



Department  
for Environment  
Food & Rural Affairs

## **Monitoring the condition of the natural environment**

Presented to Parliament pursuant to Section 16 of the Environment Act 2021

We are the Department for Environment, Food and Rural Affairs. We're responsible for improving and protecting the environment, growing the green economy, sustaining thriving rural communities and supporting our world-class food, farming and fishing industries.

We work closely with our 33 agencies and arm's length bodies on our ambition to make our air purer, our water cleaner, our land greener and our food more sustainable. Our mission is to restore and enhance the environment for the next generation, and to leave the environment in a better state than we found it.



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# Monitoring the condition of the natural environment

This statement sets out the kinds of data that will be obtained to monitor whether the natural environment, or a particular aspect of it, are improving. This includes progress towards achieving any targets or interim targets, in accordance with the current Environmental Improvement Plan. This statement responds to the requirements under section 16 of the Environment Act 2021, and will be periodically reviewed and updated, as needed.

Defra, in partnership with its arms' length bodies, publish a broad range of statistics and data on the environment. The statistics aim to provide a window on the world across the areas covered by Defra's policy and delivery remits and to inform the judgements and decisions made by the public, by organisations and by government. Its approach to publishing statistics is guided by the UK Statistics Authority's Code of Practice for Statistics. Compliance with the Code ensures government statistics have public value, are high quality, and are produced by people and organisations that are trustworthy.

## Environment Outcome Indicators

The UK government published its first Environmental Improvement Plan (the '25 Year Environment Plan') in January 2018. This set out ten goals for improving the environment in England. A key commitment was to develop a comprehensive set of indicators, which collectively describe environmental change as it relates to the ten goals of the Environmental Improvement Plan and can be used to assess whether the natural environment is improving over the course of the plan.

In 2019, the UK government subsequently launched the Outcome Indicator Framework. This comprises a suite of custom indicators designed to collectively describe environmental change as it relates to the ten goals of the Environmental Improvement Plan. The Outcome Indicator Framework selected 66 different indicators that were considered appropriate for use to consider changes relevant to the state of the natural environment. Some of these indicators had sufficient data available to publish upon launch and the remainder have been undergoing iterative development since the launch of the framework, with progress published via annual public update reports. As of the 2022 update, data will have been published for 50 indicators and a programme of work remains underway, aiming to complete data availability for the full indicator set by 2024.

This framework sets out the kinds of data about the natural environment that is appropriate for monitoring whether the natural environment as a whole is, or particular aspects of it are, improving in accordance with the Environmental Improvement Plan. The framework contains 66 indicators, arranged into 10 broad themes. The indicators are extensive; they cover natural capital assets (for example land, freshwater, air and seas) and together they show the condition of these assets, the pressures acting upon them and the provision of

services or benefits they provide. The annual update reports of the Outcome Indicator Framework describe the technical detail of each indicator, with transparency of data and methodologies employed in the production of trends reported.

Indicators present trend information based on a range of quantitative and qualitative information. Statistical techniques are used to analyse trends and detect changes over time, taking account of variability and uncertainty in the data.

The indicators within the Outcome Indicator Framework are not targets, and they do not have specific end points, levels or trajectories attached to them. They are a way to monitor the high-level changes happening in the environment and they enable us to then ensure we are taking appropriate action. For many themes within the Outcome Indicator Framework, there are links to established or developing strategies or policies such as the Resources and Waste Strategy for England, the Clean Air Strategy, and the UK Marine Strategy. The Outcome Indicator Framework does not attempt to reflect the breadth and depth of monitoring and evaluation required for these strategies, which will have their own appropriate mechanisms for programme-specific detailed monitoring and evaluation.

The current framework was designed after extensive expert stakeholder consultation. Over the next 25 years, we can expect that new issues and policy priorities will emerge for which new indicators may be required. The Outcome Indicator Framework will be kept under regular review, every five years as a minimum, so that it continues to be relevant and provide the best and most cost-effective ways of assessing progress, accounting for the evidence needs of future revisions to long-term Environmental Improvement Plans, as established under the Environment Act 2021. Technologies for monitoring and assessing change in the environment are advancing rapidly and offer new cost-effective methods (e.g., earth observations, DNA methods, citizen science/mobile apps and new sensor technologies). We will look to update indicators to reflect these developments.

Whilst the Outcome Indicator Framework already reports three quarters of indicators, drawing upon existing data, some new indicators require new data collection and analysis in order to fully reflect the breadth of the 10 goals of the 25 Year Environment Plan. We are working with expert evidence leads to develop all indicators by 2024, which reflects the need for quality, novel research to deliver the required environmental insights. Development of these indicators will also account for relevant government strategies to ensure the most useful and sustainable indicators are created. This year, indicators are published relating to 9 of the 10 25 Year Environment Plan goals.

## Environmental Targets

The Environment Act 2021 creates a power to set long-term, legally binding environmental targets. It requires government to set, and achieve, at least one target in four priority areas: air quality, biodiversity, water, and resource efficiency and waste reduction, as well as targets for fine particulate matter and species abundance. The Act provides for the Statutory Instruments setting out these targets to be laid by 31 October 2022. All targets

set under the Environment Act's framework must have an objectively measurable standard to be achieved. These standards will be specified in the regulations that contain the final long-term targets. Targets are being developed through a robust process that allows for relevant evidence to be properly gathered and tested. Since August 2020, Defra's statutory advisors and wider evidence partners have helped develop scientific evidence to underpin proposed targets. Expert groups have also been invaluable in helping inform target development. They have provided bespoke guidance on evidence processes and best available evidence.

We have published evidence reports that set out the underpinning science for each of the proposed targets. This includes details of the potential metrics and the data that would be required to monitor progress against them. For example, for the proposed species extinction risk target we would use Great Britain level data to create a new England Red List Index to use as our target indicator. The new index would include data for over 7,000 species, including birds, mammals, reptiles, amphibians, some invertebrates, vascular plants, bryophytes, lichens and some fungi.

Some of the metrics for the proposed targets relate to indicators within the Outcome Indicator Framework. For example, the proposed species abundance targets are based on the D4 indicator. Where an indicator from the Outcome Indicator Framework has not been used, we have applied similar methods and standards to developing appropriate, bespoke metrics for potential targets.

Each long-term target will be supported by interim targets of up to five years in duration. Interim targets will set the trajectory towards long-term targets and allow for an ongoing assessment of whether government is on track to meet them.

The Environment Act requires the government to always have an Environmental Improvement Plan in place. This sets out the steps the government intends to take to improve the natural environment, including measures needed to meet its long-term and interim targets. We are planning to complete the review of the Environmental Improvement Plan by January 2023.

## Environmental Improvement Plan - Annual Progress Report

Monitoring of progress toward the ambitions and goals of the government's Environmental Improvement Plans will be set out through an Annual Progress Report. The report will consider whether the natural environment has, or particular aspects of it, have, improved over the reporting period. The report will describe what has been done to implement the Environmental Improvement Plan, taking account of progress made towards achieving any relevant long-term and interim targets.

To inform this assessment, the Annual Progress Report will draw upon evidence from the Outcome Indicator Framework and other appropriate sources such as periodic statistical

publications and scientific literature from across the Defra group, wider government, and non-governmental organisations. Such supplementary evidence will be appraised on an annual basis to meet identified needs, where other sources are not available. For example, when there has been insufficient time to collate sufficient data for novel indicators to robustly describe environmental change towards the goals of the Environmental Improvement Plan. In those instances, additional evidence will be considered to support a qualitative assessment of progress in policy delivery for annual reporting.

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