



Environment
Agency

Flood and Coastal Erosion Risk Management Strategy Roadmap to 2026

Ensuring progress towards a nation ready for, and resilient to, flooding and coastal change – today, tomorrow and to the year 2100

Contents

Purpose 3

Introduction 4

What have we achieved so far? 7

Future risk and investment 9

Ambition 1: Climate resilient places 12

Ambition 2: Today's growth and infrastructure resilient in tomorrow's climate 18

Ambition 3: A nation ready to respond and adapt to flooding and coastal change 25

Purpose

At least one in six people in England are at risk from flooding from rivers and the sea, with many more at risk from surface water flooding.

Sea levels will continue to rise and the frequency and severity of floods and storm surges is only going to get worse.

We need to be better at planning for and adapting to the unavoidable impacts of climate change, while maximising opportunities for at-risk communities.

This will ensure when flooding and coastal change happens, it causes much less harm to people, does much less damage, and ensures life can get back to normal much quicker.

Creating climate resilient places lies at the heart of our Flood and Coastal Erosion Risk Management Strategy. Its vision is for “a nation ready for, and resilient to, flooding and coastal change – today, tomorrow and to the year 2100”.

We cannot do this alone. So we have come together with a wide range of partners to develop a Roadmap to 2026 that sets out the practical actions we will collectively take to achieve our ambitions.

Some of the ways in which the Roadmap will help people in local places around England include:

- Better protecting and preparing communities from flooding and coastal change by supporting the delivery of the Flood and Coastal Erosion Risk Management Investment Programme
- Taking forward projects and programmes that will pioneer innovative ways of boosting flood and coastal resilience and make a difference to their local communities
- Providing training, tools and support to help practitioners in public authorities to develop the skills and capabilities they need to support their local communities to prepare and adapt to a changing climate
- Ensuring policy makers and practitioners have the information and evidence they need about current and future risks from flooding from rivers, the sea and surface water as well as coastal erosion to make well targeted investments
- Identifying practical ways in which flood and coastal investments can contribute to wider priorities including local nature recovery, carbon reductions and more integrated water solutions that help with both flood and drought resilience

By implementing the Roadmap with our partners, we will be enhancing our resilience to future flooding and coastal change and enabling a greener and cleaner future.

Introduction

Climate change context

Climate change is happening now, and its impacts will continue to worsen. The latest Intergovernmental Panel for Climate Change (IPCC) report shows global warming reaching 1.5°C in the near-term. This would cause unavoidable increases in flooding, coastal change and drought, all of which would significantly impact on society and the environment.

To keep pace with a changing climate, we need to both cut emissions and adapt to climate risks. Even with reaching net zero, there is likely to be 59% more winter rainfall by 2050. And once-a-century sea-level events are expected to become annual by 2100.

In all future climate scenarios, we'll experience a continued rise in sea level well into the next century. Climate scientists predict that sea levels in the UK could rise by over a metre by the end of the century. Indeed, the Intergovernmental Panel for Climate Change have advised that a global sea level rise of 2 metres cannot be ruled out.

It is therefore essential that we get ready for the unavoidable impacts of climate change by adapting and helping the nation to become more resilient.

Adaptation means anticipating appropriate action to prevent or minimise the likelihood and consequences of flooding and coastal change, both now and in the future. It has been shown that well planned, early adaptation action saves money and lives later.

Resilience is the capacity of people and places to plan for, better protect, respond to, and to recover from flooding and coastal change. Places can achieve this by making the best land use

and development choices, better protecting people and places, responding to and recovering from flooding and coastal change whilst all the time adapting to climate change.

Strategy overview

Publication of the Environment Agency's [Flood and Coastal Erosion Risk Management Strategy](#) in 2020 represented a major step forward in tackling the challenges of a changing climate. The Strategy sets out a long-term vision for ***“a nation ready for, and resilient to, flooding and coastal change – today, tomorrow and to the year 2100”***, setting the direction to make our country more resilient to future flooding and coastal change. The Strategy also contributes to net zero targets.

