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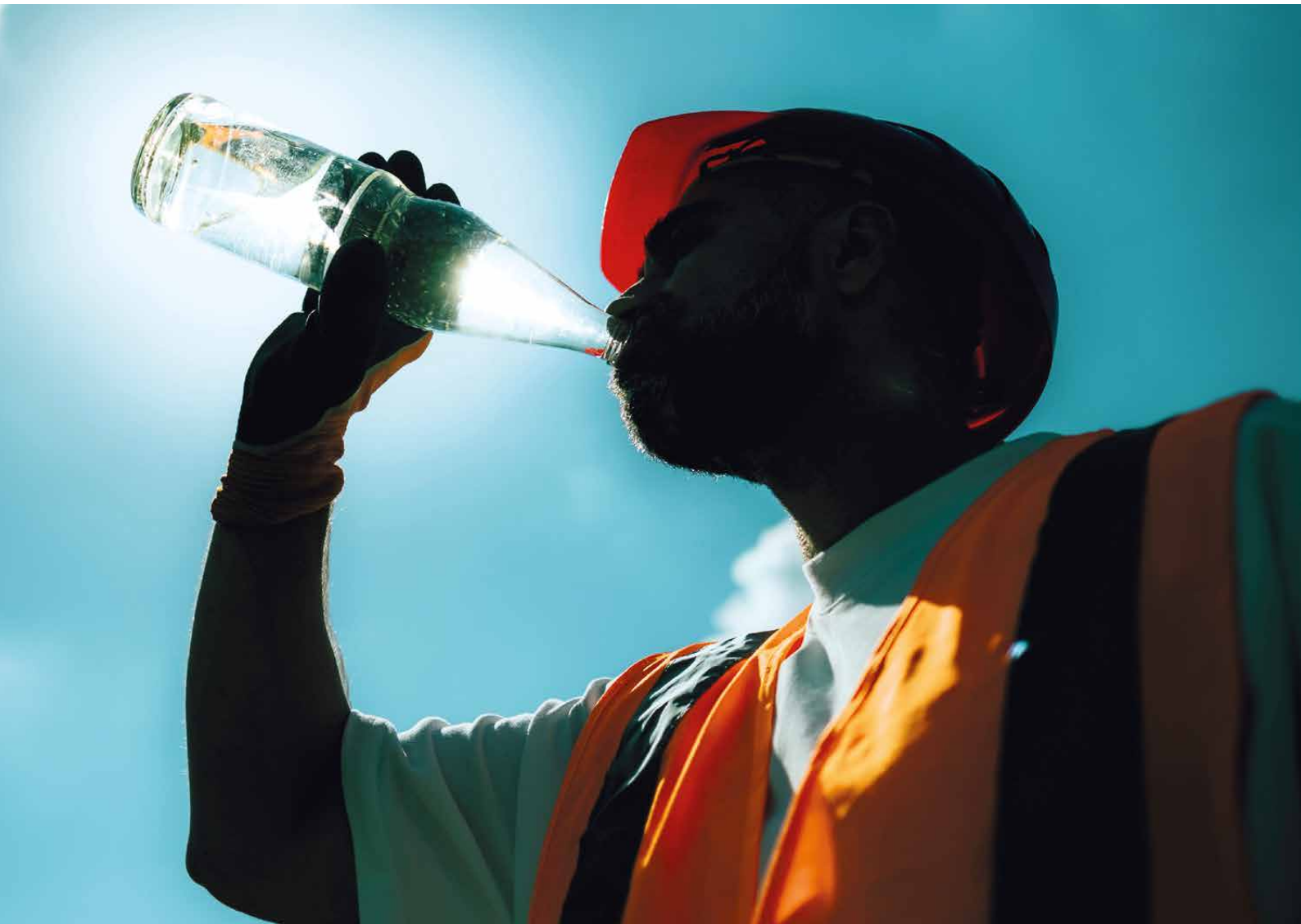
Adapt to thrive

Preparing the UK for climate change



Adapt to thrive: preparing the UK for climate change

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Green Alliance's Adaptation Task Force
We convene this task force to inspire a step change in UK government climate adaptation and resilience policy. The task force harnesses the knowledge and expertise of businesses and organisations which have a unique understanding or interest in climate adaptation. This informs Green Alliance's research and advocacy focused on the political process. Current members of the task force include:

AVIVA

IEMA Transforming the world to sustainability

National Trust

OVO

sse

Wessex Water
YTL GROUP

ZURICH
Resilience Solutions

Green Alliance
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Summary

“Two thirds of actions being taken to tackle the most pressing climate risks are not adequate for the scale of the task.”

The impacts of climate change have the potential to devastate lives, leave communities in turmoil and bring important government agendas to a standstill.

Heatwaves, storm damage and flooding are all affecting our way of life in the UK. Health warnings were issued during the June 2025 heatwave due to an expected rise in excess deaths.[1] Over four and a half million English homes are threatened by the risk of flooding from downpours that overwhelm drainage systems and almost two and half million from rivers and sea.[2]

Globally, serious shortages of foodstuffs, including vegetables, salads, olive oil and rice, have been caused by climate change, leading to an increase in the price of the weekly shop.[3] It is clear that action to increase resilience and adapt to global warming cannot be postponed.

