for their end of life environmental impact. The introduction of a deposit return scheme in England, Wales and Northern Ireland will sustain, promote and secure an increase in recycling of materials, and reduce littering.

The Government has undertaken second consultations on these reforms to the waste system. Following these, we are analysing the responses with a view to publishing Government responses on next steps for the reforms in due course. Subject to the outcome of the second consultations and parliamentary passage of the Environment Bill, we will initiate the appointment processes for the scheme administrators for the packaging Extended Producer Responsibility scheme and Deposit Return Scheme. The Government is also planning to consult on changing the Waste from Electronic and Electrical Equipment (WEEE) and batteries producer responsibility regimes.

These 3 Collection & Packaging reforms deliver on commitments in the Resources and Waste Strategy, such as a 65% recycling rate for municipal waste by 2035 and increased rates for recycling packaging. This is a step towards meeting our 25 Year Environment Plan commitment to eliminate avoidable waste by 2050 and will deliver an estimated over 30 million tonnes of CO₂ emissions savings between 2023-2035.

On the 27 January 2021, we published a revised Waste Management Plan for England, bringing current waste policies under 1 national plan. During the lifetime of this Waste Management Plan, we will see changes in the way we manage our waste; going further to improve recycling rates.

Plastic waste

We have made progress in tackling plastic waste and reducing the amount of unnecessary single-use plastic being consumed. Following on from our ban on microbeads in rinse-off personal care products in 2018, we took action on commonly littered items by introducing restrictions on the supply of single-use plastic straws, stirrers and cotton buds from October 2020. We are continuing to gather evidence to support further action on single-use items, including bans. We have reduced the use of single-use carrier bags by [95% in the main supermarkets since 2015](#) through our 5

pence charge. In May 2021, we increased the charge to 10 pence and extended it to all retailers to build on its success so far and create a level playing field for all businesses.

In April 2021, we published the Government response to the call for evidence on standards for bio based, biodegradable and compostable plastics, in which we stated our intention to consult on banning oxo-degradable plastics in due course, from advice from the Hazardous Substances Advisory Committee and calls from industry.

Waste crime and litter (including fly-tipping)

We are progressing the commitments in the Resources and Waste Strategy to develop proposals for the reform of the waste Carrier, Broker, and Dealer regime. We are working with industry and the regulator and we intend to consult towards the end of the year. We also intend to consult on the introduction of mandatory electronic waste tracking.

These measures will reduce the ability of waste criminals to hide evidence of the systematic mishandling of waste, and material dropping out of the system. The Carrier, Broker, and Dealer reform will improve the performance and credibility of the regime and aims to deter illegitimate operators.

We are also committed to preventing illegal activity being hidden through waste exemptions by reforming the existing regime. We plan to publish details of the reforms this summer, with legislation to follow when parliamentary time allows.

Good ‘binrastructure’ – the provision of litter bins – is a key element of the Litter Strategy for England, along with education and awareness and improving enforcement. WRAP published guidance in 2020 on binrastructure for local authorities and Business Improvement Districts.

Supporting this guidance, WRAP launched a grant scheme in the same year that allowed local authorities in England to apply for grants between £10,000 and £25,000 to purchase new litter bins. The scheme, funded by Defra, saw 44 applications approved, worth almost a million pounds. These new bins should help local authorities reduce litter through targeted interventions.

Last summer, in response to COVID-19, Defra developed a ‘Respect the Outdoors’ campaign to encourage people to follow the Countryside Code and to highlight the impacts of littering. This was promoted online and in locations near to urban parks, beaches and national parks. We also supported, and provided funding for, Keep Britain Tidy’s Love Parks campaign, which encouraged people to treat parks with respect.

Preliminary evaluation of these campaigns indicates that they had a positive influence on the target audience’s intended disposal of Personal Protective Equipment litter, with reports from local authorities that the intervention resulted in a beneficial outcome.

In 2021/22 we will carry out research, supported by the Department for Health and Social Care, into effective measures to tackle smoking related litter, including extended producer responsibility. Smoking related litter is the most prevalent in the UK and is estimated to cost local authorities £40 million per year.

Other research we intend to publish in 2021/22 includes detailed analysis of the drivers, deterrents and impacts of fly-tipping and pathways for terrestrial litter to the marine environment, both of which will inform future policy making.

Food waste prevention

WRAP was supported with a grant of £4 million to prevent and reduce food waste across the food chain and help consumers waste less including nearly £1 million funding for a field force to help businesses with the Food Waste Reduction Roadmap. Through this work businesses have collectively reported a 17% reduction in food waste, saving over £300 million and 180,000 tonnes of food.

We continue to support WRAPs campaigns; 'Guardians of Grub' in the hospitality industry and 'Love Food, Hate Waste and Wasting Food: It's Out of Date' which support consumers to reduce food waste in their homes. The latter were complimented with the first Food Waste Action Week in March 2021 which focused empowering consumers to reduce food waste in households.

Additional grants were also made available to prevent food waste including £11 million which supported the redistribution of surplus food to those in need. This grant-funding facilitated an increase of around 50% in the availability, capacity and capability of the sector from the year before to over 92,000 tonnes, together with laying the foundations for further increases in the future.

We plan to launch a consultation on mandatory reporting of food waste and loss in 2021.

Case Study: Increasing reuse, recycling and waste reduction in Essex through the Love Essex Fund (Essex County Council)

In Essex, the average person throws away 439kg of waste every year, a figure that we are actively trying to bring down by supporting residents to change their behaviour and minimise waste.

The Love Essex Fund was created in 2019 to support local organisations and individuals that promote repair, reuse and recycling. We offer micro-grants of £500, and so far we have successfully supported 19 projects, with a further 17 projects being funded in April/May 2021.

We fund innovative projects which:

- Reduce the amount of household waste being thrown away
- Make use of recycled, reused or reclaimed materials from the household
- Inspire people and communities to be creative and sustainable with their waste
- Provide skills and opportunities to build an environmentally sustainable community

Many of the projects we fund enhance the community in many different ways – with environmental benefits sometimes being a secondary factor. A great example of this is [BabyStuff Braintree](#), a project we supported in 2019. This small, grassroots organisation collects donations of unwanted baby and children's clothing which is then distributed to families in need.

As well as providing vital support in the local community, this project also reduces textile waste which would have otherwise gone to landfill.

We will be continuing this project next year. Our hope is that the more small-scale projects we're able to fund, the more local communities will benefit. Residents will be inspired to take small steps to reduce their waste, whilst simultaneously supporting local businesses and helping others.

13. Managing exposure to chemicals and pesticides

What is the challenge?

Chemicals

The chemicals and pharmaceuticals industry is the UK's second largest manufacturing industry. It accounted for £11.5 billion of the UK economy's Gross Value Added in 2020 and, globally, the industry is set to double by 2030.

With 350,000 chemicals on the market globally, chemicals benefit society, but pollution is one of the 5 drivers of biodiversity loss and some chemicals are linked to an increase in deaths, cancer rates and reproduction abnormalities. We therefore need to ensure chemicals are used safely and sustainably in a way that reduces risks to public health and the environment.

Pesticides

The targeted use of pesticides protects our crops and natural landscapes from native and invasive non-native pests; supports domestic food production, ecosystems and maintains our recreational, transport and amenity areas. Pesticides can also have detrimental effects on human health and the environment, including biodiversity. We need to ensure that we minimise the risk to environmental and human health and encourage sustainable pest management that enhances UK biodiversity.

Why is it important that we take action?

We need to ensure that, alongside the increased use of chemicals, we minimise the releases of chemicals that can cause harm to the environment, human health and businesses. We can achieve this through robust regulation, delivering on international obligations and seeking the assistance of others to identify alternatives.

