



HM Government

Government response to the Climate Change Committee

2023 report to Parliament – progress in adapting to climate change

HC 1943

Presented to Parliament pursuant to Section 37 of the Climate Change Act 2008

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Contents

Executive summary	4
Introduction	6
Response to recommendations	8
Priority recommendations	8
All other recommendations	15
Nature	15
Working lands and seas	18
Food	20
Water supply	22
Energy	23
Telecoms and ICT	26
Transport	27
Towns and cities	29
Buildings	32
Health	35
Community	36
Business	37
Finance	41
Glossary	48

Executive summary

In July 2023 the UK Government published its third National Adaptation Programme, setting out a commitment to take clear and decisive action over the next 5 years to maintain our country's resilience to the impacts of climate change.

This report sets out the progress government has made over the past 2 years in adapting to climate change, in line with the CCC's recommendations. Key actions include:

- **Nature** – 13 Environment Act long-term targets, accompanied by shorter interim targets, to drive long-term improvement in nature and the environment. Defra has set interim biodiversity targets for 2028 that embed consideration of adaptation into their delivery, including to restore or create 140,000 hectares of wildlife-rich habitats outside protected sites, compared to 2022 levels.
- **Working lands and seas** – designation of the first 3 Highly Protected Marine Areas (HPMAs) in England, granting the greatest protection in our seas. Through our £270 million Farming Innovation Programme, we are working with farmers, growers and the research community to develop innovative methods and technologies such as carbon-capture cropping and precision breeding for crops and livestock.
- **Food security** – putting food security at the heart of the government's vision for the food sector through the government's food strategy.
- **Water supply** – producing regional water resources plans for the first time to inform Ofwat's 2024 Price Review and bring collaboration between water companies.
- **Energy security** – DESNZ will designate parties responsible for the maintenance of energy sector codes and standards with a clear mandate to build climate and weather resilience by 2024.
- **Telecommunications and ICT** – DSIT is developing a stronger risk management framework for data centres and data storage and processing infrastructure, and will consult industry on this in due course.
- **Transport** – DfT is developing a transport adaptation strategy and will seek to consult on this strategy by the end of 2023.
- **Towns and cities** – helping local planning authorities and developers to create or improve green and blue infrastructure at a local level through the Green Infrastructure Framework: Principles and Standards for England.
- **Buildings** – a new DESNZ Homes for Net Zero research programme to provide ongoing monitoring and longitudinal data on temperature in a representative sample of the existing building stock. The second phase of this project aims to provide a testbed to monitor the effectiveness of different overheating adaptation measures.
- **Health** – National Health Service (NHS) Green Plans are in place for all NHS Trusts and Care Boards, setting out key plans for sustainability and climate

resilience. Guidance for NHS Green Plan development will be updated next year, including strengthening existing climate adaptation provisions.

- **Business** – DBT will publish the Critical Imports Strategy this year, to strengthen our ability to respond to threats to critical imports, such as from the impacts of climate change.
- **Finance** – delivering the Green Finance Strategy 2023, which sets out a range of actions being taken to protect the financial system from climate-driven impacts and to attract private investment into adaptation.

Introduction

We are already seeing the impacts of climate change across the globe (IPCC, 2022), with observed increases in the frequency and intensity of extreme weather events. Even with global targets to reduce greenhouse gas emissions, it is still necessary to adapt structures and systems to reduce the impacts of climate change. This includes critical infrastructure, the built and natural environments, water use and food production.

The Climate Change Act 2008 provides a legally binding framework to cut UK greenhouse gas emissions as well as a framework for building the UK's ability to adapt to a changing climate. This framework allows us to track the diverse and challenging set of climate risks our country faces and to develop a co-ordinated response to the challenges.

In terms of adapting to climate change, the Act requires:

1. **A UK-wide assessment every 5 years of the risks and opportunities for the UK arising from climate change.** The [third UK Climate Change Risk Assessment \(CCRA3\)](#) was published in 2022 and outlines the UK and devolved governments' views on the key climate change risks and opportunities that the UK faces today.
2. **A programme for climate change adaptation to address the risks identified in the CCRA to deliver resilience to climate change on the ground.** [The third National Adaptation Programme \(NAP3\)](#) was published in July 2023, setting out the UK government's objectives, proposals and policies for responding to the risks and opportunities identified in CCRA3.
3. **A strategy for the use of Adaptation Reporting Power (ARP)** to invite or direct organisations, such as infrastructure operators and key public bodies, to report on their climate change risks and what they are doing to address them. The fourth ARP strategy was launched alongside NAP3 and the government will be inviting organisations to report by the end of 2024.

The Climate Change Committee's (CCC's) 2023 Progress Report on Adapting to Climate Change was published at the end of the NAP2 cycle, running from 2018 to 2023, alongside its annual assessment on progress towards emissions reduction targets.

This response addresses the CCC's recommendations and highlights a range of important developments which will support the implementation of NAP3.

Alongside the implementation of NAP3, the government is preparing CCRA4 for publication in 2027. It will focus on improved economic analysis of climate change and

assessing the effectiveness of adaptation actions, as well as a spatial assessment to inform climate change action and provide local-level climate risk data.

Response to recommendations

Here the government provides detailed responses to each of the CCC's recommendations made in the Progress Report.

Priority recommendations

1. Set interim adaptation targets to drive early action to improve climate resilience of nature, enable progress assessments, and secure adequate resources (including for green jobs and skills) to facilitate delivery of the targets (2023). (Defra)

The government has set interim targets to help deliver our long-term biodiversity targets. These interim targets, for 2028, are:

- to restore or create 140,000 hectares of wildlife-rich habitats outside protected sites, compared to 2022 levels
- to have an up-to date condition assessment for all Sites of Special Scientific Interest (SSSIs)
- 50% of SSSIs to have actions on track to achieve favourable condition

In addition, our target to halt the decline in species abundance by 2030, will drive early, wide-ranging action. This action will increase resilience to climate change and provide more robust species populations.

The government set up the Green Jobs Delivery Group to deliver the workforce needed to achieve our climate and nature goals. We are publishing a joint government and industry Net Zero and Nature Workforce Action Plan in 2024.

2. The Land Use Framework should address the trade-offs and co-benefits of multifunctional landscapes to benefit climate mitigation, adaptation, food security, nature recovery, timber, recreation and rural livelihoods (2023). (Defra)

The planned Land Use Framework will consider how multifunctional, resilient, and productive landscapes can support multiple outcomes, recognising the importance of natural capital.

The Framework document will be supported by spatial evidence and analysis to help make the most of our diverse natural capital across the landscapes of England.

3. Extend the scope of the fourth round of the Adaptation Reporting Power (ARP4) to include food supply chains (2023). (Defra)

The government published its strategy for the fourth round of reporting under the Adaptation Reporting Power (ARP4) as part of the third National Adaptation Programme

(NAP3) in July. In it we set out our approach to inviting organisations in the agriculture and food sector to report on how they manage climate risk and the actions they are taking to build resilience.

Not all organisations with a role in food supply chains are formally eligible to report. We are working to identify suitable organisations that fall within the scope of the power and have a leadership role in the sector. Private companies such as supermarkets and hauliers are in scope of other climate adaptation reporting regimes where they meet the eligibility requirements, such as company climate risk disclosures. Invitations to report in ARP4 will be issued when we launch the process in late 2023. Ineligibility for a formal invitation does not preclude other bodies from reporting voluntarily.

4. Ensure sufficient investment, resources and progress monitoring to support delivery against water demand reduction and water leakage targets, given the significant gap between targets and progress (Ongoing). (Defra)

We have committed to transforming the management of our water system to secure a healthy water environment, and a sustainable supply of water for people, businesses and nature. Defra works closely with Ofwat, the Environment Agency and Natural England to ensure progress against the targets set on leakage and use of public water supply.

In April, the government published its Plan for Water, and has committed to a legally binding target to reduce water use by 20% per person by 2038. The government is confident that the measures outlined will close the demand gap. The Plan for Water reaffirmed the commitment that all fines will be channelled into a Water Restoration Fund. It also committed to over £2.2 billion of new, accelerated investment which will be directed into vital infrastructure to improve water quality and secure future supplies, including to speed up delivery of 462,000 smart meters. The government also reaffirmed its commitment to rollout the Mandatory Water Efficiency Label by 2025 in its recent consultation response. Ofwat is consulting on their £100 million fund for water efficiency in the 2024 Price Review (PR).

Ofwat sets water companies' performance commitments at the beginning of each PR period, and these are aligned with the long-term targets on leakage and demand reduction. Updates are provided through annual reporting on the delivery of companies' Water Resources Management Plans. Ofwat can impose financial penalties if companies do not meet expected performance for each performance year. These measures will save an estimated 1,200 million litres of water a day.

5. Designate Ofgem and parties responsible now and in the future (including the new Future System Operator) for the maintenance of energy sector codes and standards, with a clear mandate to ensure climate and weather resilience (2024). (DESNZ)

As set out in the publication of NAP3, DESNZ will designate parties responsible now and in the future for the maintenance of energy sector codes and standards with a clear mandate to ensure climate and weather resilience by 2024.

DESNZ is consulting on a series of resilience roles and responsibilities for the Future System Operator (FSO) that will include advising on the development of resilience standards for climate and weather resilience. These roles and responsibilities will be mandated in the Licence Conditions for the FSO.

6. Develop a set of indicators to enable monitoring of the impacts of weather and climate on telecoms and ICT services and the actions being taken to manage them, and designate Ofcom with a statutory remit for climate resilience (2025). (DSIT)

The government is expanding the range of data and guidance available to the public and businesses on tackling climate change risk. Ofcom has published guidance for all communication providers, explaining the types and sizes of incidents expected to be reported for them to comply with their regulatory obligations.

Ofcom has agreed a reporting process with each of the four UK mobile operators, based on their individual definitions of a “major service failure” (MSF). Network MSFs are incidents which have a significant impact on the network and are raised to senior management within the operators. The exact details of an operator’s MSF criteria are commercially sensitive. Ofcom is working with mobile operators to make reporting more consistent with reporting required on the fixed networks.

DSIT will engage in supporting development of monitoring and evaluation for telecoms and data infrastructure resilience.

7. Extend the scope of the next round of the Adaptation Reporting Power (ARP4) to cover local authority functions related to road infrastructure, ports, airports, and key supply chain organisations (2023). (Defra, DfT and DLUHC)

The government will pilot climate adaptation reporting by local authorities in the fourth round of reporting under the Adaptation Reporting Power (ARP4). This will launch later this year, with reports due by the end of 2024. The guidance for reporting has been co-designed by Defra and a group of volunteer local authorities. It takes an agnostic approach to the local assets and services that should be considered in risk assessments, given the varying range of responsibilities, assets and capacity in each local authority. However, guidance on the areas that reports might usefully cover, according to the type of local authority preparing the report, is included. Transport and supply chains form part of this.

