

Draft national flood and coastal erosion risk management strategy for England – Internal Questions and Answers (Q&A)

This Q&A is aimed at staff and leaders across the business in the Environment Agency about what the draft Strategy is covering and how teams may plan to respond to the internal document.

The Q&A covers climate change, resilience and the environment before discussing each draft strategy ambition and their objectives, in turn. Later sections cover the strategic overview, how the draft strategy relates to other parts of the business and finally, next steps.

This document should be read alongside the draft strategy, the Q&A for stakeholders, key messages, and DIY slide pack.

1 Key Themes

1.1 Climate change and resilience

What do you expect the future impacts in England will be?

- Our most recent [Long Term Investment Scenarios](#) and the recently published UKCP18 climate scenarios suggest that we need to act now on climate change.
 - 5.2 million homes and businesses in England are at risk of surface water, river and sea flooding, with numbers rising over future decades.
 - Up to 700 properties in England could be vulnerable to coastal erosion over the next 20 years.
 - Summer temperatures could be up to 5.4°C hotter by 2070, while winters could be up to 4.2 °C warmer.
 - Wetter winters: there could be up to 35% more precipitation in winter by 2070.
 - 0.4 to 1 metre of sea level rise is predicted by 2100, and a coast continuing to change.
 - As the population grows, we are likely to see the number of properties built on the flood plan almost double by 2065.

How serious are you about climate change?

- Climate change poses the greatest threat to our economy, environment, health, and way of life – it is the underlying driver for the changes we are proposing. The three ambition statements are all aiming to help deal with the effects of climate change.
- The scale of potential future flooding and coastal change is significant. Despite the positive work of the Environment Agency and other risk management authorities we need to adopt a different philosophy.
- We need to move the nation from a concept of protection to one of resilience – traditional flood and sea defences will remain vitally important but we cannot build our way out of future climate risks in many places. In different places we will need a range of tools which enable us to prepare for, respond to and recover from flooding and coastal change.

What are you already doing to address climate change?

- The Environment Agency and risk management authorities are already planning for climate change: building climate change projections into the design of flood and coastal change strategies and projects to make sure they are fit for the future – and over the course of six years up to 2021 are building new schemes which will better protect 300,000 homes.
- The role of planning is crucial too, and we have worked with the government to ensure that the National Planning Policy Framework reflects our climate change adaptation guidance when planning for flood and coastal risks. We and other risk management authorities also work with local authority strategic and spatial planners and infrastructure providers to advise on planning applications and longer term, strategic spatial plans with respect to flood and coastal risks.
- In addition, we are seeking carbon emission neutrality in our ambitions. We keep our data and modelling under constant review and examine it rigorously after every flooding incident to ensure our plans are climate-proof.

How will you increase resilience?

- We can increase our resilience to flooding and coastal change by working together. The ambitious draft strategy looks out to 2100. This will help ensure that as a nation we take urgent and immediate action so that we can all live in climate resilient places that are able to manage and adapt to flooding and coastal change.
- But we can never entirely eliminate flooding and coastal changes, so in some places we will need to learn to be more resilient by adapting to this risk and recovering more quickly, building back better and in better places.

What is your definition of resilience? There are so many.

- Through the draft strategy we introduce the concept of ‘resilience for places’ which refers to the ability for a community in a place to cope with, and recover from, all sources of flooding or coastal change.
- The draft strategy’s glossary refers to ‘resilience of places’, where our aspiration is for places to have access to a combination of tools so that they can understand their risk and have more control over how to adapt and respond to flood risk.

1.2 Environment

How will the draft strategy contribute to wider environmental objectives?

- The draft strategy’s objectives and measures will contribute to wider environmental objectives, and in particular, a range of objectives in the 25 year environment plan (25 YEP). The 25 YEP sets out the government’s ambition to leave our environment in a better state than we found it.
- Specifically the draft strategy will support the 25 YEP objectives to protect threatened species and provide richer wildlife habitats; reduce the risk from natural hazards; and adapt to and mitigate climate change. The draft strategy also takes account of the natural, built and historic environments that are valued by so many people and protected within different pieces of legislation.

- There are measures that aim to increase and normalise the use of natural flood management and ensure that farmers and landowners are able to contribute to reducing flood risk and coastal change through the proposed environmental land management scheme.
- Finally, there is also a measure that seeks to maximise the benefits from creating and restoring natural habitats such as woodland, peatlands and saltmarsh for reducing flood risk and coastal change.