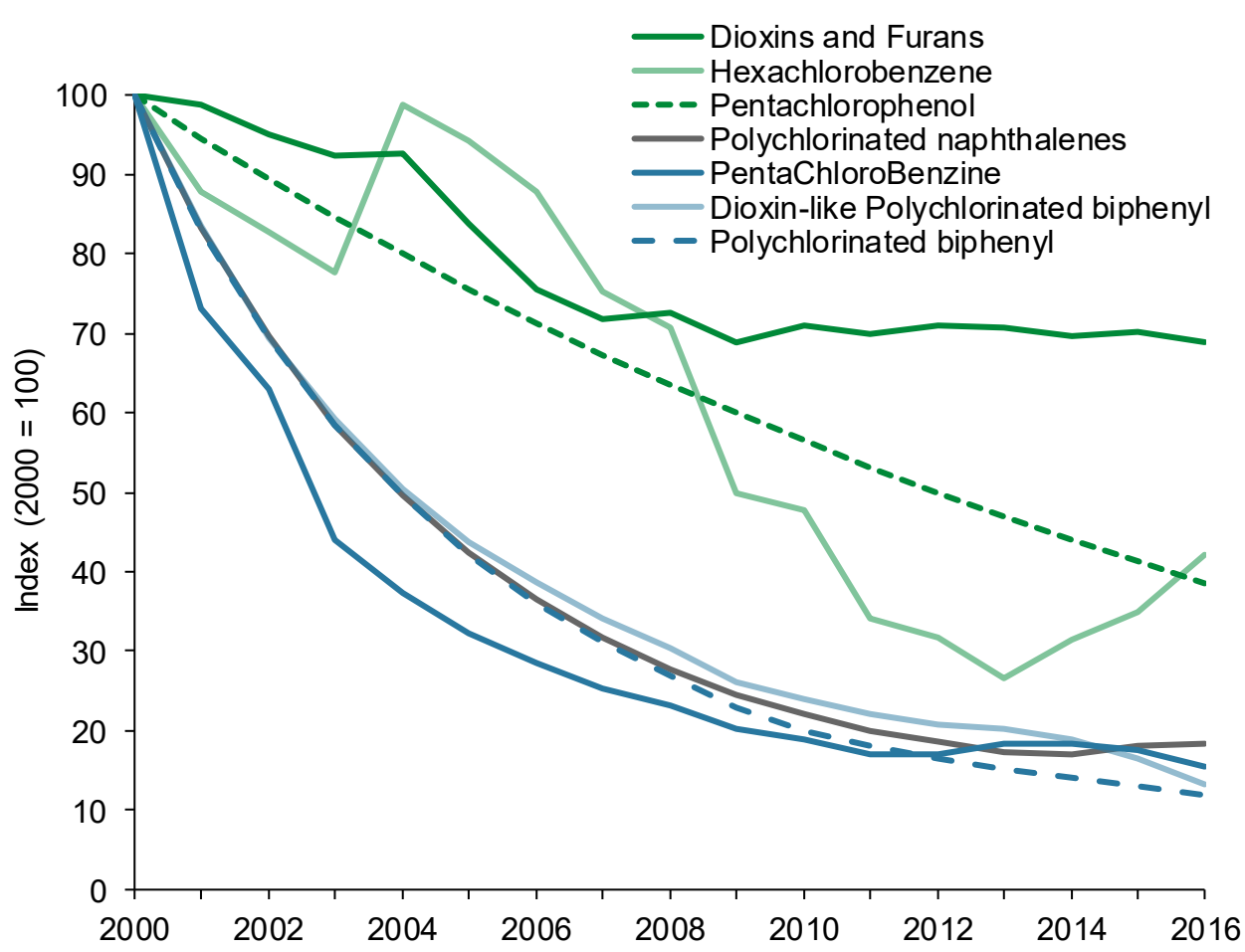
Chemical production is increasingly moving to parts of the world with less stringent regulatory framework and controls. Concerted efforts are needed to raise regulatory standards globally and understand the trade of chemicals and products along their complex supply chains. Without action unintentional releases could result in pollution that transgresses country boundaries and harms human health and the environment.

Pesticides are an integral component of UK food production and provide plant protection and control of both invasive non-native and indigenous pests. Pollution from pesticides

can create significant pressure on water quality, soil quality and biodiversity. There is a continued need to produce crops using methods with the lowest possible risk to the environment and human health.

What is the situation with chemicals and pesticides?

Figure 9. UK Emissions of Persistent Organic Pollutants (Persistent Organic Pollutants) to Air, Land and Water, 2000 to 2016



Source, Persistent Organic Pollutants Multimedia Emissions Inventory

For more information refer to the [Outcome Indicator Framework](#) - Indicator H3b

UK emissions of all 7 Persistent Organic Pollutants have fallen between 2000 and 2016. Dioxins and furans, a type of Persistent Organic Pollutants, are a family of chemicals strongly associated with combustion (particularly of waste) and the manufacture of metals. Their emissions had already reduced by 60% between 1990 and 2000, with improvements in technology and tighter environmental regulations contributing to this fall.

Between 2000 and 2010, emissions of dioxins and furans fell by a further 30%. Since then emissions have levelled out, with emissions post-2010 largely linked to more diffuse sources such as domestic combustion of solid fossil fuels, accidental fire, and illegal burning of waste.

By 2013, emissions of hexachlorobenzene had fallen to 26% of their 2000 baseline figure but have risen annually between 2013 and 2016 to now reach 42% of emissions in 2000. This recent increase is linked to waste incineration and the increasing use of a specific pesticide (chlorothalonil) for which it is a by-product.

Emissions of pentachlorophenol have fallen consistently since 2000 to reach 39% of their baseline figure in 2016. Emissions of the remaining 4 Persistent Organic Pollutants have followed a very similar pattern to each other, falling sharply in the first 10 years and then levelling out to between 13% and 18% of their baseline figures in 2016. For polychlorinated biphenyls and dioxin-like polychlorinated biphenyls, this relates to remaining final in-use stocks of heat-transfer fluids in dielectric equipment in energy transmission networks.

What action has been taken to improve the natural environment?

Chemicals

UK Registration, Evaluation, Authorisation & restriction of Chemicals (UK REACH) went live in January 2021, aiming to maintain the UK's existing high standards in the safe and effective regulation of chemicals. As part of this work, we have asked the Health and Safety Executive to prepare restriction dossiers on lead in ammunition and certain hazardous substances in tattoo inks. We have also asked the Environment Agency to investigate the risks posed by per- and polyfluoroalkyl substances and to make recommendations for managing any identified risks.

We are working closely with other Government departments and the devolved administrations to develop a Chemicals Strategy. This will set out our immediate priorities alongside any actions we will need to take to achieve safer and more environmentally sustainable management of chemicals for present and future generations.

We are continuing to take forward research, innovation and analysis to inform our approach to emerging risks posed by chemicals. These risks are to environmental quality and human health, through environmental exposure such as endocrine disruptors, exposure to unintentional mixtures of chemicals and impacts of hazardous chemicals in products.

We have continued to monitor the exposure and effects of chemicals on wildlife and aim to do further work over 2021/22. This is included in the 25 Year Environment Plan Outcome Indicator Framework 2021 Annual Report. This indicator will track changes in exposure and consider risk to wildlife from chemicals in terrestrial, freshwater, coastal and marine ecosystems.

We have developed and tested our Prioritisation and Early Warning System (PEWS) to identify emerging chemical issues across water, air and soil that will inform chemical management in the UK. This work also informs international efforts by developing links with initiatives in Europe and beyond to enhance the exchange of information on emerging environmental substances.

We have recently consulted on an update to the UK National Implementation Plan for Persistent Organic Pollutants, which reports on previous actions and proposes further actions for the next 2-3 years. We recently consulted on a draft UK proposal to list certain Medium Chain Chlorinated Paraffins (MCCPs) as a Persistent Organic Pollutant under

the Stockholm Convention. Following this consultation, the Secretary of State instructed the Environment Agency to produce a proposal setting out the evidence that these MCCPs are Persistent Organic Pollutants and this was submitted to the Stockholm Secretariat on 27 April 2021. This will now initiate a technical assessment of the proposal by the Persistent Organic Pollutants Review Committee in the autumn. If accepted, the UK will lead on the drafting of the technical documents at each stage.

We have focused on our participation in the UN Convention meetings, to which the UK is a party. The UK participated in the online segment of the UN Environment Assembly in February 2021, with the in-person event expected in early 2022.

Pesticides

Between December 2020 and February 2021 we consulted on a revised National Action Plan for the Sustainable Use of Pesticides from which we received over 1500 responses. The National Action Plan lays out how we aim to minimise the risks and impacts of pesticides to human health and the environment, while ensuring pests and pesticide resistance are managed effectively. In order to meet this aim, the National Action Plan focuses on 5 key goals, to:

- Ensure continued robust regulation to protect our health and environment
- Support the development and uptake of Integrated Pest Management
- Ensure those that use pesticides do so safely and sustainably
- Support in the reduction of the risks associated with pesticides by setting clear targets, by the end of 2022, and improving metrics and indicators
- Ensure that we work effectively with others to deliver the National Action Plan goals

What are our long-term plans to improve the natural environment?

Chemicals

We are implementing a programme of policy work to eliminate and restrict the production, use and release of Persistent Organic Pollutants in the environment in line with UK Stockholm Convention obligations.

In summer 2021 we will publish our updated National Implementation Plan, which sets out new actions to reduce and eliminate Persistent Organic Pollutants in the environment, including the removal of Polychlorinated Biphenyls contaminated equipment from use by 2025. In spring 2022 we will publish a 3-year Persistent Organic Pollutants report, including emissions, stockpiles and monitoring data.

Further work is required to develop our indicators around the target that we "substantially increase the amount of Persistent Organic Pollutants destroyed by 2030". Further work is required to develop the indicator, initially for Persistent Organic Pollutants and then for Polychlorinated Biphenyls ready for reporting in 2022.

Over the next year we will continue to work closely with the OECD and on the 'Beyond 2020 Framework' in order to help shape the future international chemicals agenda.

The UK will also participate virtually at the first (online) segment of the Triple Conference of the Parties for the Basel, Rotterdam and Stockholm Conventions in July 2021. An in-person segment is expected to take place in mid-2022.

We will continue to harness UK expertise to work with international partners through the OECD to develop tools and guidance for assessing and understanding chemical safety and issues of emerging concern.

Pesticides

We will issue a summary of the responses at the end of summer 2021 to the consultation on the National Action Plan for Sustainable Use of Pesticides, followed by a final National Action Plan later in the year which will update and supersede the 2013 version.

14. Enhancing biosecurity

What is the challenge?

Biosecurity refers to a set of precautions that aim to prevent the introduction and spread of harmful pests, diseases and Invasive Non-Native Species (INNS). These organisms can spread naturally through wind, water and animal migration. However, human activity, such as moving infected plants or timber, wearing contaminated boots and moving contaminated boats or angling gear, can have a big impact on their spread. The UK's third [Climate Risk Independent Assessment](#), published on 16 June by the Climate Change Committee, sets out 61 key risks from climate change. These include risks to freshwater, marine and terrestrial species and habitats, as well as to agriculture and forestry, from pests, pathogens and invasive species, which were allocated the highest urgency category ("more action needed"). In our 25 Year Environment Plan, we committed to enhancing biosecurity to protect our native wildlife and livestock and boost the resilience of our trees and plants.