Our strategy for ARP4 also includes working with the relevant authorities and industry associations to increase reporting by ports and the aviation sector. Major ports and airports will be invited to report individually.

8. Planning policy should be reformed to ensure that climate resilience is a priority, with mandatory adaptation interventions on all built-environment project applications (2024). (DLUHC)

The National Planning Policy Framework (NPPF) sets out the government's planning policies and subsequent application. The NPPF is clear that plans should take a proactive approach to adapting to climate change, and that new development should be planned for in ways that avoid increased vulnerability to the range of impacts arising from climate change.

DLUHC's [‘Levelling-up and Regeneration Bill: reforms to national planning policy’](#) consultation (which closed March 2023) sought views on the proposed approach to updating the NPPF. The government will carry out a fuller review of the NPPF following royal assent of the Levelling-Up and Regeneration Bill, in line with the Net Zero Strategy, to make sure to make sure it contributes to climate change mitigation and adaptation as fully as possible.

The government will use the NPPF and sector-specific National Policy Statements to provide guidance for new infrastructure proposals at both the local authority and government levels.

9. Expand the Part O Building Regulation requirement to cover refurbishments of existing buildings, conversions of non-domestic buildings to residential, and prisons (2023). (DLUHC)

The Building Regulations contain minimum standards for the design and construction of new buildings and alterations to existing buildings to protect the health and welfare of building occupants. ‘Approved Document O’ was added to the buildings regulations in December 2021 and took effect in June 2022. The new requirement seeks to reduce the occurrence of high temperatures in new residential buildings including flats, houses and residential care homes.

The government will keep ‘Approved Document O’ and all building regulations under review in relation to further expansion to include additional buildings. We intend to consult on our approach to energy efficiency and overheating in homes created through a material change of use as part of our Future Homes Standard consultation.

10. Include community engagement activities (such as citizens assemblies) under NAP3 to put fairness at the centre of efforts to implement a vision for a well-adapted UK. This engagement programme should focus on exploring issues of fairness in some of the most challenging aspects of adaptation (eg coastal retreat) and in the provision of public funding for adaptation (2023). (Defra)

Through elections to the House of Commons, to the devolved legislatures and to local government, citizens are already represented in local and national assemblies. Additionally, Ministers already engage with a range of groups on this topic, including coastal communities, as part of their regular engagement activities. Other engagement has already happened through the Defra and UK Research and Innovation (UKRI) ScienceWise programme.

11. Work across government and with local authorities to develop a long-term cross-sector approach to address risks in the social care sector, including using appropriate levers to accelerate adaptation action, and ensuring that monitoring of overheating occurrences and air quality in care homes is undertaken frequently (2024). (DHSC)

The UK Health Security Agency's (UKHSA's) Adverse Weather and Health Plan is supporting the uptake of prevention actions across the health and social care sector and in local communities. DHSC and UKHSA will also work with the social care sector in 2023 to increase awareness of and mitigate the health risks of high temperatures to front line workers.

Care providers are responsible for monitoring day-to-day quality and safety in care homes, including overheating and air quality.

Under the Care Quality Commission's (CQC's) Single Assessment Framework, we will look at how providers 'detect and control risks in the care environment', including those relating to adverse weather events. Adaptation will also be looked at within the:

- quality statement 'governance, management and sustainability' - specifically on business continuity and severe weather plans including overheating
- key question of 'Well Led' - meaning information on risks, performance and outcomes is used to effectively improve care by leaders and effective governance and management systems

If CQC finds concerns affecting the quality of care during their assessments, the issues are raised with the provider or manager to ensure good quality care, and appropriate action taken if regulations are breached.

12. Strengthen adaptation reporting requirements across the Sustainability Disclosure regime and build on the work of the Transition Pathways Taskforce (on Net Zero-related corporate transition plans) to define common standards for what a high-quality adaptation transition plan should look like. This should include how relevant physical climate risks are measured and managed as well as how the plans would contribute to wider societal adaptation to climate change (2023). (HMT)

The government committed at COP26 to move towards mandatory transition plan disclosures in the UK. The Financial Conduct Authority (FCA) updated their guidance for asset managers, asset owners and listed companies on publishing transition plans in January 2022.

The government launched the Transition Plan Taskforce (TPT) in April 2022 to create a voluntary framework for firm-level transition plans. Alongside their core work on climate, the TPT has also set up nature and adaptation working groups to examine how adaptation, nature and biodiversity considerations could inform transition planning.

The TPT published its Disclosure Framework and associated guidance in October. This guidance is voluntary.

As the UK transitions to net zero, the government will also take action to prepare for the physical impacts of the changing climate, seeking to align finance flows with a climate resilient economy and increase investment in adaptation. Transition plans are a way that firms can manage adaptation and, through their disclosure, enhance market understanding of how firms are planning for this transition.

The FCA has now committed to consult on guidance that will set out their expectations for listed companies' transition plan disclosures at the same time as consulting on their policy approach in relation to the (UK-endorsed) International Sustainability Standards Board standards. They plan to develop their guidance with reference to the final outputs from the TPT and further consideration should be given on avoiding undue burdens on business, and minimising and consolidating corporate reporting burdens.

Given the important role of transition planning across the economy, we also committed in the updated Green Finance Strategy to consult later this year on how the UK's largest companies can most effectively disclose their transition plans.

The government will continue to take proactive steps to encourage other jurisdictions to encourage transition plan disclosure requirements in place. This will include encouraging consideration of the TPT's guidance. This guidance has built on the recommendations of the Taskforce on Climate-Related Financial Disclosures (TCFD) and the International Sustainability Standards Board standards and draws on the Glasgow Financial Alliance for Net Zero framework for credible, comprehensive and comparable net zero transition planning.

13. The refresh of the Green Finance Strategy in 2023, together with NAP3, should clarify where the Government expects adaptation actions to be funded through public sources and where private investment is expected. NAP3 should contain clear new funding commitments for investment in adaptation over the coming five year period and the breakdown across department budgets (2023). (HMT)

There is significant public investment underpinning the plans and policies in NAP3, such as the government's ongoing investment in flood and coastal schemes in England.

However, adaptation actions cannot be funded through public spending alone, and additional investment from the private sector will be required to support adaptation action over the coming decades. Indicative analysis produced for the CCC estimates that public and private sector adaptation investment needs could be as much as £10 billion per year this decade across all risks and opportunities identified in CCRA3.

The government has committed to support the flow of private finance into adaptation through the 2023 Green Finance Strategy. This includes work with private sector partners to improve the approach to climate resilience assessment and disclosure and supporting private and public collaboration to address barriers to investment, including through the UK Infrastructure Bank.

14. Set out, in NAP3, a national plan for managing interdependency risks, including clear and consistent responsibilities for climate resilience across sectors and mechanisms for cross-Government collaboration (2023). (CO)

The government will, over the course of NAP3 implementation, continue to strengthen the way it manages climate risk interdependencies to ensure that the benefits of coordinated action are fully realised. This includes exploring the use of cutting-edge developments in climate and impact modelling.

The government will continue to use the Critical National Infrastructure (CNI) Knowledge Base, a bespoke CNI mapping tool, and other analytical tools, to identify risks and interdependencies across and within CNI sectors, and to examine the impacts of cascading risks.

To drive cross-government action to increase UK resilience to climate change risks, the Cabinet Office and Defra have already established a new, senior officials Climate Resilience Board. The board oversees strategic, cross-cutting climate adaptation and resilience issues, including interdependent risks. This forum will work closely with existing cross-government climate governance, aligning climate adaptation to wider government priorities on net zero and the environment.

All other recommendations

Nature

15. The Retained EU Law Bill (REUL) should be strengthened by including an environmental non-regression safeguard. Implementation of the REUL programme should be supported by thorough and meaningful engagement and consultation with key stakeholders and technical experts across the UK (2023). (Defra)

The Retained EU Law Bill received royal assent and became an Act on 29 June 2023. The government uses expert advice, including that of many independent experts, when making provisions that relate to the environment.

16. The Environmental Improvement Plan goals should be mainstreamed across all Government departments responsible for their delivery, and trade-offs with competing policies should be mitigated (2024). (Defra)

The Environmental Improvement Plan (EIP) is a cross-government plan, reflecting the collective endeavour required to deliver the government's environmental goals. Defra will continue to work with all departments to:

- identify policy interventions required
- monitor performance
- manage risks
- identify opportunities and synergies across government

A cross government 25-year Environment Plan board, with representation from senior officials in contributing departments, oversees cross-government delivery. The board has been established since 2020 and has recently been strengthened to reflect the EIP and Environment Act 2021 Targets and Environmental Principles and duties.

Under the Environment Act 2021, government Ministers must have due regard to the Environmental Principles Policy Statement. This places a requirement to consider the environment at the heart of the full range of policy making across government when it comes into force on 1 November 2023.

The government must report annually on implementation of the EIP and review it at least every 5 years. The next annual report will cover the period up to 31 March 2024 and will consider progress made by responsible government departments across all EIP goals.

17. Defra must clearly link the multiple benefits delivered through meeting the new Environment Act (2021) targets to the suite of climate, environment and planning policies that support them (2024). (Defra)

The EIP23 sets out a comprehensive plan to deliver environmental improvements in England and, together with the statutory targets under the Environment Act 2021, the government has set out a long-term approach to improving the natural environment.

We have set stretching targets to tackle some of the biggest pressures facing our environment in:

- biodiversity
- water
- air
- waste
- trees
- Marine Protected Areas

Meeting these targets will require action across government, the economy and society. In turn this will support action to tackle climate change, restore our natural capital and protect our much-loved landscapes and green spaces. This action includes join-up across climate, environment and planning policies which will both support and be crucial in target delivery.

18. Defra should publish full details on how the Environmental Land Management schemes will support healthy ecosystems to build climate resilience, and the actions that reduce vulnerability to climate change that will be eligible for payments under the scheme (2023). (Defra)

The third National Adaptation Programme reiterated that climate adaptation is a priority for the new farming schemes. The government is building adaptation into the policy design of the Environment Land Management (ELM) schemes.