Will working with natural processes really be that effective?

- All risk management authorities need to work with natural processes. Our evidence has shown that working with natural processes can reduce risk in smaller catchments for low magnitude-high frequency flood events and can contribute to reducing coastal erosion. They can also provide additional benefits including: water quality improvements; strengthened water resource provision; mitigation of and adaptation to climate change through, for instance, wetland creation and coastal and fluvial realignment; and providing urban biodiversity and amenity green spaces through sustainable drainage systems.

What will working more with natural processes mean for risk management authorities?

- Guided by this draft strategy, wider government policy and legislative requirements all risk management authorities will face choices and long term decisions that will benefit the environment.
- The following list are just some examples of those choices:
 - Balancing wider carbon costs or benefits over the life of new flood and coastal management projects;
 - Achievement of sustainable development goals,
 - Balancing the needs of society, the economy and the urban, rural and natural environment;
 - Securing environmental benefits; and meeting legal requirements to conserve and enhance natural beauty, wildlife and cultural heritage.
- Working with natural processes is a key part of our approach and can take many forms. This includes encouraging the most appropriate crops and farming techniques that limit soil erosion, natural flood risk management tools on farmland as well as the creation of inter-tidal or coastal habitat.

What is Biodiversity Net Gain?

- Net gain is an approach to development that aims to leave the natural environment in a measurably better state than beforehand. Development that adopts a biodiversity net gain approach seeks to make its impact on the environment positive, delivering improvements through habitat creation or enhancement after avoiding or mitigating harm as far as possible.
- Based on a standardised approach, biodiversity net gain delivers measurable improvements by comparing habitat losses and gains and steering mitigation and compensation accordingly.

What is Environmental Net Gain?

- Biodiversity net gain is a positive step towards the wider opportunities offered by 'environmental net gain', a way of improving all aspects of resilient and sustainable development. Environmental net gain was identified in the government's 25 year environment plan as a key means of achieving its ambition 'to be the first generation to leave the environment in a better state than we found it.'
- We know growth will not be sustainable if its net impact is to harm our natural environment – which includes geology, soil, air, water and all living things, or our cultural heritage – or ignore the risks posed by natural hazards. Establishing environmental net gain in the planning system would allow us to maintain and improve the nation's resilience to natural hazards such as flooding and coastal change as well as the effects of climate change.
- We know growth will not be sustainable if its net impact is to harm our natural environment. Establishing environmental net gain in the planning system would allow us to maintain and improve the nation's resilience to natural hazards such as flooding and coastal change as well as the effects of climate change.
- Our objective is: *"Between now and 2030 all new development will seek to support environmental net gain in local places"*.

2 Ambition 1 - Climate Resilient Places

Note: blue text below is to emphasise the particular objectives that sit under an ambition

What is meant by the ambition 'Climate Resilient Places'?

- Our draft strategy sets out:
 - How we want to create places which are resilient to a changing climate and communities that are better able to live with the risk of flooding or coastal change,
 - The need to explore and develop the concept of standards for flood and coastal resilience for all places at risk - central to creating climate resilient places.
 - Awareness that the risk of flooding and coastal change is constantly changing and that to manage it requires an iterative and dynamic approach which is reviewed over time in response to changing risks.
 - We call this the 'adaptive approach' and it promotes positive action before it is needed. It is already used in some locations in England but we are keen to broaden this concept out further.

What is the concept of resilience standards and how will they work?

- Resilience is about flood protection, adapting to our changing climate and recovery when a place is hit by a flood. Traditional defences remain vitally important but we want people to be more resilient so they are ready to respond when flooding hits and they can recover more quickly.
- By developing consistent standards, every community will be able to understand their flood risk and expect certain levels of resilience.

- The way we will do that is by offering communities the tools to give them control of how they respond to flooding and coastal change. This could include traditional flood defences, natural flood management, ensuring any new development built is safe from flood risk and adapting their homes so they can respond more quickly after a flood.
- We are planning to work with partners to explore and develop the concept of standards for flood and coastal resilience over the course of the next year.
- Resilience standards will be considered by the government later in the year in their National Infrastructure Strategy which is being developed in response to the National Infrastructure Commission's National Infrastructure Assessment published in 2018.
- Our work on resilience standards will feed into a longer term objective that is: *“Between now and 2050 the nation will be resilient to future flood and coastal risks. Over the next year the Environment Agency will work with partners to explore and develop the concept of standards for flood and coastal resilience.”*

What were the National Infrastructure Commission's proposals on standards?