Why is it important that we take action?

Invasive Non-Native Species

Invasive non-native species (INNS) are one of the greatest threats to biodiversity worldwide, a key pressure in Great Britain and cost the economy at least £2.3 billion each year. Climate change exacerbates the [risk they pose to the natural environment](#).

Approximately 12 new non-native species establish each year, of which approximately 15% cause significant negative impacts. The rate of invasion is rising due to increasing global trade, transport and travel via at least 37 different invasion pathways. Preventing new invasions and rapidly responding to those that occur is key. Between 1970 and 2013, 267 non-native plant pests were believed to have [established in Great Britain](#).

Plant health

Plants are essential to our natural environment, social wellbeing and make a vital contribution towards the food supply and rural economy. However, they are under threat from pests and diseases which are growing because of increasing globalisation and environmental change.

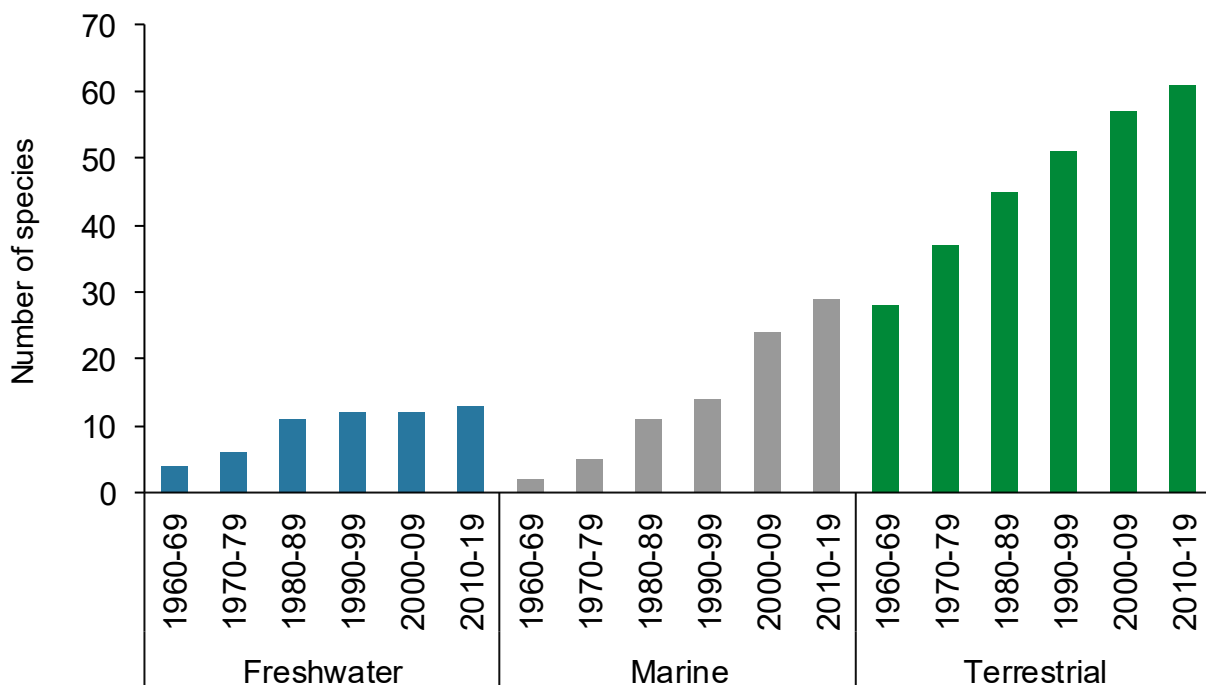
In the UK, plants and trees provide an [estimated £8 billion](#) of [value annually](#) to society. Across Europe, approximately two fifths (42%) of native tree species are [regionally threatened with extinction](#), at least in part due to invasive pests and diseases. They are considered as having a high risk of extinction with the primary threat being from plant pests.

Managing pest and disease outbreaks is expensive for the Government, the environment and the economy as a whole. Prevention and early intervention to protect our environment, prevent outbreaks or reduce the scope of existing outbreaks is critical to helping us protect our green landscapes and to acquire the benefits our healthy plants provide.

What is the condition of the natural environment?

Between 1960 to 1969 and 2010 to 2019, INNS established in or along 10% or more of Great Britain's land area or coastline has increased in the freshwater, terrestrial and marine (coastal) environments, with the greatest increases observed in the marine and terrestrial environments.

Figure 10. Number of invasive non-native species established across or along 10% or more of the land area or coastline of Great Britain, 1960 to 2019



Source, Botanical Society of Britain & Ireland; British Trust for Ornithology; Marine Biological Association; National Biodiversity Network; UK Centre for Ecology & Hydrology

For more information refer to the [Outcome Indicator Framework](#) - Indicator H1

What are our long-term plans to improve the natural environment?

We are committed to enhancing biosecurity and tackling INNS to protect our native wildlife and livestock, and boost the resilience of our trees and plants.

The Government has, and will continue to maintain, a strong risk-based biosecurity response involving comprehensive horizon scanning, and risk assessment tailored to known and future threats to Great Britain. We continue to drive higher international biosecurity standards, increase surveillance and inspect resources both at the border and inland, to reduce the risk of harmful pests, diseases and INNS entering the country, and to manage the impact of recent arrivals. We rapidly eradicate threats where feasible, and manage the impact of established pests and priority invasive species where it is not.

Through compliance, enforcement and assurance we will ensure high standards and satisfy trading partners that the regulation of animal health and welfare (including aquatics), plant health and veterinary medicine/pesticide residues in food (from food-producing animals) is fit for purpose.

We will continue to be led by science, investing in world leading research and collaborating to exchange critical information, develop and enact robust contingency plans, raise biosecurity awareness and strengthen our biosecurity regime as a whole.

What actions have we taken to improve the natural environment?

Invasive Non-Native Species

We have prioritised pathways of INNS introduction and published Pathway Action Plans for 3 of the 6 priorities (recreational boating, angling and zoos). A further plan will tackle two priority pathways (horticulture escapes and contaminants of ornamental plants). We aim to consult on all plans by the end of 2022, before finalising them and implementing their actions. The aim being to reduce the INNS introduced by these pathways.

Action has been undertaken to eradicate Asian hornet and investigate reports of raccoon, raccoon dog, gibel carp and banded newt. Work has commenced and will continue to eradicate the Chinese mystery snail, topmouth gudgeon, various-leaved watermilfoil, water primrose, ruddy duck and monk parakeet. We will continue to deliver rapid responses to priority species and develop species specific contingency plans where appropriate to support responses.

Delivery of the 'Check, Clean, Dry' and 'Be Plant Wise' campaigns continue as well as an annual Invasive Species Week in concert with the British Irish Council jurisdictions. Invasive Species Week was held in May involving 265 organisations and 34 events. These raise awareness of invasive species and improve biosecurity through behaviour change.

The review of the Great Britain INNS Strategy has been commissioned and is due to report later this year. Following the review, we will publish the new strategy in 2022.

Additionally, we have scoped the role of a non-native species inspectorate. We will develop this further in 2021/22 and pilot some of its key functions. This will inform the need for, and functioning of, a non-native species inspectorate to prevent invasive species from establishing through awareness raising, investigation and interception.

We have ensured that the retained EU Invasive Alien Species Regulation is operable across Great Britain. We have established statutory bodies to advise ministers about listing species of special concern, providing a comprehensive regulatory regime to tackle these species.

We are working with international partners towards agreeing a global target on invasive species at the 15th Conference of the Parties to the Convention on Biological Diversity in China in October 2021. We will reflect this work in our refreshed strategy.

Plant health

The UK's risk-based biosecurity regime prohibits or controls the import of high-risk plants and planting material. We have stepped up action to raise biosecurity standards even further. As of 1st January 2021, we strengthened our approach and introduced tailored requirements to address threats to Great Britain's biosecurity. This includes introducing strengthened measures against 8 tree pests and diseases, 6 of which were previously unregulated. We have also taken action to strengthen measures against major threats including from *Xylella* and emerald ash borer.

The United Nations General Assembly declared 2020 as the International Year of Plant Health (IYPH). We launched a campaign to raise awareness of the importance of plant biosecurity with over 15 organisations. This included the first National Plant Health Week in the UK.

We have continued to work with industry to support the development of the Plant Healthy Management Standard and Plant Healthy Certification Scheme aimed at improving biosecurity standards across sectors and along supply chains. We also increased support to help domestic nurseries to increase their supply of healthy, disease-free domestic saplings as well as to drive up biosecurity standards more generally.

We continue to implement the Tree Health Resilience Strategy, published in 2018, to address the escalating threat from pests and diseases. Progress in 2020 includes launching the Trees Outside Woodlands project, which will test innovative methods for planting or encouraging trees outside woodlands. It will also look for ways to improve the survival, cost effectiveness and biosecurity of new trees in our cities, towns and countryside.

In March 2021, the Local Authority Treescapes Fund was launched to establish more trees in non-woodland locations and in landscapes that had previously been neglected, ecologically damaged, or affected by tree diseases like ash dieback. We continue to support the National Environment and Research Council Treescapes Programme, which will provide £14.5 million for projects that will help inform future treescapes expansion decisions.