We published further information on ELM schemes in January 2023 (with a further update due before the end of 2023). In these updates we explain that by providing the services and goods that actions under ELM will deliver, farmers and land managers are contributing to our aims of achieving our climate outcomes and priority environmental targets. This includes adapting to climate change, alongside supporting viable businesses, maintaining food production at its current level, and achieving animal health and welfare outcomes.

The updates explained how different farmers and land managers, depending on their particular setting, can contribute to adaptation. For example, actions in the Sustainable Farming Incentive (launched in 2022) to improve the health and functionality of arable soils will provide benefits for adaptation through better soil structure for improved water retention, while actions to improve wetland habitats may contribute to drought resilience and coastal adaptation. We also specified where particular actions will bring significant adaptation benefits, such as managing hedgerows and establishing new hedgerow trees.

19. DLUHC should add an expectation in the National Planning Policy Framework that Local Plans and Design Guides support delivery of Local Nature Recovery Strategies (LNRs) and Natural England's Green Infrastructure Standards. It should ensure that the Environmental Outcome Reports provide equivalent or stronger protection for biodiversity than the current system (2023). (DLUHC and Defra)

Defra announced funding of £14 million to support 48 authorities in England responsible for developing LNRs. In addition, DLUHC has made amendments to the Levelling Up and Regeneration Bill. These will require spatial development strategies, local plans and neighbourhood plans to take account of local nature recovery strategies, to help the planning system play a more proactive role for nature and the environment.

DLUHC will undertake a full consultation on a revised NPPF and proposals for National Development Management Policies once the bill has completed its passage through Parliament. This review will consider what more can be done to:

- support environmental enhancement, nature recovery and climate change adaptation
- mitigate the effects of pollution
- embed the important reforms introduced by the Environment Act

The requirement to consider green infrastructure where new development comes forward is embedded in the National Model Design Code, which provides guidance on the production of design codes.

The Levelling Up and Regeneration Bill will secure powers to introduce a new system of Environmental Outcomes Reports. This legislation includes a clear commitment to non-regression and our recent consultation has highlighted the importance of biodiversity in the new system.

20. Government should adopt the recommendations for revised technical standards for Sustainable drainage systems (SuDS) in England, to ensure that SuDS are multifunctional systems that support biodiversity, improve water quality and provide green space for people (2024). (Defra)

The [review for making sustainable drainage systems \(SuDS\) mandatory](#) in new developments in England was published on 10 January this year. SuDS can provide a sustainable way to drain land, protect against surface water and sewer flooding, reduce storm overflow discharges, and harvest water, at the same time as enhancing local biodiversity and amenity.

The government has accepted the review's recommendations and is now looking at how best to implement Schedule 3 to the Flood and Water Management Act 2010 considering scope, threshold and process, while also being mindful of the cumulative impact of new regulatory burdens on the development sector.

Schedule 3 requires the minister to publish national standards for the implementation of sustainable drainage. It provides a framework for the approval and adoption of drainage systems. This will make the right to connect surface water to public sewers conditional on the drainage system being approved as meeting new mandatory multi-functional sustainable drainage standards for the design, construction, maintenance and operation of SuDS. This will help reduce volumes entering drainage networks, which will help ease the pressure on the sewerage system and mitigate flood risk as well as providing wider climate adaptation, biodiversity and amenity benefits.

Implementation is expected during 2024, following a public consultation.

21. The statutory requirements of marine plan policies should be extended to the decisions of public and private organisations (2024). (Defra)

We do not agree that there is a gap in protection as a result of private sector organisations not being legally required to consider the marine plan policies.

Under S58(1) of the Marine and Coastal Access Act 2009, public authorities must take authorisation or enforcement decisions in accordance with the appropriate marine policy document. For example, through the marine licensing process, applicants have to confirm they have taken account of marine plan policies. This information is considered by the Marine Management Organisation, including a more detailed consideration of alignment with marine plan policies, when determining an application for a marine licence. Other public authorities have similar processes.

22. Government should invest in social and ecological research to understand how best to work with people to restore nature and build resilience to the impacts of climate change and other pressures (2024). (Defra)

The government notes this recommendation, and Defra, alongside our arm's length bodies, will consider how research can inform our future work on climate resilience.

Working lands and seas

23. Defra should produce a strategy to ensure the agriculture sector remains productive under a changing climate, set targets for this and collect data to monitor success (2024). (Defra)

In the government's food strategy we committed to broadly maintain the current levels of food produced domestically, while exploring opportunities for growth. Defra is enabling this through its Agricultural Transition Plan (to be updated before the end of 2023), which sets out how we will support the adaptiveness, resilience and productivity of the agricultural sector to risks arising under a changing climate.

The Environmental Land Management schemes are the primary delivery vehicles to support farmers and land managers to take adaptation actions. Defra is also providing funding for equipment and infrastructure to support farmers to adapt to climate change,

addressing challenges such as heat stress in livestock, on-farm water storage and irrigation. Defra has passed legislation to reduce the regulatory barriers to precision breeding technology, which has the potential to deliver more resilient crops and livestock breeds.

Defra is engaged with initiatives to better understand and respond to the effects of climate change on agriculture. This includes our partnership with the Met Office Hadley Centre's Food, Farming and Natural Environment service, as well as significant investment in breeding research.

24. The Home Office should create and implement a cross-departmental strategy with external stakeholders to identify and mitigate risks of wildfire (2023). (Home Office and Defra)

The Home Office, as the lead government department for wildfire, will scope a Wildfire Strategy and Action Plan by mid-2024 across all themes in NAP3, supported by Defra, its agencies, the National Park Authorities and areas of outstanding natural beauty partnerships.

Defra, Natural England and the Environment Agency will commission wildfire research, including an England wildfire risk map and define effective wildfire risk reduction measures to help support a Wildfire Strategy and Action Plan.

25. Government should work with the private sector to enable more funding for building climate resilience for working lands and seas sectors, including (but not limited to) innovation, research and development (R&D), and jobs and skills (2023). (Defra)

Through our £270 million Farming Innovation Programme, we are working with farmers, growers and the research community to develop innovative methods and technologies. To date, work to build climate resilience includes carbon-capture cropping and innovation in livestock genetics. The recent £12.5 million Environmental Resilience competition aims to address the environmental challenges to plants, crops and farmed animals, with projects expected to start in early 2024.

Defra is funding Forest Research and the Forestry Commission to develop a Woodland for Water Code, to attract private finance into woodland natural flood management projects and develop more resilient landscapes.

The Fisheries and Seafood Scheme (FaSS) and the UK Seafood Fund (UKSF) supports the seafood sector to mitigate and adapt to climate change and contribute to net zero. The FaSS has funded activities such as energy efficiency audits and professional advice for businesses seeking to diversify into products that help to mitigate climate change or reduce emissions. The UKSF supports projects that will provide vital innovative research, improve infrastructure and replace or modernise engines to build a resilient and sustainable fishing industry that reduces emissions.

26. Government must strengthen policy and funding to restore coastal marine habitats by regulating bottom trawling, enforcing sustainable fishing quotas, and better protecting Marine Protected Areas to provide nursery areas to threatened commercial wild fish stocks (2024). (Defra)

We have committed that, where needed, all offshore Marine Protected Areas (MPAs) will have byelaws in place by the end of 2024 to protect them from damaging fishing activity. This will help deliver our new statutory target for 70% of the designated features in the MPA network to be in favourable condition by 2042. On 5 July, we implemented our first 3 Highly Protected Marine Areas (HPMA) which are being granted the greatest protection in our seas. HPMAs provide nature-based solutions, including carbon capture and storage, water purification and erosion protection, and nursery and spawning habitats for commercial species. In February 2023 we committed to exploring the identification of new sites.

The Joint Fisheries Statement and Fisheries Management Plans describe policies to mitigate the impact of fishing activity on benthic habitats. These are in the UK Marine Strategy programme of measures update to prevent fishing practices impacting biodiversity or seabed integrity.

Defra works with organisations including the Marine Management Organisation, Inshore Fisheries and Conservation Authorities, to enforce fisheries regulations and protect our waters. We agree annually a total allowable catch for over 100 stocks to limit the total uptake of each stock.

27. Defra should include a stretching and comprehensive soil health target as a priority in its forthcoming Soil Health Action Plan (2023). (Defra)

Under the EIP, Defra has committed to bring at least 40% of agricultural soils into sustainable management through our farming schemes by 2028.

Healthy soil is vital for food production, water regulation, biodiversity, and carbon storage, whilst being resilient to disturbances including flooding and drought. By linking to our farming schemes, we can tangibly measure against the uptake of actions that improve soil health.

Food

28. Set out specifically how the Government's food strategy will be implemented with regard to making UK food supply chains more resilient to climate risks. This should include improving data on current disruptions and future risks (2024). (Defra and DBT)

The government's Food Strategy puts food security at the heart of the government's vision for the food sector, aiming to broadly maintain the current level of food that we produce domestically and boost production in sectors where there are the biggest opportunities. At

the UK Farm to Fork Summit, we reiterated our commitment to maintain food production at current levels, where we produce domestically 60% by value of all the food we need.

Defra will next publish the triannual UK Food Security Report in 2024, including analysis of supply chain resilience. Defra engages with numerous initiatives to better understand climate impacts on the food system, including through partnerships with the Met Office Hadley Centre's Food, Farming and Natural Environment service.

UK food supply is dependent on the resilience of global supply chains. The government has published a [Safeguarding Supply toolkit](#), for businesses to consider when thinking about ensuring the resilience of their organizations' supply chains. This is based on DBT's [Supply Chain Resilience Framework](#), which highlights the five areas to explore when building resilience in supply chains, in the face of hazards, including climate shocks.

29. Uphold minimum environmental and climate standards for trade, which support the resilience of the food system as well as other Government goals such as Net Zero (as outlined in the National Food Strategy Independent Review) (Ongoing). (DBT, DESNZ, Defra)

The government is committed to upholding high environment and climate standards in trade. This includes continuing to work to increase the resilience of the food system and meeting our legal commitment to reach net zero greenhouse gas emissions by 2050.

Trade contributes to resilience by providing a diverse number of supply sources, improved business and consumer choice and healthy competition. Trade can also help to lower costs for environmental goods and services, supporting the global green transition.

We agree that regulations and standards relating to domestic production and imports also have an important role to play. For example, we committed to world-leading due diligence legislation for forest risk commodities through the Environment Act to help tackle illegal deforestation in the United Kingdom's supply chains.

