



Department  
for Environment  
Food & Rural Affairs

# Report on the first review of environmental targets (the Significant Improvement Test)

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# Introduction

Under the Environment Act 2021, we have committed to reviewing our suite of statutory environmental targets at least every five years. The purpose of this review is to assess whether meeting our statutory targets would significantly improve the natural environment in England. The Significant Improvement Test forms part of the robust statutory cycle of monitoring, planning and reporting introduced by the Environment Act 2021. It does not assess progress made towards achieving statutory targets. That is considered through annual progress reports against the Environmental Improvement Plan.

## Outcome of the review

**Following the review of statutory targets, the Secretary of State considers that the Significant Improvement Test has been met.**

We have set new stretching statutory targets to tackle some of the biggest pressures facing our environment and they will not be easy to achieve. They complement our existing suite of statutory targets and will ensure progress on clean air, clean and plentiful water, less waste and more sustainable use of our resources, a step change in tree planting, a better marine environment, and a more diverse, resilient and healthy natural environment.

Meeting these ambitious new statutory targets, as well as our broader suite of statutory targets, would lead to a significant improvement in all six components of England's natural environment assessed in the review. This includes:

- halting and reversing the decline in species abundance, as well as creating or restoring in excess of 500,000 hectares of wildlife rich habitat outside protected sites by 2042, which would deliver a range of environmental benefits such as pollination services and carbon sequestration
- restoring 75% of England's surface water bodies to Good Status by 2027, which would reduce pressures on species and habitats as well as deliver wider environmental benefits
- improving the condition of England's marine protected areas (which cover 35,000 square miles of English waters) so that 70% are in a favourable condition by 2042, which would be a 26% increase compared to 2022 and help ensure a healthy and productive marine environment
- reducing emissions and concentrations across a range of damaging air pollutants, including emissions of ammonia which harms sensitive habitats and a 35% reduction in population exposure to fine particulate matter by 2040 (compared to 2018) that would support reductions in cases of lung cancer and other conditions

- reducing damage to local ecology and major pressures on our water environment across agriculture (40% reduction in nitrogen, phosphorus and sediment loadings by 2038 compared to 2018), wastewater treatment works (80% reduction of phosphorus loadings by 2038 compared to 2020) and abandoned metal mines pollution (halving the length of rivers polluted by harmful metals by 2038)
- driving actions to reduce sediment runoff caused by soil erosion on farmland and to increase green cover on soil that will help prevent erosion and support the many species and habitats that rely on healthy soil
- halving ‘residual’ waste (waste that is sent to landfill, put through incineration or used in energy recovery in the UK or overseas) to 287 kg per capita by 2042 from 574 kg per capita in 2019, reducing pressure from waste materials on our natural environment and decreasing greenhouse gas emissions from the waste sector

The supporting [impact assessments and detailed evidence reports](#) for the new statutory targets provide further information about the benefits that would be delivered by meeting those statutory targets.

The Secretary of State’s conclusion that the Significant Improvement Test has been met is based on the breadth and degree of improvement to our natural environment that would be achieved by meeting statutory targets. Our statutory targets complement and build on a range of environmental commitments and objectives that will drive improvement across the natural environment. Further information can be found in the Environmental Improvement Plan, which is our detailed delivery plan for action.

In the coming years we will increasingly have to consider the impacts of our changing climate when assessing the role of statutory targets, including through future Significant Improvement Test reviews. Our suite of statutory targets will lead to our habitats, species, carbon stores and water supplies having more resilience to climate change. However, the Climate Change Risk Assessment notes the increasing work required to adapt to a changing climate across the economy and in the environment.

The third National Adaptation Programme will set out how the government intends to address all 61 climate risks and opportunities identified in its third Climate Change Risk Assessment. We will continue to actively assess the impacts of climate change on our goals to deliver a substantial improvement.