Through the ongoing work of the UK Plant Health Service, we will continue to strengthen plant biosecurity. To help us achieve this, we plan to carry out the following activities over 2021/22:

- Continue to deliver and strengthen the Great Britain (GB) Plant Health Regime, including increasing plant health inspectors at the border
- Consult on the GB Plant Biosecurity Strategy and publish a new strategy by 2022, that will set out our GB biosecurity approach from 2022-2027
- Introduce measures against certain threats (such as the two-lined chestnut borer), extend the existing regulations for the emerald ash borer and introduce prohibitions on the import of higher-risk plants like yacon.
- Continue to manage outbreaks of pest and diseases, including in 2021 releasing a natural biological control agent to help reduce the spread of oriental chestnut gall wasp in England to protect the health of sweet chestnut trees
- Launch a new Centre for Forest Protection to identify future threats and develop novel approaches to their management
- Launch a pilot to test and refine future tree health grants. The future grants will improve and expand upon current support provided to land managers to treat and/or fell diseased trees and to restock for resilience in response to pest or disease instances. Details will be published ahead of applications opening in August 2021
- Provide up to £10.5 million through the Nature for Climate Fund in 2021/22 to support the nursery sector to increase UK domestic production of diverse, high-quality tree planting material to meet the England Tree Planting Programme targets and to enhance biosecurity
- Continuing engagement and public awareness campaigns, including an annual National Plant Health Week was launched during International Year of Plant Health in 2020

15. Protecting and Improving our Global Environment

What is the challenge?

Humanity faces the twin threats of climate change and biodiversity loss which, together, are undermining nature's capacity to sustain healthy life, nutritious diets and national economies. The two are inextricably linked. One cannot be solved without addressing the other. Furthermore, these are global challenges, and the UK recognises the need to work with our international partners to increase global ambition and enhance collaboration, underpinned by ambitious sub-national, national and international action.

Why is it important that we take action?

As set out in the [Integrated Review of Security, Defence, Development and Foreign Policy](#) in 2021, the Government has made tackling climate change and biodiversity loss its top international priority. The UK Presidencies of the UNFCCC COP26 in Glasgow and the G7, along with the opening of the Convention on Biological Diversity COP15, have made 2021 a critical year to drive action over the coming decade.

What actions have we taken to tackle biodiversity loss and climate change?

The UK wants to work with partners to set a trajectory to halt and reverse global biodiversity loss by 2030. To achieve this, the UK has sought to galvanise global action to deliver on 3 core objectives in 2021 and beyond:

- Agreeing and implementing an ambitious new global biodiversity framework at the CBD COP15
- Catalysing new public and private investment in nature and land use and driving a shift to a nature positive economy
- Leading global action to tackle the key drivers of nature loss and degradation; in particular by addressing deforestation and unsustainable land use change

We have used a range of levers to drive progress against these objectives: securing commitments through the key events of 2021, driving ambition through other campaigns, such as the Leaders' Pledge for Nature and the Global Ocean Alliance, and leading by example through UK policy.

The Environment Bill, for example, includes an amendment to require due diligence from businesses, making it illegal for UK businesses to use key commodities if they have not been produced in line with local laws protecting forests and other natural ecosystems.

UK G7 presidency

At this year's G7 Summit in June 2021, G7 leaders committed to halting and reversing biodiversity loss by 2030 through the agreement of an ambitious 2030 Nature Compact. Ahead of the Leaders' Summit, G7 Climate and Environment ministers agreed a landmark Communiqué which was published on 21st May 2021. Important progress was also made through Finance and Trade tracks.

Leaders agreed to support the global target to conserve or protect at least 30% of global land and at least 30% of the global ocean by 2030 (30x30), along with achieving 30x30 domestically and to champion a range of ambitious and effective global biodiversity targets, including the agreement of an ambitious and effective post-2020 Global Biodiversity Framework at Convention on Biological Diversity COP15 in 2022.

These commitments were supported by the Climate and Environment Communiqué which included a number of first-time commitments for the G7, among more than 120 commitments across 14 areas including tackling the illegal wildlife trade, food loss and waste, anti-microbial resistance, ocean action, and many others, which will drive momentum to achieve a high level of ambition at Convention on Biological Diversity COP15 and COP26.

The G7 committed to ensuring our aid does no environmental harm and delivers positive outcomes overall for people, climate and nature. G7 leaders agreed to work to dramatically increase investment in nature from all sources and to ensure nature is accounted for, and mainstreamed, in economic and financial decision-making.

Finance ministers backed the Taskforce on Nature-related Financial Disclosures (TNFD). TNFD is a new global market-led initiative which aims to provide financial institutions and corporates with a complete picture of their environmental risks and opportunities. TNFD will deliver a framework for organisations to report and act on evolving nature-related

risks, building on the success of the Task Force on Climate-related Financial Disclosures (TCFD).

As part of the 2030 Nature Compact, Leaders agreed to increase support for sustainable supply chains that decouple agricultural production from deforestation and forest degradation, including production stemming from illegal land conversion. Similarly, trade ministers agreed to advance key issues including trade and the environment, and a further joint trade and environment ministerial will take place later this year.

The G7 also agreed an ambitious Ocean Decade Navigation Plan, a collaborative initiative which provides a framework for the G7 work towards transformative ocean science for ocean action throughout the Ocean Decade. It also recognises the work of the G7 Future of the Seas and Oceans Initiative and endeavours to advance 3 key areas of the initiative's ocean observing work in 2021, on 'Ocean Indicators', 'Digital Twin Ocean' and 'Net Zero Oceanographic Capability'.

26th UNFCCC Conference of the Parties (COP26)

The UK will host COP26 in Glasgow in November 2021. Nature is a core focus of our Presidency. Implementing the Paris Agreement requires action from every part of society, including an urgent transformation in the way we manage ecosystems and grow food. The climate crisis and the biodiversity crisis are mutually reinforcing and both threaten our future prosperity: action on nature and land-use must tackle them together.

The COP26 Nature Campaign was one of 5 campaigns established by the UK Presidency to create partnerships to drive ambition at COP26. The purpose of the campaign was to accelerate long-term action around two aims that will support tackling the key drivers of nature loss and degradation: global action to protect and restore forests and critical ecosystems, and global transition to sustainable agriculture and land use. The UK is also strongly focused on the protection and restoration of marine ecosystems – such as mangroves, seagrass and saltmarsh – recognising the role they play in improving the ocean's natural resilience to climate change and supporting communities to adapt to its impacts.

The Nature Campaign involved two key dialogues:

- The Sustainable Agriculture Dialogue: which aimed to share best practice and build momentum for shifting away from harmful practices towards sustainable land use and agriculture
- The Forest, Agriculture and Commodity Trade (FACT) Dialogue which is a ground-breaking partnership between the governments of producer and consumer countries committed to taking action to transition to more sustainable commodity production and global trade

The Nature Campaign was underpinned by efforts to mobilise public and private finance for nature and shift existing flows towards 'nature positive' investments and recognise the importance of nature based solutions within NDCs.

15th Conference on the Convention on Biological Diversity (COP15)

The UK is committed to playing a leading role in developing an ambitious post-2020 global framework for biodiversity to be adopted at COP-15 of the Convention on Biological Diversity in 2022.

As part of this framework the UK will be supporting ambitious global targets to halt and reverse biodiversity loss by 2030, including 30x30 targets. This ambitious set of targets must be supported by increased finance for nature.

The post-2020 Global Biodiversity Framework must also be supported by strengthened monitoring, reporting and review mechanisms that are able to hold Parties to account to their commitments and support implementation.

To support our objectives, the UK leads the Global Ocean Alliance, and is the Ocean Co-Chair (alongside France and Costa Rica) of the High Ambition Coalition for Nature and People. Together the alliances have over 80 unique members. In partnership with Norway, we are also leading a programme of workshops to provide space for discussions between Parties to enhance planning, reporting and review mechanisms to strengthen the implementation mechanisms of the post-2020 Global Biodiversity Framework and the Convention on Biological Diversity.

The Leaders' Pledge for Nature

The UK co-led the negotiation of the Leaders' Pledge for Nature alongside the EU and Costa Rica. 89 world leaders have now signed, representing 37% of the world's GDP. The Pledge's 10 commitments include developing and implementing an ambitious and transformational post-2020 Global Biodiversity Framework at Convention on Biological Diversity COP15. This will ensure that across the whole of government, policies, decisions and investments account for the value of nature and biodiversity and support a just transition to sustainable food systems - contributing to all of 3 of our core international nature objectives.

OSPAR – North-East Atlantic Environment Strategy

In addition to action at a global scale, the UK is also supporting ambitious regional ocean action in the North-East Atlantic through negotiations for a new North-East Atlantic Environment Strategy under The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR). The strategy will set out the vision and goals for OSPAR's contracting parties until 2030.

Mobilising more finance for nature

At the One Planet Summit in January 2021 the UK committed to spending at least £3 billion (over 5 years) of its International Climate Finance on climate change solutions that protect and restore nature, improve biodiversity-rich land and ocean, support the shift to sustainable food systems, and support the livelihoods of the world's poorest.

The spend forms part of the UK's overall commitment to double International Climate Finance funding to £11.6 billion over the period. It will deliver transformational change in protecting and improving biodiversity-rich land and ocean, shifting to sustainable food systems, and supporting the livelihoods of the world's poorest.