30. Set out a clear Government vision on environmental and climate standards for trade in the upcoming 2030 Strategic Framework, setting out specific conditions that do more to ensure trade does not undermine our climate and environment objectives (2023). (DESNZ, DBT, Defra)

The 2030 Strategic Framework, published 30 March 2023, recognises the challenge of shifting trade and investment rules and patterns to support our climate and environment goals. The framework:

- makes clear that the UK will advocate for a rules-based international trade and investment system which supports efforts to decarbonise the global economy
- boosts resilience and halts and reverses biodiversity loss
- maintains a level playing field which can diversify and strengthen global supply chains, without undermining our collective transition to net zero

It sets out the specific actions that the UK will take to tackle this challenge. This includes strengthening the UK's position as a major market for environmental goods and services and using trade agreements to progress our climate and nature commitments.

The UK will also promote the development of sustainable trade through green and resilient supply chains, and support developing countries in adapting to climate change through trade. The Forest, Agriculture and Commodity Trade Dialogue group, for example, launched and co-chaired by the UK, brings together producers and consumers of internationally traded agricultural commodities to promote sustainable trade and development.

31. Launch a specific work programme to investigate how and where resilience standards might be developed and applied to food supply chains (2025). (Defra and CO)

As set out in the Resilience Framework, government departments will work throughout the NAP3 period and beyond to ensure existing regulatory regimes on resilience are fit for purpose. The government has also committed in the Framework to expanding the scope and use of standards and assurance for resilience, in the public sector, by 2025 and to introduce standards on resilience across the private sector, where these do not already exist, by 2030.

Water supply

32. Ensure emerging regional Water Resource Management Plans demonstrate increased connectivity and supply capacity in the parts of England that are projected to be water stressed under climate change and population growth (2023). (Defra)

The government is committed to a twin track approach to improving water supply resilience, which involves investing in new supply infrastructure and action to reduce water company leaks and improving water efficiency.

Water companies must account for economic growth, climate change projections and population increase in their water resources planning.

Regional and water resources management plans (WRMPs) will ensure secure supply. Regional water resources groups and water companies consulted on their draft plans earlier this year and a [summary of draft plans](#) is available on gov.uk.

The draft WRMPs contain proposals for new schemes supplying 10MI/d+ by 2050, including:

- 9 desalination schemes
- 9 reservoirs
- 11 water recycling schemes

- transfers to share water resources

33. Collate data from water companies on uptake of water efficiency measures as a national indicator (2025). (Defra)

Defra works with its regulators to collate annual data on water efficiency measures as part of water companies' commitments within their Water Resource Management Plans (for example smart metering rollouts), and through their Performance Commitments (for example on the average amount of water used per person each day).

Defra is supporting Ofwat to promote innovation within water efficiency. This includes supporting incentives for developers to build water efficient properties and a £100 million fund for water efficiency in PR24.

Defra will continue to support and collate data from pilots including a recent announcement to push for stronger water efficiency measures within Cambridge and utilise this data to strengthen efficiency nationally.

34. Require water companies to report weather-related interruptions to supply to Ofwat, and collate this as a national indicator (2025). (Defra)

Ofwat currently reports on water companies' performance against a series of performance metrics. This includes interruption to supply, and the number of times consumers contact companies about water quality. These are reported on annually, and companies who do not meet their performance commitments will face penalties.

Energy Security

35. Conduct a review of governance arrangements for resilience to climate hazards in the energy system, to ensure they are fit for the new expanded and more diverse low-carbon system given increasing societal reliance on electricity (2024). (DESNZ)

DESNZ will conduct an internal review of governance arrangements for resilience to climate hazards in the energy system by 2024 so they are fit for the new expanded and more diverse low-carbon system, given the increasing societal reliance on electricity. As an independent technical body, the Future System Operator (FSO) will have an ongoing role in the governance for resilience to climate hazards in the energy system.

36. Ensure that future system design explicitly plans for the range of climate hazards that will face the energy system over its lifetime (Ongoing). (DESNZ)

DESNZ will designate parties responsible now and in the future for the maintenance of energy sector codes and standards with a clear mandate to ensure climate and weather resilience. This will ensure that future system design accounts for climate hazards that will face the energy system over its lifetime.

The 2021 Ofgem and government joint consultation established collective commitment to proceed with the creation of the FSO as an expert, impartial body with an important duty to facilitate net zero whilst also maintaining a resilient and affordable system.

DESNZ is currently consulting on a series of resilience roles and responsibilities for the FSO that will include whole system risk identification, whole system emergency response and post event, post emergency and post season analysis. Each of these roles will inform future system design. These roles and responsibilities will be mandated in the Licence Conditions for the FSO.

37. Develop a pathway to setting appropriate minimum resilience standards (both at asset and system level) to relevant climate hazards identified in the UK Climate Change Risk Assessment (CCRA), covering all relevant parties (2028 latest). (CO and DESNZ)

As set out in the Resilience Framework, government departments (in this case DESNZ) will work with regulators and infrastructure operators to:

- ensure existing regulatory regimes on resilience are fit for purpose
- introduce standards on resilience and develop an action plan to deliver these across the private sector where they do not currently exist - the government recognises the need for standards to also account for unique sector landscapes, priorities, needs, and interlinkages between sectors

Lead government departments will work with regulatory bodies and infrastructure operators throughout the NAP3 period from 2023 to 2028 to implement the actions set out in the Resilience Framework relating to the review and implementation of public and private sector resilience standards.

The Future System Operator will, as an independent technical body, provide advice to government, Ofgem and wider industry on setting resilience standards to climate hazards identified in the UK Climate Change Risk Assessment.

38. Extend requirements for reporting on outages to include the cause, duration and customers affected for all outages, and collate this as a national indicator (2024). (DESNZ)

Ofgem is considering this recommendation and will decide by 2024 whether to extend requirements on reporting of outages.

39. Mandate reporting on climate risk and adaptation plans by all generators, network operators and regulators under the Adaptation Reporting Power (2023). (DESNZ and Defra)

Defra published its strategy for the fourth round of reporting under the Adaptation Reporting Power (ARP4) as part of the NAP3 in July, including our approach to reporting by organisations in the energy sector.

We (Defra and DESNZ) will work with Energy UK to determine a proportionate approach to reporting by energy generating companies across the whole sector (including renewables), building on the last round's sectoral overview. We will invite the companies responsible for electricity transmission and distribution in Scotland, England and Wales to report. We will invite the companies responsible for gas transmission and distribution in Scotland, England and Wales to report. We will invite the Energy Networks Association to update their sectoral overview. We will explore the potential to invite other major elements of the gas and electricity systems to report. We will invite Ofgem and other relevant regulators to report.

Given the compressed timescale for reporting, reporting in round 4 will remain voluntary. Defra will review this again ahead of round 5.

40. Coordinate a systematic assessment of risks posed from cascading impacts across multiple sectors due to failures of the decarbonised energy system as part of the next round of the Adaptation Reporting Power (2025). (Defra and DESNZ)

The FSO water resources management plan will identify cross-energy sector issues because it will take a whole energy system role to understand and plan system security and resilience across electricity and gas sectors and the interactions between them. The purpose of this is to provide whole energy system coordination and analysis, allowing independent, expert advice, analysis and information to government and Ofgem, alongside strategic coordination and preparation for emergencies across energy vectors. Depending on a number of factors, including agreeing timelines with key parties, our aim is for the FSO to be operational in 2024.

In addition, the Defra strategy for the fourth round of adaptation reporting recognises the challenge that interacting and cascading risks across different networks and systems pose. Adaptation reporting has the potential to be an important lever in addressing these risks, both by helping organisations to consider their own interdependency risks and by informing the national CCRA.

Capacity to assess such risks varies between organisations and sectors. Our guidance for ARP4 asks organisations to explain their approach to identifying and managing interdependencies, including on energy both now and in the future, and encourages them to include appropriate and proportionate details about them in their risk assessments and action plans.

41. Commission further research to improve understanding of how climate change is altering key weather hazards that will impact the energy system (Ongoing). (DESNZ)

The Climate services for a Net Zero resilient world (CS-N0W) programme funds research through to 2025 to improve understanding of how climate change is affecting weather hazards that can impact the energy system. CS-N0W aims to enhance the scientific

understanding of climate impacts, decarbonisation, climate action and improve accessibility to the UK's climate data.

Telecoms and ICT

42. Designate Ofcom with a statutory remit for climate resilience (2024). (DSIT)

Ofcom has an existing statutory remit in relation to security through the Communications Act 2003, under its general duties set out in section 3(4) of the Act. The duty requires Ofcom to “have regard to the desirability of ensuring the security and availability of public electronic communications networks and public electronic communications services”. The act was also amended by the Telecommunications (Security) Act 2021 to place another general duty on Ofcom (section 105M) to ensure public telecoms providers comply with their security duties. The definition of “security” in both instances is broad enough to encompass resilience as it relates to ensuring the confidentiality, integrity and availability of telecommunications networks and services.

This duty is intentionally threat, risk and vector agnostic so that Ofcom, and operators in relation to their corresponding security duties, can respond to the changing threat and risk landscape. Climate resilience is implicit within Ofcom's existing regulatory framework.

43. Specify outcomes and actions in NAP3 for Telecommunications and ICT resilience (2023). (DSIT)

NAP3 was published in July 2023 and includes actions to support the resilience of telecoms and ICT sectors.

44. Design a pathway to develop and implement minimum climate resilience standards for Telecommunications and ICT infrastructure (2026). (DSIT)

As set out in the 2022 UK Government Resilience Framework, government departments, including DSIT, will work with regulators and infrastructure operators to:

- ensure existing regulatory regimes on resilience are fit for purpose
- expand the scope and use of standards and assurance in the public sector to support better contingency planning and risk management
- introduce standards on resilience and develop an action plan to deliver these across the private sector where they do not currently exist - the government recognises the need for standards to also account for unique sector landscapes, priorities, needs, and interlinkages between sectors

Lead government departments will work with regulatory bodies and infrastructure operators throughout the NAP3 period from 2023 to 2028 to implement the actions set out in the Resilience Framework relating to the review and implementation of public and private sector resilience standards.

45. Review the approach of consolidated sectoral reports before the next ARP round to obtain more detailed information on the preparedness of the sector (2023). (Defra and DSIT)

We acknowledge concerns raised by the CCC about the level of detail in some of the consolidated sectoral reports submitted for ARP3. We also recognise the value that sectoral reporting can bring by providing insights about a sector's overall risk profile and exposing potential vulnerabilities within interconnected systems.

Our strategy for ARP4 was published alongside NAP3. We intend to maintain the case-by-case approach to sectoral reporting. This was endorsed by the majority of respondents to our consultation (62%), compared to 10% against and 28% undecided.