The Strategy has 3 long-term ambitions underpinned by a set of strategic objectives and measures:

- 1. Climate resilient places:** Working with partners to bolster resilience to flooding and coastal change across the nation, both now and in the face of climate change
- 2. Today's growth and infrastructure resilient in tomorrow's climate:** Making the right investment and planning decisions to secure sustainable growth and environmental improvements, as well as infrastructure resilience to flooding and coastal change
- 3. A nation ready to respond and adapt to flooding and coastal change:** Ensuring local people understand the risks posed by flooding and coastal change, are responsible for managing the impacts and know how to take action

The Strategy sits alongside and supports the delivery of the government's 2020 [policy statement on flood and coastal erosion risk management](#). Together, they call for the nation to embrace a broad range of resilience actions to better protect and prepare against flooding and coastal change. This includes:

- using nature based solutions to store or slow the flow of flood waters
- avoiding inappropriate development in the floodplain
- better preparing and responding to flood and coastal incidents through timely and effective forecasting, warning and evacuation

Providing clarity on how we will implement the Strategy

This Flood and Coastal Erosion Risk Management Strategy Roadmap to 2026 builds on the positive steps included in the 1-year action plan published in May 2021. It describes how the Strategy, its objectives and measures will be translated into practical action over the next 4 years, and what will be different as a result. The Roadmap directly supports the implementation of the £5.2 billion Flood and Coastal Erosion Risk Management Investment Programme which will better protect many hundreds of thousands of properties over the next 6 years.

The Roadmap also incorporates the government's [£200 million Flood and Coastal Resilience Innovation Fund](#) which funds the following 3 programmes:

- The Flood and Coastal Resilience Innovation Programme which will enable local authorities, businesses and communities in 25 places to test and demonstrate innovative practical resilience actions
- The Adaptive Pathways Programme which will develop long-term investment plans for managing flooding and coastal change to 2100 and beyond in strategic locations including the Thames Estuary, Humber Estuary, River Severn and Yorkshire

- The Coastal Transition Accelerators Programme which will support communities in areas at significant risk of coastal erosion to transition and adapt to a changing climate

These innovation programmes will improve our evidence on the costs and benefits of innovative resilience actions as well as help inform future approaches to, and investments in, flood and coastal risk management.

Effective management of flooding and coastal change cannot be achieved in isolation from other pressures the nation faces. The Roadmap makes it clear how action taken to deliver the Strategy will contribute to:

- wider benefits for biodiversity
- improved water quality and water resources
- creating a net zero nation by reducing greenhouse gas emissions and increasing carbon capture
- increased resilience to climate change
- sustainable growth that maximises opportunities for at risk communities and supports a greener economy

Our Roadmap also accounts for external drivers, influences and opportunities for managing flooding and coastal change. For example, it aligns with:

- the 25 Year Environment Plan
- new government policy initiatives such as the Environmental Land Management Scheme
- regulatory cycles such as the water company price review
- Flood Risk Management Plans (FRMPs) and Drainage and Wastewater Management Plans (DWMPs)

The government has also committed to publishing a Roadmap for accelerating take-up of property flood resilience into the future. We also recognise that new drivers will emerge in the future and actions will need to be reviewed and adjusted. We will therefore keep the Roadmap under periodic review.

Lastly, no single organisation has the ability to implement the Strategy on their own. That’s why we have worked in collaboration with risk management authorities, infrastructure providers, the insurance sector and environmental and farming groups to develop this Roadmap.

The partners who form the Strategy Steering Group for the Roadmap are:



There are many other partners contributing directly to this Roadmap or bringing organisations together to make places more resilient to flooding and coastal change. Regional Flood and Coastal Committees (RFCCs) are one of these partners. The RFCCs have an important role championing the Strategy and Roadmap with elected members and local partners, whilst also ensuring investment is targeted and value for money. They do this by being consulted on and giving consent to the Environment Agency’s Flood and Coastal Erosion Risk Management Investment Programmes.

What have we achieved so far?

The Environment Agency published a 1-year Action Plan in May 2021. It set out the initial actions for risk management authorities and other partners to implement the Strategy. Despite the pressures of the coronavirus pandemic, significant progress has been made which provides a firm foundation for action in future years. Highlights include:

- The Environment Agency has updated its flood and coastal erosion risk management (FCERM) [appraisal guidance](#) to make it clearer, more concise, and more accessible. The changes make it easier for risk management authorities and partners to produce business cases for projects that improve resilience to flooding and coastal change
- The Environment Agency has published [case studies](#) from its £15 million Natural Flood Management programme that explain the multiple benefits of working with nature to enhance flood and coastal resilience
- The Environment Agency has [updated its climate change allowances for river flows](#) for flood and coastal projects, schemes and strategies. This will help risk management authorities to assess a range of climate allowances to understand the resilience of different design options, including from a 4°C rise in global temperatures. The Environment Agency will also use the updated climate change allowances to assist developers and planners to improve decision-making about the location and design of new development
- Coastal groups have completed shoreline management plan (SMP) 'health checks' and the Environment Agency has advised on how local coastal management policies could better reflect the latest climate science and alignment with local spatial planning policies
- The British Insurance Brokers' Association (BIBA), the Association of British Insurers (ABI) and Flood Re have published [a list of specialist flood insurance providers](#) that can help to find insurance solutions for householders struggling to obtain flood cover
- 31 lead local flood authorities around the country have worked with the Environment Agency to update local surface water flood risk maps so that authorities can better target their work to improve resilience to surface water and drainage flood risks
- The Chartered Institute of Water and Environmental Management (CIWEM) has worked with the Environment Agency to develop [property flood resilience \(PFR\) training](#) for those working in the property flood resilience industry (e.g. flood surveyors or PFR installers). The training will help ensure understanding and compliance with the [PFR code of practice](#)
- The Association of Drainage Authorities (ADA) has published a [net zero calculator](#) to assist internal drainage boards and [Key Stage 4 education materials](#) to help improve understanding of climate change amongst professionals and students
- The Town and Country Planning Association (TCPA) and Environment Agency have jointly developed an [on-line training video](#) to help local authority planners, elected members and developers to better account for flood risk and climate change in their planning decisions
- The Environment Agency and Ofwat have produced a joint approach for how water companies should consider flood and coastal resilience in the context of their statutory roles and duties

What will the Strategy Roadmap to 2026 achieve?



Strategy Ambition 1: Climate Resilient Places

People and places will be more resilient to flood and coastal change in a changing climate

People and places will be able to plan for future flooding and coastal change and adapt to future hazards

People and places will make greater use of nature based solutions to enhance flood and coast resilience and nature recovery

Farming and land management practices will better support rural resilience to both floods and droughts



Strategy Ambition 2: Growth and Infrastructure

New homes will be safe from flooding by avoiding inappropriate development in flood risk areas

Flood and coastal risk management investments will drive environmental improvements and sustainable growth

More people will take action to build back better and recover more quickly when flooding happens

Flood risk assets will be safe and resilient to current and future risks from flooding and coastal change

National infrastructure will be more resilient to current and future risks from flooding and coastal change



Strategy Ambition 3:

A nation ready to respond and adapt to flooding and coastal change

People will understand and will be better prepared to respond to flooding and coastal change risks

People and businesses will get back to normal quicker after flooding

More people will have the education and skills they need to develop careers in flood and coastal risk management

World leading research and international best practice will underpin flood and coastal risk management

Carbon emissions from flood and coastal risk management investments will be significantly reduced to meet net zero targets



Cross-cutting Enabling Ambition: Future Risk and Investment

Current and future risk and investment needs for flooding from rivers, the sea, surface water and coastal erosion will be better understood

Funding contributions from non-public sources will be increased to deliver flood and coastal resilience





Future risk and investment

The Strategy recognises the importance of having the evidence we need to inform our future understanding of flood and coastal erosion risk and future investment needs. Risk mapping, modelling and assessment provides the essential data and evidence underpinning every investment decision risk management authorities make. At the local level, this includes informing decisions about spatial planning, prioritising investments in flood and coastal infrastructure and targeting the work of emergency responders when planning their incident response. Looking ahead, we need to use this evidence to produce a new set of long-term investment scenarios to inform future policy and investment choices for achieving flood and coastal resilience. It is also vital that we make greater use of green finance and funding from non-public sector sources to contribute to future investment needs and to be more resilient to climate hazards.



Outcome: Current and future risk and investment needs for flooding from rivers, the sea, surface water and coastal erosion will be better understood.

Objective

Between now and 2025 the Environment Agency will have better evidence to inform future risk and investment needs for managing all sources of flooding and coastal change.

What will we do?



The Environment Agency will update the national coastal erosion risk map and its assessment of properties and infrastructure at risk from erosion in a changing climate. This will provide evidence to inform the Shoreline Management Plans.



The Environment Agency will publish a new national assessment of flood risk so that all risk management authorities and other partners can use it. The new national assessment of flood risk will provide better data and information to support flood risk mapping, improved ways of measuring changes in risk, as well as future investment choices. It will significantly improve our understanding of surface water flood risk.