We demonstrate in this report that current efforts, outlined in the National Adaptation Programme (NAP), fall far short of meeting the scale of this challenge. We find that two thirds of actions being taken to tackle the most pressing climate risks are not adequate for the scale of the task.

The UK government has made growth and security its top priority. We argue that effective climate change adaptation supports this agenda, by ensuring productivity is not lost during extreme weather and that the right infrastructure is in place to provide security. Failure to adapt will stand in the way of the government’s missions, but it will also not escape voters; those who are living in overheated or flood prone homes, having their NHS treatment and appointments delayed, stranded on public

> **“It is a complex issue needing cross government action but it can be solved with the right focus.”**

transport buckling under extreme weather, priced out of buying some foods or suffering the mental ill health that comes from these pressures.

It is a complex issue needing cross government action but it can be solved with the right focus, and recent announcements, on flooding spending and insulation, may prove to be a turning point. With the help of our Adaptation Task Force, we present a set of recommendations which, if acted on, would increase resilience and begin to address systematically some of the biggest risks the UK faces. Some measures have significant other benefits that will help to prevent some extreme impacts of climate change in the first place.

Our recommendations are presented in two categories. The first are cross-cutting and speak to the government’s overall approach to adaptation. We advocate applying an ‘adaptation test’ to spending, policy development and governance, where progress could be supported and accelerated. We also recommend the government works more closely with businesses already planning for and contending with the effects of climate change. We show ways businesses are leading on developing workable and cost effective solutions. A partnership approach would be in everyone’s best interests.

Our second category of recommendations applies to the areas of greatest risk for the UK and shows the most impactful steps the government could deliver soon, under its existing agenda. They include:

- committing to nature-based solutions to climate impacts and adapting homes to be flood resilient;
- setting resilience standards for critical infrastructure;
- preparing homes to cope with extreme heat.

This is designed to be a roadmap for early action. All the interventions we propose are designed to be implemented ahead of the publication of the next National Adaptation Programme (NAP4), due in 2028.

Introduction

> **“This is the new normal and the UK is not prepared for it.”**

Climate change threats to the UK are no longer abstract, they are reshaping lives and landscapes. Between January and April 2025, a new record was set for the area of land damaged by wildfires, wreaking havoc from Galloway to Dartmoor.[4,5] Just months before, England experienced its wettest 18 months ever. The town of Tenbury Wells in Worcestershire has flooded seven times in four years, devastating lives and businesses, leaving many unable either to afford or obtain insurance.[6]

This is the new normal and the UK is not prepared for it. The need for climate adaptation, where systems, materials and processes are adjusted to limit the damage and maximise the opportunities, has been largely ignored by consecutive governments in the face of other priorities.[7] But, we argue, it must now be seen as a national priority.

The Climate Change Committee (CCC), the government’s independent climate change adviser, has rated the UK’s preparations for climate change as “inadequate”.[8] Despite a Labour manifesto promise to “improve resilience and preparation across central government, local authorities, local communities, and emergency services”, the CCC has found little evidence of a change of course since the government came to power in 2024.[9]

In response to the urgent need for much more effective adaptation policy, we set up an Adaptation Task Force in the summer of 2024, made up of leading businesses and organisations with a deep understanding of and interest in the need for adaptation (see the inside front cover for the list of task force members).

Many businesses are grappling with new practices necessitated by climate impacts, or contending with adaptation and resilience reporting requirements and changing customer demands. Through this task force, we are harnessing cross sectoral business understanding and knowledge of adaptation to identify what the UK government needs to do to manage the UK’s adaptation priorities.

In this report, we stress the critical importance of acting now to prevent further years of policy drift as climate impacts worsen. We focus on the biggest risks identified by the CCC, based on their relative urgency and where the largest gaps in action are. Using our task force members’ expertise and experience, we advocate concrete policy solutions that can be implemented now.

Why the UK must act now

> **“In the UK, the top ten warmest years on record have all occurred since the turn of the 21st century.”**

Recent years have seen an alarming increase in observed climate change impacts around the world.[10] In the UK, the top ten warmest years on record have all occurred since the turn of the 21st century.[11] Sea levels have risen by 16.5cm in the past 30 years and the number of very hot days (over 30°C) trebled between 1961-90 and 2014-23.[12,13]

Preventing these impacts in the first place by halting climate change is the best way to protect people, communities and the economy. However, even if climate targets are met, some disruption is now guaranteed. As is the case with most crises, those who have the least will be hit the hardest. People living with poor health, in inadequate housing or in flood prone areas are already paying the highest price.

The economic and health impacts of climate change

An estimated **11 million** labour hours were lost due to high heat exposure in 2022[15]

Nearly **3,000** deaths due to excess heat were recorded in 2022 and this could rise to **10,000** a year by 2050[14]

Government estimates suggest flood damage cost over **£9 billion** in England and Wales between 2007 and 2019[16]

The politics of adaptation

“Flooding is now costing the UK economy £2.4 billion per year, with the potential to rise to £3.6 billion by 2050.”

