



HM Government

25 Year Environment Plan Progress Report

April 2019 to March 2020

11 June 2020

Contents

Executive Summary	2
Overview of progress	5
Annex of supporting information	12
Clean air	12
Clean and plentiful water	14
Thriving plants and wildlife	17
Reducing the risk of harm from environmental hazards	23
Using resources from nature more sustainably and efficiently	25
Enhanced beauty, heritage and engagement with the natural environment	28
Mitigating and adapting to climate change	30
Minimising waste	36
Managing exposure to chemicals	38
Enhancing biosecurity	41
Hardwiring strong environmental action into legislation	44
Funding, financing and incentivising improvement in natural capital	45
Supporting strong local delivery and leadership	46
Working together to secure lasting change	48
Summary of indicators and commitments	1

Executive summary

This is government's annual account of how it has implemented its commitments for protecting and improving the environment. It is our second account of progress since we published the [25 Year Environment Plan](#), our plan for improving the environment within a generation.

Our 25 Year Environment Plan is a living blueprint for the environment covering the next quarter of a century. It is an ambitious project and will continue to evolve and be updated as our policies develop and exceed the original actions set out in 2018. This report describes where progress has been made towards achieving the long-term vision of the plan, but also highlights the serious challenges that still remain and which we are committed to addressing.

Over the last 12 months we have continued to put the levers in place that will help us secure lasting change for the environment. We introduced our Environment Bill to Parliament which, along with our strengthened Agriculture and Fisheries Bills, sets a new legal foundation for government action to improve the environment. We also became the first major economy to legislate for net zero. Underlining our commitment to achieving this target, we launched a consultation on bringing forward the end to the sale of new petrol and diesel vehicles (including hybrids for the first time) to 2035, or earlier if a faster transition appears feasible.

Overall, there is much more to do, both in our country, and with international partners, to halt and reverse the decline of nature and address climate change. These global challenges are inextricably linked, for it will be impossible to improve nature without stabilising the climate. Similarly, we cannot avert climate change, or build resilience to its impacts, without restoring nature. Recently, COVID-19 has had a profound and sudden impact across this country and the rest of the world, and our everyday lives have changed dramatically. Rightly, the priority for government is to limit the health and economic effects of the pandemic, thereby saving lives and livelihoods. As we prepare for recovery from the crisis, we will pursue a rebuilding of our economy and society in ways that are green, just and inclusive. The government's environmental programme will play its full part in securing a sustainable and resilient recovery. At the same time, this will ensure that we also recover our precious natural environment and diverse ecosystems.

We are due to host the next United Nations climate change summit, COP26, in 2021. This bears testament to our global credentials as an ambitious and effective leader on climate change. The summit has been postponed to 2021 due to COVID-19, and we will work with partners to consider the contribution of the conference to planning for sustainable recovery and renewal. Investment in cleaner technology, preservation of our natural habitats and

measures to improve resilience to climate change impacts can all play an important part. We have committed to making nature a major focus of COP26 in recognition of the potential of nature-based solutions to addressing biodiversity loss, climate change and poverty in an integrated and sustainable way.

We will also lead by example at home by investing in nature through our Nature for Climate Fund. This includes establishing 30,000 hectares of woodland in the UK per year and restoring 35,000 hectares of peatland across the UK by 2025. We will also integrate nature-based solutions where appropriate into flood resilience work.

On 31 January 2020 the United Kingdom left the European Union, which gives us an opportunity to set our own ambitions for protecting our environment. The Environment Bill sets out ambitious commitments on waste, air quality, water and biodiversity. The Bill will transform our environmental governance by creating a new system tailored specifically to the UK.

By the end of the year we will be an independent coastal state, free from the constraints of the Common Fisheries Policy and able to control who may fish in our waters and on what terms for the first time since 1973. We will also soon be starting the transition away from the Common Agricultural Policy, moving towards introducing schemes that are based on paying public money for public goods that deliver beneficial environmental outcomes – a cornerstone for realising the ambitions in our 25 Year Environment Plan.

We are shaping new markets to incentivise more private sector investment in projects that protect and enhance the natural environment. In July 2019, we published the first ever HMG Green Finance Strategy, which sets out our plans to transform the financial sector and generate the investment required to deliver our ambitious environmental goals. We are also designing our public funding streams – such as our Environmental Land Management scheme and our Nature for Climate Fund – to de-risk and crowd-in private sector investment. We will also establish a natural capital Investment Readiness Fund to support the development of natural capital projects to attract private sector investment.

Who is this report for?

This report is for anyone who is interested in understanding what progress has been made in achieving our environmental ambitions. In response to feedback from the Youth Steering Group (a group of young people aged 14-25 convened by the British Youth Council) on the first progress report, we have aimed to make this year's publication more easily understandable to non-experts.

Copies of this report will be placed in the Libraries of the House of Commons and the House of Lords, and we will invite the Environmental Audit Committee and Environment, Food and Rural Affairs Committee to share their views on our progress. The Natural Capital Committee (an independent advisory group of experts) will publish a response to this report, setting out their assessment of our performance and where necessary challenging us to do more.

Approach to this report

This report describes progress made towards the ten goals set out in the 25 Year Environment Plan over the period between April 2019 and March 2020.

This report is lighter touch than the 2018-19 report, given that our plans for next steps will need to take account of impacts of COVID-19, when these are fully known. In the interests of ongoing transparency and rigour, we have brought indicators and trends to the fore, as these are at the heart of our reporting and planning. We have included an annex of supporting information that provides more detail to support this overview.

An update to the 25 Year Environment Plan Outcome Indicator Framework has been published alongside this progress report.






Overview of progress

The ten goals we set in 2018 for environmental improvement are long-term. This annual report provides a snapshot of progress towards these goals. Our first report focused on the beginning of the journey towards improving the environment in a generation. Much of our effort then was focused on laying the foundations for delivery and establishing more detailed plans under individual goals, such as our Clean Air Strategy. In this year's report we reflect on actions taken as well as the extent to which outcomes are being achieved.

Our ability to report on progress against outcomes is at an early stage. This is partly because there is a time lag in what the evidence tells us after policies are put in place. We are also still in the process of developing the full set of indicators against which to report. To reflect the full ambition of the plan, it is necessary for us to design additional indicators to understand progress and this work is underway. The available indicator trends show parts of our natural environment that are under strain, and where there are green shoots of improvement.


The following tables provide a brief overview of the current status of some headline indicators. A more detailed summary of indicator trends is included in the annex.



Key

	Downward short-term trend, positive outcome		Stable short-term trend, stable situation		Upward short-term trend, positive outcome
	Downward short-term trend, negative outcome				Upward short-term trend, negative outcome



The arrows show simply whether the trend has recently increased or decreased, and the colour coding reflects whether that is a positive or negative outcome for the environmental goal. Further information on indicators is set out in our outcome indicator framework.

Clean air




Outcome indicator	What are we assessing?	Status
Emissions of five key air pollutants	Changes in the emissions of five of the most damaging air pollutants, which have harmful impacts on human health and the environment.	

Concentrations of fine particulate matter in the air	A measure of the level of long-term exposure of people to harmful airborne fine particulate matter.	
Roadside nitrogen dioxide concentrations	Changes in average roadside concentrations of nitrogen dioxide. The highest concentrations are often found at roadside locations as road vehicles are a big source of this pollutant.	



Clean and plentiful water

Outcome indicator	What are we assessing?	Status
State of the water environment	The percentage of river bodies which meet the 'good ecological status' standard.	
Condition of bathing waters	The percentage of designated bathing waters meeting conditions sufficient to minimise the risk of harm to bathers from pollution.	


Thriving plants and wildlife

Outcome indicator	What are we assessing?	Status
Extent and condition of protected sites	The hectares of protected sites and the current condition of one type of protected sites (Sites of Special Scientific Interest) based on a common standard.	
Area of woodland creation in England	Change in the area of broadleaved and conifer woodland in England.	
Abundance and distribution of priority species in the UK	Changes in the relative abundance of priority species and changes in distribution of priority species (i.e. changes in the number of one kilometre grid squares in which species are recorded in any given year). Priority species are those which are of principal importance for the purpose of conserving biodiversity.	



Using resources from nature more sustainably and efficiently

Outcome indicator	What are we assessing?	Status
Raw material consumption	Trends in per capita raw material consumption and resource productivity in England, which help us to understand how efficiently raw materials are being used.	
The percentage of fish stocks fished at or below levels of maximum sustainable yield	Changes in the proportion of commercial fish and shellfish stocks that are within safe biological limits and fished sustainably.	

Enhanced beauty, heritage and engagement with the natural environment

Outcome indicator	What are we assessing?	Status
Engagement with the natural environment	The frequency of visits to natural spaces by adults in England.	



Mitigating and adapting to climate change

Outcome indicator	What are we assessing?	Status
Emissions of greenhouse gases from natural resources	Changes in greenhouse gas emissions from natural resources such as the forestry, agriculture and waste sectors.	 <p>* This indicator represents all sectors within Defra's scope. The overall downward trend does not apply to each individual sector, it is a combined attribution. For example, emissions from agriculture and waste have remained relatively stagnant in recent years.</p>
Carbon footprint and consumer buying choices	England's carbon footprint, including greenhouse gases emitted directly by households, from the goods and services produced in England and	



	consumed here, and emissions embedded in imports.	
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Climate change adaptation cuts across the other goals in the plan. A full list of relevant indicators can be found in the 25 Year Environment Plan Outcome Indicator Framework (2019, p. 13).

Minimising waste

Outcome indicator	What are we assessing?	Status
Residual waste arising by type and sector	How much waste is incinerated and landfilled in England rather than recycled or reused.	
Municipal waste recycling rates	Trends in household waste and waste from household recycling rates.	

Enhancing biosecurity

Outcome indicator	What are we assessing?	Status
Abatement of the number of invasive non-native species entering and establishing against a baseline	The change in number of invasive non-native species established across or along 10% or more of the land area or coastline of Great Britain.	
The number of additional tree pests and diseases becoming established in England	The additional tree pests and diseases formally considered as becoming 'established' by the UK Plant Health Risk Group within a rolling 10-year period.	

Please note outcome indicators relating to reducing the risk of harm from environmental hazards, and managing exposure to chemicals are in development.

As the tables above show, there is more work to do to reach our long-term goals. Over the last twelve months we have taken forward key commitments:

- Clean air:** Our Environment Bill includes measures to improve air quality, including introducing a duty to set an ambitious, legally-binding target for fine particulate matter. To address significant sources of pollution we have launched a consultation to bring forward the end of sale of petrol and diesel cars and vehicles to 2035, or earlier if a faster transition appears feasible. We will also be implementing proposals to support cleaner domestic burning of solid fuel. We will continue to implement plans in the Clean Air Strategy to tackle all sources of air pollution and minimise human exposure to harmful concentrations.

- **Clean and plentiful water:** We know that we will need to go much further if we are to meet our ambitions to improve the water environment. We launched our ‘Challenges and Choices’ consultation in October 2019 to inform the next round of River Basin Management Planning. We are considering options for additional steps alongside this. We will be taking action to reduce consumer demand and have challenged English water companies to deliver at least a 16% reduction in annual average leakage from 2019-20 levels over the 2020-25 period. We expect this will save around 469 million litres of water per day during the period.
- **Thriving plants and wildlife:** Our Environment Bill introduced a range of measures to enhance nature, such as mandating for 10% net gain for biodiversity for new development in England. These lay the foundation for our Nature Recovery Network - an expanding and connected network of places for nature - which will be further supported by a new fund of up to £25 million from next year. We have also taken action to conserve our marine environment. This includes designating the third tranche of 41 new Marine Conservation Zones in May 2019. We also published a revised UK Marine Strategy to achieve ‘Good Environmental Status’ of our seas, and a new Fisheries Bill with environmental objectives.
- **Reducing the risk of harm from environmental hazards:** As recent events have shown, environmental hazards can have a devastating impact on communities and businesses. In the recent Budget, we committed to doubling flood defence spending to £5.2 billion over six years, plus a £200 million place-based resilience programme which will support 25 local areas to take forward wider innovative actions that improve their resilience to flooding and coastal erosion. We published our National Framework for Water Resources in March 2020, which sets out England’s future water resource needs and potential deficits at a national and regional level. This will support future water company planning for drought.
- **Using resources from nature more sustainably and efficiently:** Our Fisheries Bill includes powers to support the sustainable management of our fish stocks. Similarly, we commissioned an independent review of the food system to shape a National Food Strategy for England. This will address the challenges in producing food sustainably and protecting national food security. The UK government convened the Global Resource Initiative taskforce in July 2019 to investigate what the UK can do to reduce our global environmental footprint, bringing together representatives from business, finance and civil society. The taskforce published their final report in March 2020 which sets out recommendations for ambitious actions to reduce the climate and environment impacts of key UK supply chains.
- **Enhanced beauty, heritage and engagement with the natural environment:** We are committed to connecting people of all backgrounds with the environment to improve their health and wellbeing. As part of this we launched a demonstrator project, which aims to identify how government and others can help scale up green social prescribing to support good mental health.¹ To improve access to high quality green and blue spaces, we have further expanded the England Coast Path, including a 16-mile route around Walney Island in Cumbria which opened in February 2020. We have

¹ Green social prescribing is the use of green space and green care in support of a preventative approach to healthcare.

also welcomed the findings of the independent Landscapes Review, led by Julian Glover, which has made a series of recommendations to make our National Parks and Areas of Outstanding Natural Beauty greener, more beautiful and open to everyone. We are carefully considering the recommendations and will respond fully in due course.