- The National Infrastructure Commission recommended a long term goal of establishing a 'national standard of flood resilience'. They proposed that major urban areas should be resilient to 0.1% annual likelihood events and other parts of the country should be resilient to events of 0.5% annual likelihood.
- We believe that there needs to be a consistent approach across the country but one that recognises that the tools for delivering resilience will vary from place to place, based on technical, environmental, economic and social needs and constraints. This is less about standards of protection but of resilience of place and people. The responsibility for agreeing the best combination of resilience tools will rest with the most appropriate decision maker depending on the scale of the place.
- We plan to work with risk management authorities and other partners to explore and develop the concept of standards for flood and coastal resilience, and in doing this we will consider the pros and cons of all options.

What is an adaptive approach and what does this mean for the future?

- An adaptive approach simply means making the right decision at the right time, and being flexible to review and amend this where needed in the future. It enables flood and coastal erosion risk management to be carried out in a way that is agile to the latest climate science, growth projections and other changes to the local environment. Looking out to 2100, adaptive approaches give local places 'decision points' to help navigate through the future in collaboration with local partners and communities.
- The adaptive approach will help to plan for an uncertain future and a change in how we support or encourage others to increase resilience over time. Recognising this, we have a long term objective as follows: *“Between now and 2050, risk management authorities will help places plan and adapt to flooding and coastal change across a range of climate futures”*

How does the draft strategy impact on rural land management?

- Farmers and land managers need to be climate resilient in the same way as all other businesses. We propose to support them to do this by encouraging the most appropriate crops, farming techniques that limit soil erosion, natural flood risk management tools on farmland as well as creating inter-tidal or coastal habitat.
- We also propose to support farmers through mechanisms to help them adapt to a changing climate, i.e. incentives and regulation. Our long term objective covering this is *“Between now and 2030 all those involved in managing water will embrace and embed adaptive approaches to enhance the resilience of our environment to future flooding and drought.”*

How will the draft strategy enhance the natural, built and historic environments?

- The government’s 25 Year Environment Plan: 'A Green Future: Our 25 Year Plan to Improve the Environment' sets out what the nation should do to improve the environment, within a generation. The draft strategy has measures and objectives which contribute to the delivery of the 25 Year Environment Plan aims and objectives.
- Our draft strategy includes an objective for risk management authorities to play a key role in this: *“Between now and 2030 risk management authorities enhance the natural, built and historic environments.”*

How will the draft Strategy attract additional funding?

- In the short term, we are planning to work with the government on its Green Finance Strategy to develop new options for funding and financing flooding and coastal change that deliver more private funding in the future. Linked with this, risk management authorities will test whether it is feasible to use upfront financing to deliver an adaptive approach in a place that will need significant investment in future.
- The Environment Agency is working closely with both Defra and the Treasury to agree what funding for flooding and coastal change will look like in the next capital programme. We currently don’t know either the amount or length of the programme, however we expect the current partnership funding approach to continue.
- Our draft strategy includes a longer term objective to encourage new funding sources. *“Between now and 2030 risk management authorities will use funding and financing from new sources to invest in making the nation resilient to flooding and coastal change.”*

3 Ambition 2 - Growth and Infrastructure

Note: blue text below is to emphasise the particular objectives that sit under an ambition

What is in the ambition “Today’s growth and infrastructure is resilient to tomorrow’s climate”?

- Our draft strategy sets out:
 - A long-term ambition for ourselves and risk management authorities to ensure infrastructure is resilient to flooding and coastal change, working with others as needed.

- Further ways in which flood and coastal investments can better contribute to local economic regeneration and sustainable growth.
- Measures that encourage property owners to ‘build back better and in better places’ after a flood. This could involve home improvements to make them more resilient.
- Wider opportunities offered by ‘environmental net gain’, a way of improving all aspects of resilient and sustainable development.

Will the draft strategy stop/reduce development on the flood plan?

- As the nation’s population grows we’ll need many more new homes. Our recent [Long Term Investment Scenarios](#) study suggested that we’re likely to see a doubling of the number of properties built in the floodplain over the next 50 years.
- We will continue to build on our technical planning advice to local authorities alongside other risk management authorities within the current planning framework. We recognise that it will be challenging in some places to make future development climate-resilient, due to limited development areas outside of the flood plain.
- However, better and earlier cooperation on the design of places where people live and work can help minimise future damage from flooding and coastal change. Our draft strategy includes an ambitious longer term objective: *“Between now and 2030 all new development contributes to achieving place based resilience to flooding and coastal change”*

How can the draft strategy encourage local regeneration and sustainable growth?