## Scope and methodology

### Significant improvement

The Significant Improvement Test asks us to look forward and consider what we expect will be achieved if we meet our statutory targets and whether this would amount to a ‘significant improvement’ of our natural environment. We have applied a plain English definition of ‘significant improvement’, based on the following guiding principles:

- the expected improvement would need to be a meaningful step forward from the current state. Only marginal or small improvement of the whole natural environment would not be sufficient
- the expected improvement would need to be spread broadly across the components of the natural environment. Dramatic improvement in only a few narrow areas would not be sufficient
- the expected improvement moves us closer to achieving key outcomes set out in the Environmental Improvement Plan

Crucially, whether the Significant Improvement Test has been met should be assessed for the natural environment as a whole rather than individual components or environmental challenges.

## **Statutory targets considered**

The Significant Improvement Test considers statutory targets collectively. In addition to the 13 targets set under sections 1 to 3 of the Environment Act 2021, the following legislation contains ‘targets’ (this includes statutory objectives and standards that meet the Act’s conditions for inclusion) and these have been included in the assessment:

- Air Quality Standards Regulations 2010
- Climate Change Act 2008
- National Emission Ceilings Regulations 2018
- Water Environment (Water Framework Directive) Regulations 2017

The full list of all statutory targets included in the review is at Annex A. Interim and non-statutory targets are out of scope.

We recognise that it is important to consider the positive environmental impacts that meeting the government’s overall net zero target will have, which is why it has been included in the review. However, the ambition and coverage of statutory targets for greenhouse gases has not been considered as part of the test as that would duplicate the existing process for setting and meeting carbon budgets.

## **Components of the natural environment**

We have considered the expected impact of statutory targets against six broad components of the natural environment:

Component	Scope
Atmosphere	The layer of gases surrounding Earth including the air that we and other living organisms breathe.
Water	Rivers, lakes, groundwaters and other water bodies.

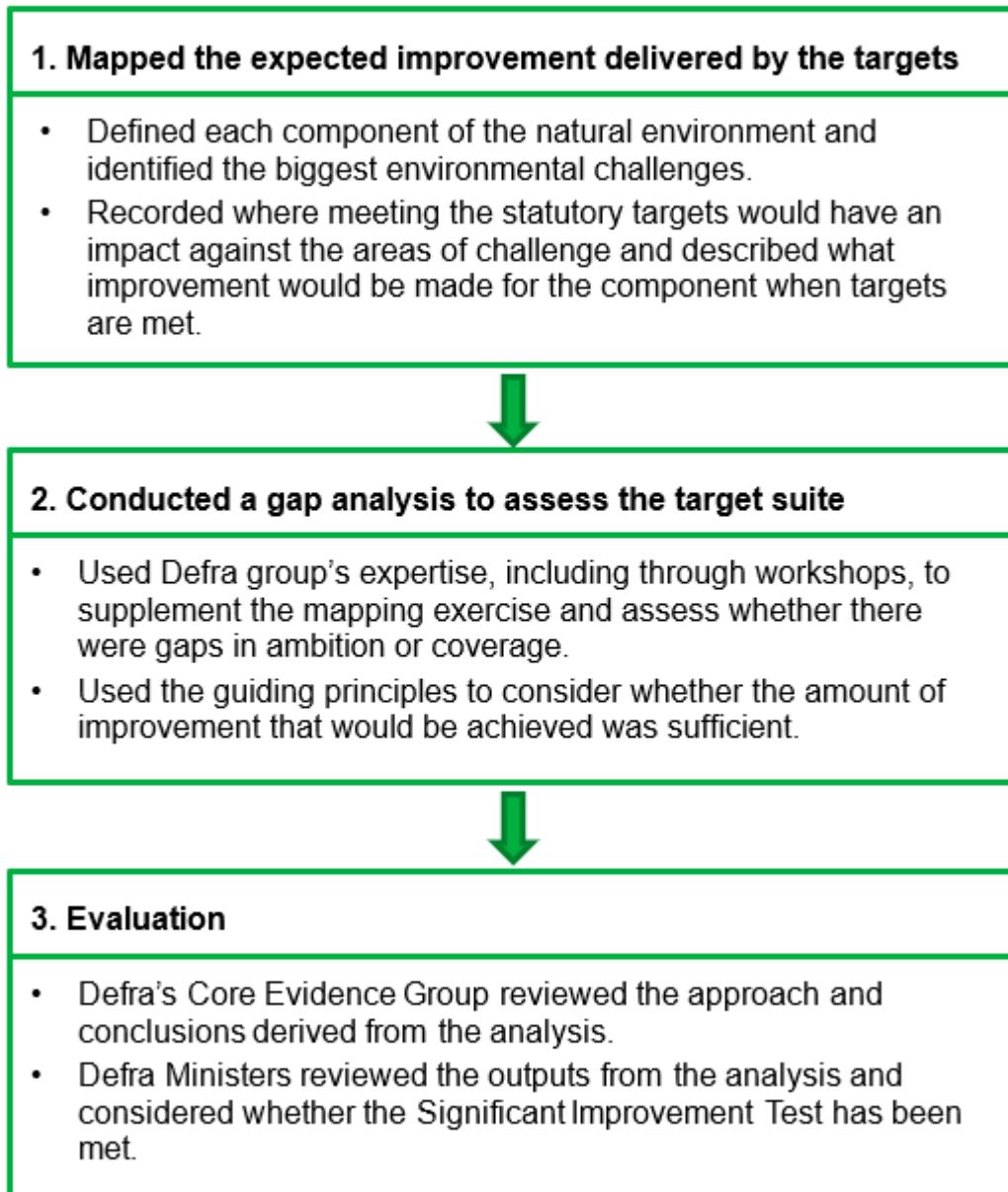
Component	Scope
Species and habitats	Plants, wild animals and other living organisms found on land and in freshwater, and their habitats.
Marine	The inshore and offshore regions and the ecosystems contained within them.
Land and soil	The physical surface of the Earth and the combination of weathered minerals, organic materials and living organisms that make up 'soil'.
Resources and waste	Our stock of natural resources and the quantity and content of waste material arising from its use.