Economic growth is at the heart of the UK government’s agenda, with its plans for health, wellbeing and defence linked to how successful it can be in generating new economic activity. But climate change impacts are already undermining this. As our analysis shows, this fact is not yet fully appreciated by the government, as evidenced by the insufficient efforts to adapt so far.

Public First estimates that flooding is now costing the UK economy £2.4 billion per year, with the potential to rise to £3.6 billion by 2050.[17] The Office for Budgetary Responsibility (OBR) highlights that climate change has significant direct and indirect economic impacts, including productivity losses due to overheating and infrastructure damage, which increase costs to the state and undermine growth.[18]

Scientists predict that global temperatures up to 2030 will remain at record levels, so additional climate disruption is already baked in.[19] How well this is dealt with has consequences for future costs to taxpayers and the country’s long term growth prospects.

It is more than just an economic risk, it is also a major security concern. Climate disruption threatens critical national infrastructure; extended heatwaves can at times shut down transport and power systems; and floods and extreme weather overwhelm drainage, destroy infrastructure and disable communications. Food and water systems face mounting pressure from both direct domestic impacts of climate change and wider impacts from volatile global supply chains. Without greater resilience, the foundations needed for UK security may struggle to function under compounding climate and geopolitical shocks.

Suitable adaptation action, across businesses, infrastructure, homes and by the government can, however, limit these impacts while generating new economic activity. For example, every £1 spent on flood prevention saves £8 worth of damages, £3 of which is a direct government saving.[20] This represents excellent value for money for the government and demonstrates how adaptation is an ‘invest to save’ agenda.

What might be less clear is the potential for climate change to reshape the political map. Regardless of whether communities attribute the challenges they face to climate change, there is no question that many will feel its effects in the coming years. This upheaval to daily lives will be noticed. Some will notice it in an

> **People will want to know that politicians are doing all they can to prevent these consequences and support them."**

overheated home, a school closing early, NHS appointments cancelled or trains running late due to the heat. For others, flooding will damage their livehlihoods, homes and treasured possessions; heatwaves will seriously harm health and wellbeing. People will want to know that politicians are doing all they can to prevent these consequences and support them.

In other countries, it is possible to draw a line between government preparedness and responses to climate change and electoral success, for example the former German chancellor candidate Armin Laschet was widely criticised for laughing at an event following a devastating flood in 2021, an incident which played a significant role in his subsequent electoral fortunes.[21] UK politicians are no less vulnerable if they do not acknowledge the seriousness of these issues. Chasing growth and security will only be possible if these electoral risks are well understood and acted on.

The UK is unprepared

> **“Successive governments have presided over a “lost decade” for adaptation policy.”**

In tackling two of the biggest climate risks: flooding and overheating, governments have taken some action, investing hundreds of millions of pounds in flood defences in England every year for much of the past two decades.[22] Updates to building regulations were introduced in 2021 to ensure that new housing design reduces the likelihood of excess temperature gain and can reduce heat quickly.[23]

However, these measures have not been enough to meet the scale of the challenge, as the number of homes protected from flooding has slowed, in fact, new housing has been built in high risks areas in recent years, and there is no systematic approach to tackle overheating in existing buildings.[24] As a result, ahead of the release of the 2023 National Adaptation Programme (NAP3), Baroness Brown, chair of the CCC’s Adaptation Committee, argued that successive governments have presided over a “lost decade” for adaptation policy.[25]

The Labour government inherited NAP3 when it was elected in July 2024. But, after a year in office, the CCC noted, in its 2025 adaptation progress report, that there is little evidence the agenda has moved forward.[26] If the government waits for the publication of the next National Adaptation Programme in 2028 to take further substantive action, risks to growth and security will increase.

The Climate Change Committee’s priority risks

1. Risks to the viability and diversity of terrestrial and freshwater habitats and species from multiple hazards.
2. Risks to soil health from increased flooding and drought.
3. Risks to natural carbon stores and sequestration from multiple hazards leading to increased emissions.
4. Risks to crops, livestock and commercial trees from multiple hazards.
5. Risks to supply of food, goods and vital services due to climate-related collapse of supply chains and distribution networks.