- There are many examples around the country where we can see how investments in flood and coastal infrastructure can make available areas of land previously thought unattractive to development. These have stopped economic blight in places experiencing repeat flooding, facilitated resilient development or unlocked opportunities for sustainable growth.
- Our draft strategy therefore includes a longer term objective to: *“Between now and 2030 all risk management authorities will contribute positively to local economic regeneration and sustainable growth through their investments in flooding and coastal change projects.”*

How are insurance and finance industries included? Will the draft strategy help to lower insurance premiums?

- If people are already paying for clean-up and other related activities, it can be quicker and cheaper to just return their property to how it was before the flood. Most insurance companies take this view too, and won't pay for replacement with flood-resilient products. But more should be done to encourage property owners to build back better and in better places, with support from their insurance company. This will help people and businesses get back to normal quicker after any future floods.
- With enhanced mapping and modelling tools proposed for delivery through the draft strategy, it will be possible to better assess flood and coastal risks. In turn, this will help inform the insurance industry, as well as people and businesses to understand the impact of their flood or coastal change risks.

- Our draft strategy includes a long term objective to address this, which will involve government, insurers and financial institutions, as follows: *“Between now and 2050, places affected by flooding and coastal change will be ‘built back better’ and in better places”*

How will the draft strategy deal with inconsistent information about flood risk and the mosaic of responsibilities that delivers flood and coastal management?

- Failure of one piece of flooding and coastal change infrastructure (i.e. flood and coastal change assets) potentially compromises them all, and, ultimately, the safety of people living and working behind them. This, together with keeping pace with climate change, complex responsibilities around flooding and coastal infrastructure and private ownership of key infrastructure means a need for greater coordination and clarification around responsibilities.
- We want to improve collectively how we and other risk management authorities and private owners to operate and maintain the flood and coastal change infrastructure of the nation.
- Our draft strategy includes an objective to address this; *“Between now and 2030 all flooding and coastal infrastructure owners will understand the responsibilities they have to support resilience standards for places.”*

Do we know what other infrastructure providers are doing on flood and coast resilience? What is the Flood and Coastal Infrastructure Task Force?

- Infrastructure is both national and local and covers everything that supports society and business, including transport, electricity, communications, water as well as schools, hospitals, doctors, food distribution, shops etc.
- Following the 2015/16 winter floods, the government undertook the [National Flood Resilience Review](#). This assessed the resilience of key local infrastructure such as energy, transport, water and communications, and identified ways to protect it better.
- The review found 41% of transport and utility infrastructure is in areas at risk of flooding. Around 36% is directly at risk and 5% is at risk due to its dependence on electricity supplies, which are also at risk. Over 55% of water and sewerage pumping stations, 20% of railway lines, 10% of major roads, 28% of gas infrastructure and 14% of electricity sub-stations are in areas at risk of flooding.
- Our chair, Emma Howard Boyd, will be setting up a Flood and Infrastructure Task Force with key infrastructure stakeholders to provide a high level focus to this ambition.
- As a nation we need to improve both current infrastructure so it is resilient to flooding and coastal change, but also ensure new infrastructure is planned and delivered to ensure it is resilient to the range of future climate impacts. To support this we have an ambitious objective: *“Between now and 2050 the Environment Agency and risk management authorities will work with infrastructure providers to ensure all infrastructure investment is resilient to future flooding and coastal change.”*

4 Ambition 3 - Nation of Climate Champions

Note: blue text below is to emphasise the particular objectives that sit under an ambition

What is in the ambition “*A nation of climate champions*”?

- Our draft strategy sets out:
 - How we want to ensure that people have the knowledge to deal with the impacts of the increased risks they are likely to face, in doing this we believe they will be better able to take responsibility to help manage the impact of their own risks. We know from our research work that people need to understand the impact of risk rather than understand the risk itself: e.g. “my house might flood, I may not get to work when it floods”.
 - How the draft strategy applies to everyone, in the nation. We are all affected by flooding and coastal change, both directly and indirectly. Over 5.2 million people’s homes and business are at direct risk but many more could be affected when they travel to work, take their children to school or go on holiday.
 - Our opportunity to inspire people to take action ahead of time and build “*A nation of climate champions, able to adapt to flooding and coastal change through innovation*”, with a broad range of people managing or facing flood and coastal risks in their lives.