The natural environment is a complex, interconnected and changing system that is subject to natural factors as well as human activity. We have sought to take account of the key interactions between the different components and targets to the extent that it is possible.

## **Methodology**

An overview of the analytical process for the first Significant Improvement Test is set out below in Figure 1.

**Figure 1: Overview of the analytical process**



The approach used for the first Significant Improvement Test may be built upon in future tests as our evidence base and analytical capability continues to improve.

## Assessment

### Atmosphere

Meeting statutory targets **would support a significant improvement for this component** of the natural environment, including:

- reductions in emissions and concentrations across 14 damaging air pollutants

- a 26kt reduction in ammonia emissions across the UK, including a reduction in England (from 172kt in England), which would help to reduce harm to sensitive natural habitats and improve biodiversity
- a 35% reduction in population exposure to fine particulate matter (compared to 2018), helping to reduce cases of cardiovascular disease, asthma and lung cancer

Meeting the statutory targets would improve biodiversity by reducing damage to ecosystems (for example, reducing the impact of ground level ozone on wild plants, crops and forests), and also support improvements in human health and productivity.

## Water

Meeting statutory targets **would support a significant improvement for this component** of the natural environment, including:

- restoring 75% of England's surface water bodies to Good Status by 2027, which would reduce pressures on species and habitats as well as deliver wider environmental benefits
- improving water quality by reducing major pressures on our water environment across agriculture (40% reduction in nitrogen, phosphorus and sediment loadings compared to 2018), wastewater treatment works (80% reduction of phosphorus loadings compared to 2020) and abandoned metal mines pollution (halving the length of rivers polluted by harmful metals from approximately 1,500km to 750km)
- reducing the use of the public water supply in England per head of population by 20%, leaving more water in our environment for nature to recover

Meeting statutory targets would improve biodiversity by reducing damage to local ecology and pressures on species and habitats, as well as increasing the resilience of England's public water supply to drought.

## Species and habitats

Meeting statutory targets **would support a significant improvement for this component** of the natural environment, including:

- halting and reversing the decline in species abundance (over the past 6 years the species abundance indicator has declined by 2.8% per year on average)
- restoring and creating in excess of 500,000 hectares of a range of wildlife-rich habitat outside protected sites
- reductions in key pressures on species and habitats, such as air and water pollution

Meeting statutory targets would deliver a range of benefits including pollination services and carbon sequestration.