The Environment Agency will produce new long-term investment scenarios which will provide an economic assessment of future flood and coastal erosion risk management for the next 50-100 years in England.



The long-term investment scenarios show that for every £1 spent on protecting communities, we avoid around £5 in property damages.





Outcome: Funding contributions from non-public sources will be increased to deliver flood and coastal resilience.

Objective

Between now and 2030 risk management authorities will make greater use of funding and financing from non-public sector sources to contribute to the investment needs of flood and coastal resilience.

What will we do?



The Environment Agency will work with strategic partnerships across England to identify and develop opportunities for green finance to help enable climate resilient places. This includes working with the Oxford to Cambridge Arc.



The Environment Agency will support some of the projects on the Flood & Coastal Resilience Innovation Programme and Adaptive Pathways Programme with green finance. This will build on best practice in UK Green Taxonomy approaches.



The Environment Agency will provide green finance training for risk management authorities to develop the skills and capabilities needed to build new finance partnerships and secure additional funding sources for flood and coastal projects.





Ambition 1: Climate resilient places

This Strategy calls for the nation to embrace a broad range of resilience actions including better protection from flooding and coastal change. We must continue to do what we have been doing: building and maintaining strong defences to reduce the risk of places being flooded. In the face of a changing climate, we need to also make our places more resilient to flooding and coastal change, so that when it does happen it causes much less harm to people, does much less damage, and ensures life can get back to normal much quicker. Alongside flood and coastal defences, we need a broader range of actions for achieving climate resilient places. These include projects that help us to better plan for, better protect, respond to, and to recover from flooding and coastal change. Looking out to 2100, we need to help local places better plan for future flooding and coastal change and adapt to future climate hazards.



Outcome: People and places will be more resilient to flood and coastal change in a changing climate.

Objective

Between now and 2050 the nation will bolster its resilience to flooding and coastal change.

What will we do?



The Environment Agency will continue to enhance its appraisal guidance for flood and coastal erosion risk management projects, in line with government policy. This is so that it reflects the latest climate science and better enables a wider range of smaller, more complex resilience projects including natural flood management, surface water and property flood resilience projects.



Local authorities leading projects in the Flood and Coastal Resilience Innovation Programme will work with local partners to test and demonstrate innovative practical actions in 25 places. The Environment Agency will lead the programme management and development of a strategic support framework for sharing best practice across risk management authorities.



The Environment Agency will work with government and partners to ensure that the learning from the Flood and Coastal Resilience Innovation Programme informs future approaches, and investments in, flood and coastal erosion risk management.





Outcome: People and places will be able to plan for future flooding and coastal change and adapt to future hazards.

Objectives

Between now and 2050 risk management authorities will help places plan and adapt to flooding and coastal change for a range of climate scenarios.

Between now and 2050 risk management authorities will help coastal communities transition and adapt to a changing climate.

What will we do?



The Environment Agency will work with partners, as part of the Adaptive Pathways Programme, to develop 'adaptive pathway' plans for the Thames Estuary, Humber Estuary, River Severn and Yorkshire. These will set out long-term investment plans for managing flooding & coastal risk in a changing climate to 2100 and beyond.



Coastal groups will review the policies and actions in their Shoreline Management Plans to ensure they reflect adaptive approaches to managing current and future coastal change.



The Environment Agency will develop a new Shoreline Management Plan Explorer. The Explorer will provide a single online portal for Shoreline Management Plan information in a map based, digital format that can be interrogated easily and kept live.



Coast protection authorities leading projects in the Coastal Transition Accelerators Programme will support communities to transition from areas of the coast that cannot sustainably be defended from erosion. The Environment Agency will support the programme management and lessons learnt.



The Environment Agency will develop a bank of best practice and digital tools to equip risk management authorities to embed adaptive approaches to flooding and coastal change into their projects, investments and strategic plans. This will be accessible to Environment Agency operational teams, local authorities, water companies and internal drainage boards.



Outcome: People and places will make greater use of nature based solutions to enhance flood and coast resilience and nature recovery.

Objective

Between now and 2030 risk management authorities will use nature based solutions and improve the environment through their investments in flood and coastal resilience.

What will we do?



The Environment Agency and Natural England will jointly develop new approaches for the conservation of protected sites, species and natural landscapes that enable adaptation to sea level rise and a changing climate.



