



National Audit Office

An Overview of the
**government's approach to the
environment and climate change**
for the new Parliament 2023-24

October 2024

OVERVIEW

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1 Introduction to the National Audit Office

Welcome to our Overview of the Government's approach to the environment, net zero and adapting to climate change, part of our series of Overviews for the New Parliament, covering government departments and cross-cutting issues.

The National Audit Office (NAO) is the UK's independent public spending watchdog and is responsible for scrutinising public spending for Parliament. We audit the financial accounts of all departments, executive agencies, arm's-length bodies, some companies and charities, and other public bodies. We also examine and report on the value for money of how public money has been spent.

The NAO is independent of government and the civil service. The NAO's wide remit and unique access rights enables us to investigate whether taxpayers' money is being spent in line with Parliament's intention and to respond to concerns where value for money may be at risk.

We support all Members of Parliament to hold government to account and we use our insights to help those who manage and govern public bodies to improve public services. In 2023, the NAO's work led to a positive financial impact through reduced costs, improved service delivery, or other benefits to citizens, of £1.59 billion.

We are funded by, and accountable to, Parliament. As an Officer of the House of Commons, I am committed to ensuring that we support you and your staff in your work as a Member of Parliament, and your scrutiny of public spending and performance.

Our dedicated Parliamentary team can offer you support and put you in touch with our experts on subjects of interest to you and your constituents. If you would like more information about our work, or to arrange a briefing with me or one of my teams, please contact our Parliamentary Relations team at parliament@nao.org.uk.



Gareth Davies

COMPTROLLER & AUDITOR GENERAL
NATIONAL AUDIT OFFICE

Gareth Davies was appointed Comptroller & Auditor General (C&AG) in June 2019. He was appointed by the Monarch, following the approval of the House of Commons.

The C&AG has statutory authority to examine and to report directly to Parliament on whether government departments and other public sector bodies have spent taxpayers' money in the way Parliament intended. The C&AG and his staff are totally independent of government.

Gareth is a Fellow of the Chartered Institute of Public Finance and Accountancy and a Fellow of the Institute of Chartered Accountants in England and Wales. He is a non-executive Board member of the INTOSAI Development Initiative (IDI), which supports Supreme Audit Institutions (SAIs) in developing countries to sustainably enhance their performance and capacity.

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2 How the NAO can help you as a Member of Parliament

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How we support Parliament

We produce reports:

- on the annual accounts of government departments and their agencies;
- on the economy, efficiency and effectiveness with which government has spent public money; and
- to establish the facts where there are concerns about public spending issues.

We do not question government policy objectives. We look at how government has spent money delivering those policies and if that money has been used in the best way to achieve the intended outcome.

What we can offer

Through our website or our Parliamentary Relations team, MPs, peers and staff can:

- request a personal briefing on areas of our work that are of interest to them;
- sign up to receive embargoed copies of our reports on subjects of interest;
- make general queries about public spending, or raise concerns with us about value for money; and
- request advice on understanding and scrutinising departments' annual reports and accounts.

Resources available on our website

- **Reports:** Reviews of public spending and how well government is delivering.
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- **Overviews:** Factual overviews of government departments, sectors and services.
- **Work in progress:** Our schedule of future publications.
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You can write to us with any queries or concerns about the misuse of public money or behaviour in public bodies we audit

3 About this Overview

About this overview

This has been produced as an overview to the Government's approach and commitments for:

- environmental improvement;
- mitigating climate change; and
- adapting to climate change.

It provides insights from the NAO's work examining the previous government's spending and performance in these areas and of its implementation and delivery of relevant policies. It also includes an overview of the current government's plans in these areas. It is intended to support the Environmental Audit Committee and Members across the House in their examination of these matters.

The report includes:

- current targets for environmental improvement and responding to climate change;
- responsibilities within central government;
- the previous government's approach to financing progress on environment and climate;
- the role of regulation for environmental improvement;
- progress against current targets for environmental improvement and responding to climate change;
- the Greening Government Commitments; and
- climate related financial disclosures.

This report updates our previous [Environmental Protection Overview](#), published in March 2019.

How we have prepared this report

The information in this report draws on the findings and recommendations from our financial audit and value for money work, and from publicly available sources.

We have cited these sources throughout the guide to enable readers to seek further information if required. Where analysis has been taken directly from our value-for-money or other reports, details of our audit approach can be found in the Appendix of each report, including any evaluative criteria and the evidence base used.

Other analysis in the guide has been directly drawn from publicly available data and includes the relevant source as well as any appropriate notes to help the reader understand our analysis.

Other relevant publications

More information about our reporting on the government's work to deliver environmental improvements and to mitigate and adapt to climate change, as well as information about our other recent and upcoming reports can be found on the [NAO website](#).



4 Current targets for environmental improvement

The Government has committed to protecting and restoring nature and delivering the Environment Act targets. This includes the new Government's manifesto promise to expand nature-rich habitats such as wetlands, peat bogs and forests for people to enjoy and wildlife to thrive, including on public land.

2018: The previous government published a 25 Year Environment Plan. This established 10 wide-ranging goals and set out the government's intention to report on progress annually, develop a set of metrics against which to assess progress, and refresh the plan periodically.

2021: Parliament passed the Environment Act (2021). This set legally binding targets for four goal areas – waste and resources, air quality, nature and water. It also requires the government to publish a statutory Environmental Improvement Plan every five years and for ministers to apply principles in policy-making to support environmental protection and enhancement from November 2023.

2023: The previous government published its Environmental Improvement Plan. This set out its proposed actions to drive environmental improvements.

The Environmental Improvement Plan (EIP 2023)

This was published by the previous government and covers environmental protection work in England, as well as policies, programmes and targets that have a UK-wide effect, and the UK government's international environment work.