6. Risks to people and the economy from climate related failure of the power system.

7. Risks to human health, wellbeing and productivity from increased exposure to heat in homes and other buildings.

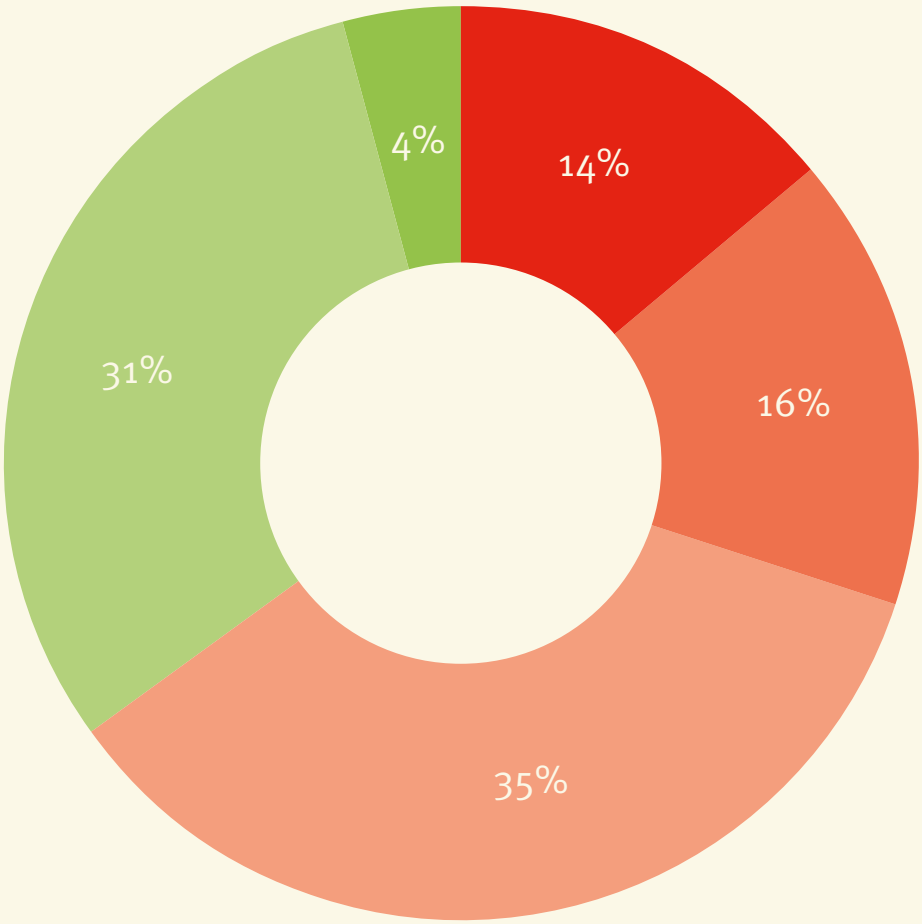
8. Multiple risks to the UK from climate changes impacts overseas.

Following the publication of NAP3, the CCC commissioned rapid analysis of the plan to determine how well it tackled climate risks. The research, conducted by expert advisers at ADAS, identified indicative beneficial activities in the CCC's risk assessment and then evaluated the extent to which NAP3 and its supporting documents address those actions.

Their analysis scored the interventions across five categories, from 'not addressed' to 'fully addressed'. We have taken the CCC's assessment further and focused on the actions specifically identified to tackle the CCC's eight priority risks. As illustrated opposite, we have grouped actions it described as 'minimally addressed', 'recognised but not addressed' or 'unaddressed' under one 'inadequate' category.

This approach shows that 65 per cent of UK actions to address the biggest climate risks are currently inadequate.[27]

How adequate are current actions at addressing top climate risks?[28]