Activity to be supported by this funding includes part of the wider £500m Blue Planet Fund for protecting, restoring and addressing the drivers of degradation of marine environments. It will also fund part of a wider £220 million package of Biodiversity funding, as announced by the Prime Minister at United Nations General Assembly (UNGA) in 2019.

This includes a new £100 million Biodiverse Landscapes Fund which will focus on 18 countries to improve governance and management of landscapes covering critical ecosystems around the world. It also includes continuation and enhancement of the UK's longstanding Darwin Initiative, supporting protection and restoration of biodiversity, and of activity to address the illegal wildlife trade.

Collectively these funding commitments for nature are expected to make substantial contributions to addressing biodiversity loss, mitigating climate change and adapting to its impacts in developing countries, and enhancing livelihoods especially for women. They are expected to support the UK's international leadership and leveraging of contributions from others.

Furthermore, as set out in the Government's response to the Dasgupta Review, the Government is taking steps to ensure that all new UK bilateral aid spending does no harm to nature.

Case Study: Darwin Initiative

The planet is facing unprecedented biodiversity loss and degradation; the scale of loss and rates of extinction are the greatest they have been for several million years and are accelerating.

The Darwin Initiative is the UK's flagship international challenge fund for biodiversity and sustainable development, established at the Rio Earth Summit in 1992 and has committed £168m to supporting more than 1,100 projects across Africa, Asia and the Americas. Many of the applications reflect the UK Government's 25 Year Environment Plan commitments to protect the marine environment, to secure the benefits of biodiversity for the poorest communities, and to help prevent the extinction of species.

Darwin Initiative aims to addressing the barriers to these commitments by promoting an understanding of biodiversity and the challenges that face it, developing policy, evidence and refined best practices, and building inclusive partnerships, through capability and capacity building to deliver local solutions to the global challenge.

Project Oratsimba, by SEED Madagascar and funded by the Darwin Initiative, seeks to address climate-related decline in lobster fishery stocks and to build resilience in rural fishing villages. Through building capability and capacity, including addressing gender inequality, the project has strengthened governance, management, and stewardship of the lobster fishery by local communities to deliver local socioeconomic resilience, and sustainability of their enterprises.

By scaling successful approaches and evidence developed by Darwin Initiative projects, the fund has the potential to play an important role in the delivering transformation change required to slow, halt or reverse the loss and degradation of biodiversity, and reduce poverty in developing countries.

16. Overseas territories

What is the challenge?

The UK Overseas Territories contain over 90% of the endemic species found in the UK. They are biodiversity hotspots containing many rare and vulnerable species found nowhere else. As small island states they are at particular risk from climate change and the threat posed by invasive non-native species.

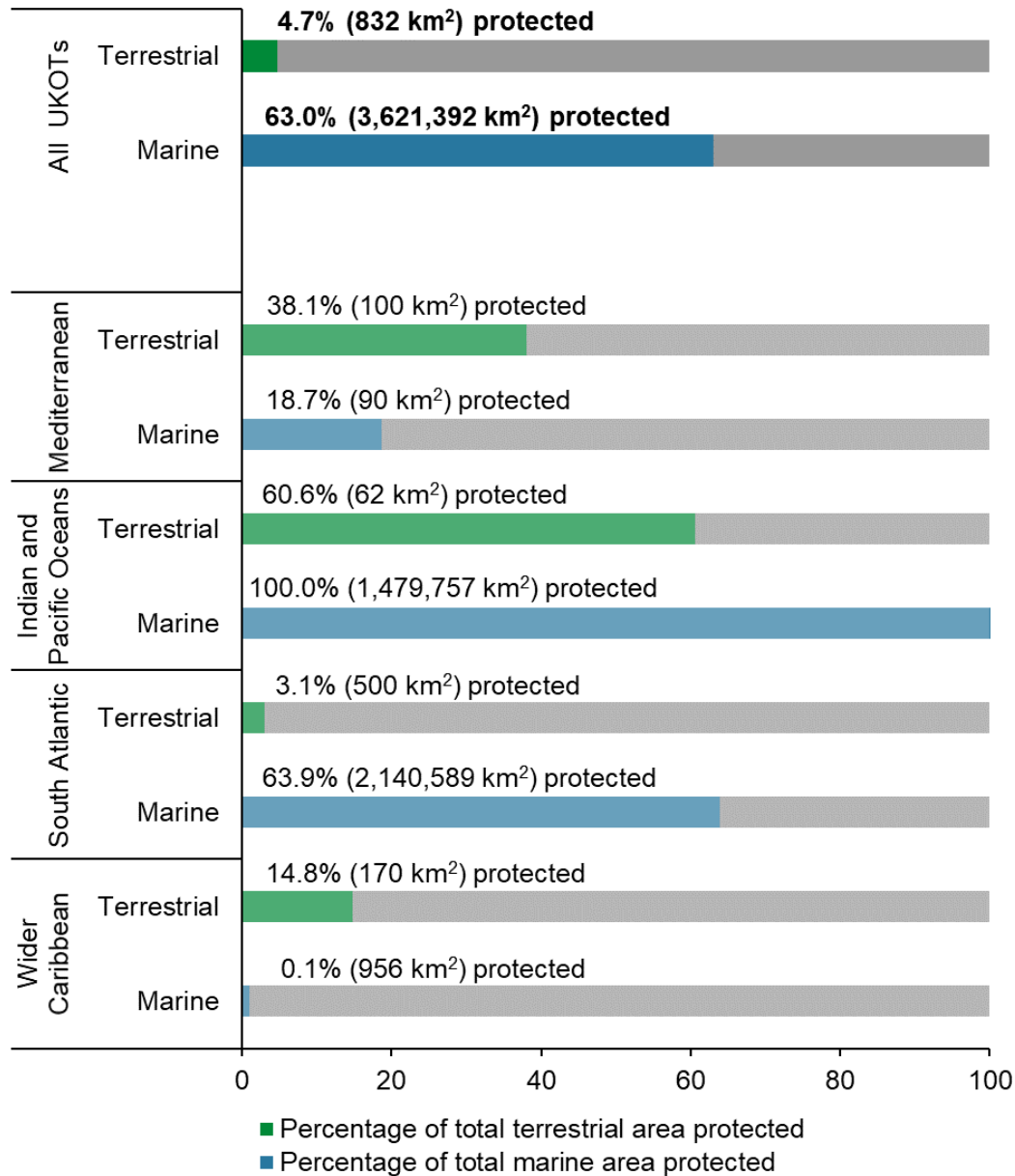
Why is it important that we take action?

We are committed to taking action to recover threatened, iconic or economically important species of animals, plants and fungi, and where possible to prevent human-induced extinction or loss of known threatened species in the Overseas Territories as well as championing and supporting the conservation and biodiversity of coral reef in Overseas Territory waters and creating 4 million km² of protected ocean around the Overseas Territories.

What is the condition of the natural environment?

Protected areas and Other Effective Area-Based Conservation Measures (OECMs) cover nearly two-thirds (63%) of the marine environment in the UKOTs but a much smaller proportion (4.7%) of the terrestrial environment. Given the UKOTs' combined marine area is more than 300 times larger than the land area (approximately 5,748,600 km² of sea compared to 17,738 km² of land), the extent of marine protection (3.62 million km²) is also 4 orders of magnitude larger than for the terrestrial environment (832 km²). There are marked differences in protected area cover between regions, with the two UKOTs in the Indian and Pacific Oceans protecting the greatest proportions of the terrestrial and marine environment (collectively) compared to other regions.

Figure 11. Extent of terrestrial and marine protected areas and other effective area-based conservation measures in the UK Overseas Territories, in total and by region, 2020



Source, Joint Nature Conservation Committee

For more information refer to the [Outcome Indicator Framework](#) - Indicator K4

The chart above shows the percent coverage of terrestrial and marine protected areas for all UK Overseas Territories combined, then across 4 regions. 4.7% of the terrestrial environment and 63% of the marine environment is protected across all UK Overseas Territories combined.

What actions have we taken to improve the natural environment?

We have continued to provide financial and technical support to the Overseas Territories to protect their unique environments. An additional £7 million has been made available in

2021-22 for biodiversity. £8 million of funding has been committed to fund 31 projects over the next 3 years through the Darwin Plus scheme.

We are continuing to increase the biosecurity capacity of the Overseas Territories. This will help to reduce the risk of future incursions of invasive non-native species and to prioritise existing species and help draft management and control plans.

Updated coral reef action plans have been agreed with territory Governments to help conserve coral reefs in Overseas Territory waters. This includes taking action to tackle the threat to the health of coral reefs posed by stony coral tissue loss disease which has been identified as an urgent priority area. Work will now be undertaken to implement priority areas in the action plans. Through the Blue Belt programme, we are supporting all Overseas Territories to enhance marine protection and sustainable marine management, and we are also supporting the conservation of coral reef in Overseas Territory waters.

The programme has funded a new initiative, the Global Ocean Wildlife Analysis Network, which is working with 10 Territories to monitor biodiversity in their waters with baited remote underwater video cameras (BRUVS). This will help Overseas Territories protect some of the unique and globally threatened species of fish and shark in their waters.

For the first time specific indicators are being developed to assess the extent and condition of terrestrial and marine protected areas and the status of endemic and globally threatened species in the Overseas Territories. Data on the extent of protected areas has now been published in the 2021 update to the 25 Year Environment Plan Outcome Indicator Framework.

17. Green finance

What is the challenge?