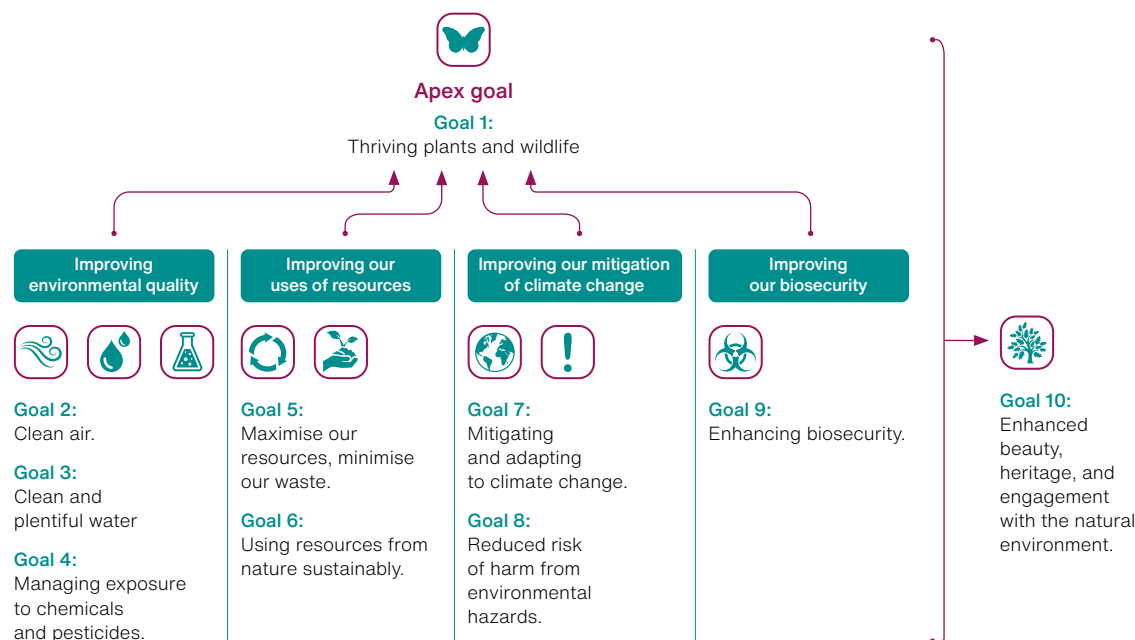
It reinforced 10 long-term goals, some with legally binding targets as required by the Environment Act (2021) where government is required to:¹

- halt the decline in species populations by 2030 and then increase populations by at least 10% by 2042 (goal 1 – biodiversity);

- cut levels and exposure to PM2.5 in the air by 2040 (goal 2 – air);
- reduce pollution into the water environment from agriculture, wastewater and abandoned metal mines by 2038; and reduce water demand by 20% by 2038 from a 2020 baseline (goal 3 – water);
- reduce the mass of residual waste per person by 2042 (goal 5 – waste and resources); and
- reach 16.5% of England covered with trees and woodland by 2050.

On 30 July 2024, the current government announced a rapid review of EIP 2023, to be completed by the end of the year.

The government's current goals for environmental improvement, published 2023



Source: Department for Environment, Food and Rural Affairs, *Environmental Improvement Plan*, 2023

¹ These are a broad summary of the government's targets. Full legal targets are set out in Environment Act (2021) legislation, available at: [Environment Act 2021 \(legislation.gov.uk\)](https://www.legislation.gov.uk).

5 Current targets for mitigating and adapting to climate change

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Mitigation

Climate change mitigation refers to actions taken to reduce or prevent greenhouse gases, or to enhance carbon sinks that remove them from the atmosphere.

The previous government legislated the target for the UK to reach net zero greenhouse gas emissions by 2050.² This requires emissions to be cut substantially from current levels, with any residual emissions after 2050 needing to be equal or less than what is removed from the atmosphere, whether by the natural environment or by carbon capture technologies.

2008: Parliament passed the Climate Change Act (2008). This set out an ambition for the UK to reduce its greenhouse gas emissions in 2050 by 80% compared with 1990 levels. It also requires the government to set five-yearly carbon budgets defining the amount of greenhouse gases that the UK can emit in that period.

2019: Parliament updated the Climate Change Act (2008) to require net zero carbon emissions by 2050.

2021: Parliament legally accepted the sixth Carbon Budget, which requires a 77% reduction in UK emissions by 2035 compared to 1990 levels. This is needed for the UK to remain on a pathway to achieve net zero by 2050.

Government's net zero strategy

The previous government set out its plan to reach net zero in the [Net Zero Strategy](#) (2021). In 2022, a [High Court judgment](#) required the previous government to set out more detail on how it aims to reach net zero. In 2023, the previous government published its [Net Zero Growth Plan](#).

In May 2024, [the High Court](#) found that the previous government's updated plan to meet carbon budget targets did not comply with certain duties under the Climate Change Act. The current government will publish a new report setting out its plans to meet carbon budget targets by May 2025.

Adaptation

Even if net zero is achieved globally, our climate will continue to warm due to historic emissions and the long atmospheric lifetime effect of greenhouse gases. As a result, the UK will need to adapt to manage the effects of unavoidable climate change and build resilience across every sector of the economy.

The government has no legally binding target for adaptation.

The Climate Change Act (2008) provides the legal basis for the UK's approach to adapting to climate change. It requires the government to produce a climate change risk assessment every five years and to set out its climate adaptation plan.

2023: The previous government published the [Third National Adaptation Programme](#), for the period 2023 – 2028.

² Scotland's net zero target is 2045.

6 New priorities for mitigating climate change

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The current government has made several commitments for decarbonisation and delivering net zero:

On energy generation

- One of the government's five missions is to make Britain a "clean energy superpower" by delivering clean power by 2030 and accelerating to net zero. It will do so by doubling onshore wind, tripling solar power, and quadrupling offshore wind.
- Great British Energy is a new publicly owned company, designed to drive clean energy deployment, create jobs, boost energy independence, and generate benefits for UK taxpayers, bill-payers and communities. It is backed by a capitalisation of £8.3 billion over this Parliament.
- The Green Prosperity plan, in partnership with business through the National Wealth Fund, will aim to create thousands of jobs by 2030.
- In its manifesto, Labour committed to strengthening Ofgem to ensure it can hold companies to account, requiring higher standards of performance and introducing automatic customer compensation for failure.

On accelerating to net zero

- The institutional framework for policy making will reflect commitments to reach net zero and meet carbon budgets, including the Bank of England giving due consideration to climate change.
- The government will mandate UK-regulated financial institutions – including banks, asset managers, pension funds, and insurers – and FTSE 100 companies to develop and implement credible transition plans that align with the 1.5°C goal of the Paris Agreement.

On housing

- The government has stated that it will double the existing planned investment in energy efficiency, adding an extra £6.6 billion over the next Parliament to upgrade five million homes.
- The government will deliver a Warm Homes Plan that promises to offer grants and low interest loans to support investment in insulation, solar panels, batteries, and low carbon heating to cut bills.

On energy infrastructure

- The government has committed to increasing energy infrastructure deployment, including a more distributed production capacity developed through a Local Power Plan and an upgrade of the national transmission infrastructure.
- In July 2024, the government announced details of the National Wealth Fund and confirmed that £7.3 billion of additional funding will be invested in projects such as ports, hydrogen, and industrial clusters across the country.

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How are environmental and climate change issues interconnected?

There are numerous ways in which the issues of environmental degradation and climate change are interconnected. For example,

- Environmental degradation and climate change share common drivers, the most significant of which are land use change and management practices such as agriculture and deforestation.
- Degradation of the natural environment exacerbates climate change by reducing the ability of natural systems to store carbon. It also reduces the resilience of ecosystems to the impacts of climate change. In turn, climate change is a major pressure on the natural environment through extreme weather events and changes to predictable seasonal patterns.
- Well-functioning ecosystems are a key part of increasing resilience to a changing climate and can help us adapt through, for example, providing natural flood management or urban cooling.