We are working with the industry's Electronic Communications Resilience and Response Group to determine a proportionate approach to reporting by communications network operators, building on the last round's sectoral overview. We will invite TechUK to report on behalf of data centres.

DSIT will explore the potential for Ofcom to provide information to the government on climate adaptation, within the extent of their powers.

Transport

46. Develop pathways to review and implement climate resilience standards to align with timing of regulatory cycles for transport (2030 latest). (DfT)

DfT will work with operators of transport infrastructure and regulatory bodies throughout the NAP3 period to review and implement resilience standards in line with the UK government's 2022 Resilience Framework. This will include standards related to climate change risk. The government recognises the need for standards that are appropriate for the operating contexts, priorities and interlinkages between different parts of the transport network. DfT will:

- ensure existing regulatory regimes on resilience are fit for purpose
- expand the scope and use of standards and assurance mechanisms across the transport network to support better contingency planning and risk management
- introduce standards on resilience and develop an action plan to deliver these across the transport sector where they do not currently exist

47. Ensure changes to transport systems, especially electrification of road and rail networks, to deliver Net Zero are resilient to climate impacts (Ongoing). (DfT)

The transformation in technology required to deliver net zero greenhouse gas emissions in the UK requires both new infrastructure and the retrofitting of existing networks. This provides an opportunity to build adaptation to climate change into new transport schemes and improve existing infrastructure.

The transport sector will embed consideration of climate change risks across all transport operations. This includes investment in existing assets throughout their lifespans and planning of new assets to ensure transport continues to enable economic growth.

48. Establish and monitor a suite of transport adaptation indicators, in particular for local roads, airports and ports, and infrastructure for active modes such as walking and cycling (Ongoing). (DfT)

The transport sector will continue to develop indicators to evaluate progress in adapting to climate change, in line with commitments on monitoring and evaluation set out in NAP3.

National Highways will continue to ensure that technical guidance encourages appropriate consideration of climate change, including by updating the drainage metric they use so that it more accurately reflects climate risk and relevant guidance.

UK airports and NATS undertake regular monitoring programmes, that include reviewing maintenance schedules of infrastructure, contingency and response plans with current and emerging climate risks.

Network Rail is seeking to develop metrics and targets to measure and direct its adaptation action. DfT will be taking the work of the transport sector into account when developing its adaptation strategy.

49. Designate transport sector regulators with consistent remits for climate resilience (Ongoing). (DfT)

As set out in the government's 2022 Resilience Framework, DfT will ensure that existing regulatory regimes are fit for purpose and introduce standards on resilience where they do not currently exist.

The rail sector is regulated by the independent Office of Rail and Road (ORR), which has both economic and safety-related duties. The ORR holds Network Rail to account through its network licence that enforces relevant health and safety legislation.

National Highways is monitored and held to account by the ORR for their performance, in delivering better environmental outcomes and having a well maintained and resilient network. This is done through key performance indicators and performance indicators (PIs), including a PI to track mitigations to sections of the carriageway susceptible to flooding.

The Civil Aviation Authority has a role in ensuring that the aviation industry meets the highest safety standards. This includes advising industry and government on climate risks and best practice.

Towns and cities

50. Planning policy should ensure that assessments for all type and size of built development include, at a minimum, an assessment of current and future flood, erosion, and heat risk under future climate scenarios. This requires tighter controls on Functional Floodplain and Coastal Change Management Area designation, as well as statutory consultees with appropriate skills to assess future climate risks (2025). (DLUHC, Defra)

The National Planning Policy Framework (NPPF) is clear that plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures.

The government has committed to conducting a review of the NPPF following Royal Assent of the Bill, to maximise its contribution to both climate change mitigation and adaptation. This will include consideration of how best to respond to known climate risks.

Approved document O of the Building Regulations was implemented in June 2022, this aims to reduce the occurrence of high temperatures in new residential buildings including houses, flats and residential care homes. DLUHC and the Building Safety Regulator plan over the NAP3 period to increase our evidence of the health-related impacts of issues such as overheating in homes.

In addition, new-build prisons will target the Building Research Establishment Environmental Assessment Method Excellent standard as a minimum, with a requirement to conduct a Climate Change Risk Assessment to reduce risks from climate change such as overheating and flooding.

For schools, flooding and overheating risk assessments will be carried out from this year onwards, and new schools will be designed for 2°C and adaptable to 4°C global warming scenarios.

51. Government should set long-term targets for the number of people and buildings at high to very low risk for all sources of flooding (sea, river, surface water and groundwater) (2025). (Defra)

The government has set a long-term ambition to create a more resilient nation and to be better protected and better prepared against flooding and coastal erosion. As part of this we are developing indicators to drive and monitor progress.

The government has set a target to better protect properties which is linked to the government's investment programme, currently over a 6-year period. This covers all sources of flood and coastal erosion risk and follows a risk-based approach targeting investment where the risk is greatest and the benefits highest.

This enables a better assessment of the need for investment and the level of cost benefit by taking account of the latest updates in risk, climate change, population growth and

asset conditions. In addition, the Environment Agency's Long Term Investment Scenarios provide an economic assessment under a range of scenarios, over the next 50 years.

52. Government should guarantee funding for maintaining existing flood and coastal defences at a target standard suitable to future climate risk over the current FCERM policy cycle (2023). (Defra)

As part of the 2021 Spending Review, the government committed to increase revenue funding for flood defence maintenance, with an extra £22 million per year between 2022 to 2023 and 2024 to 2025. This will maintain the Environment Agency's current level of 94 to 95% of assets in high consequence systems in required condition by 2025.

Future funding allocations will be determined as part of the next Spending Review.

53. Policy decisions within shoreline management plans should be statutory (2025). (Defra)

Shoreline Management Plans are developed and owned by the local councils and coastal protection authorities. These provide long-term strategic plans which identify approaches for managing the flood and coastal erosion risks at every stretch of coastline.

Defra will review national policy for Shoreline Management Plans by the end of 2026 to ensure they are transparent, continuously review outcomes and enable Local Authorities to make robust decisions on shoreline management, including local planning choices.

54. Set out mechanisms for funding installation and maintenance of SuDS and green infrastructure (2023). (Defra, DLUHC)

The review for implementation of Schedule 3 to The Flood and Water Management Act 2010 (published January 2023) identified a number of options for funding of SuDS. These options are being further explored as part of the work to implement Schedule 3 in line with our commitment in the Plan for Water (also read recommendation 20).

Mandatory Biodiversity Net Gain is supporting the funding of investment for green infrastructure and is one of the mechanisms to create better places for local communities.

55. Urgently collect data on the location, type and standard of SuDS and green infrastructure interventions (2023). (DLUHC, Defra)

The government's Levelling up and Regeneration Bill will enable greater consistency and transparency to planning data by utilising data standards and collecting information using a standardised approach. This will enable greater consistency and availability of planning information.

Collection of SuDS data is being further explored as part of the work to implement Schedule 3 to The Flood and Water Management Act 2010 in line with our commitment in the Plan for Water (also read recommendation 20).

We will be consulting on a revised National Planning Policy Framework and proposals from National Development Management Policies in which we will explore incorporating

nature into development and the evidence underpinning these interventions, through better planning for green infrastructure and nature friendly buildings.

56. Introduce an urban greenspace target to reverse the decline and ensure towns and cities are adapted to more frequent heatwaves (2022). (DLUHC, Defra)

The government's Environmental Improvement Plan sets out our commitment for everyone to be within a 15-minute walk of a green or blue space. This commitment reflects and builds on the ongoing work across government to deliver better access to nature across all sections of society.

DLUHC is also engaging with stakeholders to understand and establish how urban parks and other DLUHC-led policies can successfully contribute to the commitment.

In addition, as part of a forthcoming National Planning Policy Framework review, DLUHC has committed to exploring incorporating nature into development through better planning for green infrastructure and nature-friendly buildings. The requirement to consider green infrastructure where new development comes forward is embedded in the National Model Design Code, which provides guidance for local planning authorities on setting clear design standards through design codes to support climate change resilience and highlights the Green Infrastructure Framework.

57. Provide a mechanism for setting out place-based targets for urban greenspace and unplanned impermeable urban surfaces in towns and cities (2024). (DLUHC, Defra)

The government's 25 Year Environment Plan included a commitment to introduce stronger new standards for green infrastructure, alongside a commitment to support Local Authorities to assess provision against these new standards.

In January 2023, Natural England launched the Green Infrastructure Framework: Principles and Standards for England to help local planning authorities and developers to create or improve green and blue infrastructure at a local level, particularly where provision is poorest.

This includes the Urban Greening Factor standard; a planning tool, to be applied to major developments, to improve the provision of green infrastructure and increase the level of greening in urban environments.

With regard to unplanned impermeable surfaces, we note that the National Infrastructure Commission's (NIC's) 2022 report of surface water flooding highlighted the risks of unplanned impermeable surfaces. The government is considering the findings of the NIC's report and will respond later this year.

Buildings

58. Undertake post occupancy evaluations of new build homes to monitor summer temperatures to ensure homes meet Part O when built (From 2024). (DLUHC)

The government and the Building Safety Regulator will keep Approved Document O under review, including its implementation.

DLUHC will use recommendations from the Housing Health and Safety Rating System review to support the effective enforcement of quality and safety standards in all tenures of residential accommodation post-occupancy, including standards related to excess heat.

59. Increase understanding of overheating risk in existing buildings by making use of annual empirical studies of overheating. For example, the Energy Follow Up Survey would be a useful tool to track overheating in homes if it were to be conducted each year. The Government should also assess other innovative ways to monitor temperatures in buildings, for example by using smart data (Ongoing). (DESNZ)

DESNZ is undertaking research to improve understanding of overheating, and pursuing innovative opportunities for monitoring temperatures in buildings. The department has commissioned Loughborough University to use the Energy Follow-Up Survey data to analyse trends in overheating across the existing housing stock, developing a better understanding of overheating vulnerability. This project will report back by the end of 2023.

DESNZ is also commissioning a research programme called Homes for Net Zero which will provide ongoing monitoring and longitudinal data on temperature in a representative sample of the existing building stock. The first phase of this project will conclude in 2025. The planned second phase of this project would aim to provide a testbed to monitor the effectiveness of a range of different overheating adaptation measures.

60. Through the cross-government working group on overheating ensure the Government is actively addressing the need to mitigate overheating risks when installing measures to increase the energy efficiency of buildings (2023). (DESNZ and DLUHC)

The government's Overheating Working Group is a forum for overheating policy leads, enabling research and capability sharing and collaboration as buildings are retrofitted to Net Zero. At senior levels, work on overheating is part of the existing cross-government climate and adaptation governance.