The natural environment provides the foundations for our economic model. According to the World Economic Forum, over half of the world's GDP (\$44 trillion worth of economic value) is potentially at risk owing to the reliance of business on nature and its services.

While public funding will continue to play an important role in protecting and enhancing the natural environment, it will not be sufficient on its own to meet our ambitious goals. Private sector investment is therefore critical in achieving our environment and climate goals and in addressing the economic risks posed by the decline in nature.

What actions have we taken to improve the natural environment?

Ensuring a Green Recovery

In 2020 we launched the £80 million Green Recovery Challenge Fund (GRCF) to kickstart nature projects across England while creating and retaining jobs in the wake of the COVID-19 pandemic. We anticipate that the GRCF will support 2,500 jobs across

England by 2022, which will help maintain and develop capacity in the environmental Non-Government Organisations sector.

In order to support the achievement of our ambitious environmental goals while making the transition to a greener economy, we aim to publish a skills action plan for the natural environment sector by the end of 2021.

Developing the nature finance market

The Government is taking action to develop the nature finance market. This will require collaborative efforts across the public, private and voluntary sectors.

We are:

- Working with industry leaders from business, finance, land management and environment sectors through the Financing UK Nature Recovery coalition to understand how to attract private investment and accelerate the development of environmental markets. This includes nature-based carbon, biodiversity, water quality and natural flood management. A report of recommendations is anticipated in autumn 2021.
- Developing policies and frameworks to unlock private finance for nature. For example, introducing mandatory Biodiversity Net Gain through our Environment Bill.
- Designing our public funding provisions, such as our new environmental land management schemes and our Nature for Climate Fund – to de-risk and crowd-in private sector investment. As part of this we are introducing a Nature for Climate Impact Fund later in 2021/22.

As promised in last year's progress report, Defra launched the £10 million Natural Environment Investment Readiness Fund (NEIRF) in February 2021. The NEIRF will support the development of a pipeline of nature projects, which can generate revenue and attract private finance. The first grants will be awarded in summer 2021.

Greening Finance

In the Government's Green Finance Strategy, we committed to work with international partners to catalyse market-led action on enhancing nature-related financial disclosures, complementing the global review of the economics of biodiversity by Professor Sir Partha Dasgupta. This work is now well progressed through Defra's involvement in and support for the Taskforce on Nature-related Financial Disclosures (TNFD), which was launched in June in 2021. TNFD will provide a framework for corporates and financial institutions to report and act on evolving nature-related risks in order to support a shift in global financial flows away from nature-negative outcomes and toward nature-positive outcomes.

To further support sustainable investment decision making, the Government intends to introduce an economy-wide Sustainability Disclosures Regime. This will make it easier to understand how a firm is impacting the environment; support businesses as they plan to transition to net zero; and help consumers and investors of all sizes to make more informed decisions. It will also serve as an effective tool in pushing capital towards sustainable activities that benefit the natural environment, including waste, water, forestry management and wetland restoration.

In November 2020, the Chancellor announced the Government's plan to issue its inaugural sovereign green bonds (green gilts) under the Green Financing Framework, which was subsequently [published in June 2021](#). The Framework lays out the Government's climate and environmental strategy, leading the way in bringing its net zero ambitions alongside promoting nature and biodiversity, and sets out its vision for extending the UK's global leadership in green finance.

It details how proceeds raised via the UK's green gilt and NS&I's retail Green Savings Bond will help finance green expenditures which will help tackle climate change and other environmental challenges and create green jobs across the UK; The intention is to issue a second gilt this year as the UK looks to build out a green yield curve, as well as to issue a retail Green Savings Bond through NS&I. The first issuance is expected to be released before COP 26 in November 2021.

18. Response to the Natural Capital Committee

Response to the Natural Capital Committee's Final Response to the 25 Year Environment Plan Progress Report

Natural capital asset and status	NCC recommendation	Government response
<p>Atmosphere</p> <p>The quality of the air we breathe indicates an overall reduction in pollution levels in recent years, but in some urban areas levels are still resulting in significant health impacts.</p> <p>Relevant Indicators relating to this NC asset:</p> <ul style="list-style-type: none"> - - (A3) Concentrations of 5 particulate matter (Pm2.5) in the air 	<p>The NCC advises that the proposals in the 'Environment Bill – environmental targets' policy paper for developing statutory Environment Bill targets for air quality (for example, "introducing a target aimed at reducing average population exposure to PM2.5 across England") should be set out more clearly, with national and local level targets.</p>	<p>-The Environment Bill establishes a framework for setting targets through secondary legislation. The government is committed to setting targets through a process that allows for relevant evidence to be properly gathered, scrutinised and tested. As part of this, we are seeking advice from independent experts, and providing a role for stakeholders and the public.</p> <ul style="list-style-type: none"> • Reducing levels of PM2.5 will require action from across government and all parts of society, which is why it is important to ensure everyone has the opportunity to input into the development of these air quality targets. • The technical detail for the targets will be developed during the target setting process and the targets will be brought forwards through secondary legislation by 31st October 2022. • We will be reviewing local air quality standards and objectives as part of the future review of the Air Quality Strategy.
<ul style="list-style-type: none"> - (A4) Rural background concentrations of ozone (O3) - (A5) Roadside nitrogen dioxide (N02) concentrations <p>Relevant indicators relating to pressure on this NC asset:</p> <ul style="list-style-type: none"> - (A1) Emissions for 5 key air pollutants - (A6) Exceedance of damaging levels of nutrient nitrogen deposition on ecosystems - (A7) Area of land exposed to damaging level of ammonia (NH3) in the atmosphere) 	<p>The Government should collate and report local data alongside national data, to show the variation in the air quality at the regional level (for example, the number of local authorities in breach of air quality targets and giving rise to significant health impacts). The way the data is collected and analysed currently does not allow for such an assessment.</p>	<p>The UK Government produces an annual assessment of compliance with limit and target values at a region and city level (known as zones and agglomerations), which examines zonal differences and trends in accordance with the requirements of the Ambient Air Quality Directive 2008. The Air Pollution in the UK report summarises measurements from the national air quality monitoring networks and includes comprehensive analysis.</p> <p>Local Air Quality Management is the responsibility of local authorities and is underpinned by the Environment Act 1995. It requires local authorities to review and assess air quality in their areas. Local authorities are required to make local air quality monitoring data publicly available.</p> <p>Data from automatic monitoring sites managed by local authorities is also publicly available on Defra's UK-Air website. The data sits alongside data from Defra's national networks and can be accessed in the same ways, for example the data download service or interactive monitoring site maps. The Uk-Air website is available here – https://uk-air.defra.gov.uk/</p> <p>More information on the local data can be found here – (https://uk-air.defra.gov.uk/interactive-map).</p>

	<p>The relevant organisations should scale up the number of monitored sites and monitor consistently/periodically to provide an appropriate time series. For example:</p> <ul style="list-style-type: none"> a) Determine what datasets can be used as a definitive baseline; b) Introduce measures to reduce groups of pollutants that are identified as in high concentrations in certain locations; c) Monitor to determine whether implemented measures are effective (evaluation); and d) Yearly monitoring to determine trends from the baseline. 	<p>The minimum level of air quality monitoring that must be carried out to ensure it is representative of air quality within a region/city is specified in domestic and previously European legislation¹. The criteria for determining the minimum number of monitoring stations within an area includes the background concentrations of air pollutants, population and density.</p> <p>The stations covered by this legislation feed into the National Statistics which contains time series for several key pollutants.</p> <p>The main benefit of expanding the network is to improve monitoring data input for air quality modelling, and for this reason monitoring for fine particulate matter will be expanded. Modelling can cover all of the country and is dependent on the quality of inputs such as spatial emissions data and air quality measurements from monitoring stations.</p> <p>Evaluation of government policies to reduce emissions of air pollutants are planned and funded; the last Spending Review included funding specifically for this purpose.</p> <p>All Local NO₂ Plan areas are required to monitor changes to air quality and report data quarterly. Central evaluation aggregates data from across the different Local Plan areas, to look at changes in air quality over time and understand what impact have Local Plans have had on NO₂ concentrations.</p>
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Natural capital asset and status	NCC recommendation	Government response
<p>Freshwater</p> <p>Progress towards achieving freshwater quality targets and commitments is poor, even though there has been some improvement in individual components.</p> <p>Relevant Indicators relating to this NC asset:</p> <p>(B3) State of the water environment</p>	<p>The NCC advises that any future natural capital-based assessment should consider the long-term economic benefits of wide scale river restoration projects to restore modified water bodies to a near natural state. Land use change projects including changes in farming practices should also be central to this assessment.</p>	<p>Methodologies for future natural capital-based assessments are in development and will be underpinned by the evidence from Natural Capital Ecosystem Assessment. Aspects of restoration and impacts of land use change, including farming will be considered as part of the assessment.</p>