Because the two issues are closely interconnected, activities to decarbonise can impact on delivery of the government's environmental goals, positively (for example, sustainable agricultural policies to improve biodiversity would contribute to greenhouse gas emissions reduction) or negatively (for example, the use of biomass in the power sector has potentially detrimental implications for air quality).

The NAO has reported on areas of the previous government's work that aims, in part, to improve the environment and reduce climate change

[The Farming and Countryside Programme](#) (July 2024):

The Department for Environment, Food & Rural Affairs (Defra) established 16 environmental objectives for the Programme which support the delivery of some of the goals in the Environment Improvement Plan 2023 (EIP 2023) and delivery of targets under the Climate Change Act 2008. These include objectives on air quality, biodiversity and net zero. We found that Defra has a set of environmental objectives for the Programme, but some are still in development, and there are weaknesses that Defra needs to address.

[Active Travel in England](#) (June 2023): In developing its business case for active travel spend between 2021 and 2025, the Department for Transport (DfT) identified that active travel has the potential to deliver beneficial outcomes for health, the environment, the economy and society. We found that DfT had not identified or developed metrics which it can use to track and influence delivery of these beneficial outcomes or assess what has been delivered.

[Tackling local breaches of air quality](#) (June 2022): We found that the government has arrangements to manage the links between its work on air quality and net zero, although these could be strengthened. The government's approach to tackling climate change could have knock-on impacts for air quality, with some measures bringing risks as well as potential benefits.

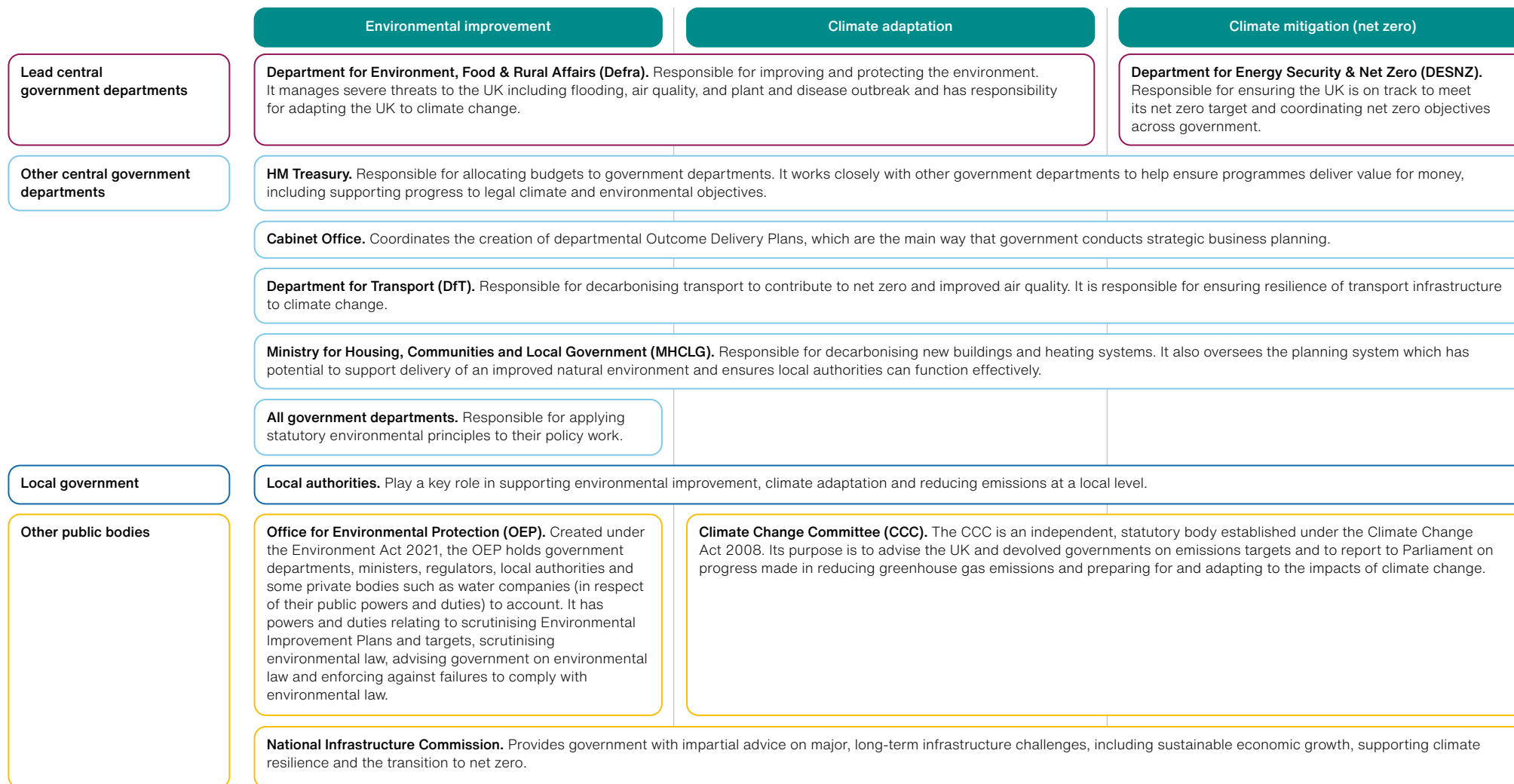
8 Responsibilities within central government

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Responsibilities for environmental improvement and mitigating and adapting to climate change are led by two departments. But other departments have key roles to play



9 The government's approach to financing progress on environment and climate

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Significant upfront investment is needed to address the challenges of decarbonising, restoring nature and adapting to climate change.

To deliver the UK's net zero ambitions

through the late 2020s and 2030s, the previous government estimated that an additional £50-60 billion of capital investment will be required. Most of this will need to come from the private sector.

To halt the decline of biodiversity, the previous government set a target to raise at least £500 million in private finance for nature's recovery every year in England by 2027, rising to more than £1 billion by 2030.

To prepare the UK for the physical effects of climate change, the Climate Change Committee has estimated that additional investment flows in the order of £10 billion per year may be needed this decade.

There are significant economic opportunities in transitioning to a green and net zero economy. The government expects green trade to deliver up to £170 billion of export sales in goods and services for the UK by 2030. The government's approach to raising finance to support its green activities is a combination of public investment supported by bonds, mobilising private investment, and creating economic opportunities.

Mobilising private investment and creating economic opportunities

The UK Infrastructure Bank

In 2021, the previous government established the UK Infrastructure Bank, a publicly owned company with £22 billion of capital available to the private sector and local authorities to level up and decarbonise the economy. The Bank's private sector lending prioritises investments where there is an undersupply of private sector financing. Its local authority function supports local authorities in delivering infrastructure priorities.