## **Marine**

Meeting statutory targets **would support a significant improvement for this component** of the natural environment, including:

- improving the condition of England's marine protected areas (which cover 35,000 square miles of English waters) so that 70% are in a favourable condition, which would be a 26% increase compared to 2022, providing statutory support for existing objectives to improve marine habitat and conservation
- reducing damaging human activities in marine protected areas such as dredging and unsustainable fishing

Meeting the statutory targets would support the achievement of the UK's shared vision for clean, healthy, safe, productive and biologically diverse seas.

## **Land and soil**

Meeting statutory targets **would support a significant improvement for this component** of the natural environment, including:

- delivering co-benefits for soil health, structure and moisture levels, helping to support the many species and habitats of principal importance in England that rely on soil with appropriate soil structure and moisture levels
- driving actions to reduce sediment runoff caused by soil erosion on farmland and to increase green cover on soil that will help prevent erosion

Meeting statutory targets would support increases in the range of functions that healthy soil provides, such as carbon storage and flood and drought mitigation.

Work to improve our evidence base, such as developing our new soil health baseline, will mean we will be able to further assess the role of statutory targets in addressing challenges for land and soil in future Significant Improvement Test reviews.

## **Resources and waste**

Meeting statutory targets **would support a significant improvement for this component** of the natural environment, including:

- reducing 'residual' waste (waste that is sent to landfill, put through incineration or used in energy recovery in the UK or overseas) to 287 kg per capita from 574 kg per capita in 2019
- driving reductions across key waste material streams, including environmentally harmful materials like plastics

Meeting statutory targets would reduce pressure from waste materials on our natural environment and decrease greenhouse gas emissions from the waste sector.

# Annex A: List of statutory targets included in the Significant Improvement Test review

Note 1: Limit value or target value for a pollutant that continues to have to be met each year on an ongoing basis (under the Air Quality Standards Regulations 2010).

Target	Deadline	Region	Legislative source
To halt the decline in species abundance	2030	England	Environmental Targets (Biodiversity) (England) Regulations 2023
To ensure that species abundance is greater than in 2022, and at least 10% greater than 2030	2042	England	Environmental Targets (Biodiversity) (England) Regulations 2023
Improve the Red List Index for England for species extinction risk, compared to 2022 levels	2042	England	Environmental Targets (Biodiversity) (England) Regulations 2023
To restore or create in excess of 500,000 hectares of a range of wildlife-rich habitat outside protected sites, compared to 2022 levels	2042	England	Environmental Targets (Biodiversity) (England) Regulations 2023
70% of the designated features in the MPA network to be in favourable condition, with the remainder in recovering condition	2042	England	Environmental Targets (Marine Protected Areas) Regulations 2023

Target	Deadline	Region	Legislative source
Halve the length of rivers polluted by harmful metals from abandoned mines, against a baseline of around 1,500 km	2038	England	Environmental Targets (Water) (England) Regulations 2023
Reduce phosphorus loadings from treated wastewater by 80% against a 2020 baseline	2038	England	Environmental Targets (Water) (England) Regulations 2023
Reduce nitrogen, phosphorus and sediment pollution from agriculture into the water environment by at least 40%, compared to a 2018 baseline	2038	England	Environmental Targets (Water) (England) Regulations 2023
Reduce the use of public water supply in England per head of population by 20% from the financial year 2019 to 2020 baseline reporting figures	2038	England	Environmental Targets (Water) (England) Regulations 2023
Ensure that the total mass of residual waste excluding major mineral wastes in a year does not exceed 287 kg per capita	2042	England	Environmental Targets (Residual Waste) (England) Regulations 2023
Increase England's tree canopy and woodland cover from 14.5% to 16.5% by 2050	2050	England	Environmental Targets (Woodland and Trees Outside Woodland) (England) Regulations 2023