<p>(B4) Condition of bathing waters (B5) Water bodies achieving sustainable abstraction criteria (B6) Natural functions of water and wetland ecosystems (B7) Health of freshwaters assessed through fish populations G1 Changes in landscape and waterscape character G2 Condition of heritage features including designated geological sites and scheduled monuments G3 Enhancement of green/blue infrastructure</p> <p>Relevant indicators relating to pressure on NC asset:</p> <p>(B1) Pollution loads entering water (B2) Serious pollution incidents to water</p>	<p>The government should develop a baseline and metrics for the condition and extent of smaller water bodies comparable to those for WFD water bodies. Such an assessment should look to incorporate citizen science to engage communities and the use of other monitoring approaches.</p>	<p>The government’s approach to the Natural Capital Ecosystem Assessment is to build a comprehensive and long-term programme to transform landscape decision-making in England by providing a rich picture of the state of our terrestrial and water environment and how it is changing over time. The design of monitoring networks will include the whole catchment and will look to include data and evidence from a wide range of sources.</p>
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Natural capital asset and status	NCC recommendation	Government response
<p>Marine</p> <p>Abiotic properties of marine systems, that drive changes in oceanographic systems and underpin critical marine ecosystem services indicate drastic climate driven change. Even though the UK is an island nation, the available marine data provides an incomplete picture, with very limited data on marine assets.</p> <p>Relevant Indicators relating to this NC asset:</p>	<p>The additional funding for monitoring and reporting through the proposed Natural Capital and Ecosystem Assessment provides an opportunity to broaden the scope of marine monitoring to allow for a joined up natural capital approach to protecting and improving the broad suite of marine assets.</p> <p>The NCC acknowledges the government’s intention to limit marine targets to a biodiversity</p>	<p>The Marine Natural Capital and Ecosystem Assessment programme (mNCEA) will be a comprehensive and long-term evidence programme to transform environmental and economic decision-making in England. The programme aims to improve understanding of the nation’s natural capital assets by gathering new and timely ecosystem information to provide a full, rich and current picture of the state of our changing marine environment. The programme is embarking on its first pilot year in 2021/22 and it will seek to secure additional funding for future years through SR21.</p> <p>The updated UK Marine Strategy Part One published in October 2019 set out the targets we will use to define and determine progress towards achieving or maintaining Good Environmental Status in our seas. Any marine related targets in the Environment Bill need to complement and avoid duplication with the existing suite of targets which cover, for example, species, habitats and resource use.</p>

<p>(B3) State of water environment (B4) Condition of bathing waters (C3) Diverse seas: Status of marine mammals and marine birds (C4) Diverse seas: Condition of seafloor habitats (C5) Diverse sea: condition of pelagic habitats (C6) Diverse seas: Status of threatened and declining features (C7) Healthy seas: fish and shellfish populations (C8) Healthy seas: Marine food webs functioning (C9) Healthy seas: Seafloor habitats functioning (C10) Productive seas: fish and shellfish stocks fished sustainably (C11) Productive seas: status of sensitive fish and shellfish stocks G1 Changes in landscape and waterscape character</p>	<p>target for marine protected areas (MPAs), within the first suite to be set under the statutory framework of the Environment Bill. The NCC strongly advises that this should not prevent the Environment Bill framework from driving the protection of natural capital assets across the marine environment, in line with the 25 Year Environment Plan goals. The current focus on MPA condition does not reflect the interconnected nature of the wider marine environment and its components and will not allow for integrated implementation and assessment measures to improve the condition of marine natural assets.</p>	<p>Additional targets in the Environment Bill risk duplicating the work already done by the UK Marine Strategy.</p> <p>Typically, marine species are highly mobile and widely dispersed and therefore assessments are done at a much larger scale (e.g. the North-East Atlantic). As the scope of the Environment Bill is England only, and marine species do not have land-based reference points, setting accurate and reliable targets for English populations will not be possible.</p>
<p>G2 Condition of heritage features including designated geological sites and scheduled monuments G3 Enhancement of green/blue infrastructure</p> <p>Relevant indicators relating to pressure on this NC asset:</p> <p>(C1) Clean seas: Marine litter (C2) Seabed subject to high pressure from human activity</p>	<p>The government should urgently address data gaps related to assessing the extent and condition of marine natural capital assets, with a particular focus on how changes in the marine environment affect the dynamic flows of services and benefits. This evidence should then be utilised through the Environment Bill targets framework to review and set targets for marine beyond MPAs as a matter of urgency.</p>	<p>Through the mNCEA we will seek to identify and invest in innovative approaches to address priority data gaps to better address the decline in marine biodiversity by deepening the evidence on the health of our seas.</p> <p>Any marine related targets in the Environment Bill need to complement and avoid duplication with the existing suite of targets set at a UK level under the Marine Strategy Regulations 2010 which cover, for example, species, habitats and resource use. The updated UK Marine Strategy Part One published in October 2019 set out the targets we will use to define and determine progress towards achieving or maintaining Good Environmental Status in our seas until 2024.</p>

Natural capital asset and status	NCC recommendation	Government response
<p>Soils</p> <p>For metrics which are important for soil health, our collated data indicates a deterioration in soil asset extent and condition.</p> <p>Relevant indicators to this NC asset:</p> <p>(E7) Healthy Soils</p> <p>Relevant indicators relating to pressure on this NC asset:</p> <p>(A1) Emissions for 5 key air pollutants</p> <p>(A7) Area of land exposed to damaging levels of ammonia (NH3) in the atmosphere</p>	<p>The NCC repeats its recommendation that a national survey is urgently needed to provide data on the extent and condition of soils, including establishing a baseline assessment of soils against which change can be measured. Only then will we know if we are on track to meet the government target to manage our soils sustainably by 2030. This requires a significant scaleup in the number of sites monitored consistently at fixed periods to provide data that can show changes over time. The national survey should aim to improve certainty in modelled data, with data regularly updated. Defra's proposed Natural Capital and Ecosystem Assessment should be used to deliver this, with a focus on delivering coverage at appropriate spatial scales.</p>	<p>To help achieve the Government's commitment for sustainably managed soils by 2030 we are considering a number of actions as an appropriate means of supporting land managers and farmers. This would include developing, implementing, and supporting actions that enable sustainable soil management. For example, the Sustainable Farming Incentive will support sustainable approaches to farm husbandry to improve soil health (e.g. through the introduction of herbal leys, and the use of grass-legume mixtures and cover crops).</p> <p>We are developing plans for soil health monitoring that would produce a robust data baseline for England. We are also developing metrics to produce a new robust data baseline that will inform the development of a healthy soils indicator as set out in the 25 Year Environment Plan and potentially a future target for soil.</p>
	<p>If current evidence is not sufficient to support a legally binding target for soils through the Environment Bill legislative framework, then the NCC recommends setting a shadow target for soils in the interim, in line with the ambition to ensure soils are sustainably managed by 2030.</p>	<p>Separate to the soil health monitoring plans, we will be working with farmers and land managers to develop the means of measuring and monitoring soil structure to enable visual assessments to be carried out across all land use, soil type and climate. This will complement the development of a healthy soils indicator and a future soil health monitoring scheme by providing a user-friendly way of measuring long-term trends, easily understood by those who manage soil.</p> <p>Land manager collected data would then provide a baseline that will enable an informal target to be developed, which will provide a proxy for achieving sustainably managed soils in England by 2030.</p> <p>This informal target would serve as an interim until a robust and well-evidenced soil health target (for all soil types/land uses) is established under the Environment Bill.</p>

	<p>The 5 soil types outlined in the Environment Bill targets policy paper is a good place to start but looking at these alone will not allow for an integrated natural system-based assessment.</p> <p>The NCC advises that there is no 'one size fits all' indicator for soil health, and the soil types will need to be assessed across different land cover/habitat types to assess their condition, the services they deliver, and to understand how/why these are changing over time.</p>	<p>As part of the soil health indicator work outlined above, we are considering options for producing a baseline assessment of soil health against which change and future long term soil targets can be measured.</p> <p>We are working collaboratively with technical experts to identify soil health metrics that can represent diverse functions and ecosystem services provided by soils across different land-use types. These metrics will inform the development of a healthy soils indicator as set out in the 25 Year Environment Plan and potentially a future target for soil, and would feed into a national soil monitoring scheme for England.</p>
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Natural capital asset and status	NCC recommendation	Government response
<p>Land</p> <p>The majority of priority habitats are not on track to meet the UK 2020 Biodiversity Strategy target, and only 51% of National Nature Reserves are in 'favourable' condition.</p> <p>Relevant indicators relating to this NC asset:</p> <ul style="list-style-type: none"> – (E1) Area of Productive Agricultural land – (E7) Healthy Soils – (D1) Quantity, quality and connectivity – (D2) Extent and condition of protected sites – land, water and sea – (D3) Area of Woodland in England 	<p>The NCC advises that the government should assess the feasibility of setting a legally binding target through the Environment Bill legislative framework to replace the existing target from the Biodiversity 2020 Strategy that will end in 2020.</p> <p>The Committee recommends that a clear plan to deliver on the existing commitments is required. This should be closely linked to developing new metrics and prioritising improved monitoring to report on delivery of these commitments. The government should ensure that it commits the necessary resources to</p>	<p>The government has committed to setting a legal binding target for biodiversity under the Environment bill. In our environmental targets policy paper, we set out the objectives for targets currently under consideration. For biodiversity, these include improving the condition of protected sites, restoring habitats and improving the status of species.</p> <p>Government is already taking action to deliver on existing commitments under Biodiversity 2020 - for example on protecting 30% of land and sea, setting legally binding targets, including for biodiversity and investing in peat and trees. We will continue to develop our approach to implementing these existing commitments and will update our plans and strategies in response to the 15th Conference of the Parties to the CBD in October of this year</p>