- **Mitigating and adapting to climate change:** In June 2019 we set a legally binding target to achieve net zero greenhouse gas emissions from across the UK economy by 2050. We have started to take the necessary action across all sectors of the economy to help us achieve this ambitious target. This includes launching the £50 million Woodland Carbon Guarantee to provide long-term income support to new woodland creation projects, and publishing the first phase of our Transport Decarbonisation Plan. We are also investing £640 million in a new Nature for Climate Fund to support woodland creation and peatland restoration. Alongside this we are continuing to implement the second National Adaptation Programme, published in 2018, to increase the country's resilience to the climate change impacts identified in the Climate Change Risk Assessment.
- **Minimising waste:** We have taken forward commitments laid out in the Resources and Waste Strategy. This includes consulting on major reforms to the way waste is managed, such as by introducing a deposit return scheme for drinks containers, extending producer responsibility for packaging and consistent recycling collections. We are seeking new powers through our Environment Bill to provide the legislative framework to realise our proposals to reform the waste system.
- **Managing exposure to chemicals:** We have continued to play an influential role internationally, including in the development of the beyond 2020 framework for chemicals and waste with a specific focus on strengthening the science policy interface and putting in place international targets. At home, we have started work towards a new chemical strategy and launched our new Prioritisation and Early Warning System to identify emerging chemical issues across different media such as water and soil.
- **Enhancing biosecurity:** To better protect our native wildlife and livestock, we have strengthened controls to prevent the importation of new plant pests and diseases. We have also continued to deliver our Invasive Non-native Species Strategy, and launched a 'Plant Healthy' biosecurity management standard for UK nurseries.

The way we report progress towards our goals is evolving

On the recommendation of the Natural Capital Committee, our 25 Year Environment Plan is focused on how we can increase our natural capital. Natural capital defines nature as an asset or set of assets that benefit people. It includes certain stocks of the elements of nature that have value to society such as forests, fisheries, rivers, biodiversity, land and minerals. That is why we have ten goals in the plan and why we report against each of these. Each goal is pertinent to maximising the goods and benefits we receive from nature.

We are evolving our reporting focus from activities towards outcomes and have taken steps in that direction in this report. This is in line with the Natural Capital Committee's recommendation to get the balance right between actions taken and measurable outcomes. We do not currently have complete information on outcomes as there are gaps in our knowledge and monitoring systems for some natural capital assets. Through the

Committee's advice we can better understand how this may be addressed through an appropriate form of baseline census.

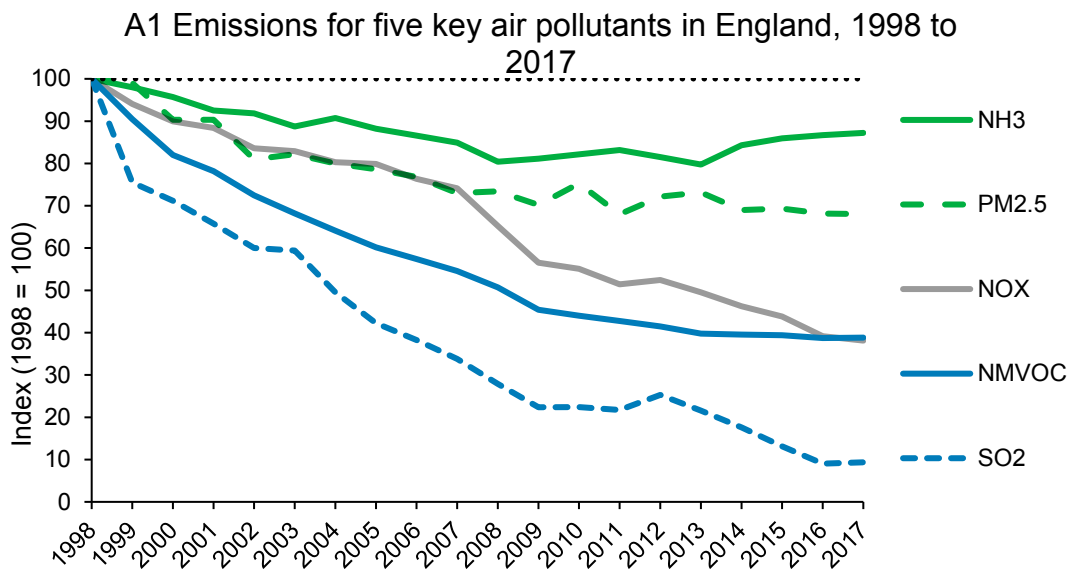
In this second progress report we have provided a short assessment of progress using the headline indicators for each goal where this is possible. This greater focus on outcomes will be further strengthened in future reports as more outcome indicators become available for reporting. This will help us to better understand the state of the environment and how the action we are taking helps to protect and improve it.

The Environment Bill creates a series of new monitoring and reporting requirements. Once the Bill becomes law, the government will be required to prepare an Environmental Improvement Plan, which sets out the steps it intends to take to improve the natural environment. The 25 Year Environment Plan will be the first such Environmental Improvement Plan. The Environmental Improvement Plan will have to be reviewed at least every five years. The government will have to report annually on what it has done to implement the Environmental Improvement Plan and on whether the natural environment (or particular aspects of it) has improved. The new environmental watchdog, the Office for Environmental Protection, will also have to report annually on the progress that has been made in improving the natural environment in accordance with the Environmental Improvement Plan. That report may also include recommendations to government about how it can improve progress. These are significant changes, which government welcomes.

Annex of supporting information

Clean air

Clean air is essential for life, health, the environment and the economy. Air pollution is the top environmental risk to human health in the UK and has direct impacts on the natural environment as it contributes to climate change, damages biodiversity, reduces crop yields and pollutes our oceans. The sources of air pollutants are mainly produced by human activities, including combustion of fuels for heat and power, agriculture, industrial processes and transport. We are committed to tackling these and meeting our legally-binding emissions ceilings targets in 2020 and 2030 for five key pollutants.



Source: Ricardo Energy & Environment

- Emissions for five key air pollutants in England have fallen over the latest 19 years where data is available (between 1998 and 2017). Over the last 5 years of the time series the trends in annual emissions of fine particulate matter (PM_{2.5}) and non-methane volatile organic compounds (NMVOC) have levelled off and ammonia (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. There are no separate ceilings for England.
- Population-weighted annual mean concentrations of PM_{2.5} in England have declined from 12.1 µg/m³ in 2011 to 9.5 µg/m³ in 2018, a fall of 22% over the latest 7 years for which comparable data are available. The population-weighted mean concentration is used as a measure of the impact of PM_{2.5} on the health of the total population. Greater weighting is given to concentrations of PM_{2.5} in urban areas to reflect the higher population density as those concentrations will affect a greater number of people.

England (and the UK as a whole) is compliant with the legally-binding limit values for concentrations of particulate matter (PM₁₀ and PM_{2.5}). These limit values are based on annual and daily mean concentrations. These are either measured by the national network of air quality monitoring stations or derived from modelling of background concentrations for each square kilometre of the UK and roadside concentrations at over 9,000 major urban road links.

- Average concentrations of nitrogen dioxide (NO₂) at the roadside in England have fallen from 60 µg/m³ in 1997 to 32 µg/m³ in 2018. Although the general trend in measured NO₂ concentrations is decreasing and falls below the NO₂ limit value of 40µg/m³ in recent years, there are hotspots of NO₂ exceedances which are being addressed through the NO₂ plans. These exceedances are based on annual mean concentrations of NO₂; the vast majority of these are measured or modelled at the roadside in urban areas.
- Average rural background concentrations of ozone (O₃) have increased from 56 ug/m³ in 1987 to 74 ug/m³ in 2018. It has fluctuated over the last 10 years, but from 2017 to 2018 it increased rapidly from 68 µg/m³ to 74 µg/m³. Some variance from year-to-year is expected due to fluctuations in the occurrence of hot summer weather conditions which are associated with high ozone concentrations.
- The percentage area of sensitive habitats in England where nutrient nitrogen deposition exceeded critical load has fallen over the latest 20 years for which data are available (98.3% in 1995-97 versus 94.8% in 2015-17).

What progress have we made since April 2019?

We have continued to implement our [Clean Air Strategy \(2019\)](#) which sets out the comprehensive actions required across all parts of government and society to improve air quality.

In July 2019, we published [a report](#) assessing the progress that will be made towards World Health Organization (WHO) guideline annual mean level of PM_{2.5} of 10µg/m³ in the UK through the commitments outlined in the Clean Air Strategy. This report showed that significant progress will be made towards achieving WHO guideline levels by 2030 if we fulfill all of the strategy's commitments, but that additional action would be needed to reach these levels in specific locations. The report considered the technical feasibility of reaching the guideline level, but not economic and social factors.

On reducing transport sector emissions and roadside NO₂ concentrations, we have:

- launched a consultation to bring forward the end of sale of petrol and diesel cars and vehicles to 2035, or earlier if a faster transition appears feasible, as well as including hybrids for the first time.
- continued to work with several local authorities to support the development of around 40 local plans to tackle roadside NO₂ concentrations including through the designation of Clean Air Zones where required.

To reduce emissions from agriculture including ammonia which damages sensitive natural habitats, we have:

- initiated work with representatives from farming organisations on an environmental permitting system for the beef and dairy sector.
- convened a working group to develop 'Best Available Techniques' to reduce pollution from sectors which will underpin the environmental permitting regime.
- continued to deliver practical support to farmers on reducing ammonia emissions through our Catchment Sensitive Farming advisers.
- offered grants for slurry management equipment that reduces ammonia emissions through our Countryside Productivity Small Grants Scheme.

Next steps

Our Environment Bill includes key measures to improve air quality and deliver health benefits. It will:

- introduce a duty to set an ambitious, legally-binding target for PM_{2.5}, alongside a further long-term air quality target.
- ensure that local authorities have a clear framework and simple to use powers to address air quality in their areas.
- provide government with new powers to enforce environmental standards for vehicles.

We will also implement proposals to support cleaner domestic burning of solid fuel:

- restricting the sale of small volumes of wet wood for domestic burning from February 2021.
- phasing out the sale of traditional house coal between 2021 and 2023.
- applying sulphur and smoke emission limits to all manufactured solid fuels from February 2021.

NO₂ concentrations are at a historic low, however there are still persistent exceedances which we are under a legal obligation to bring into compliance. To reduce roadside NO₂ concentrations we will:

- continue to work with local authorities to deliver compliance as soon as possible. The first Clean Air Zones (in Birmingham, Leeds and Bath) are due to go live in early 2021, after the COVID-19 outbreak response.

Clean and plentiful water

Our water environment is essential to human life and vital to biodiversity. It supports the adaptability of communities and ecosystems to climate change risks and thriving and resilient aquatic biodiversity contributes to carbon sequestration. Our water environment also supplies us with drinking water and contributes to recreation and tourism. In our 25 Year Environment Plan we committed to achieving clean and plentiful water by improving

at least three quarters of our waters to be close to their natural state as soon as is practicable.

- In 2017, 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 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 number of designated bathing waters in England meeting at least the minimum standard has increased considerably from 45.7% in 1995 to 98.3% in 2019; it has remained relatively stable over the last four years at between 97.8% and 98.5%. The number of bathing waters achieving 'excellent' status has also increased considerably since 1995, with 71.4% meeting this standard in 2019. The number of bathing waters rated as 'poor' has remained below 3% since 2015.
- The total number of serious pollution incidents to water in England has fallen from 373 in 2008 to 314 in 2018, a drop of 16%.
- In 2018, 84% of surface bodies supported required flow standards, a 2% increase since 2017. In 2018, 72% of groundwater bodies were sustainable, with no change since 2017. We are still committed to achieving sustainable levels for 90% of surface water bodies and 77% for groundwater bodies by 2021. Future trends are not possible to predict as data is currently only available for two consecutive years.

What progress have we made since April 2019?

The next round of River Basin Management Plans is due in 2021. To help inform this process the Environment Agency launched the ['Challenges and Choices' consultation](#) in October 2019. The consultation explored the main issues that constrain our water environment and how we use it. It also considers how we may be able to manage these challenges together with the available resources.

To improve water quality, we have:

- enhanced 1,575km of water environment against an ambitious target of just under 2,000km and protected an additional 25km of waterbodies from deterioration.
- engaged 6,088 farm holdings (covering 1,215,842 hectares of farmed land) with Catchment Sensitive Farming adviser visits, supporting them to make improvements to their farm practices which reduce water pollution.

To ensure there is enough water for the environment, we have:

- established nine Priority Catchment Projects through the Catchment Based Approach, working collaboratively with stakeholders to explore opportunities and innovative approaches for greater access to water, solutions to unsustainable abstraction and strengthen the catchment-based approach for water resources.

- reviewed 91 abstraction licences in the Restoring Sustainable Abstraction Programme, making changes to 49 of these to ensure they are sustainable. We also reviewed a further 114 time-limited licences to ensure they are sustainable.
- revoked 101 abstraction licences for non-use preventing the abstraction of 141 million cubic metres per year.

To reduce demand for water, we have:

- challenged English water companies to deliver at least a 16% reduction in annual average leakage from 2019-20 levels over the 2020-25 period. We expect this reduction will save around 469 million litres of water per day in England during the period.
- run a consultation and call for evidence (from July to October 2019) on measures to reduce personal water use.
- through our work with English water companies, the companies have now committed to an average per capita consumption target of 131 litres per person per day to be achieved by 2025; and at most 120 by 2045.

While we have worked hard to prevent deterioration in the face of increasing pressures on the water environment, we know that we will need to go much further if we are to meet our targets. Therefore, we will consider options for taking additional actions alongside our current River Basin Management Planning.

Next steps

We will:

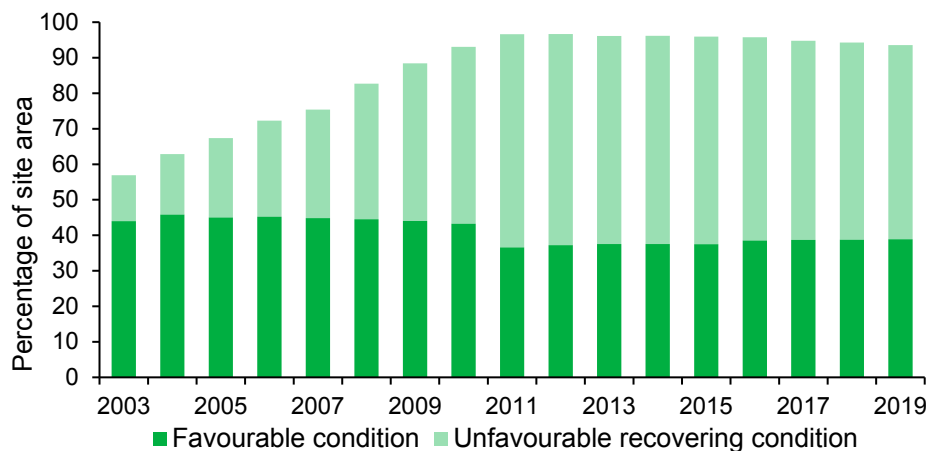
- continue to develop our new approaches to improve the water environment. We will use the data from the 'Challenges and Choices' consultation to develop and publish draft River Basin Management Plans to meet our objectives.
- improve our water and wastewater services and increase their resilience through enhanced long-term water industry planning processes.
- publish a consultation seeking views on moving abstraction licences into the Environmental Permitting Regime.
- work with stakeholders to develop and implement a range of actions to address national water resource management and specific issues for chalk streams.
- publish four updated abstraction licensing strategies by 31 December 2020, including innovative solutions to increase access to water and resolve sustainable abstraction issues.
- continue receiving applications and proceed with licence determination for New Authorisations until June 2020, complete all required licence changes in the Restoring Sustainable Abstraction Programme and start progressing the review of 134 time-limited licences due in 2021.