Between April 2021 and September 2023, the Bank committed £1.9 billion and mobilised a further £9.7 billion of private capital commitment. It has signed 13 deals spanning the clean energy, water, digital and transport sectors.

In 2022, we reported on the early [setup of the Bank](#). We found a range of operational and external challenges that the Bank will need to manage to deliver as the government intended. We set out that developing a clear view of where investment is most needed and an impact framework that shows where the Bank's interventions are most effective will be vital to its success.

In July 2024, the current government announced details of the National Wealth Fund and confirmed that £7.3 billion of additional funding will be allocated through the Bank.

The British Business Bank

In 2014, the government established the British Business Bank, a publicly owned company to support access to finance for smaller businesses to drive sustainable growth and prosperity across the UK, and to enable the transition to a net zero economy. The Bank provides funding for small and medium-sized enterprises (SMEs) indirectly through its delivery partners and aims to stimulate demand for finance by raising awareness among SMEs of their finance options.

Between 2014 and 2023, it provided £12.4 billion to over 90,000 small businesses across the UK, the majority of which are outside of London. It supported £420 million equity investment in clean technologies.

UK Export Finance (UKEF)

UKEF is the government's export credit agency. Part of its role is to help UK exporters take advantage of the global appetite for renewable energy by providing specialist support to UK companies and favourable financing to international buyers.

In 2023-24 UKEF issued £8.8 billion of financial support to exporters.

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The government's approach to financing progress on environment and climate *continued*

Raising finance to support public investment (supported by bonds)

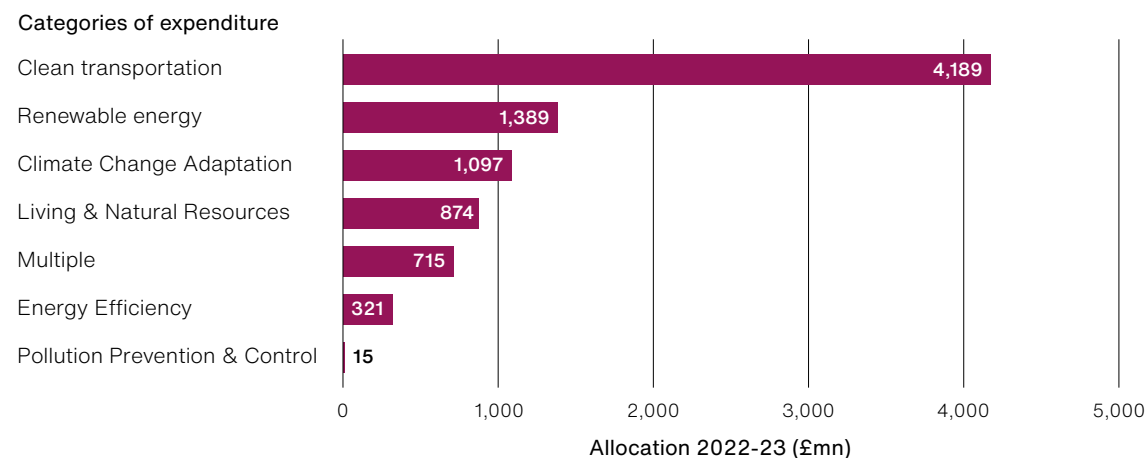
The UK's Green Financing Programme

In 2021, the previous government launched the UK's Green Financing Programme to raise investment to finance government expenditure on these activities. Since it was launched, the programme has raised over £41.6 billion through green gilts, issued by the Debt Management Office, and Green Savings Bonds, sold via National Savings & Investments.

In 2022-23, the Programme raised £10.5 billion. Of this, HM Treasury committed net £8.6 billion to eligible green expenditures that year and planned to allocate the remaining £1.9 billion in 2024.

The UK Green Financing Programme covers important elements of government expenditure on environment and climate change issues, but it is not a complete list of all the expenditure that government expects to contribute to achieving its environment and climate objectives. For example, the UK Green Financing Programme does not fund nuclear expenditure or government's activities to implement statutory biodiversity net gain, deliver waste reforms or establish a circular economy.

UK Green Financing Programme allocation, 2022-23



Notes

- 1 HM Treasury's 2023 allocation includes amounts allocated for 2022-23, adjusted for under- and over-spend in 2021-22.
- 2 The 'Multiple' category includes three international programmes and one UK research fund.
- 3 Values are rounded to the nearest £1 million and may not sum due to rounding.

Source: National Audit Office analysis of information published in HM Treasury, UK Green Financing Allocation and Impact Report, 2023

UK Green Financing Programme – areas of greatest allocation

Project	Expenditure category	Description of project	2023 allocation (£mn)
Track renewal	Clean Transportation	Funding to renew railway tracks. Electric rail only and does not include HS2 spend.	£1,686.47
Flood & Coastal Erosion Risks management	Climate Change Adaptation	Investment into flood and coastal erosion risk management programmes.	£1,097.21
Renewable Heat Incentive	Renewable Energy	Funding to help businesses, homes and other organisations meet the cost of installing renewable heat technologies.	£1,001.88
Track maintenance	Clean Transportation	Funding to maintain existing rail. Electric rail only and does not include HS2 spend.	£694.75
Agri-environment schemes	Living & Natural Resources	A collection of agricultural environmental and forestry schemes including Countryside Stewardship Offer, Future Plant Health, and Environmental Land Management.	£483.00
Public Sector Decarbonisation Scheme	Energy efficiency	Grants for public sector bodies to fund heat decarbonisation and energy efficiency measures.	£428.40

10 Role of regulation for environmental improvement

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Environmental regulators in England³