<ul style="list-style-type: none"> – G1 Changes in landscape and waterscape character – G1 Changes in landscape and waterscape character – G2 Condition of heritage features including designated geological sites and scheduled monuments – G3 Enhancement of green/blue infrastructure 	<p>deliver on the improvement of priority habitats.</p>	
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Natural capital asset and status	NCC recommendation	Government response
<p>Biota</p> <p>Key terrestrial species and ecological communities (biota) that are known to underpin critical ecosystem services in the UK indicate serious declines.</p> <p>Relevant indicators relating to the NC asset:</p> <p>(D1) Quantity, quality and connectivity of habitats (D2) Extent and condition of protected sites – land, water and sea (D3) Area of Woodland in England (D4) Relative abundance and/or distribution of widespread species (D5) Conservation status of our native species (D6) Relative abundance and distribution of priority species in England (D7) Species supporting ecosystem functions</p>	<p>The range of biodiversity targets that the UK government needs to adopt to determine progress towards the 25 Year Environment Plan should be more closely focused on a subset of species that are known to: i) underpin key ecosystem functions; ii) support other flows/ecosystem services; iii) be rare, iconic or protected species. Good work is being carried out measuring various groups of terrestrial biota. However, the NCC advises that there needs to be much better co-ordination to ensure key groups are measured in a regular and consistent way and duplication is removed.</p> <p>The scope of monitoring of the terrestrial biota asset should be simplified with a common methodology adopted for measuring abundance, occurrence and distribution. Currently, there are a plethora</p>	<p>The government has a range of commitments to improve biodiversity through improvements to habitats and species, as reflected in the 25 Year Environment Plan. We set out in the Outcome Indicator Framework our intention to develop an indicator for functional species; this work is ongoing. There are number of initiatives aimed at improving monitoring, including the Natural Capital Ecosystem Assessment and the Terrestrial Partnership of Partnerships. The latter of which is coordinated by JNCC and brings together organisations involved in the monitoring and surveillance of terrestrial species, with the aim of facilitating knowledge sharing.</p> <p>Much of our data on species is provided by volunteers who have expert knowledge of particular species, and collect data for a variety of reasons. Our approach is to work closely with volunteer organisations, recognising their value and motivations, but also providing advice and guidance to ensure quality and consistency of data and allow the use of data for multiple purposes. JNCC oversee the Terrestrial Partnership of Partnerships (TePoP) which brings partners and statutory bodies together to facilitate collaboration and knowledge sharing, including best practice for data standards and data sharing. We also recognise the potential of new innovative techniques that will improve our monitoring and surveillance capacity, recognising that not all technology will</p>

<p>Relevant indicators relating to pressure on this NC asset:</p> <p>(H1) Abatement of the number of invasive non-native species entering and establishing against a baseline</p>	<p>of methods, making comparisons between datasets complex and difficult to compare and contrast.</p>	<p>be suitable for all species. Bioacoustics, eDNA and earth observation are just some of the techniques being explored and implemented.</p>
	<p>The NCC advises that much greater attention needs to be given to determining trends over time. Currently, the interval of time between measurements is hugely variable and some key datasets (e.g. UK hedgerows) have not been updated on a national scale since 2007. Without a regular interval of measurement, starting from a clear baseline, it will be impossible to measure progress against targets due to be set as part of the Environment Bill legislative framework to improve those aspects of nature that provide important societal benefits.</p>	<p><u>NCEA:</u></p> <p>Central to the design of NCEA is collaboration with the 25 Year Environment Plan, with ambition for NCEA to provide some core data for monitoring and evaluating outcomes. The programme will harness cutting edge technologies in Earth Observation and Data Science.</p> <p>Information and knowledge flowing from NCEA will also provide information to a range of stakeholders and support local decision making. For example, it will inform nature-based solutions, engage citizens and communities and support market decisions and financial disclosure, enable both the private and public sectors and NGOs to manage supply, demand, restoration and accounting of our natural capital assets, and inform and make transparent trade-offs.</p> <p>Building on recent innovations in how we make our data open, accessible and interoperable (for example the Outcome Indicator Framework dashboard) we will look to develop solutions to package up the new data from NCEA as a service. This will form part of the wider Defra Group data offer and will be free at the point of access and meets our different stakeholder requirements.</p> <p><u>Outcome Indicator Framework:</u></p> <p>Through the custom-designed 25 Year Environment Plan Outcome Indicator Framework, Defra is developing a comprehensive set of 66 indicators describing environmental change through the lens of a natural capital framework.</p> <p>The Outcome Indicator Framework describes the state of the environment and supports the strengthened framework for monitoring and reporting on environmental improvement which will be introduced through the Environment Bill.</p> <p>We continue to annually update and further develop the Outcome Indicator Framework to provide an effective, systematic and comprehensive means for measuring environmental change in England. In the future, the framework will be used for assessments of environmental change. New research into potential assessment approaches is currently taking place considering appropriate statistical techniques and timeframes. Where possible, a baseline near to 2018 will be used to align with the publication of the 25 Year Environment Plan.</p> <p>Where suitable timeseries are available, we will assess both long-term (for example, greater than 5 years) and recent (such as latest 5 years) trends. The precise frequency of data updates required to yield the</p>

		<p>desired insights depends on the specific element of the environment being monitored. For example, geomorphological features are unlikely to significantly alter over short time periods. In partnership with scientific experts, Defra is working to ensure individual indicators have appropriate intervals between data updates in order to deliver their intended trend descriptions.</p> <p>Data series of less than 5 years are likely to show year-to-year fluctuations that are difficult to reliably assess for meaningful change. It is also important to appreciate the natural time lags in environmental response to interventions. It is expected that the majority of outcome indicators will require longer-term reporting (greater than 5 years) before they may be considered as showing a definitive response to any policies enacted.</p> <p>The technologies for monitoring and assessing change in the environment are advancing rapidly and offer new cost-effective methods (for example, Earth Observations, DNA methods, citizen science/mobile apps and new sensor technologies). The Outcome Indicator Framework will be kept under regular review so that it continues to be relevant and provide the best and most cost-effective ways of assessing progress. The framework will be reviewed as a minimum every 5 years.</p>
	<p>Urgent consideration needs to be given to devising a set of clear set of metrics to assess those marine species that are important in underpinning key ecosystem services.</p>	<p>Objectives for achieving and maintaining Good Environmental Status (GES) in our seas and targets and indicators to measure progress towards GES are set under the UK Marine Strategy. These cover a comprehensive range of biodiversity and marine environmental descriptors from marine species and habitats to contaminants, litter and noise and are updated every 6 years.</p> <p>The UK Marine Strategy applies an ecosystem-based approach to the management of human activities. In doing so, the Strategy seeks to keep the collective pressure of human activities within levels compatible with the achievement of GES. Achieving GES will maintain the capacity of marine ecosystems to respond to human-induced changes and enable the sustainable use of marine goods and services by present and future generations.</p>

Natural capital asset and status	NCC recommendation	Government response
<p>Minerals and resources</p> <p>The current status on the use of resources and of waste management activities indicates that although a number of targets are now in place, progress in achieving them is mixed.</p>	<p>There is a negative impact on the environment of sending waste to landfill and a loss of valuable resources: the NCC advises that there needs to be an end to unnecessary landfilling in line with the waste hierarchy (e.g.: prevent, reduce, reuse,</p>	<p>We broadly support this recommendation. Under the Resources and Waste Strategy (RWS), we have a commitment to recycle 65% of our municipal solid waste in England by 2035. This is a considerably higher recycling rate than we are currently achieving for 'waste from households' (WfH) - 45.5% in 2019 (the latest year for which we have data). We are in the process of developing the metric to track municipal recycling rates and as an interim are providing annual updates of WfH recycling to broadly monitor progress towards the 2035 target until this metric is finalised.</p> <p>Major policy reforms being pursued as part of the RWS within the next few years and which include Extended Producer Responsibility, the introduction of a Deposit Return Scheme and reforms to achieve greater</p>

<p>Relevant indicators relating to pressure on this NC asset:</p>	<p>recycle, etc.). England should follow the lead of Wales and Germany in terms of setting targets for achieving higher recycling rates.</p>	<p>consistency in household and business recycling, should help to lift recycling rates in England. These proposed reforms are currently out to consultation, with links provided here: Extended Producer Responsibility Deposit Return Scheme Consistency in recycling. Given the complex nature of the reforms, they will take time to implement and impact on rates of recycling and landfilling in England.</p>
<p>(J3) Municipal Waste Recycling rates (J4) Residual Waste arising by type and sector (J1) Carbon footprint and consumer buying choices (J2) Raw Material Consumption (a2) Emissions of greenhouse gases from natural resources</p>	<p>The NCC advises that statutory deadlines should be set for phasing out the use of natural resources which lead to long-term negative impacts on other natural assets and result in irreversible damage (e.g. the extraction and use of non-renewable energy sources on the condition of atmosphere, freshwater, biodiversity and marine).</p>	<p>We are not currently advising the use of statutory deadlines but through the Resources and Waste Strategy and the 25 Year Environment Plan, we are committed to doubling resource productivity by 2050 and to pursuing policy reforms to increase recycling rates and reduce our reliance on extracted primary materials such as metals and minerals. We are currently exploring legally-binding targets for introduction under the Environment Bill to drive improvements in resource productivity and reduce residual waste (policy paper available here).</p> <p>We are also developing a new <i>Waste Prevention Programme (WPP) for England: Towards a Resource Efficient Economy</i> that will set out priorities for action to manage our resources and waste in accordance with the waste hierarchy via extending product lifetimes and increasing reuse, repair and remanufacture. These measures should also work to reduce our reliance on extracted primary materials and environmental impacts associated with this. The proposed WPP is also currently out to consultation. WPP</p>



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