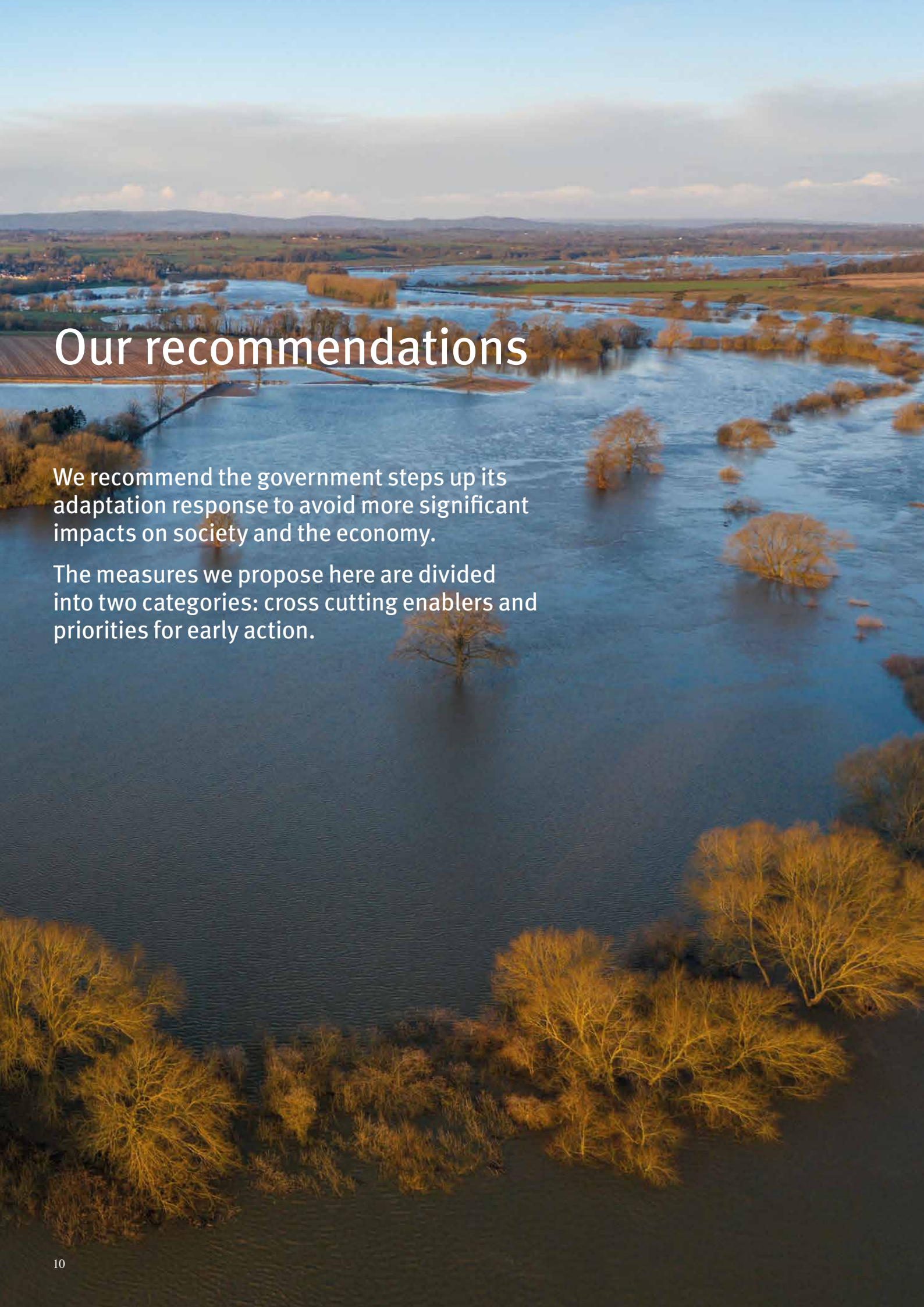


Adequate

- Fully addressed
- Significantly addressed

Inadequate

- Not addressed
- Recognised but not addressed
- Minimally addressed



Our recommendations

We recommend the government steps up its adaptation response to avoid more significant impacts on society and the economy.

The measures we propose here are divided into two categories: cross cutting enablers and priorities for early action.

Cross cutting enablers
Plugging the gaps in approach

> **“A minister to champion the climate adaptation agenda would give it the status required.”**

We have identified what the government could do to create a more enabling environment for effective adaptation now and through the next National Adaptation Programme (NAP4), which would lead to positive impacts across a broad swathe of priorities.

Cross-cutting strategic enablers we recommend are:

Introduce an adaptation test

The breadth of climate impacts shows that one single policy framework, spending decision, individual minister or department cannot suitably prepare the UK for climate change. NAP3 contains multiple references to various ‘foundational policies’ which provide a framework for the ways in which a sector or industry operates. The Land Use Framework (LUF) for example, will be crucial to governing the way farmers and landowners operate in the context of significant climate risks.

The LUF, alongside the Environmental Land Management schemes, the Strategic Spatial Energy Plan, and the infrastructure and industrial strategies must have commitment to adaptation at their core.

Announcements of £1.4 billion on flood defences and a fully funded Warm Homes Plan, have been encouraging.[29] But headline commitments must pass the adaptation test to ensure there is appropriate preparation for, and resilience to, major climate risks. For example, retrofitted existing buildings that perpetuate overheating challenges, or new housebuilding in flood risk areas threaten people’s health and the economy.

All spending commitments should adequately account for climate risks so priorities that are not explicitly focused on adaptation or resilience also avoid making these challenges harder.

To co-ordinate this level of cross departmental action, the government should assess how its governance arrangements contribute to adaptation outcomes. The adaptation test should apply to all governmental activities and units, the mission boards and individual ministerial responsibilities. A minister to champion the climate adaptation agenda would give it the status required.

Convene an adaptation advisory group

The government recognises that cross government collaboration is required to deliver NAP3, with senior officials from the Department of Environment, Food and Rural Affairs (Defra), the Cabinet Office and the Treasury involved in the Climate Resilience Board. The current administration has also set up a Floods Resilience Taskforce, with stakeholders from devolved nations, arm's length bodies, private sector stakeholders and relevant departments. These changes emphasise the critical value of using expertise to push through institutional changes.

Despite this recognition, it is reported that only 17 officials worked on NAP3 which is surprisingly few, considering the breadth of the strategy.[30] While there was significant expert input to the climate change risk assessment, this report and other work highlights the delivery gap around adapting to the most pressing climate risks.

Formally bringing together businesses, NGOs and appropriate arm's length bodies can widen the circle of expertise to discuss the implementation challenges. As the case studies we highlight in the next section show, best practice on climate adaptation is already happening in some places, where businesses have committed to act. The government should convene these voices to learn where previous NAPs have fallen short. Experience can help to identify lessons for governance, target setting, financing, accountability and reporting to inform future adaptation plans.

“Best practice on climate adaptation is already happening in some places, where businesses have committed to act.”

Priorities for early action
Three common themes

> **“It is estimated that 6.3 million homes in England are now at risk of flooding.”**

The government is falling short in addressing the eight priority risks identified by its expert advisers at the CCC. As highlighted, our analysis is that two thirds of the NAP3 actions outlined are failing to prepare the UK for climate change.

Earlier action is needed to address these risks. In identifying the shortcomings, common themes emerged. We outline three of these themes and suggest measures, illustrated by existing action being taken, which would constitute an effective roadmap for UK climate adaptation.