Energy efficiency measures installed under current government schemes require installers to be Trustmark registered and measures must be installed in accordance with the Publicly Available Specification (PAS) 2030 and PAS 2035 standards. PAS 2035 and 2030 require a whole house approach to retrofit and ensures that the risks of unintended consequences are minimised.

For new buildings, the overheating (Part O) and energy efficiency (Part L) requirements of the building regulations were designed to complement and support each other, ensuring that measures installed to increase energy efficiency do not inadvertently lead to overheating risks. We are also reviewing the Decent Homes Standard to make sure it is fit for modern requirements.

61. Track the resilience of the building stock through mandatory resilience reporting or Green Building Passports (2023). (DLUHC and DESNZ)

The government plans to consult on reforms to the Energy Performance Certificate regime, including improving access to building performance data, in the coming months.

The Building Safety Regulator (BSR) will have a statutory role in overseeing the safety and standards of all buildings, including the resilience of buildings to climate risks. Section 5 of the Building Safety Act 2022 places a duty on BSR to keep safety and standards of all buildings under review. To help meet the Section 5 duty, BSR will gather and analyse information from a variety of sources, such as through feedback and advice from formal committees, input from stakeholders, and analysis of data, including analysing information received through voluntary occurrence reporting and mandatory occurrence reporting.

DESNZ and DLUHC are engaging with industry stakeholders to explore the delivery of Building Passports and are aware of projects delivering a passport or logbook package.

62. Work with the Environment Agency and other risk management authorities, such as water and sewerage companies, to set clear targets for the uptake of property-level flood resilience and set out standards for quality and maintenance. This should include improved data collection and monitoring (2023). (Defra)

It is important that Property Flood Resilience (PFR) is understood and trusted by consumers and industry (manufacturing, construction, and financial sectors) and that households and businesses are aware of the benefits and have information to take action to make their properties more resilient.

Industry is developing the standards, tools and mechanisms that enable consumer confidence. We are focusing on engaging with industry to improve the drivers and remove barriers. This is through actions such as:

- influencing Flood Re to identify and appraise options that would establish the mechanism needed to determine eligibility for discounted premiums for households with PFR
- continuing to influence and evaluate Flood Re's Build Back Better (BBB) scheme.
- as part of the Defra and industry PFR Roundtable, signal support and encourage an industry led PFR Code of Practice certification scheme, and new information platform

63. Create a framework for data collection and monitoring property flood resilience installations (2023). (Defra)

Property Flood Resilience (PFR) is a developing market. We want to encourage innovation and learning by doing it. The government will consider the impact and effectiveness of such, and any changes required in the future to drive the growth of the PFR market.

As part of the Defra and industry PFR roundtable a Code of Practice on PFR service delivery was published by the Construction Industry Research and Information Association. It complements British Standards on flood resilient construction and retrofit, and resistance products.

The Chartered Institution for Water and Environmental Management is developing a 'Certified Competent PFR Practitioner Scheme'. This approach will help grow the pool of trained professionals and improve the standards for the design, installation, and maintenance of PFR projects. The scheme will help to build confidence and trust in the market and the Environment Agency will be mandating the use of certified people within their next PFR framework.

64. Make finance available to install proactive adaptation measures for overheating and flood resilience. This should be via grant schemes or green finance for private owners, with public funding targeted at low-income or vulnerable households, alongside energy efficiency retrofit (2023). (DESNZ, DEFRA, DLUHC)

Catalysing the green finance market is a priority for government to help support homeowners ineligible for grants with upfront improvement costs.

Launched in October 2022, the Green Home Finance Accelerator programme, is making up to £20 million available on a competitive basis to support the development of innovative green finance products and services for homeowners.

Energy efficiency measures installed under current government schemes require installers to be Trustmark registered and measures must be installed in accordance with the Publicly Available Specification (PAS) 2030 and PAS 2035 standards. PAS 2035 and 2030 require a whole house approach to retrofit and ensures that the risks of unintended consequences are minimised.

Energy efficiency retrofits, if correctly installed, are unlikely to exacerbate overheating risk, and with adequate ventilation can in fact reduce risk of overheating for many building types.

For flood resilience, government funding from the capital Grant-in-Aid programme for resistance PFR is focused on reducing risk to those households (and businesses where it is integral to a wider scheme) at the highest risk, where it is cost beneficial to do so and in areas where PFR is the best solution for reducing risk.

Health

65. Build on NHS Green Plans to ensure long-term adaptation planning is included. Ensure that NHS Trusts and Integrated Care Systems have the support and guidance needed to do this (2024). (DHSC)

All NHS Trusts and Integrated Care Boards have Green Plans in place, which are strategies setting out an organisation's key plans for net zero and broader sustainability issues, including climate resilience. [Guidance is available](#) to support Green Plan development, which recommends that climate adaptation should be an area of focus, summarising organisational plans to mitigate climate change risks.

Most Green Plans outline action that will be undertaken from 2022 to 2025 and NHS England will start developing updated guidance with strengthened adaptation provisions from 2024, to inform future Green Plans.

The current NHS Standard Contract includes a requirement for providers to reduce risks associated with climate change and severe weather to premises and services, through an array of mechanisms to protect service delivery, including business continuity plans. Every Trust has a business continuity plan and climate change adaptation is included in the NHS Emergency Preparedness, Resilience and Response core standards.

66. Make available long-term, protected funding to adapt hospitals, care homes and other healthcare buildings to the impacts of climate change (2023). (DHSC)

It is the responsibility of NHS Trusts and other healthcare providers to ensure their estates are resilient, including to the impacts of climate change. The government will continue to provide major funding to support these responsibilities. Capital investment has increased significantly in recent times, reaching £10.6 billion in 2022 to 2023, up 17% from £9 billion in 2021 to 2022. We provided £4.2 billion capital last year (2022 to 2023) specifically for the NHS to spend on operational needs, including the maintenance and resilience of the NHS estate. A further £8.4 billion will be available through to 2025. Future funding for the health estate will be considered through the Spending Review process.

67. The CQC must include the readiness of health and care providers to manage overheating and other extreme weather within the new Single Assessment Framework inspections (2023). (DHSC)

CQC's Single Assessment Framework, due to launch at the end of 2023, will apply to health and care providers, local authorities, and integrated care systems. Under the Single Assessment Framework, there is a quality statement for 'safe environments' and as part of this we will look at how providers 'detect and control potential risks in the care environment.' We will use this to look at environmental risks such as adverse weather events.

Climate change adaptation will also be looked at within the key question of 'Well Led' and the quality statement 'governance, management and sustainability', specifically looking at business continuity and severe weather plans including overheating. The key question

'Well Led' is defined within the Single Assessment Framework as: based on meeting the needs of people who use services and wider communities, and all leaders and staff share this. Leaders proactively support staff and collaborate with partners to deliver care that is safe, integrated, person-centred and sustainable, and to reduce inequalities.

Community

68. Make the National Resilience Standards a statutory requirement (2024). (CO)

The [Civil Contingencies Act 2004: post-implementation review \(CCA PIR\) report](#) recommended that the National Resilience Standards should be placed on a statutory footing. This would require Category 1 and 2 responders to have due regard to the standards whilst fulfilling their duties under the Act.

In addition to the CCA PIR there will be consideration of the outcomes of planned pilots to strengthen local resilience forums (England). These will be run by DLUHC and will focus on leadership, accountability and the integration of resilience into levelling up work, as well as testing how to bring about greater assurance and drive improvement in collective preparedness. The pilots are due to be completed by 2025 and CO will consider what legislative changes might be required to support the outcome of the pilots as findings emerge.

69. Ensure the new reporting duty under the resilience framework from 2025 includes resilience to all climate risks, not just flooding, which may impact local communities (2025). (CO)

The UK Government Resilience Framework commits us to delivering an annual statement to Parliament on civil contingency risk and resilience, with the first such statement due this year. This Statement will include the government's understanding of the current risk picture, performance on resilience and current state of preparedness. This is informed by the revised National Security Risk Assessment (NSRA) which assesses risks over a longer timescale, includes multiple scenarios, and considers chronic risks and interdependencies such as those posed by climate change. The risk picture is also informed by the Integrated Review Refresh, which addresses risks from climate change, environmental damage and biodiversity loss. The government will take an agnostic approach to risks and resilience to ensure our plans do not preclude the most appropriate response, and will be informed by the widest possible range of relevant data and insights, alongside external challenge.

70. Extend the scope of the fourth round of the Adaptation Reporting Power (ARP4) to include local authorities (2023). (Defra and DLUHC)

Our strategy for ARP4 sets out our intention to run a pilot of reporting among a group of local authorities, to test its costs and benefits. This will launch later this year, with reports due by the end of 2024.

The guidance for reporting has been co-designed by Defra and a group of volunteer local authorities to ensure it will complement existing risk management practices and drive

adaptation action in local authorities in a non-duplicative way. It takes account of existing duties and the different roles and responsibilities of the different types of authorities.

After the reporting window closes at the end of 2024, we will evaluate the pilot to explore how well it worked and what value it brought to participants. This will inform future considerations of the case for wider roll-out across the sector in later rounds of adaptation reporting.

71. Undertake an assessment of the characteristics of vulnerability and adaptive capacity across England (2025). (Defra)

We have established a new £15 million research programme which will launch next year between Defra and UKRI, to help build the evidence base on effective adaptation action. As part of UK Research and Innovation's 'building a secure and resilient world' and 'building a green future' strategic themes, the programme will identify the skills, standards and data provision needed to increase adaptation capability across government and wider society.

The Defra and UKRI programme will enhance the assessment of vulnerability to climate impact and integrate with existing hazard data to produce improved climate risk information.

As part of the monitoring and evaluation work to support NAP3, Defra will undertake an assessment of adaptive capacity across government.

Business

72. Ensure that the Sustainability Disclosure Requirements and supporting policies result in large businesses disclosing their current and future supply chain risks from extreme weather and climate change. This should include reporting the financial impacts of supply chain disruption and considering multiple climate change scenarios (2023). (DESNZ)

Through the introduction of [Climate-related Financial Disclosure Requirements](#) in 2022, a core element of the UK's Sustainability Disclosure Requirements, the largest UK Registered Companies (Public Interest Entities with over 500 employees and large private companies and LLPs with over 500 employees and over £500 million turnover) are required to disclose 'an analysis of the resilience of the business model and strategy of the company or LLP, taking into consideration of different climate-related scenarios'. In accompanying [guidance](#), the government has set out that this analysis should consider both transition risks and physical risks, and in their analysis of physical risks companies may need to consider 'Where elements of a supply chain...are likely to be exposed to increased physical risks...to consider mitigating actions'.