- reward farmers and land managers for providing public goods, including clean and plentiful water, in the future Environmental Land Management scheme (further details of this scheme are set out in 'Hardwiring strong environmental action into legislation').
- work to build natural capital, including by using nature-based solutions and natural flood management techniques to help build resilience at a catchment and landscape scale and reduce greenhouse gas emissions.

Thriving plants and wildlife

Nature matters. We value our species and ecosystems in their own right, but they also provide wider benefits, for example by contributing to climate change mitigation and adaptation, such as flood mitigation. In our 25 Year Environment Plan we committed to protecting and enhancing England's biodiversity on land, in freshwater and at sea. This includes restoring 75% of our one million hectares of terrestrial and freshwater protected sites to favourable condition, creating or restoring 500,000 hectares of wildlife-rich habitat outside protected sites on land by 2042, and increasing the proportion of protected and well-managed seas.

D2b (interim) Condition of Sites of Special Scientific Interest in England, 2003 to 2019



Source: Natural England

- We currently measure the condition of habitats in Sites of Special Scientific Interest (SSSIs). Further monitoring is required to assess the condition of other designated protected areas including those at sea. Over the past eight years, there has been a small increase in the condition of SSSIs. The area in favourable condition increased from 36.6% in 2011 to 38.9% in 2019. Based on recent trends we are not on track to meet our commitment to restore 75% of our one million hectares of terrestrial and freshwater protected sites to favourable condition. We are, however, committed to improving the condition of our protected sites network as part of a Nature Recovery Network.
- The total area of woodland in England has increased from 1.24 million hectares in 1998 to 1.31 million hectares in 2019, equating to an increase from 9.5% to 10.0% of the land area of England. Recently announced measures aim to enable planting of 30,000

hectares of woodland annually in the UK including through a new Nature for Climate Fund, marking a significant step towards meeting our aspiration of 12% cover in England by 2060.

- By 2016, the index of relative abundance of priority species in the UK fell by 60%. Between 1970 and 2016, the index of distribution of priority species in the UK declined by 27%. The majority of this decline occurred in the 1970s and early 1980s; since then, the index has remained relatively stable.
- There was an overall decrease in the UK pollinators' index from 1987 onwards. In 2016, the index had declined by 31% compared to its value in 1980. This overall decline masks the trends of the individual species within the index, 44% of which have become less widespread, 14% of which have become more widespread and 42% of which have remained the same since the index began in 1980.
- The health of our seas can be tracked using assessments of fish populations, the first metric looks at the size of the fish in a community (Typical Length) and the second looks at the composition of fish communities (Mean Maximum Length). In the Channel, northern North Sea and the eastern Irish Sea, the health of the demersal fish community (fish living near the bottom of the sea) has improved since the 1990s. In the central and southern North Sea and on the shelf edge to the west of Scotland, communities are in poorer health. Within the southern and central North Sea, the health of pelagic fish communities (fish living in the water column) is declining. There is no evident change in the pelagic fish communities overall in the Celtic Sea or in the northern North Sea. Overall while there has been improvement in the health of demersal fish communities, Good Environmental Status has not yet been achieved in either the Greater North Sea or the Celtic Seas for demersal fish. A partial assessment of pelagic shelf fish status did not provide a clear result.
- The average total abundance of beach litter items per 100m of coast varies considerably around the UK with greater quantities being recorded in the Celtic Seas than the Greater North Sea. After showing some decrease from 2011 to 2013, beach litter levels in the Celtic Seas whilst fluctuating have risen to greater than the 2008 levels. In the Greater North Sea there has been an increase in beach litter levels. Water currents, weather conditions, and prevailing wind conditions can have an influence on the deposition and retention of beach litter and therefore beach litter abundance.

What progress have we made since April 2019?

On land and in freshwater

We have continued to put in place a range of policies to underpin the Nature Recovery Network, so that our protected sites are in better condition and other wildlife-rich habitats are improved and expanded. This includes a series of measures set out in our Environment Bill:

- a framework to set at least one legally binding long-term target for biodiversity.
- a strengthened biodiversity duty on public authorities.

- Local Nature Recovery Strategies to help plan and target investment in nature recovery.
- mandating for 10% net gain for biodiversity for new development in England, which will mean that the delivery of much-needed housing enhances the environment, contributes to our ecological networks and conserves our precious landscapes.
- enabling landowners to agree voluntary, legally binding conservation covenants to provide long term conservation benefits on their land.

These measures will build on the (Sir John) Lawton principles of making space for nature to drive improvements in the condition, diversity and connectivity of our wildlife habitats and in doing so increase their resilience. For example, this will ensure species can move in response to climate change and that the ecosystems of which they are part continue to support wider adaptation and mitigation benefits. They will also sit alongside and strengthen other flagship policies, including our plans for a new Environmental Land Management scheme.

In March 2020, we announced that we will invest £640 million in a new Nature for Climate Fund to support woodland creation and peatland restoration, and up to £25 million in a Nature Recovery Fund, which will bring together businesses, landowners and local communities to protect and restore habitats, species and landscapes. We have also continued to take action to drive an overall improvement in the status of threatened species, including pollinators, on land, as well as providing opportunities for reintroduction of formerly native species, including through the following measures:

- providing funding for new projects to help support pollinator habitat mapping and the recovery of the breeding curlew population in the east of England.
- supporting the development of the Management Strategy Framework for the Devon Beaver trial.
- developing a code of best practice and guidance for assessing the merits and risks of species reintroduction and translocation projects.

Natural England has continued to lead on species conservation projects, including:

- developing, with stakeholders, the 'Bats in Churches' project which uses bespoke solutions to conserve bats alongside the protection of our priceless historic heritage.
- rolling out district-level licensing schemes for great crested newts in target local planning authority areas.
- working with a range of external partners on the Back from the Brink species recovery programme.

TRADE IN ENDANGERED SPECIES

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) aims to ensure that international trade in listed species is sustainable, legal and traceable. At the Conference of the Parties to CITES in August 2019, the UK was successful in championing improved protection for the listing of several vulnerable endangered species including jaguars, giraffes, saiga antelopes and mako sharks. A CITES listing provides significant conservation benefit by ensuring trade is monitored and can only take place in a sustainable manner. The UK also played a leading role in driving through stronger regulation of the international trade in live African elephants to place in captivity.

The UK is also committed to being at the forefront of international efforts to protect endangered animals and plants from illegal trade by addressing demand reduction, strengthening enforcement and criminal justice, and providing alternative sustainable livelihoods for people around the globe. In October 2019 we committed an additional £30 million of funding from 2021 to continue our work to tackle this abhorrent trade, by strengthening existing work and allowing more projects to be supported through our Illegal Wildlife Trade Challenge Fund.

At sea

We published the updated [UK Marine Strategy \(Part 1\)](#) in October 2019. This provides an updated assessment of the state of UK seas and progress made towards achieving 'good environmental status'. It also sets out our updated high level objectives and targets to be used for the period to 2024.

To conserve and improve our protected marine sites, we have:

- designated the third tranche of 41 new Marine Conservation Zones in English waters, expanding the UK's Blue Belt by 12,000km² of marine habitat in UK waters.
- launched an independent review in June 2019 which will consider whether and how Highly Protected Marine Areas should be introduced in English inshore and English and Northern Irish offshore waters.

We continue to work towards minimising and, where possible, eliminating the bycatch of sensitive and protected marine species in our waters, including:

- continuing to work with stakeholders to develop the UK Plans of Action for Cetacean and Seabird Bycatch.
- establishing a Regional Cetacean Bycatch Focus Group to focus on implementing local, practical solutions.
- commencing pilot trials for a range of mitigation measures in different fisheries along Cornwall's south coast.

We published a new Fisheries Bill in Parliament which is a major milestone in establishing a modern fisheries management regime once we leave the EU's regime in December 2020. The Bill confirms the UK Government's commitment to sustainable fishing for future generations and to the conservation of the marine environment. The UK Government and governments of Scotland, Wales and Northern Ireland will set out in a joint statement how they will work together to achieve the Bill's sustainability objectives. It includes new powers that will enable UK authorities to control fishing activity that damages our marine environment and to improve its state throughout our waters.

The updated UK Marine Strategy (Part 1) showed that we have made good progress towards achieving 'good environmental status'. The findings of the 60 indicator assessments covering marine species and habitats and the key pressures affecting them have enabled us to assess the extent to which 'good environmental status' has been achieved, and to identify gaps in our knowledge and appropriate next steps.

SUPPORTING OUR OVERSEAS TERRITORIES

The UK's Overseas Territories are home to rich, globally important biodiversity, with many endemic species. In 2019-20 we provided financial and technical assistance to protect their unique biodiversity including through:

- strengthening their biosecurity capacity to tackle the threat posed by invasive non-native species.
- developing action plans in agreement with Overseas Territories' governments to help conserve coral reefs, and supporting the work of the International Coral Reef Initiative to effectively deliver coral reef conservation and management.
- committing £3.8 million through the Darwin Plus programme for important biodiversity work, and helping to fund projects, such as saving the critically endangered Turks and Caicos rock iguana and protecting herbivorous fish to conserve Cayman Island coral reef biodiversity.
- announcing an uplift to £10 million per annum from 2021 until the end of this Parliament for the Darwin Plus.

Next steps

On land and in freshwater

We will:

- continue to develop a new strategy for nature, setting out our plans for conserving biodiversity in England
- prepare for implementation of key Environment Bill policies including biodiversity net gain, Local Nature Recovery Strategies and biodiversity targets.

- continue to engage with industry to explore potential net gain approaches for types of development, including Nationally Significant Infrastructure Projects, that are not subject to the mandatory requirement set out in the Environment Bill.
- support smaller developments in delivering mandatory net gain by consulting on the detail of the simplified processes that small developments will be able to use.
- prepare for delivery of our Nature for Climate and Nature Recovery Funds.
- establish a partnership of landowners, wildlife conservation and government bodies to support the planning and delivery of the Nature Recovery Network.
- engage stakeholders as we develop our new Environment Land Management scheme, exploring how we can design a scheme that achieves key objectives, including thriving plants and wildlife.
- publish by the end of the year revised user guidance on carrying out a Habitats Regulation Assessment and new guidance on protecting, conserving and restoring European sites.
- continue to work with the River Otter Beaver Trial partnership and assess the trial ahead of making decisions on the reintroduction of beavers in England.

At sea

We will:

- publish an update to the UK Marine Strategy (Part 2) in December 2020 which will set out how we will monitor progress against the updated targets and indicators proposed in Part 1.
- publish a comprehensive Seabird Conservation Strategy which will help address the current declines in some UK species.
- launch our programme of work on 'Protected, Endangered and Threatened Species' bycatch, which will support a more ecosystem-based approach to fisheries management and monitoring.
- publish the UK Cetacean Bycatch Initiative, which will outline the actions that will be taken to tackle cetacean bycatch in UK waters through the implementation of practical and effective risk-based mitigation.
- develop policies and programmes to implement the Fisheries Bill, including the new provisions for Fisheries Management Plans to deliver sustainable fishing and protect the wider marine environment.

GLOBAL OCEAN ALLIANCE

At the United Nations General Assembly in September 2019, the UK launched a Global Ocean Alliance of countries who support a target to protect at least 30% of the global ocean in marine protected areas and other effective conservation measures by 2030. It is the UK's ambition that the '30by30' target is adopted as part of the post-2020 Global Biodiversity Framework.

We will continue to engage with countries around the globe to grow the alliance and to build support for the '30by30' target to be adopted at the fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity in 2021.

Reducing the risk of harm from environmental hazards

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. We are committed to continued investment in protecting communities, as well as boosting the long-term resilience of our homes, businesses and infrastructure.

The 25 Year Environment Plan outcome indicator framework includes indicators relating to drought, flood and coastal erosion risk management which are currently in development. Flood and coastal erosion risk management indicators are subject to decisions on long-term Flood and Coastal Erosion Risk Management policy. 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 seven since 1990.
- Since 1884 all of the UK's ten warmest years have occurred since 2002. 2018 was the seventh warmest year for the UK in a series from 1884.
- Looking ahead to future decades, the UK Climate Projections 2018 (UKCP18) 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. Cold, dry winters and cool, wet summers will still occur, albeit with reduced frequency over the course of the 21st century.

What progress have we made since April 2019?

Flooding and coastal erosion

Through our flood investment programme we have continued to improve protection for more homes across the country. Since 2015 over 200,000 homes have been better protected from flooding and coastal erosion. During the winter flooding of 2019/20 alone, previous investment in flood defences helped to protect more than 128,000 properties.

The Environment Agency has published a draft [Flood and Coastal Erosion Risk Management Strategy](#) for public consultation. We have also:

- issued a call for evidence on our flood and coastal erosion policy in July 2019.
- commissioned an independent review of the arrangements for determining responsibility for surface water and drainage assets as part of the implementation of the Surface Water Management Action Plan.

Drought resilience

We have worked with water companies on their final water resource management plans for the current round of planning, all of which have now been published. These plans demonstrate an increase in the planned level of drought resilience to be achieved between now and 2045.

We have also:

- published our [National Framework for Water Resources](#) in March 2020, which sets out England's future water resource needs and potential deficits at a national and regional level.
- made up to £469 million of funding available between 2020 and 2025 for water companies to explore a number of the strategic options that will be needed to ensure the nation's future water needs are met, including new infrastructure.