The Environment Agency will publish its evaluation of the £15million Natural Flood Management programme (for England) and will update its Working with Natural Processes Evidence Directory (for England, Scotland and Wales). These publications will share evidence and best practice to help mainstream the use of natural flood management projects.



The Wildfowl & Wetlands Trust will collate evidence and case studies to demonstrate the wider climate benefits of natural flood management and blue wetland habitats. This will draw on ongoing Wildfowl & Wetlands Trust projects as well as the Blue Recovery campaign which is seeking to create 100,000 hectares of wetland across the UK.



Risk management authorities will double the number of natural flood management projects delivered as part of the Flood and Coastal Erosion Risk Management Investment Programme. These projects will deliver multi-beneficial outcomes including improving biodiversity, contributing to cleaner and healthier rivers as well as providing carbon sequestration.



The Environment Agency will work with partners, including the Catchment Based Approach (CABA), Blueprint for Water and Natural England, to develop options for better recording data and information from natural flood management projects. This will help to monitor and evaluate the effectiveness of natural flood management projects over time.



Risk management authorities will work with partners on Local Nature Recovery Strategies to identify where actions for nature could benefit flood and coastal risk management. Risk management authorities will also identify where they can contribute to nature recovery through their investments, plans and strategies. This includes ensuring that Local Flood Risk Management Strategies, Flood Risk Management Plans and Shoreline Management Plans complement the actions in Local Nature Recovery Strategies.



Outcome: Farming and land management practices will better support rural resilience to both floods and droughts.

Objective

By 2030 risk management authorities will work with farmers and landowners to help them adapt their businesses and practices to be resilient to flooding and coastal change.

What will we do?



Natural England and the Environment Agency will use the government's Catchment Sensitive Farming scheme, to help farmers and landowners play an active role in mitigating flood risk and in delivering drought resilience benefits.



The National Farmers Union (NFU) will work with the Environment Agency to establish a rural resilience partnership focused on helping farmers and growers adapt to a changing climate. The partnership will look at how farming practices can enhance flood resilience in rural areas alongside sustainable food production.



The Environment Agency and Natural England will support Defra with the development and piloting of the Environmental Land Management Schemes, notably the Local Nature Recovery scheme and the Landscape Recovery scheme. These schemes will maximise integrated outcomes for water, nature, flood and drought resilience whilst also contributing to the reduction of and adaptation to climate change.



Risk management authorities will support farmers and landowners to access Environmental Land Management agreements and to adapt their businesses and practices to be more resilient to flooding and coastal change.



The Environment Agency will work in partnership with Anglian Water, local councils, internal drainage boards and land managers in the Fens to develop long-term plans for managing water differently. This will be part of the work of the Future Fens: Integrated Adaptation Taskforce, which is developing ways of adapting to flooding and drought in low lying, agricultural catchments.



The Environment Agency will support farmers, land owners and other local partners to transition to more climate friendly farming in both lowland and upland peatland areas that delivers greater resilience to future flood and droughts as well as identifying opportunities for carbon sequestration.



Aerial view of Steart Marshes



Ambition 2: Today's growth and infrastructure resilient in tomorrow's climate

The Strategy recognises that getting the right kind of growth in the right places is one of the main ways of achieving climate resilient places. Effective spatial planning is an essential tool for making land use choices that help to achieve greater flood and coastal resilience, as well as wider environmental benefits. Planners and developers have a key role to play in avoiding inappropriate development in flood risk areas and enabling climate resilient development. More focus is also needed on encouraging property owners to 'build back better' after a flood and to mainstream property flood resilience measures that reduce flood damages and enable faster recovery for local communities.

The Strategy also sets out a long-term objective for risk management authorities to work with infrastructure providers to ensure their investments are resilient to current and future threats from flooding and coastal change. When critical infrastructure, such as electricity sub-stations and water treatment plants, are impacted by flooding it can cause considerable disruption and economic damage. This directly affects peoples' everyday lives by disrupting the essential services they rely on.



Outcome: New homes will be safe from flooding by avoiding inappropriate development in flood risk areas.

Objective

Between now and 2030 all new development will contribute to making places resilient to flooding and coastal change.

What will we do?