1.
Commit to nature-based solutions and adapt homes to become flood resilient

It is estimated that 6.3 million homes in England are now at risk of flooding.[31] Without adequate planning and regulation, housebuilding may further exacerbate this risk. If we continue to site new homes in the same way, 115,000 of the government’s targeted 1.5 million new homes will be built in high risk zones.[32]

UK nature is also becoming increasingly degraded. Since 1970, UK species have declined by 19 per cent and nearly one in six species are at risk of extinction.[33] Nature decline and climate change are inherently linked as changes to the climate drive species loss. And the impacts of species decline can have major impacts on people and the economy, threatening food security and weakening the fundamental economic underpinning that the natural environment provides.

The CCC has identified that the beneficial interrelationship between nature-based solutions to flooding and the broader nature recovery agenda are not properly acknowledged.

A recent review of research into nature-based flood solutions suggests they are cost effective. In fact, 65 per cent of studies show they are more effective than engineered solutions.[34] The government’s own figures suggest a benefit cost ratio (BCR) of around 5:1 for natural flood management schemes and The Wildlife Trusts’ modelling shows that this ratio grows over time.[35,36] Natural flood management solutions being used in the River Soar catchment in the Midlands are just one example where

a triple benefit is evident: better water management protecting homes and businesses, increased carbon storage to mitigate against climate change and habitat creation to restore nature. An added bonus is the higher amenity value of the area for public recreation.

Not all flood impacts can be alleviated by traditional or nature-based flood defences, particularly as the risk increases. Property flood resilience will therefore be critical to adapt homes to resist and recover more quickly from increasing surface water risk. Simple interventions, like raising plug sockets, fitting non-return valves to wastepipes and automatic airbricks, are low cost but effective measures which can easily be absorbed into the cost of developing new homes.[37] But, crucially, they can all significantly reduce the impact of flooding events, including the associated costs and time spent, on householders.

> “Property flood resilience will be critical to adapt homes to resist and recover more quickly from increasing surface water risk.”

To reduce the impact of flooding and commit to a nature-based approach to resilience in the current parliament, the government should:

- **change planning and building regulations to prevent development in high risk flood areas where possible, and only allow building in such places if the highest resilience standards are met;**
- **produce clear standards on implementing sustainable urban drainage (SuDS) for landowners, local authorities and businesses;**
- **include low cost effective property flood resilience measures in the Future Homes Standard and building regulations so new homes are adapted to cope with increasing flood risk caused by high volumes of surface water runoff;**
- **refocus the flooding spending formula , ahead of the ten year infrastructure strategy’s capital spending allocation, to increase the proportion allocated to natural flood management and encourage private financing.**

Natural flood management in the River Soar catchment

Aviva are working with Trent Rivers Trust and WWF UK on upstream land to reduce flooding across the catchment of the River Soar, a major tributary to the River Trent in Leicestershire.

Natural flood management is primarily about slowing the flow of water at source to prevent funneling water downstream and overwhelming infrastructure. Interventions include lowering embankments to increase access for local people to the river and creating habitats for local wildlife. It can also add natural speed bumps for water across the catchment to create a 'sponge effect' that slows and absorbs water. These measures reduce the input of excess sediment, improving water quality downstream and habitat upstream.

Increasing the proportion of natural permeable surfaces helps to reduce river energy and manage water levels, reducing the threat of flooding during heavy rain.

Natural flood management in the Soar is also connecting the river to its natural floodplain, delaying and suppressing the 'flood peak', and allowing less developed areas to flood, reducing downstream impacts on people and businesses. Together, these interventions are having a significant economic impact, with the potential to save up to £20 million per major flood event in the catchment.[38]

River restoration at the Holnicote Estate in Somerset

This three year project was the first large scale attempt in the UK to use the innovative 'Stage zero' river restoration technique. The National Trust has reset and fully reconnected the waters of the previously heavily engineered and channelled River Aller with its surrounding floodplain, dramatically creating seven hectares of waterscapes and wetlands.

In reconnecting the river with its floodplain, essentially transforming the river from a pipe into a sponge, the project has increased lag times between rainfall and stormflow. It has reduced downstream flood peaks, which were on average 38 per cent lower. These results mean that, during storms, less water leaves the site and at a slower rate, protecting downstream communities from flooding.

These wetlands are also very important carbon stores and habitats for wildlife.

Since the project's completion, impressive increases in aquatic habitat of nearly 1,800 per cent have been documented, with new waterscapes and wetlands greater than ten football pitches in size created.

Photo: View It 360

2.
Set resilience standards for critical infrastructure

> “It is crucial that reporting on climate risk and adaptation is improved.”

The government’s plan for change is a builders’ agenda. But the quality of infrastructure built will have an impact on whether it contributes to growth and security as promised. Several critical national infrastructure (CNI) sectors are outlined, central to the functioning of daily life, including food, defence, energy and water.[39] But the level of preparation across sectors varies. The National Preparedness Commission, for example, has highlighted threats to food security by the UK’s ‘just in time’ food supply chain.[40]

In many of these sectors, private sector businesses or public bodies are central to delivering services. It is crucial, therefore, that reporting on climate risk and adaptation is improved. As the CCC’s 2025 adaptation progress report says, the Adaptation Reporting Power has led to incremental progress in water, energy and transport planning since 2023.[41]

The government should develop resilience standards for critical infrastructure like the water system to ensure security for people and businesses across the country. Wessex Water’s new and integrated water supply in the South West is an example of how customers can benefit from investment in high quality infrastructure.