The National Framework shows how we are bringing together industry and regulators to transform the way we use and look after our water supplies. It sets out how we will reduce demand, halve leakage rates, develop new supplies, move water to where it is needed and reduce the need for drought measures that can harm the environment.

Next steps

We will invest £5.2 billion over the six years from April 2021 in a major upgrade to flood and coast infrastructure across the country. This comprehensive package will better prepare communities for flooding and coastal erosion risks for the long-term.

We will also invest a further £200 million over those six years to pilot innovative actions that improve the long-term flood and coastal resilience of 25 local areas across the country, to ensure that they can better prepare for and adapt more quickly to flooding and coastal erosion.

We will also:

- publish our updated National Flood and Coastal Erosion Risk Management Strategy.
- increase our resilience to extreme weather events and the risk of sewer and surface water flooding through our Environment Bill measures, which will enhance long-term water industry planning processes.
- pay farmers and land managers for providing public goods, including reduction in and protection from environmental hazards, through the future Environmental Land Management scheme.

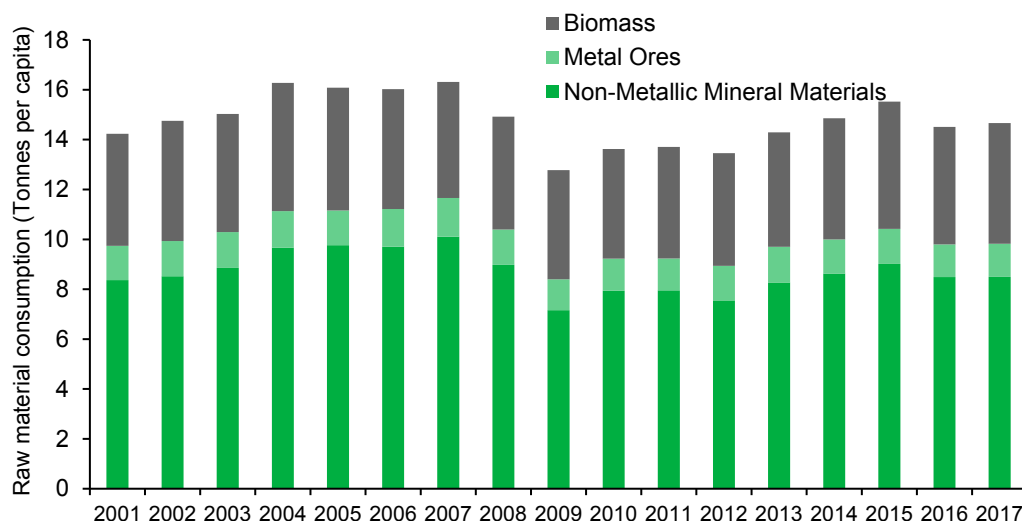
To improve drought resilience, we will:

- work with water companies as they begin to develop their next round of water resources management plans which are due to be published in 2024.
- streamline the planning process for new large water resource infrastructure through the National Policy Statement for water resources infrastructure, which we will lay before Parliament this year.

Using resources from nature more sustainably and efficiently

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

J2a Raw material consumption per capita in England, 2001 to 2017



Source: Defra

environmental impacts through unsustainable land and fisheries management practices.

- 'Raw Material Consumption' (RMC) (alternatively 'material footprint') accounts for the full amount of raw materials required to meet final demand for goods and services consumed in England. England's per capita material footprint increased steadily between 2001 and 2007, before declining sharply during the recession. It rose again to

2015 but fell back in 2016 and 2017. Overall, between 2001 and 2017, RMC per capita increased just 3%, from 14.2 to 14.7 tonnes.

- In the Resources and Waste Strategy, we set out the strategic ambition to, at least, double resource productivity by 2050. In 2017, England generated 16% more economic value per unit of raw material consumed than in 2001, with resource productivity rising from £1.63 of national Gross Value Added (GVA) per kg of RMC, to £1.89 in 2017. Resource productivity 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 has increased again. The increase over the long term has been driven by growth in the economy outstripping growth in raw material consumption.
- The percentage of softwood growth in England which is harvested has fluctuated between 67% and 82% over 2010 to 2018, reflecting sustained active management of softwood resources. The percentage of hardwood growth which is harvested remains much lower (between 13% and 16% over the same nine-year period). This may be attributed to a lower level of active management of broadleaved woodland for timber supplies, or other factors including the low level of sawmills using UK hardwood.
- Efficiency of agricultural production is measured by Total Factor Productivity, the ratio of inputs to outputs. It is a well-established index of how efficiently farming inputs (fertilisers, labour etc.) are converted into outputs (wheat, milk etc.). Total factor productivity was 53% higher in 2018 than it was in 1973. There has been an overall long-term increase since 1973 driven by both increased outputs and a fall in inputs.
- The percentage of fish stocks fished at or below levels capable of producing maximum sustainable yield (FMSY) has increased from 7% in 1990 to 49% in 2017, whereas the percentages fished above FMSY or at unknown levels relative to FMSY have both decreased over the same time period. For 2020, the UK agreed a Total Allowable Catch (TAC) at maximum sustainable yield (MSY) for 36 (67%) out of total of 54 stocks with MSY assessments available, a further improvement towards our goal of sustainable fisheries.

What progress have we made since April 2019?

The impact of farming on soil, air quality, biodiversity and climate change raises questions about how we can make food production more sustainable. In June 2019 we commissioned Henry Dimbleby to conduct an independent review of the food system which will shape a National Food Strategy.

The National Food Strategy will address the challenges of supporting people to eat healthy diets, producing food sustainably and protecting national food security. A key focus of the strategy will be examining how we can create a food system that restores and enhances the natural environment for the next generation in this country.

Sustainably managed 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. Therefore, we are committed to protecting and enhancing our soils so that they function better to deliver a wide range of ecosystem services. Central to this ambition is the inclusion of a clause in the Agriculture Bill which enables financial

assistance to enhance soils. This could include, for example, supporting research to better inform farmer decision-making. We are also developing a soil health monitoring scheme to help further inform actions to protect our soils.

We are also committed to managing our fisheries in a more sustainable way. Our Fisheries Bill, which was reintroduced to Parliament in January 2020, includes powers to give the UK control of who can fish in our waters, set fishing opportunities and reform the management of fisheries over time.

This year, 36 out of 54 stocks of interest to the UK will be fished at maximum sustainable yield levels, representing 67% of stocks where we have data. These levels were agreed in December 2019 at the Agriculture and Fisheries Council negotiations where we also secured enhanced rules on sustainable fishing practices, such as changing net sizes, which will help vulnerable cod stocks recover.

LIGHTENING OUR GLOBAL FOOTPRINT ON THE ENVIRONMENT

Just as any company has a supply chain, so too does the UK, and demand for key commodities like palm oil, soya and beef can act as a driver of deforestation and environmental degradation overseas. In response the UK government convened the Global Resource Initiative taskforce in July 2019 to investigate what the UK can do to reduce our global environmental footprint, bringing together representatives from business, finance and civil society.

The taskforce, chaired by Sir Ian Cheshire, published their [final report](#) on 30 March 2020, which sets out recommendations for ambitious actions to reduce the climate and environmental impacts of key UK supply chains.

Next steps

As an independent coastal state, we plan to work closely with our regional neighbours on the sustainable management of our fish stocks. We will also:

- through our Fisheries Bill, introduce a set of sustainability objectives to ensure a coherent UK framework, as well as a duty to create fisheries management plans to recover stocks and protect the wider environment.
- work with industry and other stakeholders to design a new approach for allocating additional quota from 2021.

The English Tree Strategy consultation will be launched this summer, which will inform the final strategy which is due to be published later in the year. The strategy will provide a basis to support the delivery of the 25 Year Environment Plan commitments such as nature recovery, as well as clean growth and net zero goals to 2050.

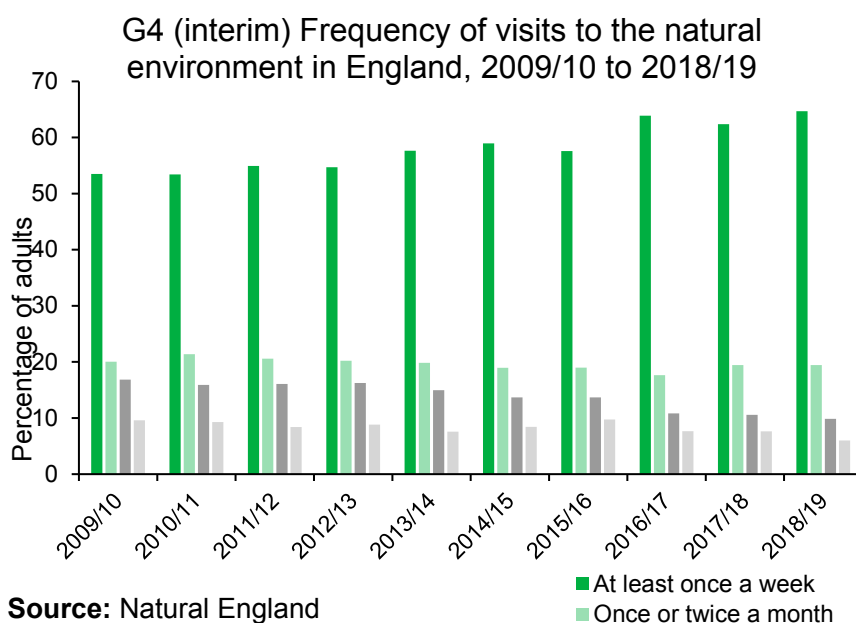
Work on the National Food Strategy has been temporarily paused to focus on the COVID-19 response. The strategy remains a priority and will resume as soon as possible. The

'National Food Strategy Part 1: Diagnosis and Vision' will be published in due course, with the independent review's final report to follow.

Enhanced beauty, heritage and engagement with the natural environment

Our countryside and coastlines are places of natural beauty, and we are committed to safeguarding and enhancing these precious landscapes so they can continue to be enjoyed by future generations. We also know that people's health, wellbeing and resilience can be improved and strengthened by spending time in the natural environment. Our aim, therefore, is for more people, from all backgrounds, to engage with and spend time in green and blue spaces in their everyday lives.

- There has been an increase in the proportion of adults visiting the natural environment at least once a week, from 54% in 2009/10 to 65% in 2018/19. In 2018/19, 16% of adults visited the natural environment every day or more than once per day.



- The proportion of the adult population who visit nature infrequently (less than once a month or never) has decreased by ten percentage points over the ten year period to 16% in 2018/19. Of this, 6% never visit, a decrease from 10% in 2009/10. Among children, around 12% do not visit the natural environment each year.
- Overall, older people, people from Black, Asian and minority ethnic (BAME) backgrounds, and those people living in the most deprived areas of England are less likely to spend time in nature than the average for the English population. For example, 25% of those aged 65+ visit the natural environment less than once a month or never, compared to 16% or less in other age groups. Among BAME groups, 23% of adults visit less than once a month or never, compared to only 14% of people from white backgrounds.

What progress have we made since April 2019?

We are committed to connecting people of all backgrounds with the environment to improve their health and wellbeing. This was one of the key themes for our '[Year of Green Action](#)'. Through a network of cross-sector partnerships and sponsored events, we supported and promoted opportunities for green action across the country in 2019. Further details of this are set out in the section on 'Working together to secure lasting change'.

Alongside this, we launched a workstream in collaboration with Public Health England and NHS England to explore how more people can be connected with green spaces to support their mental health through green social prescribing (the use of green space and green care in support of a preventative approach to healthcare). In early 2020 we launched a social prescribing demonstrator project in the Boroughs of Camden and Islington. This aims to identify how government and others can help scale up green social prescribing to support good mental health. This complements two research projects that are gathering evidence in eight locations in England to understand the effectiveness of green social prescribing interventions and how they can be made more available.

We have started to deliver our Children and Nature programme, which provides children from disadvantaged backgrounds with better access to natural environments to support their mental health and wellbeing and engagement with school. As part of this we have:

- launched the Growing Care Farming project in May 2019, which aims to scale up care farming services (the therapeutic use of farming practices) for children and adults facing disadvantage or social exclusion.
- begun working with eligible schools with the highest levels of Pupil Premium through the Nature Friendly Schools project. This will enable them to provide activities in nature to pupils, both onsite and offsite.
- awarded five grants for the Community Forest Woodland Outreach project in August 2019. A Community of Practice has been established, and an integrated approach to monitoring and reporting has been put in place across the projects.
- commissioned an independent evaluation to improve understanding of the effectiveness of nature-based interventions to inform future policy and practice.

To improve access to high quality green and blue spaces, we have continued to:

- expand the England Coast Path, including a new 10-mile route from Newport Bridge to North Gare which was opened in September 2019, and a 16-mile route around Walney Island in Cumbria, opened in February 2020.
- develop options to improve access to the natural environment through the forthcoming Environmental Land Management scheme. This could potentially include payments to land managers for activities such as creating new paths and other improvements to access.
- develop a framework of Green Infrastructure Standards (including benchmarks, new mapping and design guidance) that can be easily used by local planners, designers, land managers and communities to deliver more, good quality green infrastructure.

Recognising the importance of protecting England's most beautiful landscapes and their natural and cultural heritage, we commissioned an independent review of National Parks and Areas of Outstanding Natural Beauty. The Landscapes Review's [final report](#) was published in September 2019 and made 27 headline recommendations to make our landscapes greener, more beautiful and open to everyone.

Next steps

We will:

- work with programme partners to explore how the Children and Nature programme can continue to deliver in the face of COVID-19 and school closures, in order to improve the health and wellbeing of thousands of pupils across the country.
- consider findings from the green social prescribing demonstrator project in Camden and Islington, and learnings from our two research projects to increase our understanding of nature-based interventions and inform future policy development.
- carefully consider the recommendations of the Landscapes Review, make early progress where we can, and respond fully in due course.
- continue to work towards completion of the England Coast Path, and then start work on creating a new National Trail across the North of England.
- reform rights of way legislation, ensuring that rights of way can be recorded and legally protected and that future generations can continue to use them to access the natural environment.
- continue to develop green infrastructure benchmarks, design guidance, green infrastructure maps and guidance in preparation for launch in 2021; and test the use of the Green Infrastructure Standards products in trials.