Further, the UK has set up a process to assess and endorse International Sustainability Standards Board disclosure standards, which explicitly recommend analysis of supply chain risks; they would be available for voluntary use by UK companies.

73. Provide financial support for smaller businesses to recover and adapt after extreme weather events (similar to existing grants which are usually offered after flooding or as Flood Re does for homeowners) (2024). (DBT)

In a severe weather event with significant wide area impacts, local authorities can seek central support to help their communities and businesses return to normal through the government [Flood Recovery Framework](#). This includes a core package of business and community recovery support for severely affected areas.

Before we consider other options for additional financial support, we need to further understand the barriers to adaptation which businesses face. To address this, DBT is focused on gathering information and data around business adaptation and mitigation, including through surveying businesses to gauge current preparedness for climate risks. Depending on the results we will consider the viability of additional financial support. The survey concluded in August 2023 and work has commenced to assess results.

Government actions referenced in NAP3 also aim to build a more resilient economy, with the intention being to reduce exposure of businesses to extreme weather events, and thereby reduce the need for financial support.

74. Increase capacity building through its overseas programmes to improve global capacity for climate resilience, including supply chains, health systems and early warning systems for climate hazards. Overseas programmes should work to reduce underlying vulnerabilities to climate risks and not just respond to disasters (2024). (FCDO)

UK overseas programmes provide support for countries affected by climate related disasters, build resilience to climate hazards and support countries and communities to reduce underlying vulnerabilities. The UK has committed to triple International Climate Finance (ICF) funding for adaptation to £1.5 billion in 2025. Adaptation funding is being used for early warning and early action principles and programmes as key aspects of reducing vulnerability, alongside work on health systems. Three examples of programmes that use UK ICF to build capacity and increase resilience are:

- **WISER (Weather and Climate Information Services)**, delivered by the UK MET office, the WISER programme has been delivering transformational change in the quality, accessibility and use of weather and climate information at all levels to support sustainable development in Africa since 2016.
- **Risk-Informed Early Action Partnership (REAP)**, bringing together diverse stakeholders across climate, humanitarian, and development communities to drive a systemic shift to early action with the target of making one billion people safer from disasters by 2025.

- **Climate Risk and Early Warning System (CREWS)** - CREWS works with Least Developed Countries and Small Island Developing States to increase the accessibility of effective early warning systems to mitigate disaster risks, reduce impact and enhance climate resilience.

75. Carry out stress testing exercises to understand the resilience of essential goods supply chains. This should include assessing the effectiveness of solutions like parallel supply chains or diversifying supplier locations based on assessments of climate risk (2024). (DBT)

DBT will incorporate climate considerations in relevant critical supply chain stress tests by the end of 2024, including with international partners, to understand the resilience of critical supply chains to climate-related disruptions.

Stress tests allow government to test supply chain resilience and identify new and novel interventions and policy levers to mitigate or manage vulnerabilities. A focus on climate risks, will enable government to simulate climate disruptions, assess the UK's response and identify areas for future work and climate adaptation measures.

76. Increase resources for adaptation as part of the existing SME Climate Hub (2023). (DBT)

The government will increase climate adaptation information and guidance for businesses on the Small and Medium-sized Enterprise (SME) Climate Hub, including use of the hub to host climate risk factsheets. DBT will work with other departments and government partners to develop and publish factsheets for the major climate risks impacting businesses. These factsheets will be circulated to businesses through trusted government stakeholder networks, such as SME Climate Hub and Business Representative Organisations, by the end of 2023 to increase business awareness of information sources on tackling climate risks.

77. Ensure that resilience to extreme weather and climate change is part of industrial and security strategies such as the British Energy Security and Critical Minerals strategies (2023). (DBT)

DBT will ensure that resilience to extreme weather and climate change is part of the government's sectoral, economic and security strategies through the NAP3 implementation period to 2023 and beyond. Climate change adaptation is already integrated into the UK Government Resilience Framework, the Integrated Review Refresh, the Climate Finance Strategy, the Green Finance Strategy, and Powering up Britain – and will be included in DBT's forthcoming Critical Imports Strategy, due to be published this year.

78. Publish more accessible monitoring and data analysis of climate risks in order to support businesses to improve their resilience (2023). (DBT)

The government provides information to businesses to help them improve their resilience to climate change risks, including:

- the UK Climate Projections, produced by the Met Office on behalf of government, a set of tools and data that show how the UK climate may change in the future.
- [the Adverse Weather and Health Plan](#), which brings together and improves existing guidance on weather and health, underpinned by scientific evidence collection, guidance, and weather-health alerts.
- advice to individuals, communities, and businesses on flood and coastal-erosion risk, such as the Environment Agency's [flood risk alerts](#), the [active flood checker](#), the [long-term flood risk checking service](#) and [advice on flood risk information for planning applications](#).

In addition, DBT will work with the Met Office to review provision of accessible climate risk data to businesses by the end of 2023. We will produce and disseminate accessible climate risk factsheets and relevant climate intelligence to businesses, making use of data and resources from the Met Office and other government partners.

79. Carry out a review of the impacts of recent supply chain disruption and how businesses and governments responded. Use the findings as part of building a strong resilience capability for the UK by taking an overarching view of systemic and interacting risks (2023). (DBT)

The resilience of UK supply chains is a key priority for the government. The government will continue to actively monitor the impact of supply chain disruption. Lead government departments (LGDs) are responsible for monitoring, analysing, and developing effective sector responses to risk. DBT works with LGDs, businesses and other governments to prepare and respond to disruptions, learn lessons from disruptive events, and build resilience capability.

DBT will publish a Critical Imports Strategy to support specific government and business action to strengthen resilience in critical and growth sectors this year. Through engagement with businesses, DBT has gathered intelligence on the barriers that businesses face to supply chain resilience and how business and government can respond. This delivers on the commitments in NAP3 to use the strategy to drive specific government and business action to strengthen our collective ability to respond to threats and hazards such as climate change.

80. Review the value of an early warning system for global climate shocks and enhancing the ability of the government to make fast decisions by bringing in technical advice and expertise when needed (2023). (FCDO, CO)

FCDO and the Cabinet Office will use government's extensive network of overseas posts, researchers, and international relationships to identify emerging risks and escalating, where necessary, cascading risks through government's existing risk management governance structures, and risk assessment products such as the NSRA. The Cabinet Office's National Situation Centre (SitCen) brings together data and analysis from across and beyond government to inform crisis preparedness and response, providing some early warning capability. SitCen has established close working with both the Met Office and Office for National Statistics (ONS) and is able to ingest climate change data from both organisations rapidly, drawing on their scientific and analytical expertise. In the event of national emergencies, the Scientific Advisory Group for Emergencies can be convened to provide independent scientific advice to decision-makers.

81. Extend the scope of ARP4 to include food supply chains. Defra should also ensure that all organisations who meet the criteria for participation are being invited to report (2024). (Defra)

Please read the response to recommendation 3 on the inclusion of food supply organisations in ARP4.

Finance

82. The Office for Budget Responsibility should undertake a full review of how the impacts of climate change in the UK will affect the UK's macroeconomic performance and public finances, building on the analysis in their 2021 Fiscal Risks Report, to enable a full-cost benefit analysis for public investment in adaptation (2023). (HMT)

The Office for Budget Responsibility (OBR) is continuing to build its analysis of the economic and fiscal implications of climate change. The OBR has committed to working with the CCC, among others, as it develops its analysis of both adaptation to climate change, and decarbonisation on the route to net zero, consistent with its remit of examining and reporting on the sustainability of the public finances.

83. UK public financial institutions (such as the UK Infrastructure Bank, British Business Bank, UK Export Finance, and British International Investment) – should create adaptation finance strategies, setting out how they will independently and collectively ensure that no viable UK climate adaptation project fails for lack of finance or insurance (2023). (HMT)

UK public financial institutions are aware that climate resilience is part of their responsibility and are helping to create the conditions for sufficient access to private sector finance for projects that can improve resilience.

The UK Infrastructure Bank (UKIB) has published in its first Strategic Plan detail on measures it will take to deliver on its mandate to help the UK adapt to climate change, including considering the resilience of the infrastructure UKIB invests in. Within its Environmental, Social, Resilience and Governance framework, UKIB is implementing a process to measure climate risk in investment proposals.

UK Export Finance (UKEF) and the British Business Bank are also embedding consideration of climate change into their business, with UKEF increasing their support to climate adaptation sectors. More widely, one of the three building blocks of British International Investment's Climate Change Strategy focuses on strengthening adaptation and resilience.

Specific adaptation finance strategies for financial institutions are therefore not needed as they are already embedding adaptation considerations into their work.

84. UK public financial institutions should launch new sustainability-linked instruments tied to adaptation outcomes to help prime the market, potentially by offering guarantees to private issuers and lenders for adaptation-linked instruments (2024). (HMT)

Sustainability-linked bonds (SLBs) are a type of bond with financial features, such as the coupon rate, being dependent on whether or not the issuer meets a set environmental goal. This could include reducing greenhouse gas emissions or increasing forest cover by a certain year.

SLBs are a novel instrument of which there are currently only two sovereign issuers (Uruguay and Chile in 2022). HM Treasury and the Debt Management Office continue to monitor the market for sovereign SLBs, but there are currently no plans for any issuance by the UK Government.

85. The Bank of England should examine how capital requirements for banks and insurers should be adjusted based on assessed climate risks in terms of how assets are impacted by climate risk, how existing and planned adaptation will influence this, and how some assets create climate risk and contribute to greater societal risk and fragility (2023). (HMT)

As part of the Bank of England (the Bank), the Prudential Regulation Authority (PRA) is responsible for ensuring regulated firms such as banks and insurers effectively manage

the risks climate change poses to their safety and soundness, in support of the transition to net zero.

The PRA already expects banks and insurers to identify, measure and control risks, including those arising in unlikely but very severe scenarios, which includes risks which are relevant to climate change. Since 2022, the PRA has been actively supervising firms' management of climate risk.

In 2022, the Bank also undertook a review of climate risk in the capital framework, including consideration of the latest academic analysis and convened a conference to consider the issues, and published findings in March 2023. This review identified potential gaps in the current framework due to difficulties in estimating climate risks and challenges in capturing risks in the existing capital regimes. The Bank also continues to engage at international committees on the impact of climate risk on capital requirements.