Target	Deadline	Region	Legislative source
PM <sub>2.5</sub> : annual mean concentration levels in England to be 10 µg m <sup>-3</sup> or below	2040	England	Environmental Targets (Fine Particulate Matter) (England) Regulations 2023
PM <sub>2.5</sub> : a reduction in population exposure of 35% compared to 2018	2040	England	Environmental Targets (Fine Particulate Matter) (England) Regulations 2023
NH <sub>3</sub> : 16% reduction in annual emissions against 2005 baseline	2030	UK	National Emission Ceilings Regulations 2018
NMVOC: 39% reduction in annual emissions against 2005 baseline	2030	UK	National Emission Ceilings Regulations 2018
NO <sub>x</sub> : 73% reduction in annual emissions against 2005 baseline	2030	UK	National Emission Ceilings Regulations 2018
PM <sub>2.5</sub> : 46% reduction in annual emissions against 2005 baseline	2030	UK	National Emission Ceilings Regulations 2018
SO <sub>2</sub> : 88% reduction in annual emissions against 2005 baseline	2030	UK	National Emission Ceilings Regulations 2018
Arsenic: 6 ng per m <sup>3</sup> annual mean concentration	2012 [note 1]	England	Air Quality Standards Regulations 2010
Benzene: 5µg per m <sup>3</sup> annual mean concentration	2010 [note 1]	England	Air Quality Standards Regulations 2010

Target	Deadline	Region	Legislative source
Cadmium: 5 ng per m <sup>3</sup> annual mean concentration	2012 [note 1]	England	Air Quality Standards Regulations 2010
Carbon monoxide: Maximum daily running 8 hour mean concentration of 10mg per m <sup>3</sup>	2005 [note 1]	England	Air Quality Standards Regulations 2010
Lead: 0.5µg per m <sup>3</sup> annual mean concentration	2005 [note 1]	England	Air Quality Standards Regulations 2010
Nickel: 20 ng/m <sup>3</sup> annual mean concentration	2012 [note 1]	England	Air Quality Standards Regulations 2010
NO2: 200µg per m <sup>3</sup> hourly mean concentration not to be exceeded more than 18 times a year	2010 [note 1]	England	Air Quality Standards Regulations 2010
NO2: 40µg per m <sup>3</sup> annual mean concentration	2010 [note 1]	England	Air Quality Standards Regulations 2010
NOx: 30 µg per m <sup>3</sup> annual mean concentration for protection of vegetation (in rural locations only)	2008 [note 1]	England	Air Quality Standards Regulations 2010
O <sub>3</sub> : 120µg per m <sup>3</sup> maximum daily 8-hour mean not to be exceeded by more than 25 times a year averaged over 3 years	2010 [note 1]	England	Air Quality Standards Regulations 2010

Target	Deadline	Region	Legislative source
O <sub>3</sub> : (protection of vegetation) AOT 40 (calculated from 1 h values) 18,000 µg per m <sup>3</sup> ·h averaged over five years	2010 [note 1]	England	Air Quality Standards Regulations 2010
PM <sub>10</sub> : 40 µg per m <sup>3</sup> annual mean concentration	2005 [note 1]	England	Air Quality Standards Regulations 2010
PM <sub>10</sub> : 50 µg per m <sup>3</sup> daily mean concentration not to be exceeded more than 35 times a year	2005 [note 1]	England	Air Quality Standards Regulations 2010
Polycyclic Aromatic Hydrocarbons: 1.0ng per m <sup>3</sup> annual average concentration of benzo[a]pyrene	2012 [note 1]	England	Air Quality Standards Regulations 2010
SO <sub>2</sub> : 125µg per m <sup>3</sup> daily mean concentration not to be exceeded more than three times a year	2005 [note 1]	England	Air Quality Standards Regulations 2010
SO <sub>2</sub> : 20 µg per m <sup>3</sup> annual mean and winter average concentrations for protection of vegetation (in rural locations only)	2005 [note 1]	England	Air Quality Standards Regulations 2010
SO <sub>2</sub> : 350µg per m <sup>3</sup> hourly mean concentration not to be exceeded more than 24 times a year	2005 [note 1]	England	Air Quality Standards Regulations 2010

Target	Deadline	Region	Legislative source
To protect, enhance and restore 75% of surface waters with the aim of achieving good ecological status (or good ecological potential for artificial or heavily modified waters) and good surface water chemical status	2027	England	Water Environment (Water Framework Directive) (England and Wales) Regulations 2017
Ensure that the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline	2050	UK	Climate Change Act 2008