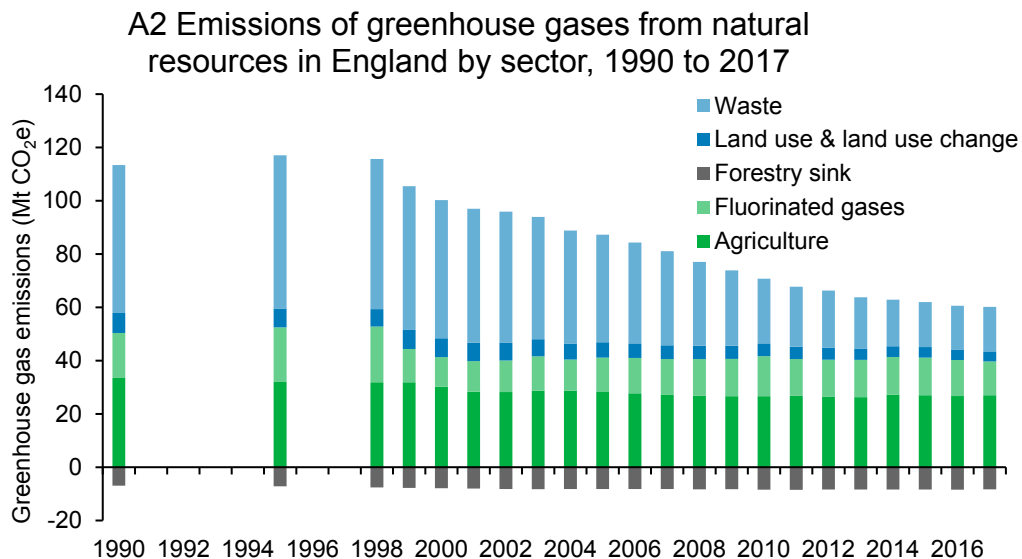
Mitigating and adapting to climate change

There is no doubt that climate change is one of the greatest global challenges we face. We recognise that urgent action is required in the UK and across the world, which is why we have committed to achieving net zero greenhouse gas emissions by 2050, and to taking the vital steps required to enhance our climate resilience.

Our work to mitigate and adapt to climate change cuts across the goals of the 25 Year Environment Plan, and we are committed to developing joined-up solutions that deliver for climate and the environment. Nature needs to be at the heart of our response to climate change. We know that restoring, expanding and maintaining habitats is good for our wildlife, and in addition that nature recovery can help us to mitigate and adapt to climate change by sequestering carbon and providing adaptive benefits, such as flood attenuation.

- The UK Climate Change Act commits the UK to reducing greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050. In 2018, UK greenhouse gas emissions were 351.5 million tonnes (Mt), 43.1% lower than in 1990 and 2.7% lower than 2017. The UK over-achieved against its first (2008-12) and second (2013-17)

carbon budgets, and the latest projections show that we are on track to meet the third (2018-22). We recognise the need for further action to meet the fourth (2023-27) and fifth (2028-32) carbon budgets. Throughout 2020-21, we will bring forward ambitious plans to reduce emissions across key sectors of the economy, building on the strong foundations we have established in the Clean Growth Strategy.



Source: BEIS

- Emissions of greenhouse gases from natural resources (e.g. land use, land use change, the agriculture and waste sectors and the use of fluorinated gases) have fallen by 51% between 1990 and 2017 in England. The greatest reduction has been achieved in the waste sector (39 Mt CO₂e or 70%). Emissions from land use and land use change, and fluorinated gases have fallen by 50% and 25% respectively. Agricultural emissions have reduced by 19%. In recent years progress has stalled and there have been no significant reductions in agricultural emissions since 2008.
- The Government recognises the challenge of climate change, and Defra is looking at ways to reduce agricultural emissions further by considering a broad range of measures, including improvements in on-farm efficiency. As the cornerstone of future agriculture policy, the new Environmental Land Management scheme will pay public money for the provision of environmental public goods. One of the public goods incentivised by the Environmental Land Management will be mitigation and adaptation to climate change.
- The total area of woodland in England has increased from 1.24 million hectares in 1998 to 1.31 million hectares in 2019, equating to an increase from 9.5% to 10.0% of the land area of England. Recently announced measures to plant 30,000 hectares of woodland annually in the UK by 2025, including through a new Nature for Climate Fund, represent a significant step towards meeting our aspiration of 12% woodland cover in England by 2060.
- Estimates of our 'carbon footprint' provide us with the fullest picture of greenhouse gas emissions associated with demand for goods and services in England, wherever these arise across the globe. England's carbon footprint was estimated to be 652.3 million

tonnes CO₂ equivalent (MtCO₂e) in 2017, 15.3% less than levels in 2001 (770.5 MtCO₂e). England's carbon footprint has been on a downward trajectory since 2007.

- In 2017, 22% of UK's peatlands were in near natural condition. To meet our net zero target, the Committee on Climate Change advises that 55% of peatlands need to be restored to good condition. The Nature for Climate Fund will restore 35,000 hectares of peatland across England by 2025, preventing further emissions from these peat soils. Emissions from peatland will be included in the UK's greenhouse gas inventory by 2020, which is published in 2022, at the latest.
- The cross-cutting nature of climate change means many 25 Year Environment Plan goals, and their indicators of progress, are highly relevant to climate change adaptation. Climate change poses risks to our terrestrial, freshwater and marine habitats, and so can impact on progress towards goals such as Thriving Plants and Wildlife, Biosecurity and Clean and Plentiful Water. A full list of indicators relevant to climate change adaptation can be found in the [25 Year Environment Plan Outcome Indicator Framework](#) (2019, p. 13).

What progress have we made since April 2019?

On 4 March 2020, the Prime Minister chaired a new Cabinet Committee on Climate Change to drive further action across government to reduce emissions, increase resilience, and deliver net zero. A number of actions set out below have benefits for both mitigation and adaptation, such as those set out in the Green Finance Strategy.

Furthermore, several actions that support our goal of mitigating and adapting to climate change are covered in other sections of this report. This includes launching a consultation on bringing forward the end to the sale of new petrol and diesel vehicles to 2035, or earlier if a faster transition appears feasible, the Nature for Climate Fund, and improving our long-term drought resilience plans.

Mitigation

In June 2019 we set a legally binding target to achieve net zero greenhouse gas emissions from across the UK economy by 2050. Setting this target is only the start; to achieve net zero emissions we will need to take ambitious action in all sectors of the economy, and unlock the potential of nature-based solutions.

Critical steps taken so far include:

- investing £640 million in a new Nature for Climate Fund to support woodland creation and peatland restoration.
- allocating £5.7 million to plant 1.8 million trees by 2022 and support the ambition of 50 million trees planted over the next 25 years including in the Northern Forest.
- launching the £50 million Woodland Carbon Guarantee in November 2019 to provide long term income support to new woodland creation projects.
- in the latest Contracts for Difference allocation round, contracts were awarded to 12 renewable projects with the potential for nearly 6GW of new renewable capacity – enough to power over 7 million homes.

Further detail of progress across the key sectors of our economy is set out in [our response](#) to the Committee on Climate Change's 2019 Progress Report to Parliament on reducing UK emissions.

Adaptation

We have continued to deliver the [second National Adaptation Programme \(NAP\)](#) (2018 - 2023) and support and develop further action on resilience to the risks identified in the [2017 Climate Change Risks Assessment](#) (CCRA2), including:

- ensuring the upcoming Nature Strategy will support measures to enhance natural resilience to climate change risks. The strategy will include our commitments to bring 75% of protected sites by area into favourable condition, and to create or restore 500,000 hectares of wildlife-rich habitat outside protected sites, both as part of a Nature Recovery Network.
- working with our practitioner partners to enhance the resilience of our natural environment to climate change risks. For example, in 2019 the Forestry Commission published [guidance on Managing England's woodlands in a climate emergency](#). In December 2019 the Environment Agency began introducing changes to some of the regimes in the Environmental Permitting Regulations to require organisations to consider potential climate risks as part of their permit, alongside other types of environmental risk.
- helping to restore the marine environment's resilience to climate change by designating 41 new Marine Conservation Zones covering 12,000km² of marine habitat.
- investing £2.6 billion in managing flood and coastal erosion between 2015 and 2021, and publishing a [National Framework for Water Resources](#), to improve drought resilience sustainably in the long-term.
- updating the 2018 [UK Climate Projections](#) (UKCP18) with new local-scale projections, in conjunction with the Met Office. These are the first national climate projections in the world to provide locally relevant climate change information on a similar resolution to that of weather forecast models (2.2km). These will help enable central and local government, businesses and the public to make climate-resilient decisions.
- launching an adaptation and resilience 'Call for Action' at the United Nations Climate Action Summit in September 2019.
- working in partnership with the Association of Directors of Environment, Economy, Planning and Transport and the Local Adaptation Advisory Panel to produce a [guide on adaptation for local government](#).

Further detail of progress is set out in [our response](#) to the Committee on Climate Change's 2019 Progress Report to Parliament on preparing for climate change, and [our update on NAP actions](#). We will build on the progress made to ensure the country continues to be well prepared to face the significant challenges a changing climate brings.

INTERNATIONAL CLIMATE FINANCE

International Climate Finance (ICF) is the UK aid funding which supports other countries to address climate change and stop its worst effects. ICF projects around the world aim to reduce the amount of harmful carbon emissions by preventing deforestation and investing in clean energy. ICF interventions also help vulnerable communities to better adapt to climate change that is already happening – for instance by providing farmers with special climate-resilient crops that can grow in hotter, drier conditions.

Over the past eight years ICF has reduced global greenhouse gas emission by 16 million tonnes, helped 57 million people to cope with the effects of climate change, and improved access to clean energy for 26 million people.

The UK is working with other countries to step up global action and deliver on the commitments made in the landmark Paris Agreement. In September 2019, the Prime Minister announced a doubling of UK ICF to at least £11.6 billion which in the next 5 years will help developing countries turn the tide against climate change.

Next steps

We will bring forward decarbonisation plans across many key sectors of the economy in order to reach net zero in the UK and lay the foundations for a successful COP26 summit in Glasgow, now postponed until 2021.

Mitigation

Carbon Budget 6 will be set in law by June 2021. This is a crucial step on the pathway to achieving net zero by 2050.

We will continue to put nature at the heart of our climate response, including:

- establishing 30,000 hectares of woodland annually in the UK by 2025, and restoring 35,000 hectares of peatland across the UK through our new 'Nature for Climate' fund.
- consulting on an English Tree Strategy which will help us to maximise the benefits trees and woodlands provide including carbon sequestration.
- publishing a Peat Strategy for England which will set out an ambitious framework for restoring England's peatlands.

We will also:

- invest around £2 billion to support clean growth in a range of sectors, from transport to industry.
- publish a review on how the transition to net zero will be funded in a way that works for households, businesses and the taxpayer.

- continue to develop our Transport Decarbonisation Plan, following [the phase one publication](#) in March 2020, to go further and faster to tackle climate change and put transport on a pathway to net zero.
- use the ‘Clean Growth through Sustainable Intensification’ research project and the development of the new Environmental Land Management scheme to support work to reduce emissions from agriculture.

Adaptation

We will:

- continue to implement the National Adaptation Programme, ensuring that adaptation actions are embedded in policy making across government and risks are adequately addressed.
- continue to work with delivery bodies, including Natural England, who will be publishing a new edition of the [Climate Change Adaptation Manual](#) with RSPB in April this year to support nature conservation in a changing climate.
- address the Committee on Climate Change’s recommendations, including working with them to scope the expansion of the indicators used to monitor adaptation.
- continue to work with the Committee on Climate Change in preparing an Evidence Review to support delivery of the next Climate Change Risk Assessment (CCRA3), due in 2022. The Evidence Review will build on the previous assessment of the UK’s climate risks and opportunities.
- continue to provide support to organisations reporting under the Adaptation Reporting Power (ARP) and encourage the submission of high-quality reports, utilising UKCP18 and considering actions to minimise risks to the natural environment. Over 90 organisations committed to report before the end of 2021 on actions they are taking to strengthen preparedness for climate change risks. This includes bodies responsible for water, energy, transport, environment, heritage, health and finance.
- stimulate greater action and commitment to adaptation and resilience through COP26.

HOSTING COP26

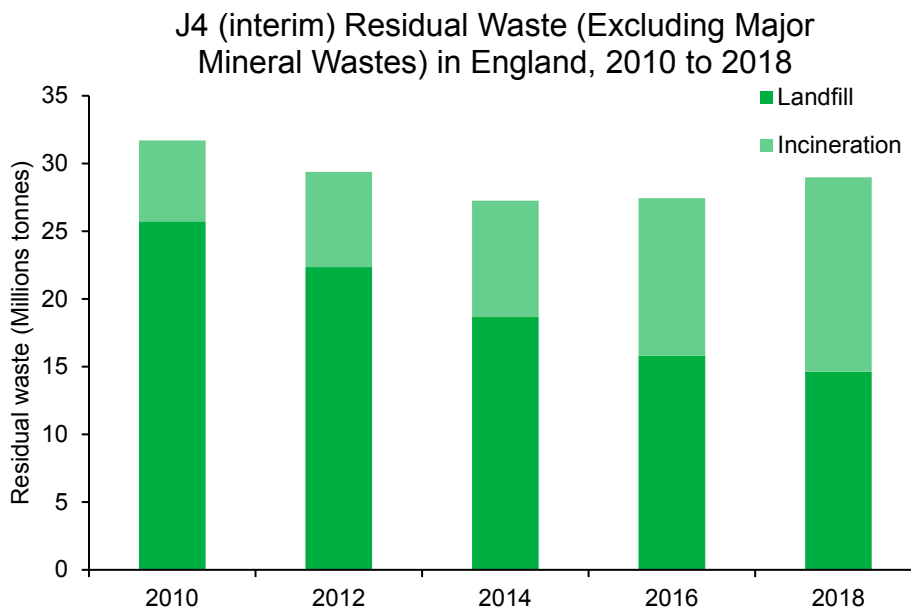
The UK is at the forefront of global action on climate change and we are determined to build on the leadership we have shown to date. COP26 will be the biggest international summit the UK has hosted in decades. The conference will bring 30,000 people together in Glasgow, including heads of state, climate experts, campaigners and entrepreneurs to agree coordinated action to tackle climate change. The UK’s COP Presidency themes are clean growth, finance, nature, adaptation and resilience, and zero emission vehicles.