More broadly, the private sector is central to the government’s mission to grow the economy but climate risks are affecting its ability to do so. In recent years, climate related financial disclosures reporting has been the primary driver of adaptation considerations for large businesses. Yet risk modelling and the subsequent adaptation required is not an area that many have expertise in, so additional reporting is creating a burden without improving adaptation planning.

Government direction is needed on resilience standards for strategic infrastructure and it should work with businesses to make proactive adaptations across operations and supply chains.

To build resilience across strategic infrastructure and private businesses in the current parliament, the government should:

- **guarantee the development of a suite of outcome-based resilience standards across energy, transport, water and telecoms infrastructure in the years ahead of NAP4;**
- **provide further business guidance on effectively modelling risks and understanding what good adaptation planning looks like under climate risk reporting requirements;**
- **widen the scope of the existing Adaptation Reporting Power to include major landowners and make completion compulsory for all reportees.**

Security for customers through an integrated water supply

Wessex Water's £230 million supply grid project was completed in 2018 and allows water to be redistributed across the region the company serves, from areas where there is a surplus to where it is needed most.

The project has improved security of supply for 1.3 million customers, ensuring greater resilience in the face of chronic stresses and acute shocks, as demonstrated during the 2018 'Beast from the East' freeze thaw when all supplies were maintained. It has also supported the reduction of abstraction licences, as required by the Environment Agency, to improve flows in some rivers and protect ecology.

One innovation has been the introduction of a new optimiser flow control system. The optimiser manages the transfer of water along the 74km trunkmain in the most efficient way, while operating within the constraints built into the system.

The new infrastructure allows greater flexibility to take key water treatment works out of supply for major improvements, including those not directly associated with the grid, due to the fully integrated distribution system.

Wessex Water's integrated water supply network of strategic mains, sources and reservoirs

Source: Wessex Water

Resilience and adaptation strategies for critical energy infrastructure

As a business with a significant infrastructure across the country and expertise around climate risk modelling, SSE has built experience in identifying, and responding to, climate risk.

In recent years, it has responded to its mandatory climate-related financial disclosures and also disclosed voluntarily under the Adaptation Reporting Power about its plans to manage climate risk. Reporting focuses on how the business considers its risks and governance arrangements, as well as site specific climate risk profiles and resilience plans.

A major area of risk is around the company's electricity distribution networks, in the north of Scotland and central southern England. Risks include substation flooding and the performance of cabling and transformers under higher temperatures.

Flood defences are installed across a number of sites, including around substations in Osney Island in Oxfordshire and Drakes Way in Wiltshire, helping to prevent outages associated with flooding and keep the lights on for around 35,000 people. Work has included greening sites to slow flood water, which also has benefits for nature and biodiversity.

Besides building resilience to longer term climate and weather changes, the company is responding directly to extreme weather events. When Storm Éowyn hit Scotland in late January 2025, it mobilised 1,100 engineers and community support teams. Power was restored quickly to 92,000 customers, 2,000 of the most vulnerable were directly spoken to and 7,000 hot meals were provided.

3.
Prepare homes for extreme heat

> “Unless a ‘passive cooling first’ approach is taken, tackling overheating will only increase energy use.”

Labour’s mission-led approach to government is bold in areas of vital national importance, including making the country a clean energy superpower and creating an NHS fit for the future. But achieving both of these missions faces significant challenges: to scale up clean energy to 2030 and beyond and tackle significant health challenges and the consequences of an aging population. Avoidable pressures from climate change affecting these areas must be addressed.

The CCC highlights that power system failure, increased energy demand for cooling and the health impacts of extreme heat are significant risks. But the government’s policy response to these has primarily been concerned with new housing, with little attention paid to existing buildings. As these are the majority of buildings in the UK, retrofits will be important if the response to overheating is going to be adequate for most homes and businesses.

Unless a ‘passive cooling first’ approach is taken, using non-mechanical features, like insulation, shading, shutters and ventilation, tackling overheating will only increase energy use, as air conditioning units are increasingly employed. While active cooling may be required in some circumstances, passive cooling for individual buildings, cities and communities is highly effective, low cost and necessary to avoid undue pressure on the energy system.