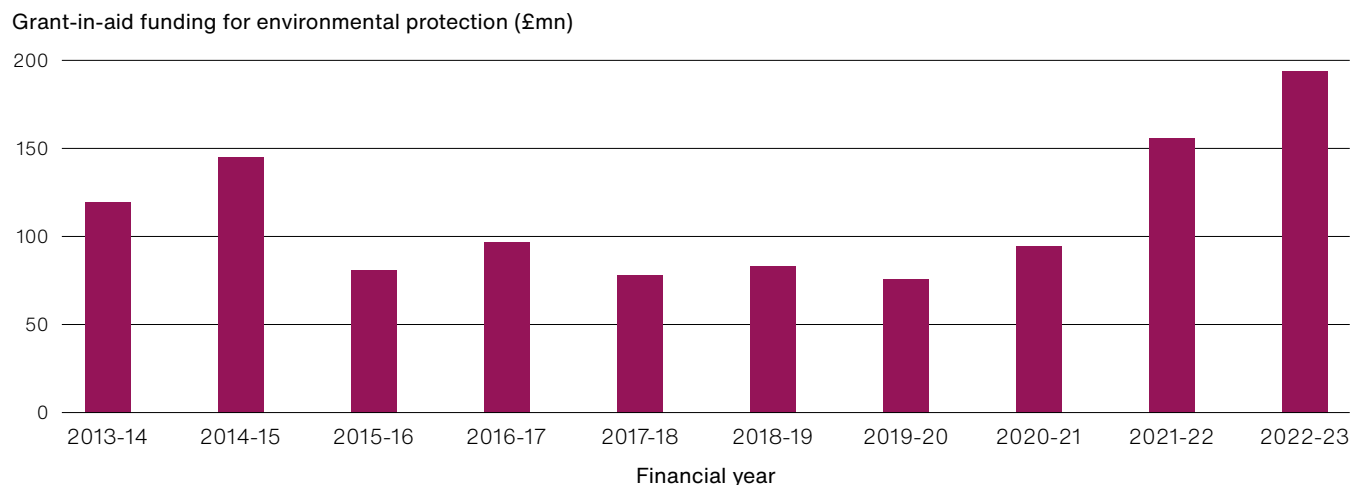
Environment Agency (EA): is an executive non-departmental public body sponsored by Defra, with a role in protecting and improving the environment. The EA implements regulations and environmental standards set by government and regulates a wide range of sectors and activities including water, waste management, agriculture, producers of goods such as packaging and batteries, food and drink, chemicals, and paper and textiles.

Most of EA's funding is grant-in-aid, provided by Defra. This includes grant-in-aid funding for EA's environment protection work. Between 2014-15 and 2019-20 Defra reduced its grant-in-aid funding for environmental protection, but has since increased this funding.

Natural England: is an executive non-departmental public body sponsored by Defra. It acts as the government adviser for the natural environment in England. It is responsible for enforcing laws that protect wildlife and the natural environment, and has responsibility for sites of special scientific interest, environmental damage regulations and breaches of wildlife licences as well as other areas.

Other organisations also have regulatory responsibilities including the **Marine Management Organisation, Rural Payment Agency, Forestry Commission** and **Ofwat**.

Grant-in-aid funding from Defra for EA's environment protection work, 2013-14 to 2022-23



Source: National Audit Office analysis of Environment Agency annual report and accounts

In 2023, the NAO reported on [Regulating to achieve environmental outcomes](#). We concluded that Defra's work to understand how its current regulation supports its overall environmental objectives is still at an early stage. We also found that Defra did not have the information it needs on the effectiveness of regulation and that these gaps were limiting its ability to make evidence-based decisions about where to deploy resource and understand the wider impacts of its regulatory approach.

Upcoming NAO work

Regulation in the water sector. This report will look at whether the government and regulators are clear about what outcomes the water industry needs to achieve and the investment needed, whether regulation is successfully incentivising investment and meeting desired outcomes and targets, and whether regulators can respond to current challenges.

³ The devolved nations have their own equivalent regulatory bodies.

11 Progress in environmental protection

The Office of Environmental Protection (OEP) reports annually on the progress that the government has made against the Environmental Improvement Plan 2023 (EIP 2023), including a range of environmental targets and what this means for progress against the 10 goal areas in the EIP 2023.

The OEP's latest report, published in January 2024, concluded that the government is largely off track to meet its environmental improvement ambitions, Environment Act targets and other commitments. The OEP found that:

- the previous government had made some progress against its 10 goals, although very substantial challenges remain; and that
- seven goal areas were largely off track, two were partially on track, and it could not assess one – enhancing beauty, heritage, and engagement with the natural environment. The government has not finalised its metrics for this goal since it was set in 2018.

To get back on track, the OEP set out that the government needs to develop detailed delivery plans that spell out who will do what, how much, and by when. These plans must show that, when these many and diverse actions are taken, specified outcomes will be achieved.

The OEP highlighted several actions for improvement including that the government should:

- attend particularly to rapid and effective implementation of major initiatives, primarily nature-friendly farming, where late, slow or partial delivery will lead to overall failure; and
- make clear and make public who is accountable, how decisions are made, and how delivery of the EIP 2023 will be assured across all levels of government and wider society.

The Office for Environmental Protection's 2024 assessment of meeting the government's goals for environmental improvement

Environmental Improvement Plan 2023 areas	Environmental Improvement Plan 2023 goals	Overall prospects of meeting ambitions, targets and commitments
The apex goal	Goal 1: Thriving plants and wildlife	Off track
Improving environmental quality	Goal 2: Clean air	Partially on track
	Goal 3: Clean and plentiful water	Off track
	Goal 4: Managing exposure to chemicals and pesticides	Off track
Improving our use of resources	Goal 5: Maximise our resources, minimise our waste	Off track
	Goal 6: Using resources from nature sustainably	Off track
Improving our mitigation of climate change	Goal 7: Mitigating and adapting to climate change	Off track
	Goal 8: Reduced risk of harm from environmental hazards	Partially on track
Improving biosecurity	Goal 9: Enhancing biosecurity	Off track
Improving the beauty of nature	Goal 10: Enhancing beauty, heritage and engagement with the natural environment	Not assessed

Assessment rating	Overall prospects
Green	Largely on track
Yellow	Partially on track
Red	Largely off track
Grey	Not assessed

Notes

- 1 The OEP's assessment was published in January 2024 and covers the 2022-23 period.
- 2 This figure has been simplified from the original.
- 3 The evidence base needed to assess progress towards 'improving the beauty of nature' is under development and so the OEP did not assess the overall prospects of achieving this in its report.

Source: National Audit Office analysis of information published in Office for Environmental Protection, *Progress in improving the natural environment in England 2022-23, 2024*

Section 11:

Progress in environmental protection *continued*

Key findings from our audit work on environmental protection

Implementing statutory biodiversity net gain (May 2024)

Statutory biodiversity net gain (BNG) requires developers to leave habitats for wildlife in a measurably better state than they were before the development. Defra prioritised launching the policy, accepting some significant risks to its effectiveness. There is a long way to go before Defra can be confident that damage to biodiversity through development will not be understated and that the benefits of biodiversity enhancements will be delivered. For its market-led approach to work, Defra needs the market to scale up to meet demand, and for statutory biodiversity credits to deliver biodiversity when the market fails to do so. Local authorities manage many aspects of statutory BNG through the planning process, including ensuring compliance and enforcement. For now, there is doubt about whether local authorities will be able to discharge these duties effectively.

Planting Trees in England (March 2022)

In 2021-22, Defra launched seven new grant schemes and partnerships for planting trees, working quickly under challenging circumstances. We found that, despite its efforts, the amount of new tree-planting looked to be well short of original expectations. This increased the challenge for government to achieve its 2025 and future tree-planting targets required for the net zero strategy. Defra had not done enough to establish what was required in order to set up a sustainable increase in tree-planting to achieve the 2025 target.