The Bureau of the Conference of the Parties to the UNFCCC (United Nations Framework Convention on Climate Change), with the UK and its Italian partners, have recently agreed new dates for the COP26 United Nations climate conference, which will now take place between 1 and 12 November 2021 in Glasgow.

Minimising waste

Material resources are at the heart of our economy, and we consume them in large quantities. They allow us to meet our basic human needs and generate economic growth, but our use exacts a heavy toll on the environment and is unsustainable. We use too much and are too ready to throw things away. This waste causes environmental damage and contributes to climate change. That is why we have committed to working towards eliminating all avoidable waste by 2050 and all avoidable plastic waste by the end of 2042.

- In 2018/19, the recycling rate for ‘Waste from Households’ in England was 45.1%, up 3.2 percentage points on the equivalent figure for 2010/11 (when the measure was first reported). While ‘Household Waste’ is based on a broader definition of waste and is not directly comparable to ‘Waste from Households’, there has been a 33.9 percentage point increase in the waste recycling rate across the 2 measures between 2000/01 (recycling rate based on ‘Household Waste’) and 2018/19 (recycling rate based on ‘Waste from Households’). In recent years, however, the recycling rate has plateaued.



Source: Environment Agency

- Residual waste here refers to waste sent to landfill or incineration in England. In 2018, the total quantity of waste (excluding major mineral wastes) landfilled or incinerated in England was 29.0 million tonnes, an 8.6% reduction against levels in 2010 (31.7 million tonnes). This reduction was due to less waste being landfilled (falling by almost half over the period), whereas waste sent to incineration more than doubled in the same period.

What progress have we made since April 2019?

Our [Resources and Waste Strategy \(2018\)](#) sets out how we will preserve material resources by minimising waste, promoting resource efficiency and moving towards a circular economy in England. We will minimise the damage caused to our natural environment by managing waste safely and carefully where it does arise, and by tackling waste crime.

We have taken forward commitments laid out in the strategy, including:

- consulting on major reforms to the way waste is managed.
- building on our microbeads ban by confirming our intention to ban more of the most polluting single-use plastics.
- announcing a new multi-million-pound grant scheme in June 2019, which will support the development of textile recycling facilities in the UK.
- publishing a call for evidence on the development of standards for bio-based, biodegradable and compostable plastics in July 2019.
- setting up a £15 million pilot scheme to reduce food waste through food redistribution and initiatives in August 2019.
- awarding £1 million to two companies to build prototypes for the UK's first digital waste tracking system, which will help reduce waste crime.

We have publicly consulted on a suite of measures to be taken forward through our Environment Bill to reduce, reuse and recycle more, which will:

- make recycling easier and ensure there is a comprehensive, consistent service across England. To do this, we will ensure that all households and businesses have a minimum core set of materials collected by local authorities or (for businesses) commercial waste collectors.
- reform the current packaging waste regulations, to financially incentivise producers to take greater responsibility for the environmental impacts of packaging they place on the market.
- introduce a deposit return scheme for drinks containers in England.
- introduce a new tax on plastic packaging which has less than 30% recycled content, from April 2022, with revenue from our packaging reforms and the tax going to fund investment in reducing plastics, waste and litter.

We have also supported local authorities by publishing:

- materials in August 2019 which help them increase public understanding of the duty of care.
- improved guidance in September 2019 on how to use their enforcement powers against littering.

TACKLING MARINE LITTER THROUGH GLOBAL ACTION

Recognising that reducing plastic pollution in our ocean requires global action, we launched the Commonwealth Clean Ocean Alliance (CCOA) in 2018, which we co-lead with Vanuatu. We have established programmes worth up to £70 million in total to support the ambitions of the CCOA. This includes £10 million that has been made available through the CCOA Technical Assistance Facility which was launched in May 2019 to support the implementation of CCOA commitments.

Alongside this our new £500 million Blue Planet Fund will help eligible countries protect their marine resources from key human-generated stressors including plastic pollution, as well as overfishing and habitat loss.

Next steps

We are seeking new powers through our Environment Bill to provide the legislative framework to realise the proposals we have set out.

In June 2019 we announced a ban on the distribution and/or sale of plastic straws, stirrers, and plastic-stemmed cotton buds to end users and this will come into force in 2020.

In the future we will:

- publish a suite of documents setting out progress towards the Resources and Waste Strategy's implementation, as well as future plans. These include an indicator framework and an evaluation plan.
- publish the government response to the call for evidence on standards for bio-based, biodegradable and compostable plastics.
- consult on introducing regulations to make reporting of food surplus and food waste mandatory for businesses of an appropriate size.
- consult on final policy proposals relating to extended producer responsibility for packaging, introduction of a deposit-return scheme for drinks containers, consistency in recycling and the introduction of a tax on plastic packaging.
- publish a review of the 2013 Waste Prevention Programme and consult on proposals for a new programme.
- consult on introducing a digital waste tracking system and reforming the carrier, broker and dealer regime.

Managing exposure to chemicals

Chemicals provide substantial benefits to society but their widespread use has led to some concerns about the impacts of environmental and human exposure. In our 25 Year Environment Plan we committed to publishing a Chemicals Strategy, which will set out our

ambitious approach to the management of chemicals throughout their lifecycle to support improvements in our water, air, soil, and biodiversity, in our marine and land environments, and public health.

We are developing indicators for tracking emissions of mercury and Persistent Organic Pollutants (POPs) to air, land and water. We are also developing indicators to track changes in the exposure of wildlife to harmful chemicals in aquatic and terrestrial ecosystems, considering risk where possible. Interim data is available for emissions to air from Persistent Organic Pollutants (POPs) and mercury.

- Significant progress has been made to reduce emissions to air from POPs. Since 1990, polychlorinated biphenyls have been reduced by around 92.4%, hexachlorobenzene by 98.7%, and dioxins and furans by 86.7%. This has been achieved by reducing and eliminating POPs production, use and release, and working with industry to ensure destruction of waste containing POPs material.
- UK emissions of mercury to air have declined by 2% since the last progress report and by 90% since 1990. This is as a result of tighter regulatory controls and restrictions; decline in ferrous and non-ferrous metal production; decreasing use of coal as a fuel; and a gradual decrease in mercury to landfill. The UK Government committed in the 25 Year Environment Plan to reduce remaining land-based emissions of mercury to air and water in England by 50% by 2030. Data is currently only available for emissions to air, and whilst emissions will continue to decline, primarily resulting from our commitment for the closure of coal power stations, further action could be sought to achieve this ambitious target.

What progress have we made since April 2019?

Early work to support the development of a Chemicals Strategy has included:

- engaging with interested stakeholders (industry, academia and NGOs) to help shape the vision and scope of the strategy.
- launching our new Prioritisation and Early Warning System (PEWS) to identify emerging chemical issues across different media i.e. water, air and soil. Our initial focus has been to understand the risk posed by emerging substances present at the highest levels in English surface waters and ground waters.
- taking forward the programme of work to consider the impacts of hazardous chemicals in products. For example, using waste electrical and electronic equipment (WEEE) compliance funding, the Industry Council for Electronic Equipment Recycling (ICER) found POPs in a wider range of WEEE plastics than anticipated. The Environment Agency is working with the waste sector to ensure this contaminated material is being separated and destroyed in compliance with the existing regulation.

On pesticides, working closely with stakeholders we are developing a new National Action Plan for the Sustainable Use of Pesticides (see next steps below). We have been reviewing existing monitoring schemes for the terrestrial environment. This review is almost complete and we are considering the best options to pursue for construction of new impact indicators.

WORKING WITH INTERNATIONAL PARTNERS

We continue to play an influential role internationally on chemicals, including at the Triple Conference of the Parties for the Basel, Rotterdam, and Stockholm Conventions in April 2019. We shaped the decision to strengthen controls on plastic waste exports under the Basel Convention and in the adoption of a compliance mechanism under the Rotterdam Convention which will improve implementation. Our experts continue to play an important role in gathering evidence to support Stockholm Convention restrictions of substances that have POPs characteristics.

We also continue to play a leading role in the development of the [beyond 2020 framework for chemicals and waste](#) with a specific focus on strengthening the science policy interface and putting in place international targets. We hosted a United Nations technical expert workshop to further the development of international indicators for the targets. Under this collaborative effort we worked with the United Nations Environment Programme World Conservation Monitoring Centre, and delivered a successful side event at the Intersessional Process in the beyond 2020 framework in September 2019.

We are also working with international partners at the Organisation for Economic Cooperation and Development (OECD) to develop new test methods for identifying endocrine disruptors, and for assessing the safety of manufactured nanomaterials on sustainability criteria for plastics from a chemicals perspective, and on projects on per- and polyfluoroalkyl substances (PFASs). We will continue to work with partners around the world to develop our approach domestically and internationally.

Next steps

We will:

- once pressures from dealing with COVID-19 ease, continue work to develop a chemicals strategy. It will set out our priorities for action, and detail how we will achieve our goals and measure success.
- maintain the UK's existing high standards in the safe and effective regulation of chemicals now we have left the EU.
- continue to take forward a programme of policy work to eliminate and restrict the production, use, and release of POPs in the environment under UK Stockholm Convention obligations.
- continue to run and build our own Prioritisation and Early Warning system (PEWS), establishing how a UK system could work within the framework of a new Chemicals Strategy and continuing to develop links with appropriate emerging substances initiatives in Europe and beyond.
- much international activity will shift to 2021 which will be an important year, and the UK aims to set up virtual approaches to help play an influential role at the United

Nations Environment Assembly in February 2021 and the Triple Conference of the Parties in July 2021. We will continue to support and work towards an ambitious [beyond 2020 framework](#) in July 2021 and seek to improve the management of chemicals and waste in all countries, including actively promoting the need for international indicators.

- 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.
- we have committed to banning exports of plastic waste to countries that are not members of the OECD and we will consult with industry, non-governmental organisations and local councils on the date by which this should be achieved.

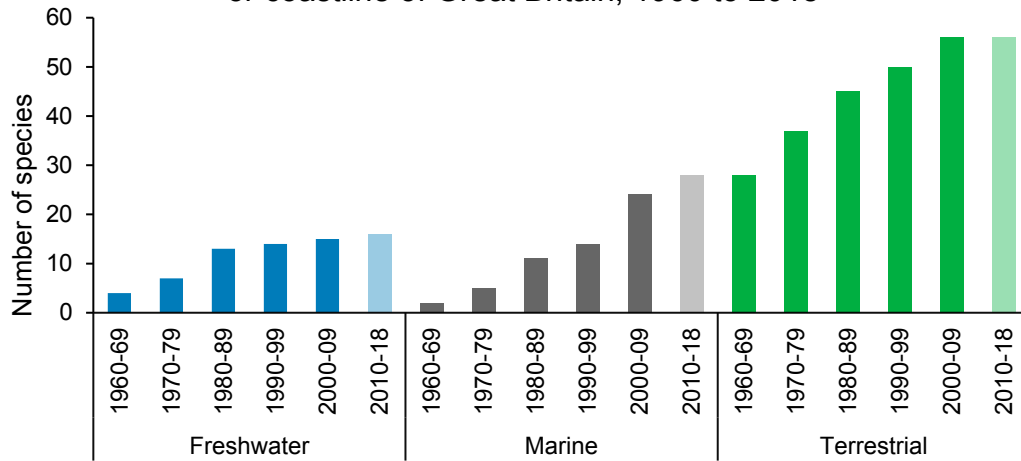
The new National Action Plan for the Sustainable Use of Pesticides will set out a plan to facilitate our progress towards reducing exposure to hazardous substances. The National Action Plan will also set out measures for increasing the take up of Integrated Pest Management (IPM) approaches that aim to minimise the use of chemical pesticides. Defra will continue to work closely with all interested parties as we develop our evidence base and policies.

Enhancing biosecurity

Biosecurity is the prevention of the introduction and spread of harmful pests, diseases and invasive non-native species. These organisms can spread naturally through the wind, water and animal migration. However, human activity, such as moving infected timber and wearing contaminated boots, can have a big impact on their spread. Their spread has also been identified as a priority risk catalysed by climate change in the 2017 Climate Change Risk Assessment. 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.

We are currently developing an indicator to show changes in the distribution of non-native invasive species and plant pests that have already established in England, and another indicator demonstrating the estimated number of invasive non-native species entering Great Britain that have been abated (i.e. reduced). Interim data is available on the number of invasive non-native species established in Great Britain and the number of additional tree pests and diseases recorded. This indicator contains 193 non-native species that are considered to be exerting a negative impact on native biodiversity (46 freshwater species, 39 marine species and 108 terrestrial species). The majority (187) of these species are established; 6 are long-term residents but not known to breed in the wild.

H1 (interim) Number of invasive non-native species established across or along 10% or more of the land area or coastline of Great Britain, 1960 to 2018



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

- Between the periods 1960-69 and 2010-18, the number of invasive non-native species 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 having been observed in the marine and terrestrial environments. Based on the most recent period 2010-18, the number of invasive non-native species established in or along 10% or more of Great Britain's land area or coastline was 13 species for freshwater, 56 for terrestrial and 28 for marine (coastal) environments.
- The number of additional tree pests and diseases becoming established in England within a rolling 10-year period fell from a peak of 7 in the 10-year period 2000-09 to a low of 3 in 2007-16. However, it has recently increased again to 5 in 2009-18 (the most recent 10-year period for which data are available).

What progress have we made since April 2019?

We have robust controls in place to prevent the importation of new plant pests and diseases, including border inspections, surveillance and a statutory notification system. In December 2019 we further strengthened these measures by:

- introducing new registration requirements for all those who produce, store, move or sell plants and plant products.
- requiring the certification of all plants and living parts of plants, except for five tropical fruits, upon import to the UK from outside Europe
- introducing a more precautionary approach to trade flows so that 38 high-risk host plants are now prohibited for import from outside Europe until a full risk assessment has been carried out.