- The Environment Agency will continue to monitor and report on the quality and timeliness of its planning advice to help avoid inappropriate development in areas at risk of flooding and coastal change.
- The Environment Agency will incorporate surface water flood risk into the digital Flood Map for Planning. This will help local planning authorities and developers better mitigate the surface water flood risks from new development.
- The Environment Agency will work with planning authorities to ensure that spatial plans and growth strategies reflect adaptation to future flooding and coastal changes. This should include reflecting the policies and actions in Local Flood Risk Management Strategies and Shoreline Management Plans.
- The Environment Agency will work with the Association of Sustainable Drainage Authorities to support lead local flood authorities to promote best practice in incorporating sustainable drainage systems for new development.
- The Environment Agency will continue to work with organisations such as the Town and Country Planning Association (TCPA) and Susdrain to improve planning skills and capabilities. This will help planning authorities and other local organisations making planning decisions that impact flood and coastal resilience.



Outcome: Flood and coastal risk management investments will drive environmental improvements and sustainable growth.

Objectives

Between now and 2030 risk management authorities will encourage environmental net gain in all new development to support resilience to flooding and coastal change.

Between now and 2030 risk management authorities will support investments to manage flooding and coastal change that enables growth in a sustainable and climate resilient way.

What will we do?



Risk management authorities taking forward flood and coastal projects (that require planning permission) will achieve at least 10% biodiversity net gain ensuring that they leave biodiversity in a better state than before.



The Environment Agency will monitor and report on progress with delivering biodiversity net gain through projects funded by the Flood and Coastal Erosion Risk Management investment programme.



The Environment Agency will work with developers and planners to maximise opportunities for environmental net gain associated with investments in flood and coastal resilience.



The Environment Agency will produce an evidence report showing how investments in flooding and coastal resilience can improve local economies by reducing the blight caused by flooding. In addition, case studies will be produced showing how flood and coastal investments can contribute to land value uplift in significant growth areas.



‘Net gain’ is an approach to development that aims to leave the natural environment in a measurably better state than it was before.



Property with a flood gate installation





Outcome: More people will take action to build back better and recover more quickly when flooding happens.

Objective

Between now and 2040 risk management authorities will work with the finance sector and other partners to mainstream property flood resilience measures and to 'build back better' after flooding.

What will we do?

- CIWEM will establish a 'Certified Competent Property Flood Resilience Practitioner Scheme' to give home and business owners confidence that their installations are of good quality.
- Flood Re will work with the insurance sector to phase in the 'Build Back Better' scheme, offering increased insurance pay outs for properties which have flooded so that resilience measures can be installed.
- The Environment Agency, Flood Re and the National Flood Forum will develop a programme of communications and engagement targeted at homeowners to signpost advice and support on the benefits of Property Flood Resilience and other measures to communities at highest risk.
- The Environment Agency will launch a new framework of property flood resilience suppliers to ensure that products are tested to Kitemark standards and installed following the Property Flood Resilience Code of Practice.
- The Environment Agency will develop a consistent way of recording and sharing data on property flood resilience measures funded from its Flood and Coastal Erosion Risk Management Investment Programme.
- The Environment Agency, in partnership with Flood Re, will undertake a pilot study in Kent to test options for collecting property flood resilience data from homeowners. The pilot will help inform how the insurance sector can understand the role that property flood resilience can play in reducing risk.



Outcome: Flood risk assets will be safe and resilient to current and future risks from flooding and coastal change.

Objectives

Between now and 2030 owners of flood and coastal defences will understand and take responsibility for achieving flood and coastal resilience.

Between now and 2030 owners and operators of large, raised reservoirs will ensure they are safe in a changing climate.

What will we do?



The Environment Agency will publish best practice record keeping guidance for local flood defence management and will work with partners to communicate it widely. This will include asset types such as embankments, floodgates and flood walls. The partners involved in communicating the guidance will include: the Coastal Group Network, the National Network of Regional Coastal Monitoring Programmes of England, Coastal Partnerships, Water UK, the Association of Directors of Environment, Planning and Transport (ADEPT), the Association of Drainage Authorities (ADA), National Highways, the Canal and Rivers Trust (CRT) and the Local Government Association (LGA) Coastal Special Interest Group.



The Environment Agency will work with risk management authorities to develop common approaches for inspecting and managing assets for all sources of flooding. This will also help to ensure that all 'third party' owners of flood and coastal defences are aware of their responsibilities to ensure assets are safe and resilient.



The Environment Agency will update guidance for the reservoir industry on climate readiness to ensure reservoirs continue to be resilient to extreme flood events and climate change.





Outcome: National infrastructure will be more resilient to current and future risks from flooding and coastal change.