Improving the UK's science capability for managing animal diseases (June 2022)

We found that Defra had allowed facilities at Weybridge, the UK's primary site for managing threats from animal diseases, to deteriorate. As it transforms the site, Defra needs to manage several risks. Failure to do so could limit the UK's ability to respond effectively to a major disease outbreak.

The government's resources and waste reforms for England (June 2023)

In December 2018 the government published [Our Waste, Our Resources: A strategy for England](#). It set strategic long-term ambitions to reduce waste and make more efficient use of raw materials – which is key if it is to decarbonise the waste sector given household recycling rates in England have stalled since 2011-12. We found that four and half years on, Defra was delivering some projects and planning others, but it did not know what it needs to do to achieve its ambitions over the long term. It was not able to effectively assess overall progress because of weaknesses and limitations in its performance information. The main reforms it had taken forward on collection and packaging had been delayed. Defra took too long to put in place essential elements of good programme management, and some elements are still lacking. A lack of clarity had made it hard for businesses and local authorities to prepare for the changes they will need to make.

Look out for: Defra's roadmap to move Britain to a zero-waste economy.

Tackling local breaches of air quality (June 2022)

The UK has legal air quality limits for major pollutants at both a local and national level. Most of these have been met, except for nitrogen dioxide (NO₂), for which there have been long-standing breaches. We found that progress had been made, with measures to reduce NO₂ fully implemented in 14 local authorities and four sections of the Strategic Road Network. However, the NO₂ Programme has not moved as fast as expected and, because of limited action tackling the challenges on major roads and motorways, compliance is not expected until after 2030. For other pollutants, it was not clear how it will meet existing 2030 ceiling limits.

12 Progress towards achieving net zero

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In its 2024 report to Parliament, the Climate Change Committee (CCC) reported that between 1990 and 2022, UK emissions fell by 50% (47% if emissions from international aviation and shipping are included). All sectors of the economy, apart from aviation, have reduced emissions although the size of the reduction varies considerably.

To help manage the reduction in greenhouse gas emissions required to reach net zero by 2050, the government sets five-yearly carbon budgets which set out the amount that the UK can emit in each period. Reductions to date mean that the UK has achieved its first, second and third carbon budgets.

However, in 2024, CCC set out that emissions reductions across most sectors will need to significantly speed up and will need to outperform the legislated fourth and fifth carbon budgets for the UK to be on a sensible path to achieve net zero by 2050. CCC identified that most of the emissions reductions seen to date were from energy supply sectors. Looking forwards, more than three-quarters of the required emissions reductions for the next carbon budgets are expected to come from other sectors. Specifically, contributions from transport, buildings and agriculture need to accelerate fast. In 2023, the CCC noted that in agriculture and land use there has been no progress in reducing emissions in the last decade, with significant risks and policy gaps.

In May 2024, the High Court found that the previous government's updated plan to meet carbon budget targets did not comply with certain duties under the Climate Change Act.

Look out for:

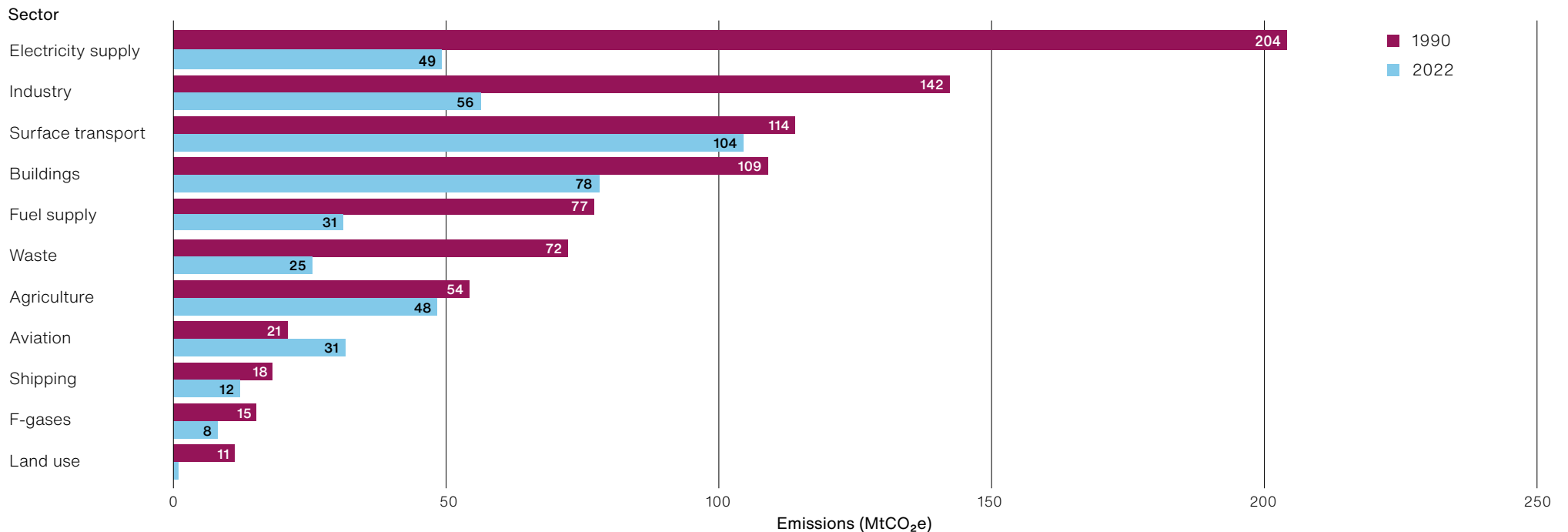
- In 2025, the CCC will advise the UK on its seventh carbon budget, the legal limit for UK net emissions over the years 2038 to 2042.
- The current government is required to publish a new climate strategy by May 2025.
- Defra's promised Land Use Framework has not been published. This is expected to map the proportion of land currently used for different activities, such as housing, agriculture, forestry and nature conservation, and set out how these proportions will need to change to meet statutory targets.



Section 12:

Progress towards achieving net zero *continued*

UK emissions by sector, 1990 and 2022



Notes

- 1 This figure is based on information presented in the Climate Change Committee's 2024 report, which draws on data published by the Department for Energy Security & Net Zero (DESNZ), available at: <https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fmedia%2F65ff114a65ca2ffef17da7a6%2Ffinal-greenhouse-gas-emissions-tables-2022.xlsx&wdOrigin=BROWSELINK>
- 2 In March 2024, DESNZ published a provisional update to these data, showing estimated emissions reduction in 2023, available at: www.gov.uk/government/statistics/provisional-uk-greenhouse-gas-emissions-national-statistics-2023
- 3 Electricity supply includes emissions from coal, petroleum, gas and solid waste power stations; Industry includes emissions from onsite combustion for industry and fossil-fuel extraction plus various industrial processes; Surface transport includes emissions from road and rail transport; Buildings includes emissions from combustion of fossil fuels for heating and cooking; Fuel supply includes emissions from oil, gas and coal and nuclear production processes; Waste includes emissions from landfill and waste-water handling; Agriculture includes emissions from livestock, fertilisers, machinery and agricultural processes; Aviation and Shipping includes civil and military domestic activities; F-gases includes emissions due to certain fluorinated gases used in industry and for refrigeration; Land use includes a combination of positive sources of emissions and negative sinks of emissions.
- 4 Emissions from international aviation and shipping are excluded here as they are not included in the UK's Nationally Determined Contribution (NDC) to the Paris Agreement to reduce emissions. Although not covered by the NDC, emissions from international aviation and shipping must also be managed to meet future carbon budgets.