Alongside this, we have continued to take action to improve tree and plant health, including:

- supporting an industry-led UK Plant Health Alliance, and launching a 'Plant Healthy' biosecurity management standard for UK nurseries and an online self-assessment tool.
- publishing our ash research strategy and planting of 3,000 tolerant ash trees in the UK's first archive of trees tolerant to ash dieback.
- launching the second phase of the £17.7 million bacterial plant diseases research programme in collaboration with the Biotechnology and Biological Sciences Research Council and other funders.
- continuing our commitment to the Action Oak partnership, which has supported seven new PhDs on oak health, working with charities and landowners.
- launching a new digital 'Healthy Plants, Healthy Minds' communications campaign to raise awareness of the importance of plants and green spaces to our own mental health.
- publishing the first experimental statistic on plant health, covering international trade and the work of plant health inspectorates in maintaining biosecurity at the border.

We have continued to deliver the Great Britain (GB) Invasive Non-native Species Strategy and strengthen invasive species legislation. We have:

- put in place the Invasive Alien Species (Enforcement and Permitting) Order 2019, which gives us effective tools for tackling listed invasive non-native species of special concern.
- increased awareness-raising and volunteering activity through our 'Check, Clean, Dry' and 'Be Plant Wise' biosecurity campaigns, as well as Invasive Species Week.
- completed a comprehensive analysis and prioritisation of pathways, with plans drafted for zoos and aquaria, angling and recreational boating.
- repeated our horizon scanning exercise to identify potential future invasive species.
- maintained the GB alert system, published generic contingency plans for all potential invasive vertebrates, plants and freshwater invertebrates in England and delivered rapid responses to priority species including the Asian hornet and raccoon dog.
- continued work to eradicate six priority invasive species (topmouth gudgeon, water primrose, variable-leaved watermilfoil, ruddy duck, monk parakeet and American bullfrog), as well as managing well established species such as floating pennywort.

In February 2020, we published [the Future for food, farming and the environment: policy statement](#) which set out our intention to establish an Animal Health and Welfare Pathway. This will be industry-led, in partnership with government and with key stakeholders and will map out how farmers and government will work together to improve continuously the health and welfare of farmed animals now and in the future, supported by the best science and evidence.

Next steps

We will:

- confirm the management measures for widely spread invasive alien species and continue to work with relevant sectors on implementing these.
- continue to support the alert mechanism for invasive non-native species, as well as research into novel and humane methods of controlling invasive non-native species.
- publish and consult on the Pathway Action Plans for zoos and aquaria, angling and recreational boating, commence work on other priority plans and continue awareness raising activities.
- continue to strengthen contingency plans for new invasive non-native species.

2020 is the United Nations International Year of Plant Health, so we will be raising awareness of the importance of plant biosecurity. We will also:

- continue to review and strengthen plant biosecurity standards through the ongoing work of the UK Plant Health Service and a refresh of our GB Plant Biosecurity Strategy.
- consult on quarantine arrangements for high risk plants.
- work with the UK Plant Health Alliance to launch the new 'Plant Healthy' nursery assurance scheme to enable consumers to buy with greater biosecurity confidence.
- set out policies to support our domestic nursery sector in the forthcoming Tree Strategy for England.

Hardwiring strong environmental action into legislation

The Agriculture, Fisheries and Environment Bills were reintroduced into Parliament in January and February 2020. The measures in these three bills harness the key opportunities arising from leaving the EU and will work together to help deliver our objective of improving the environment in a generation.

The Agriculture Bill will introduce new land management schemes in England, based on the principle of “public money for public goods”, which will allow us to reward farmers and land managers who protect our environment and produce high quality food in a more sustainable way. Our new Environmental Land Management scheme will enable us to improve the health of our environment on a far greater scale than achieved under the Common Agricultural Policy whilst also providing high value for money for the taxpayer. The first agreements with those taking part in the national pilot for the new Environmental Land Management scheme are planned to begin formally in late 2021, ahead of the full roll out of the scheme in 2024.

The Fisheries Bill creates the powers for the UK to operate as an independent coastal state and manage its fish stocks sustainably outside the EU. Leaving the Common Fisheries Policy means we can create a fairer system which will allow marine habitats to

thrive. The Bill includes powers to ensure fisheries management decisions are taken strategically for the benefit of the whole marine environment and introduces a legal requirement for all fish stocks to be fished at sustainable levels.

To deliver sustained environmental improvement, the Environment Bill establishes the structure for long-term environmental governance and accountability, including:

- a policy statement on environmental principles which policy-makers will legally be obliged to have due regard to when choosing policy options.
- a framework for setting long-term legally binding targets, including a requirement to set at least one target in four priority areas of the natural environment: air quality, waste and resource efficiency, water and biodiversity.
- the creation of a new independent, domestic watchdog, the Office for Environmental Protection, which will monitor progress in improving the natural environment and hold government to account.
- a requirement that current and future governments make a statement to Parliament confirming that a new piece of primary legislation does not have the effect of reducing existing levels of environmental protection.

The Environment Bill will also introduce a series of measures that will help deliver direct environmental improvement, supporting four priority areas of the natural environment. The measures in the Bill will enable us to deliver cleaner air, contribute to nature's recovery, improve our management of water and change the way we manage our waste and resources. Several of the Environment Bill's measures will support the delivery of the Environmental Land Management scheme. Local Nature Recovery Strategies and conservation covenants will work together with the Environmental Land Management scheme to enable land management practices to be more effective and support nature's recovery, whilst biodiversity net gain will incentivise retention of existing habitat, encourage new development that incorporates new habitat and deliver investment for nature through the planning system. Together, the Bill measures will deliver environmental improvement on the ground as well as embed positive environmental outcomes into future activity.

Funding, financing and incentivising improvement in natural capital

Public sector funding sources will continue to play an important role in protecting and enhancing the natural environment. However, for us to achieve our goals it is critical that more private sector investment is also targeted at improving our natural capital.

Our landmark Environment Bill contains several measures that will help stimulate private sector investment, including the power to set long-term, legally binding targets. Introducing a robust target-setting framework sends a clear signal to investors, providing the much-needed long-term certainty to support planning, innovation and investment. We are designing our public funding streams – such as our Environmental Land Management scheme and our Nature for Climate Fund – to de-risk and crowd-in private sector investment and we will establish a natural capital Investment Readiness Fund to support natural capital projects to become 'investment ready'.

In the 25 Year Environment Plan we committed to exploring the potential for a 'Natural Environment Impact Fund' to stimulate private sector investment in natural environment projects. As an important step towards this, in 2021 we will establish a natural capital Investment Readiness Fund; a three-year, £10 million capability and capacity-building grant programme. This will support the development of natural capital projects that can blend different forms of public-private investment to protect and enhance the natural environment and use different ecosystem service revenue streams to repay investment. The aim is to broaden the funding-base for natural capital project developers, helping the sector become more financially resilient and less reliant on grants and subsidies.

In July 2019, we published the first ever HMG [Green Finance Strategy](#) which sets out our plans to transform the financial sector and generate the investment required to deliver our ambitious environmental goals.

The Green Finance Strategy includes steps to improve take-up of the Taskforce on Climate-related Financial Disclosures (TCFD) framework. Climate-related financial risks, however, need to be tackled in tandem with wider financially material risks posed by nature and biodiversity loss. In recognition of this, we committed in the Green Finance Strategy to work with international partners to explore how best to mainstream and integrate broader nature-related financial risks into operational, lending and investment decisions. To this end, we are looking at how best to support delivery of this work by collaborating with leading private sector players and other governments to ensure a coordinated approach. Ultimately, improving financial markets' understanding of nature-related financial risks will ensure an increasing amount of finance flows towards projects that are aligned with our shared climate and environmental goals.

Supporting strong local delivery and leadership

Effective action at a local level is critical to successful delivery of the 25 Year Environment Plan. To continue to improve the plan, government is seeking to foster greater integration and coordination between the outcomes we are seeking to achieve and how our activities help to move us towards these goals. The concept of natural capital is a critical tool in supporting this and we have continued to develop our understanding of how best to apply it through practical testing and development of shareable tools. Defra has been integrating natural capital thinking into existing work programmes, for example Area Integrated Plans now align closer with delivery of the 25 Year Environment Plan.

A key development since our last progress report has been the introduction of Local Nature Recovery Statements (LNRs) in the Environment Bill. LNRs are intended to improve spatial planning for nature by introducing a requirement to create spatial strategies that identify existing areas of value for nature and areas where action to help nature to recover should be focussed. They will be locally led and produced, and be a key tool to support delivery of the Nature Recovery Network.

LNRs have, however, been designed to help achieve wider environmental outcomes and to model the more integrated approach to local delivery that the 25 Year Environment Plan is seeking to achieve. LNRs will do this by considering where the recovery or enhancement of biodiversity could make a particular contribution to other environmental benefits, as well as for biodiversity's own sake. In other words, LNRs will propose actions specifically to help nature's recovery and also encourage and target the use of nature-

based solutions to wider environmental problems. In this way they will help to draw together varied initiatives aimed at addressing different environmental issues. LNRs can also play a role in supporting longer-term shifts towards natural capital planning. Understanding how different habitats are distributed and what condition they are in are key early steps in both natural capital planning and the production of an LNR. Mandating the creation of LNRs will help draw together this common evidence base and make it more available for natural capital planning.

The four 25 Year Environment Plan Pioneer Projects ended in March 2020. The projects began during 2016 to support the development of the plan, and following its publication the Pioneers evolved to help develop those policies that were included. Learning from the Pioneers has informed policy development in a number of different areas during the lifetime of the projects. Within the past year this has included helping to shape our approach to including LNRs and biodiversity net gain in the Environment Bill and carrying out Tests and Trials to inform the development of the new Environmental Land Management scheme. We will continue to consider the outputs from the Pioneers to develop our next steps for local delivery policy.

A key focus of the Pioneers has been exploring the use of natural capital in decision making. They have expanded our collective understanding of how to assess and value natural capital in urban, marine and rural environments. This information has been published on-line and used in other parts of the country. They have also explored the practical challenges of using natural capital in decision making processes. In their operation the Pioneers have also demonstrated the conditions necessary for successful delivery of environmental action at a local level. They have reinforced the importance of strong local leadership and partnerships, the value of broad engagement and the need for the right incentives to encourage these things. Pioneers were partnership projects and as such relied heavily on the support of partner organisations in Cumbria, North Devon, Greater Manchester and Suffolk for their success.

Local Nature Partnerships (LNPs) have continued to have a strong role in shaping delivery of the 25 Year Environment Plan goals across the country. In many areas they are working closely with Local Enterprise Partnerships to shape their Local Industrial Strategies using natural capital evidence. Other LNPs have focussed on building their evidence base, creating resources for other organisations to use in their decision making. This ranges from Natural Capital Accounts to Investment Strategies. These bring together the bespoke local data and knowledge of the partners to create resources that supplement nationally held data and give a better picture of the natural capital in their area.

Many LNPs are looking to the future Nature Strategy and Environment Bill measures, like Local Nature Recovery Strategies, as an opportunity to refresh their strategic thinking and reposition their activities. This will make sure they have a clear role in delivery of the 25 Year Environment Plan into the next phase. The partnerships that have already been built will be highly valuable to quickly getting LNRs and the Nature Recovery Network up and running.

Local authorities are vital partners in delivering the goals of the plan. They provide important local environmental leadership and help to shape place-based decision making. This includes the important role local government has in driving local climate measures and action, including ensuring their services, estates and infrastructure are climate resilient. We work closely with the Local Adaptation Advisory Panel, a forum for dialogue

on climate adaptation between central and local government and delivery partners, to support delivery of adaptation activities, and whose members are involved in the implementation of programmes referenced above.

Working together to secure lasting change

The 25 Year Environment Plan is a living blueprint for the environment covering the next quarter of a century. Defra acts as 'owner' of the plan on behalf of government and leads on delivery along with its arm's length bodies, but all of government is playing its part. This includes:

- the Department for Business, Energy and Industrial Strategy who lead government's efforts to reduce greenhouse gas emissions and maximise the opportunities of the global shift to clean growth.
- the Ministry for Housing, Communities and Local Government who are supporting work around the development and implementation of a biodiversity net gain requirement for new development in England.
- HM Treasury who are leading a review on how the transition to net zero will be funded in a way that works for households, businesses and the taxpayer, and commissioned Professor Sir Partha Dasgupta's independent review on the economics of biodiversity.
- the Department for Transport who are working with Network Rail to implement recommendations from John Varley's independent review of lineside vegetation management which will help deliver improvements in biodiversity.
- the Ministry of Defence who launched a review in March 2020 which will explore how the department can better incorporate climate change and sustainability considerations into their processes and policy decisions.
- the Department for Health and Social Care who are supporting work to explore how more people can be connected with green spaces to support their mental health through social prescribing, and launched a new National Academy for Social Prescribing in October 2019.

All government departments, and many of their arm's length bodies and agencies, report on their environmental performance through the [Greening Government Commitments](#). Environmental protection will be further embedded in policy development across government once the Environment Bill receives Royal Assent, as all departments will legally be obliged to have due regard to a policy statement on environmental principles. The ten goals of the 25 Year Environment Plan cannot be achieved by government alone, however, as everyone has a role to play in improving our natural environment.

We made 2019 a year of action for the environment, encouraging more people from all backgrounds to get involved in projects to connect with, protect and enhance nature. Through social media campaigns, a dedicated website and engaging the public at over 100 stakeholder-led events, the Year of Green Action inspired 4,000 pledges to take action for nature. Children and young people were at the heart of the Year of Green Action, and

we partnered with the charity Step Up To Serve to encourage youth social action. This included a review by the Youth Steering Group of climate and environment policy, delivered to Ministers in August 2019. Findings from this review are informing policy and communications in the Department for Digital, Culture, Media and Sport, Defra and the Department for Business, Energy and Industrial Strategy. Resources from the Year of Green Action, including case studies and tips for greener living remain available on [the website](#).