Objectives

Between now and 2030 water companies will plan for their infrastructure to be resilient to flooding and coastal change.

Between now and 2050 risk management authorities will work with national infrastructure providers to contribute to more flood and coastal resilient places.

What will we do?



The Environment Agency, Water UK and Ofwat will work with risk management authorities to inform Drainage and Wastewater Management Plans to improve resilience to surface water and drainage flood risks.



The Environment Agency and Ofwat will engage stakeholders on their joint approach for how water companies should consider flood and coastal resilience in the context of their statutory roles and duties.



Ofwat's final methodology for Price Review 2024 will be clear on how water companies can use adaptive planning to ensure their assets are resilient and contribute to better flood and coastal risk outcomes.



National Highways will work with the Environment Agency to invest in more schemes as part of the National Highways Environment Wellbeing Fund. These schemes will reduce flood risk and improve biodiversity for communities and the strategic road network.



The Environment Agency will work with Network Rail to deliver a joint programme of multi-beneficial schemes that improve the flood and coastal resilience of rail assets.



The Environment Agency will work with the telecoms and power distribution sector to share flood and coastal erosion risk information and explore joint investment opportunities to improve the resilience of telecommunication and power distribution assets.

Environment Agency member of staff talking to resident about flood risk



Ambition 3: A nation ready to respond and adapt to flooding and coastal change

The Strategy seeks to build a nation of people who understand their risk to flooding and coastal change, know their responsibilities and are able to take action. Risk management authorities and local responders all have a key role to play in helping people and businesses respond and adapt.

There are multiple parts of this Strategy ambition including transforming the Environment Agency's flood warning and informing services and communicating risks better through improved digital services for customers. We want to be world leading in terms of our research and also how we work with partners nationally and internationally to innovate to reach net zero targets and adapt to a changing climate. Underlying this will be ensuring that we invest in the skills and learning we need for the future.



Outcome: People will understand and will be better prepared to respond to flooding and coastal change risks.

Objectives

Between now and 2050 people will understand the potential impact of flooding and coastal change on their lives and livelihoods and will take action to reduce that impact.

Between now and 2030 people will receive the information and support they need to transform how the nation better prepares and responds to flooding and coastal change.

What will we do?



The Environment Agency will continue to improve its digital 'Check Your Long-Term Flood Risk Service' to increase the public's understanding of their flood risk. This will include incorporating improved surface water risk information from local authority mapping and the data from the new national assessment of flood risk.



The Environment Agency will work with Hull University and a range of children's charities to develop and co-create digital communication and education tools. These tools will help children and young people to be better prepared for flooding and to improve their schools' and communities' flood resilience.



The Environment Agency will ensure that all places at high risk of flooding from rivers and sea are covered by its flood warning service. The Environment Agency will also develop and pilot new forecasting and warning approaches, where traditional flood warnings are not feasible.



The Environment Agency will work with the government on the new Emergency Alerts service for the most severe river and sea flooding incidents. The Environment Agency will be able to use the government owned Emergency Alerts capability to warn people if there is a danger to life from severe flooding in a specific location by sending an alert to mobile phones or tablets.



The Environment Agency will work with the Met Office and Flood Forecasting Centre to explore opportunities to improve its forecasting capabilities for surface water flood events.



Outcome: People will understand and will be better prepared to respond to flooding and coastal change risks.

Objectives

Between now and 2050 people will understand the potential impact of flooding and coastal change on their lives and livelihoods and will take action to reduce that impact.

Between now and 2030 people will receive the information and support they need to transform how the nation better prepares and responds to flooding and coastal change.

What will we do?



The Environment Agency will continue to work with local resilience forums as they develop their flood plans that better coordinate, prepare and respond to flood incidents. This includes updating Multi-Agency Flood Plans, and the Environment Agency undertaking a 'health check' every three years.



The Environment Agency will create new engagement skills courses for practitioners in risk management authorities. They will build capability in collaborating with communities and creating partnerships that are inclusive and enhance public understanding of a range of flood resilience actions.



Communities Prepared and the National Flood Forum will support new and existing volunteer groups to grow and take a more active role in managing flood and coastal resilience in their local communities.



The Environment Agency will work with Communities Prepared, Aviva, the British Red Cross and local resilience forums to pilot local resilience hubs. The hubs will bring together local volunteers, community groups, third sector and risk management authorities. They will offer virtual and physical spaces for resilience-building activities such as preparing for emergency response, training, and sharing good practice.