86. Financial regulators should provide directional guidance for financial institutions to measure physical climate risk and their contribution to climate adaptation (and maladaptation) outcomes across portfolios and loan books. This should be integrated into required climate-related disclosures as part of SDR, as well as enforced through microprudential supervision (2024). (HMT)

In their March 2023 report on climate-related risks, the Bank of England identified as a next step the 'continued business as usual supervision against firms' progress at embedding supervisory expectations in the management of financial risks from climate change.' The Bank highlighted that it will also consider whether further guidance or updates to these expectations are warranted over time. As such the Bank is supporting the progress of firms in measuring climate risk and contribution to climate adaptation and is monitoring the need for further guidance.

The UK has implemented mandatory reporting against recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD) across the economy as the core basis of Sustainability Disclosure Requirements (SDR). TCFD rules require disclosure of climate-related financial risk information structured around four thematic areas: governance, strategy, risk management, and metrics or targets.

Additionally, the Transition Plan Taskforce published its Disclosure Framework and associated guidance earlier this month.

87. The UK should build on the work of the Transition Plan Taskforce (on Net Zero-related corporate transition plans) to define common standards for what a high-quality adaptation transition plan should look like. This should include how relevant physical climate risks are measured and managed as well as how the plans would contribute to wider societal adaptation to climate change (2023). (HMT)

Read recommendation 12 response on the Transition Plan Taskforce.

88. The updated Green Finance Strategy in 2023 and NAP3 should set out steps to ensure that the UK SDR initiatives (including the Green Taxonomy) are effective in improving our understanding of adaptation investment needs, directing finance towards adaptation and ensuring that regulators and auditors have the necessary expertise to monitor the quality of reporting, and provide incentives for organisations to report on their adaptation actions (2023). (HMT)

The government updated the Green Finance Strategy (GFS) in 2023, incorporating adaptation and nature into its objectives and setting out the next steps on SDR.

SDR aims to increase the flow and uniformity of decision-useful information on sustainability which can inform firms' capital allocation. TCFD rules are already in place across the UK economy to support firms' governance, strategy and risk management around climate-related risks, with recommendations to consider and disclose adaptation and mitigation activities.

Building on this, the government is setting up an endorsement and implementation process for a UK-endorsed version of the International Financial Reporting Standards Foundation's International Sustainability Standards Board baseline standards; this would be available for voluntary use by UK companies.

In the GFS, the government reiterated its commitment to deliver a UK Green Taxonomy. The government continues to expect to consult in autumn this year on how to define green economic activities, including consideration of adaptation. Any UK taxonomy must be proportionate, tailored to the UK and avoid undue burdens on companies.

SDR also includes Transition Plans (read response 12).

The government is keen to minimise and consolidate corporate reporting burdens.

89. Government and its implementing agencies should ensure that a growing fraction of their funding helps to support pioneering projects that seek to provide proof of concepts of how adaptation actions can be successfully funded and delivered through public-private partnership funding and financing (Ongoing). (HMT and Defra)

In addition to public investment underpinning NAP3 plans, private sector investment will be required to support adaptation action over the coming decades. In the 2023 Green Finance Strategy, the government committed to work with the Green Finance Institute to explore how blended finance models might be used to mobilise private finance to support the government's green objectives. The Strategy also sets out how the Environment Agency is exploring opportunities for new financing mechanisms for facilitating insurance markets to build flood resilience, where that will reduce overall costs; as well as innovative financing mechanisms to support residents in properties impacted by sea level rise.

More widely, the UK Infrastructure Bank (UKIB) has published details on measures it will take to deliver on its mandate to help the UK adapt to climate change. This includes

investing in early-stage technologies and business models that require lenders to take new risks. UKIB will assess deals on a case-by-case basis to identify financing structures that best fit the proposal's needs.

90. Government can enable the provision of data as a public good. This could include directly investing in open risk and resilience data and metrics or developing platforms and tools to share relevant datasets, such as those collected by insurance companies (2023). (CO)

The government continues to work with a range of stakeholders and agencies, including the Met Office and ONS, to provide weather and climate data to the public. The Met Office launched their Climate Data Portal earlier this year, which makes key climate data and supporting information available for operational and strategic decision-making. As announced in the NAP3, the government is also piloting a Local Authority Climate Service, which builds on previous Met Office-led work, including 'city packs' developed through UK Research and Innovation, and will give all local authorities and local resilience forums across the UK access to localised climate data and projections to inform adaptation decision-making in local areas.

In addition to this, the recently published National Risk Register, the external version of the National Security Risk Assessment, provides more risk information than ever before to support resilience professionals, businesses and other organisations in their planning, preparation and response.

91. The interdependencies between physical, transition and liability risks must be considered for scenario analysis and stress testing. Stress testing of the financial system to climate change risks should be done regularly as data and methodological approaches improve our understanding of the risks and impacts (2023). (HMT)

In March 2023, the Bank of England published its report on climate-related risks and the regulatory capital frameworks. In this report, the Bank recognised that 'the unique characteristics of climate risks... require a more forward-looking approach than used for many other risks' and noted that 'scenario analysis and stress testing will play a key role in this.'

The Bank also pledged to consider a number of underlying issues, including 'the extent to which known expectations of how physical and transition risks will unfold over the typical stress test horizon could be incorporated into the baseline scenarios used within stress testing'.

As next steps, the Bank has said it will 'further develop its capabilities to test the resilience of the financial system to climate risks. This includes how scenario exercises and stress tests can help the Bank and firms understand the exposure of the financial system to risks.'

92. Government should prioritise creating markets for adaptation outcomes across relevant legislation and policy programmes, including initiatives on carbon market integrity and the Environmental Land Management Schemes (2023). (Defra)

The government's 2023 Green Finance Strategy and Nature Markets Framework set out our commitment to supporting and accelerating the growth of nature markets and ensuring that they operate with high integrity. Nature markets are expected to deliver a number of climate adaptation benefits such as flood risk management.

Our nature investment standards programme with the British Standards Institution will play a key role in ensuring nature markets are high-integrity and deliver genuine environmental benefits. Through this programme, the UK will build on emerging international best practice – including the work of the Voluntary Carbon Markets Integrity Initiative and the Integrity Council for the Voluntary Carbon Market.

93. The need for investment in adapting to climate change should be included within mandates or strategic priorities for all relevant regulated industry regulators and implementing agencies through resilience standards aligned to national-level objectives. There should be a duty for regulators to identify and create climate adaptation project pipelines, aligned with national adaptation objectives, and to set out how they will enable the realisation of that pipeline (2028 latest). (CO)

This is a broad recommendation with applicability across a range of regulated sectors. In responding it is important to emphasise the importance of regulatory independence.

As set out elsewhere in this response, regulators have a range of existing duties with respect to climate change resilience. NAP3 sets out in detail how each infrastructure sector is approaching the challenge of climate resilience, now and in the future, including the way in which regulatory frameworks drive investment in climate resilience.

The government will consider this recommendation alongside others in delivering commitments in the Resilience Framework to work with regulators and government agencies to review existing regulatory regimes on resilience to ensure they are fit for purpose. Notably, as set out in the Resilience Framework, the government will introduce standards on resilience across the private sector, where these do not already exist, adjusted to take into account the current landscape, priorities and needs across and between sectors. In the highest priority sectors that are not already regulated, and for the highest priority risks, the government will consider enforcing standards through regulation.

The government is also considering a range of actions through the Green Finance Strategy 2023 to attract further investment into adaptation, including developing financial adaptation reporting, stronger evidence to understand adaptation investment need, and incorporating adaptation into the government's green finance policy framework.

94. Financial regulators in the UK should collaborate with international counterparts to establish a cost of capital observatory for physical risk, similar to efforts to track this for transition risk (for example by the International Energy Agency) (2023). (HMT and Defra)

The financial regulators agree that climate change is a pressing issue facing the financial services sector. They continue to collaborate with other jurisdictions to understand both the transition and physical costs of climate risk, including whether the current regulatory capital treatment is appropriate.

Glossary

- ARP - Adaptation Reporting Power
- AC - Adaptation (Sub-Committee) of the Committee on Climate Change
- BSR – Building Safety Regulator
- CCA PIR - Civil Contingencies Act 2004: Post-Implementation Review
- CCC – Climate Change Committee
- CO – Cabinet Office
- CQC- Care Quality Commission
- CCRA – Climate Change Risk Assessment
- CNI – Critical National Infrastructure-
- CS-NOW - Climate Services for a Net Zero resilient World E
- DBT – Department for Business and Trade
- DCMS – Department for Culture, Media and Sport
- Defra - Department for Environment, Food and Rural Affairs
- DESNZ – Department for Energy Security and Net Zero
- DfE – Department for Education
- DfT – Department for Transport
- DHSC – Department Health and Social Care
- DLUHC – Department for Levelling Up, Housing and Communities
- DSIT – Department for Science, Innovation and Technology
- EIP - Environmental Improvement Plan
- EU - European Union
- FaSS – Fisheries and Seafood Scheme
- FCA – Financial Conduct Authority
- FCDO – Foreign, Commonwealth and Development Office
- FCERM - Flood and Coastal Erosion Risk Management
- FSO- Future System Operator
- GFS – Green Finance Strategy
- HMT – His Majesty’s Treasury
- HPMa – Highly Protected Marine Area
- ICF – International Climate Finance
- LGD – Lead Government Department
- LNRS – Local Nature Recovery Strategy
- MPA – Marine Protected Area
- MSF – Major Service Failure
- NAP - National Adaptation Programme
- NHS - National Health Service
- NIC – National Infrastructure Commission
- NPPF - National Planning Policy Framework
- NSRA – National Security Risk Assessment
- OBR – Office for Budget Responsibility
- Ofwat - Water Services Regulation Authority
- ONS – Office for National Statistics
- ORR – Office of Rail and Road
- PAS – Publicly Available Specification
- PFR – Property Flood Resilience

- PI – Performance Indicators
- PR – Price Review
- PRA – Prudential Regulation Authority
- R&D - Research and Development
- SDR - Sustainability Disclosure Requirements
- SitCen – National Situation Centre
- SLB – Sustainability-Linked Bond
- SME – Small and Medium-sizes Enterprise
- SSSI - Sites of Special Scientific Interest
- SuDS - Sustainable Drainage Systems
- TCFD - Taskforce on Climate-Related Financial Disclosures
- TPT – Transition Plan Taskforce
- UK – United Kingdom
- UKEF – UK Export Finance
- UKHSA – UK Health Security Agency
- UKIB – UK Infrastructure Bank
- UKRI- UK Research and Innovation
- UKSF – UK Seafood Fund
- WRMP - Water Resources Management Plan

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