To embed a passive cooling first approach the government should:

- **integrate heat resilience and cooling measures into the £13.2 billion Warm Homes Plan, by ensuring insulation is paired with appropriate cross ventilation and offering households low cost shutters and shading devices;**
- **ensure that, under the Future Homes Standard, part O of the building regulations is extended to material changes of use and refurbishments;**
- **review the scope of VAT exemptions for retrofits to ensure they apply to all materials which demonstrate a measurable improvement in energy efficiency or heat resilience;**
- **extend the boiler upgrade scheme to air-to-air heat pumps which provide effective heating and cooling.**

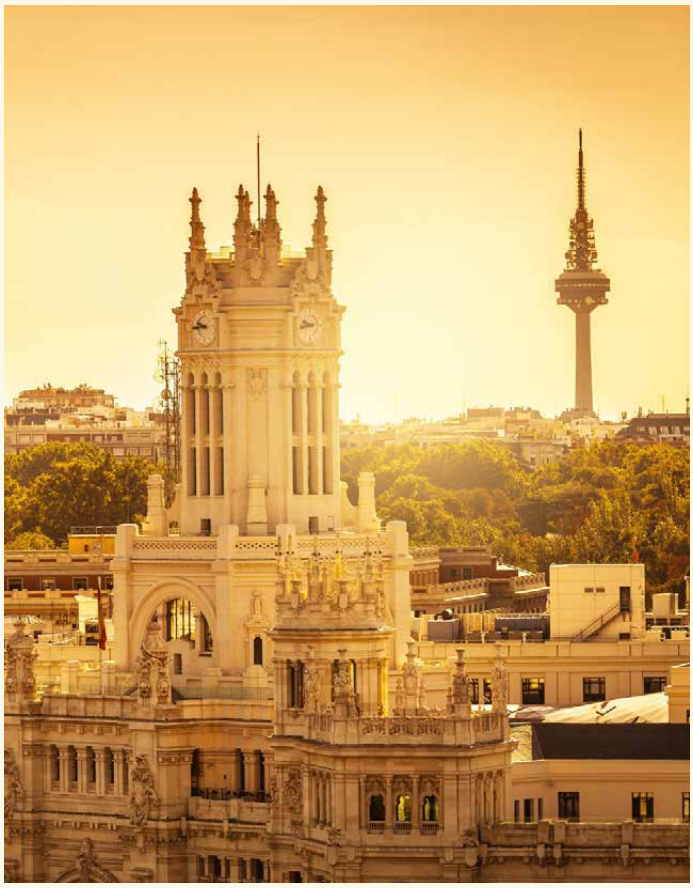
Data driven community cooling in Madrid

Many cities in southern Europe are being transformed by extreme heat. Madrid is one of them with temperatures regularly topping 40°C in recent years. And the urban heat island effect makes the experience of living in those cities unbearable, as temperatures can sometimes soar several degrees higher than in surrounding rural areas.

Zurich Resilience Solutions (ZRS) is taking a data driven approach to help Madrid City Council identify and quantify its exposure to short and long term climate risks, particularly extreme heat. It is also helping to define measures that enable the city to increase its climate resilience and adapt to more frequent, intense and longer lasting heatwaves.

As a result, the council now plans to focus on the use of nature-based solutions by replacing hard surfaces with green spaces and introducing water permeable surfaces, to combat the urban heat island effect while also building flood resilience. It intends to introduce more trees, shaded sidewalks and use more reflective building materials.

ZRS have also advised Madrid's schools how they can adapt to high heat to reduce absenteeism and prevent a drop in academic performance.



Supporting vulnerable customers with insulation

OVO has examined what more domestic energy suppliers can do to support customers with their bills while tackling climate change. As one of the biggest energy suppliers in the UK, with four million customers, the company recognises that its business can play an important role in tackling interrelated challenges.

The company launched a trial in 2023 offering free insulation to selected customers. The initiative focused on improving loft and cavity wall insulation in homes identified as vulnerable to extreme temperatures. It prioritised hundreds of households in areas more likely to experience overheating and those with residents at higher health risk.

The results were encouraging: participants reported feeling more comfortable during summer heat, and early internal monitoring suggested improved thermal performance and reduced reliance on fans and portable air conditioning units. This trial also cut future winter heating costs.

This example demonstrates how energy retailers can go beyond traditional services to support climate adaptation in practical, customer-focused ways. With millions of homes needing retrofit measures, energy companies are uniquely positioned to engage households, deliver low carbon interventions and build better resilience to climate impacts.

The government's leadership role

> **“The government should bring business and NGO experts together to improve its response.”**

The need for climate adaptation has, for too long, been ignored by successive governments as a major priority. But this has to change. The scale of impacts unfolding, from thousands of heat related deaths each year to the billions of pounds in flooding damages, will get worse, even as greenhouse gas emissions come down, unless more action is taken.

The ‘adaptation test’ we advocate, for major policy, spending and governance decisions, will put the need to anticipate and act to mitigate the impacts of extreme weather front of mind across government.

Businesses are already showing what can be done. The examples we have cited indicate how they are mobilising to respond to storms, build new wetlands, provide data led solutions to citywide overheating, support vulnerable customers with insulation and invest in resilient infrastructure necessary to secure important services. There is much the government can learn from this and it should bring business and NGO experts together to improve its response ahead of the publication of the next National Adaptation Plan (NAP4).

Immediate risks are substantial and can no longer be ignored, but it is possible to reduce them. We have shown how holistic plans for flood protection can incorporate nature restoration, and property level resilience and smarter planning, with a passive cooling first approach, can tackle overheating in homes and improve health and productivity.

Stringent resilience standards and reporting for businesses will also help to establish more effective systems and infrastructure.

This is a challenge for all of society, but the government’s role is necessary to lead the UK on a positive path to become a thriving climate adapted society.


Bus stand
Buses do not pick up passengers here

Endnotes

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