Outcome: People and businesses will get back to normal quicker after flooding.

Objective

Between now and 2030 people and businesses will receive the support they need from all those involved in recovery after flooding so they can get back to normal quicker after flooding.

What will we do?

- The Environment Agency will work with partners and the insurance industry to review the recovery phase from a broad selection of historic major flood events, while learning from other major civil emergencies. This review will share lessons learnt on how people and businesses can be better supported after flooding to get back to normal quicker.
- Flood Re will work with the insurance industry to understand barriers to greater access to affordable flood insurance for economically and socially deprived and diverse communities.
- The Environment Agency will share best practice on the types of post event support and long-term recovery planning that can be provided by responders and other partners to mitigate the long-term mental health impacts from flood incidents.
- The Environment Agency will work with the National Flood Forum and other partners to develop a national framework for how the third sector can be better involved in supporting recovery from significant flood incidents.

“

74% of people believe responsibility to protect homes should be shared between home owners and the authorities

40% of people don't know who to call to get work done to their home to protect it from flooding

30% of people would like to take action but don't know how to

”

EA Public Flood Survey 2021-22



Environment Agency

Microsoft MINECRAFT

RiverCraft

Students learning about flood risk by playing the RiverCraft Game by Minecraft



Outcome: More people will have the education and skills they need to develop careers in flood and coastal risk management.

Objective

Between now and 2030 the Environment Agency will have an oversight of skills and capabilities across the flooding and coastal change sector to identify gaps and future needs.

What will we do?



The Environment Agency will enhance its outreach activities in schools through STEM Ambassadors working collaboratively with the Department for Education, STEM Learning and the Geographical Association.



The Environment Agency will work with the Department of Education to help deliver its [Sustainability and Climate Change Strategy](#) and [National Education Park](#). This work will support climate education, promotion of green skills and careers and enhance the flood resilience of the schools' estate.



The Environment Agency will encourage opportunities for ongoing learning and career development in engineering and environmental sciences through degree-level apprenticeships and a new graduate training scheme.





Outcome: World leading research and international best practice will underpin flood and coastal risk management.

Objective

Between now and 2030 the nation will be recognised as a world leader in researching and managing flooding and coastal change.

What will we do?



The Environment Agency, Defra and Welsh Assembly Government will work with universities, research councils and other partners to produce world leading research through the Flood and Coastal Erosion Risk Management Research and Development Programme.



The Environment Agency will strengthen its collaboration with international partners such as Rijkswaterstaat and U.S. Army Corps of Engineers to share flood and coastal resilience research, best practice and innovation.



The Environment Agency will continue to work with the [I-STORM Network](#) to share knowledge and best practice for those working in the storm surge barrier industry internationally.





Outcome: Carbon emissions from flood and coastal risk management investments will be significantly reduced to meet net zero targets.

Objective

Between now and 2030 the nation will be recognised as a world leader in researching and managing flooding and coastal change.

What will we do?



The Environment Agency will work with its supply chain to trial and pilot innovative, low carbon products and solutions to the construction and management of flood and coastal risk management infrastructure. The Environment Agency will publish lessons learnt and case studies from this work to benefit other risk management authorities.



The Environment Agency will produce a national offsetting strategy for how Environment Agency led flood and coastal projects can offset greenhouse gas emissions and mitigate carbon impacts.



The Environment Agency will roll out carbon literacy training to encourage its staff and supply chain partners to consider net zero solutions in the early stages of designing and developing flood and coastal risk management projects.



The Association of Drainage Authorities (ADA) will publish a guide to carbon reduction techniques for water level management in lowland pumped catchments.



The Environment Agency will work with the government's 'Construct Zero Advisory Board' and the joint public-private 'Infrastructure Client Group' to inform net zero and wider sustainability approaches across the infrastructure sector.

www.gov.uk/government/organisations/environment-agency

General enquiries: 03708 506 506

Incident hotline: 0800 80 70 60

Floodline: 0345 988 1188

**On social media: @EnvAgency
or search for Environment Agency on Facebook**

All images © Environment Agency except:

Cover: Natural flood risk management including leaky barriers. © Johnny Kidd, West Cumbria Rivers Trust

Page 17: © Sam Stafford, Wildfowl and Wetlands Trust

Page 18: © Jessica Lamond, University of the West of England

Page 33: © Coastal Partners

Coastal sea defence, Portsmouth