A range of business representatives, including the Council for Sustainable Business, continue to work alongside government policy teams to help implement the 25 Year Environment Plan.² The Council is mobilising business leaders from a range of industry sectors to make sustainability commitments relating to reducing their carbon emissions and enhancing biodiversity. The first wave of commitments from UK businesses will be unveiled at a virtual 'Business Call to Action Summit' kicking off the countdown to COP26 and a clean and resilient recovery.

Delivering the vision of the 25 Year Environment Plan is a shared endeavour and the progress made to date has been thanks to the hard work and efforts of third sector organisations, groups of volunteers, government arm's length bodies, local authorities and other important partners. We remain committed to working with all parts of society and all sectors of the economy to secure lasting change for our shared natural environment.

² The Council for Sustainable Business was established in 2018 to advise on how business can drive action to help deliver the aims of the 25 Year Environment Plan.






Summary of indicators and commitments



Key



	Downward short-term trend, positive outcome		Stable short-term trend, stable situation		Upward short-term trend, positive outcome
	Downward short-term trend, negative outcome				Upward short-term trend, negative outcome

The arrows show simply whether the trend has recently increased or decreased, and the colour coding reflects whether that is a positive or negative outcome for the environmental goal. Further information on indicators is set out in our outcome indicator framework.

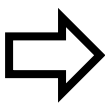


Clean air


Indicator <i>(Indicator ref / type of measure / Geographical scope)</i>	Measurable commitments	Current status and trend	
Emissions for five key air pollutants (A1 / Natural Capital Pressure /England)	There are no specific emission ceilings for England; however the UK has emission ceilings in force, as well as revised ceilings in place for 2020-2029 and 2030 onwards.	Our most recent data for NH ₃ is from 2017: there were 193kt of emissions that year.	
		Our most recent data for PM _{2.5} is from 2017: there were 82kt of emissions that year.	
		Our most recent data for NMVOCs is from 2017: 548kt emissions.	
		Our most recent data for SO ₂ is from 2017: 131kt emissions.	
		Our most recent data for NO _x is from 2017: 630kt emissions.	

<p>Concentrations of fine particulate matter in the air</p> <p><i>(A3 / Natural Capital Asset / England)</i></p>	<p>The legal limit value for concentrations of PM_{2.5} is 25 µg/m³ (decreasing to 20 µg/m³ in 2020) annual mean. All of England (and the UK as a whole) meet this limit value. Assessment against this limit value applies to the whole surface area of the country plus a large number of roadside locations in urban areas.</p>	<p>Our most recent data is from 2018: 9.5 µg/m³.</p>	
<p>Roadside nitrogen dioxide concentrations</p> <p><i>(A5 / Natural Capital Asset / England)</i></p>	<p>The legal limit values for concentrations of NO₂ are 40 µg/m³ annual mean and 200 µg/m³ hourly mean. There are exceedances of both limit values in England (please see the annual Air Pollution in the UK report for details). Assessment against these limit values applies to the whole surface area of the country plus a large number of roadside locations in urban areas.</p>	<p>Our most recent data for average concentrations is from 2018: 32 µg/m³.</p>	

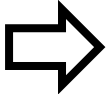

Rural background concentration of O3 <i>(A4 / Natural Capital Asset / England)</i>	There are target values for ozone set by the Air Quality Directive for the protection of health and vegetation. Please see the annual Air Pollution in the UK report for details.	Our most recent data is from 2018: 74 µg/m ³ .	
Nutrient nitrogen deposition <i>(A6 / Natural Capital Asset / England)</i>		Our most recent data is from 2015-2017 (3 year moving average): 94.8% of sensitive habitats in England where nutrient nitrogen deposition exceeded critical load.	




Clean and plentiful water

Indicator <i>(Indicator ref / type of measure / Geographical scope)</i>	Measurable commitments	Current status and trend	
State of the water environment <i>(B3 / Natural Capital Asset/ England)</i>	Our legal target is for 75% of surface waters to meet the Good Ecological Status standard by 2027 <i>Water Framework Directive 2000/60/EC</i>	Meeting our legal target is very challenging. Our most recent data is from 2017: 16% of surface waters meet the 'Good Ecological Status' standard.	
Condition of bathing waters <i>(B4 / Natural Capital Asset / England)</i>		Our most recent data is from 2019: 98.5% of designated bathing waters in England meeting at least the minimum standard.	
Number of serious pollution incidents to water in England		Our most recent data is from 2018; The total number of serious pollution incidents to water was 314.	

<i>(B2 / Natural Capital Pressure / England)</i>			
Water bodies achieving sustainable abstraction criteria <i>(B5 / Natural Capital Asset / England)</i>	To increase the proportion of water bodies with enough water to support environmental standards to 90% for surface water bodies and 77% for groundwater bodies by 2021. <i>25 Year Environment Plan 2018</i>	Data is currently only available for 2 consecutive years. Our most recent data is from 2018: 84% of surface bodies and 72% of groundwater bodies have enough water to support environmental standards.	

Thriving plants and wildlife

Indicator <i>(Indicator ref / type of measure / Geographical scope)</i>	Measurable commitments	Current status and trend	
Extent and condition of protected sites <i>(D2 / Natural Capital Asset- England)</i>	Restoring 75% of our one million hectares of terrestrial and freshwater protected sites to favourable condition. <i>25 Year Environment Plan 2018</i>	Our most recent data is from 2019. The area of SSSI's in favourable condition was 38.9%. A significant improvement is still required to deliver our commitment of 75%. Further monitoring is also required to assess the condition of other designated protected areas including those at sea.	
Area of woodland in England <i>(D3 / Natural Capital Asset / England)</i>	Increasing woodland area in England in line with our aspiration of 12% cover by 2060. <i>25 Year Environment Plan 2018</i>	Our data from 2019 shows there were 1.31 million hectares of woodland, equating to 10.0% of the land area of England.	

Abundance and distribution of priority species in UK <i>(D6/ Natural Capital Asset/ England)</i>		Our most recent data is from 2016: since 1970 the index of relative abundance of priority species in the UK fell by 60% and the index of distribution of priority species in the UK fell by 27%.	
Species supporting ecosystem functions <i>(D7/ Natural Capital Asset/ England)</i>		Our most recent data is from 2016: the index had declined by 31% compared to its value in 1980.	
Healthy seas: fish and shellfish populations <i>(C7 / Natural Capital Asset / United Kingdom)</i>	To achieve or maintain Good Environmental Status (GES) in our seas by 2020. <i>The Marine Strategy Regulations (2010)</i>	Demersal fish biodiversity is recovering from a history of over-exploitation, but Good Environmental Status has not yet been achieved in either the Greater North Sea or the Celtic Seas. A partial assessment of pelagic shelf fish status did not provide a clear result.	
Clean seas: marine litter <i>(C1 / Natural Capital Pressure / United Kingdom)</i>	To achieve or maintain Good Environmental Status (GES) in our seas by 2020. <i>The Marine Strategy Regulations (2010)</i>	Our most recent data is from 2015: the average total abundance of beach litter items per 100m was 367 in the Celtic Seas and 282 in Greater North Sea.	

Reducing the risk of harm from environmental hazards






The 25 Year Environment Plan outcome indicator framework includes indicators relating to drought, flood and coastal erosion risk management. However, these are not yet available for reporting. The indicators are:

- F1 Disruption or unwanted impacts from flooding or coastal erosion
- F2 Communities resilient to flooding and coastal erosion
- F3 Disruption or unwanted impacts caused by drought

Further information on these is set out in our outcome indicator framework.


A growing body of observational and modelled evidence shows that climate change has increased the probability of significant weather events.

Using resources from nature more sustainably and efficiently



Indicator <i>(Indicator ref / type of measure / Geographical scope)</i>	Measurable commitments	Current status and trend	
Raw Material Consumption (RMC) <i>(J2/ Natural Capital Pressure/ United Kingdom)</i>		Our most recent data from 2017 shows raw material consumption is 14.7 tonnes per person.	
Resource Productivity	Maximising the value and benefits we get from our resources, doubling resource productivity by 2050. <i>Resources and Waste Strategy 2018</i>	Our most recent data from 2017 shows resource productivity is £1.89 Gross Value Added (GVA) per kg of RMC.	
Percentage of the annual growth of trees in English woodlands that is harvested <i>(E5/ Natural Capital Benefit/ England)</i>		Our data from 2018 shows that in England 82% of softwood growth was harvested, and 16% of hardwood growth.	
Efficiency of agricultural production (measured by Total Factor Productivity) <i>(E4/ Natural Capital Benefit/United Kingdom)</i>		Our most recent data is from 2018; this shows total factor productivity INDEX was 53% higher than it was in 1973.	
The percentage of fish stocks fished at or below levels of maximum sustainable yield (FMSY) <i>(C10/ Natural Capital Asset/ United Kingdom)</i>	To achieve or maintain Good Environmental Status (GES) in our seas by 2020.	Our most recent from 2018 shows that 49% of fish stocks were fished at or below levels of maximum sustainable yield (FMSY).	

	<i>The Marine Strategy Regulations (2010)</i>		
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Enhanced beauty, heritage and engagement with the natural environment

Indicator <i>(Indicator ref / type of measure / Geographical scope)</i>	Measurable commitments	Current status and trend	
Engagement with the natural environment <i>(G4 (interim) / Natural Capital benefit / England)</i>		The most recent data from 2018/2019 shows that the proportion of adults visiting the natural environment at least once a week, was 65%.	



Mitigating and adapting to climate change

Indicator <i>(Indicator ref / type of measure / Geographical scope)</i>	Measurable commitments	Current status and trend	
Emissions of greenhouse gases <i>(N/A/Natural Capital Pressure/ England)</i>	To reduce greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050. <i>The UK Climate Change Act</i>	The most recent final figures are for 2018, UK greenhouse gas emissions were 351.5 million tonnes (Mt), 43.1% lower than in 1990 and 2.7% lower than 2017.	
Emissions of greenhouse gases from natural resources <i>(A2/Natural Capital Pressure/ England)</i>		The most recent data from 2017 shows emissions of greenhouse gases from natural resources (e.g. land use, land use change, the agriculture and waste sectors and the use of fluorinated gases) was 52 Mt CO ₂ e. ³	


³ This indicator represents all sectors within Defra's scope. The overall downward trend does not apply to each individual sector, it is a combined attribution. For example, emissions from agriculture and waste have remained relatively stagnant in recent years.

<p>Area of woodland in England <i>(D3/ Natural Capital Asset/ England)</i></p>	<p>Increasing woodland area in England in line with our aspiration of 12% cover by 2060. <i>25 Year Environment Plan 2018</i></p>	<p>The most recent data from 2019; there are 1.31 million hectares of woodland, equating to 10.0% of the land area of England.</p>	
<p>Carbon footprint and consumer buying choices <i>(J1/ Natural Capital Pressure/ England)</i></p>		<p>England's carbon footprint was estimated to be 652.3 million tonnes CO₂ equivalent in 2017 (MtCO₂e).</p>	
<p>Climate Change Adaptation</p>	<p>The cross-cutting nature of climate change means many 25 Year Environment 25 Year Environment Plan goals are highly relevant to adaptation.</p> <p>Climate change poses risks such as drought, flooding and overheating to our terrestrial, freshwater and marine habitats, and to our communities and so impact on progress towards goals such as Thriving Plants and Wildlife, Environmental Hazards, Biosecurity and Clean and Plentiful Water. A full list of the indicators relevant to climate change adaptation, which cover:</p> <ul style="list-style-type: none"> ▪ Indicators that could suggest successful adaptation ▪ Indicators that suggest the need for adaptation ▪ Indicators that show resilience of natural assets to climate change <p>These can be found in the 2019 25 Year Environment Plan Outcome Indicator Framework (p. 13)</p> <p>Not enough of the suite of indicators relevant to adaptation have sufficient data yet to offer a comprehensive picture of trends in climate change adaptation action, which we hope to give in future reporting.</p> <p>We are also working with the Committee on Climate Change to scope strengthened indicators used to monitor adaptation, including aligning with 25 Year Environment Plan monitoring process wherever relevant.</p>		



Minimising waste

Indicator <i>(Indicator ref / type of measure / Geographical scope)</i>	Measurable commitments	Current status and trend	
Residual waste arising by type and sector – <i>(J4 (Waste Treated using Landfill/Incineration (Excluding Major Mineral Wastes) (C&I) Sources / Natural Capital Pressure/ England)</i>		Our most recent data shows that in 2018 the total quantity of waste treated using landfill or incineration in England (excluding major mineral wastes) was 29 million tonnes.	
Municipal waste recycling rate <i>(J3 (interim – household waste recycling rate only) / Natural Capital Pressure/ England)</i>	To recycle at least 50% of household waste by 2020. <i>Waste and Resources Strategy 2018</i>	Our most recent data shows in 2018/2019 the recycling rate for 'Waste from Households' was 45%.	

Managing exposure to chemicals

Indicator <i>(Indicator ref / type of measure / Geographical scope)</i>	Measurable commitments	Current status and trend	
Emissions of mercury and persistent organic pollutants to the environment <i>H3 (interim) / Natural Capital Pressure / United Kingdom</i>	Reduce remaining land-based emissions of mercury to air and water by 50% by 2030. <i>25 Year Environment Plan 2018</i>	Our most recent data shows a decline by 2% since 2017 of mercury emissions to the air. However the indicator is not currently available for emissions to water.	

Enhancing biosecurity

Indicator <i>(Indicator ref / type of measure / Geographical scope)</i>	Measurable commitments	Current status and trend	
<p>H1 (interim) Number of established invasive non-native species in Great Britain. The interim indicator shows the change in number of invasive non-native species established across or along 10% or more of the land area or coastline of Great Britain.</p> <p>This indicator contains 193 non-native species that are considered to be exerting a negative impact on native biodiversity (46 freshwater species, 39 marine species and 108 terrestrial species).</p> <p><i>(H1/Natural Capital Pressure/ Great Britain)</i></p>		<p>The number of invasive non-native species established in or along 10% or more of Great Britain's land area or coastline has increased in all environments.</p>	
<p>The number of additional tree pests and diseases becoming established in England</p> <p><i>(H2 (interim)/ Natural Capital Pressure /England)</i></p>		<p>The full indicator is currently unavailable for reporting, however an interim indicator is: a total of 5 tree pests and diseases became established in England in the 2009-18 period.</p>	



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