Source: National Audit Office Analysis of Department for Energy Security & Net Zero data

Section 12:

Progress towards achieving net zero *continued*

Key findings from our audit work on reducing greenhouse gas emissions and delivering net zero

The government's support for biomass (January 2024)

Since 2002, the government has provided more than £20 billion of financial support for businesses and households using biomass for power and heat because of its potential to be a low-carbon alternative to fossil fuels. It is relying on biomass, in combination with Carbon Capture, Usage and Storage (CCUS), to make a significant contribution to its net zero goals. For biomass to fulfil this role the government needs to be confident that the industry is meeting high standards of sustainability.

We found that current monitoring arrangements rely on a combination of information provided by generators, third-party certification schemes and limited-assurance audit reports. The lack of an evaluation of how effective these arrangements have been, particularly given the long supply chains involved, means in our view that the government cannot demonstrate that its current arrangements are adequate to give it confidence industry is meeting sustainability standards.

Since our report, Ofgem and DESNZ have commissioned reviews of the existing assurance process.

Support for innovation to deliver net zero (May 2023)

The government expects research and innovation to play a crucial part in the UK achieving net zero. The government's Net Zero Research and Innovation Framework (2021) provided stakeholders with a clear steer on the main innovation priorities and timescales. The Delivery Plan (2023) mapped out the estimated £4.2 billion of net zero research and innovation public sector funding to 2025 for the first time.

We found that the government needs to do more to ensure value for money from this investment.

- It had not considered the level of longer-term public sector investment needed up to 2050 to support delivery of the innovation challenges in the 2021 Framework.
- The complexity of public sector funding will make it hard for the government to track spending.
- A lack of clarity remains over who is responsible for overseeing end-to-end progress across the innovation system priority areas, what success will look like at key milestones, and what the government's risk appetite is in supporting the different priorities within the innovation portfolio.

Approaches to achieving net zero across the UK (September 2023)

This report sets out the UK and devolved governments' legislation, policy, strategy, governance and monitoring arrangements, relevant to achieving net zero.

Our findings included:

- The four nations have different emissions profiles and varied approaches to achieving net zero, but the choices they make must ultimately deliver net zero at the UK level.
- Given the different net zero targets, carbon budgets and policies across the nations, there will be opportunities for the governments to learn from each other.
- Effective working relationships and close engagement between the UK and devolved governments will be vital to achieving net zero.

Decarbonising the power sector (March 2023)

In 2021, the government set an ambition that by 2035 all electricity should be generated using clean sources, subject to security of supply, while meeting an expected increase in electricity demand of up to 60%.

We found that to achieve government's ambition requires a step-change in both private investment and pace at which new generating capacity is built, and that the power system needs to modernise to accommodate renewable electricity generation. Decarbonising power requires the government to increase its planning and coordination of the power system. It has not established a delivery plan, which increases the risk it does not achieve its ambitions, or does so at greater than necessary cost to taxpayers and consumers.

Section 12:

Progress towards achieving net zero *continued*

Decarbonising home heating (March 2024)

Decarbonising home heating represents one of the biggest challenges to achieving net zero, requiring almost all households to engage in the transition. In October 2021, the previous government published its Heat and Buildings Strategy. The strategy made a range of commitments aimed at developing markets and consumer choices for heat pumps and heat networks, and stated the previous government's ambition to end the installation of new fossil fuel boilers by 2035.

Findings include:

- Aspects of the Department for Energy Security & Net Zero's (DESNZ's) overall pathway remain unclear, particularly as DESNZ works towards determining the role of hydrogen in home heating.
- DESNZ needs to get to grips with other longer-term challenges, such as the future of the gas networks and plans for reaching harder-to-decarbonise homes, to ensure it has a clear, enduring plan that maximises the value of public and private investments in the transition.
- DESNZ's progress with encouraging households to install heat pumps has been slower than planned because costs remain high and public awareness remains low.

Carbon Capture, Usage and Storage programme (July 2024)

The previous government saw CCUS as central to achieving net zero by 2050. CCUS can potentially address several challenges to decarbonising the economy, such as in the power sector, and may be the only practical way to decarbonise some industries, such as cement production. DESNZ and the CCC have described CCUS as being "essential" to achieving net zero.

Some of the report conclusions include:

- The previous government did not have and was not developing a credible alternative pathway without the use of CCUS. In this context, it is critical that DESNZ succeeds with its CCUS programme if the UK is to achieve its legally binding climate ambitions.
- Completing negotiations to support the Track-1 projects, the first phase of the CCUS programme, will be a very significant milestone in signalling the programme's commercial feasibility and the government's commitment to CCUS. Achieving this may require the government to accept that some risks can only be partly mitigated, including higher costs to support early projects.

Upcoming NAO work

Achieving environmental improvement and responding to climate change: enablers for success. This report will pull together challenges and insights from our published works on net zero and environmental topics to identify recurring issues that the government should consider.

The electric vehicle infrastructure strategy. This report will examine whether the government, led by the Department for Transport (DfT), is achieving value for money in supporting the rollout of electric vehicle infrastructure.

Supporting the UK's priority industry sectors. This report will examine whether the Department for Business and Trade is well positioned to secure impact from its support for priority industry sectors, including how it works with other departments and delivery partners to deliver policy challenges such as net zero.

13 Progress on adapting to climate change

The UK is already experiencing the impacts of climate change and, even if net zero is achieved globally, our climate will continue to warm in the short term. The government recognises that the UK will need to adapt.

Expert analysis commissioned by the Climate Change Committee (CCC) in 2021 set out that several of the climate threats identified by the government have high economic costs amounting to billions of pounds each year by as early as the middle of this century.

There is no legally binding target for adaptation. However, the Climate Change Act (2008) requires the government to develop a National Adaptation Programme (NAP) to manage the effects of unavoidable climate change, with each NAP setting out key actions over a five-year period.

In 2023, CCC reported on the government's progress on climate action. It found that the second NAP (covering 2018 to 2023):

- did not adequately prepare the UK for climate change, with the current approach to adaptation policy not leading to delivery on the ground and significant policy gaps remain – no sectors are yet well adapted to the risks of climate change (see figure on the right); and
- did not address risks identified in the government's Climate Risk Assessment, suffered from a lack of ambition, and did not embed a focus on adaptation delivery across government.

In July 2023, Defra published its third NAP for the period 2023 to 2028. This sets out what the government and others will be doing to be ready for the challenges of climate change in the UK.

Look out for:

The CCC's report on the government's progress on climate action in 2025.

Climate Change Committee's overview of assessed adaptation outcomes



Source: Climate Change Committee, *Progress in adapting to climate change 2023 report*, 2023

Section 13:

Progress on adapting to climate change *continued*

Key findings from our audit work on adapting to climate change

Resilience to flooding (November 2023)

Findings include:

- The government wants to achieve greater resilience to flooding in the long term but has no measure for resilience and no target for the level of flood resilience it expects to achieve.
- By 2027, the capital programme is likely to provide better protection to around 40% fewer properties than originally planned and there are several risks, meaning it could deliver even less than this.
- The Environment Agency's (EA's) past attempts to accelerate projects have increased costs and delays, and this remains a risk for the programme.
- A key reason for properties being exposed to additional flood risk is due to a shortfall of £34 million in the EA's maintenance funding for 2022-23. Defra and the EA did not explore with HM Treasury the potential to use part of the capital budget underspend to address the shortfall in maintenance funding in 2022-23.

Government resilience: extreme weather (November 2023)

This report concluded on how well prepared the country is for future extreme weather events, focusing on droughts, high temperatures and heatwaves, surface water flooding and storms. Findings include:

- The government has yet to set out what outcome it was looking to achieve in managing risks of extreme weather, and its risk appetite. It needs to increase its focus on reducing these risks.
- Given the dynamic nature of risks over the medium and long term, even where the government makes improvements, they may not be keeping pace with changes in climate risk.
- The government does not know how much is being spent on managing extreme weather risks.
- The challenge for the government now is how it places sufficient emphasis on prevention and preparedness, making informed decisions about prioritisation to ensure efficient and effective investment in the long term.

14 Greening Government Commitments

Since 2011, the Greening Government Commitments (GGCs) have set actions to help government departments and their agencies reduce their environmental impact. GGCs are usually published in five-year periods; the most recent commitments are an exception due to COVID-19 and cover 2021 to 2025. Defra is working with departments to finalise the next round of commitments for 2025-30 which will apply from April 2025.

Government's reporting of GGC progress

Until 2021, progress made against the GGCs was measured against a 2009-10 baseline. The 2021 to 2025 GGCs will be measured against a 2017-18 baseline. The government committed to report annually on its progress against the GGCs. However, it has not published any progress reporting for the 2021 to 2025 GGCs.

In 2022 we published a report on [Measuring and reporting public sector greenhouse gas emissions](#). We found that central government departments had reported progress in reducing their direct emissions over the past decade and that GGCs had broadly provided a stable framework within which departments can measure and report progress. However, GGCs do not cover all public sector emissions and there are inconsistencies in which bodies are and are not reporting. There is a patchwork of different measurement and reporting frameworks for climate and environmental metrics and targets across the public sector. We found that more active leadership is needed from the centre of government to strengthen management of the measurement and reporting regime.

The 2021 to 2025 Greening Government Commitments

Commitment	Headline target (2021 to 2025)
Reduce water consumption	Reduce water consumption by at least 8%.
Reduce greenhouse gas emissions	Reduce overall greenhouse gas emissions. Reduce direct greenhouse gas emissions from estate and operations.
Minimise waste and promote resource efficiency	Reduce the overall amount of waste generated by 15%.
Improve sustainable procurement	Continue to buy more sustainable and efficient products and services with the aim of achieving the best long-term, overall value for money for society.
Develop nature recovery plans	Departments and partner organisations with the greatest potential to improve biodiversity should develop and deliver nature recovery plans for their land, estates, development and operations. All other departments and partner organisations should consider what they can do to support the government's commitment to improve nature and develop and deliver nature recovery plans for their organisations, where suitable.
Develop and deliver climate change adaptation strategies	Develop an organisational climate change adaptation strategy across estates and operations. <ul style="list-style-type: none"> • Departments should conduct a climate change risk assessment across their estates and operations to better understand risk and to target areas that need greater resilience. • Departments should develop a climate change adaptation action plan, including existing or planned actions in response to the risks identified.
Reduce environmental impacts from ICT and digital services	Departments should report on the adoption of the <i>Greening government: ICT and Digital Services Strategy 2020 to 2025</i> and associated targets and ensure they provide membership to the sustainable technology advice and reporting team, who manage and deliver the GGCs ICT reporting.

15 Climate-related financial disclosures

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Central government departments are required to include sustainability reporting in their annual report and accounts. The purpose of this reporting is to provide transparency on public sector annual performance on sustainability. It includes, but is not limited to, a requirement to report on their greenhouse gas emissions.

HM Treasury, in collaboration with other relevant authorities, considers developments by international standards setters and legislation and regulation in the private sector to maintain high quality and comparable annual reports and consistency across the wider public sector.

In 2015, the Task Force on Climate-Related Financial Disclosures (TCFD) was established to develop recommendations for more effective climate-related disclosures to promote more informed decisions and enable better understanding of carbon-related assets and exposure to climate-related risks. In 2017, TCFD published its recommendations, which included four widely adoptable recommendations across four thematic areas:

- governance;
- strategy;
- risk management; and
- metrics and targets

Since 2010-11: Government departments are required to report information in their annual reports, closely aligned to the GGCs. Guidance on this sustainability reporting is provided by HM Treasury. In 2022, our report [Measuring and reporting public sector greenhouse gas emissions](#) found patchy compliance with HM Treasury sustainability reporting guidance.

Government departments are required to phase in reporting on the thematic areas recommended by TCFD through Climate Related Financial Disclosures, which will set out climate-related risks and opportunities, as follows:

- **from 2023-24 onwards:** Governance.
- **from 2024-25 onwards:** Risk management; Metrics and targets.
- **from 2025-26 onwards:** Strategy.

NAO work on the sustainability of government departments

We have produced seven sustainability overviews covering how different government departments are fulfilling their sustainability remit.

2013: [Business, Innovation & Skills](#)

2014: [Home Office](#)

2015: [NHS](#)

2016: [Department for Transport](#)

2017: [Ministry of Justice](#)

2019: [Ministry of Defence](#)

2023: [Department for Education](#)

Recurring challenges that we have identified in these overviews include:

- identifying and focusing on what matters most;
- senior level oversight/ engagement; and
- data/monitoring limitations, particularly for sustainable procurement.

Our [climate change risk good practice guide](#) helps support and challenge senior management in their approach to managing climate-related risks.