Why is the draft strategy focussed on the role and education of young people?

- We need to start inspiring younger generations to understand and take personal action to manage impacts of flood and coastal risks. Flooding and coastal change are already regularly used as case studies within schools to show the impacts of natural hazards and climate change. However, more can be done and we need to take a long term view in helping those delivering the school curriculum to include flooding and coastal change in it.
- Our draft strategy therefore includes the following objective: “*Between now and 2030 young people at 16 should understand the impact of flooding and coastal change, but also recognise the potential solutions for their place, and opportunities for career development*”.

How is the draft strategy dealing with public awareness and mental health challenges with flood and coastal risk?

- The impact of flooding or coastal change is long-lasting and significant. Following a flood people suffer from depression, anxiety and post-traumatic stress disorder to levels similar to those seen after major disasters. Together with our partners, we have continually improved our combined services - giving people more accurate information, with more warning, for all sources of flooding. The draft strategy aims to continue this work.
- Despite these improvements, more needs to be done to ensure everyone understands the language, and can access simple digital tools that prompt them to act, regardless of whether there’s an imminent risk of flooding or coastal change. Our strategic objective seeks to address this issue: “*Between now and 2030 people will understand the potential impact of flooding and coastal change on them and take action.*”

How is the draft strategy dealing with flood response planning and recovery?

- The Multi-Agency Flood Plan Review, published in June 2018, found that there are many people engaged across the country in recovery work and the overall picture is reassuring. However, the review found there was room for improvement in many aspects of flood response planning.
- The draft strategy aims to address this by reinforcing success, spreading existing good practice, extending national support measures and increasing resources devoted to flood emergency preparedness rather than more fundamental reform. Our draft strategy addresses this with the following objective: *“Between now and 2030 people will receive a consistent and coordinated level of support from all those involved when recovering from flooding and coastal change.”*

How will the Strategy promote or support the FCERM Sector?

- The Strategy recognises the opportunity to strengthen an already thriving and innovative flood and coastal change profession. The Strategy highlights the opportunities for the FCERM sector to work effectively with people to jointly develop the resilient places people who live there.
- Digital tools will be key part of this due to the mobile nature of modern life. Growth opportunities for the sector will benefit from industry supported standards for resilience measures, and wider opportunities to export knowledge and innovation, globally. We have a strategic objective to grasp these opportunities: *“Between now and 2030 the nation will be recognised as world leader in managing flooding and coastal change, as well as developing and attracting talent to create resilient places.”*

5 Strategic overview role

Will the draft strategy affect our Strategic Overview role?

- The draft strategy is a good example of what we can achieve by working together whilst providing strategic direction for flooding and coastal change management in England. There is more to do, but we can do this within the current legal framework through the stronger use of our strategic overview role for all sources of flooding and coastal erosion.
- The draft strategy sets out what we propose to continue and what could change within our strategic overview role. This includes providing data and tools on flood and coastal change, leading partnerships to enable place-shaping, giving effective information and warning, and supervision of flood and coastal change.

What changes are needed?

- The draft strategy sets out what changes are needed to lead flooding and coastal change as part of broader climate resilience. This includes overseeing the collaboration, sharing and monitoring between flooding and coastal change infrastructure owners and providing reporting and assurance that the final strategy’s objectives and measures are being progressed.

How might application of ‘resilience tools and standards’ affect decision making across the flood and coastal change landscape?

- We would like to work with risk management authorities and other partners to explore and develop the concept of standards for flood and coastal resilience, and in doing this we will consider the pros and cons of all options. Decision making will be a part of this.

6 The draft strategy consultation and other parts of the business.

How will the draft strategy consultation affect other parts of the business?

- The draft strategy includes a number of new ideas which may lead to some changes on how we operate. At this stage the consultation is just that – seeking views on the new vision, ambitions, objectives and measures.
- We have therefore set up a parallel internal consultation for seek views from the business. The internal consultation will be launched on 9 May for a 5 week period closing 13 June.
- If you are manager and planning to run a session or workshop to collectively respond to the consultation, you may want to gather comments and opinion from your group and then formally submit your response online after the discussion. The downloadable response form [\[available from this link\]](#) would provide a good template for you to gather responses.

How should we approach our networks?

- If you have contacts with external stakeholders (networks, organisations or individuals) we would like you to send them the external consultation link to encourage them to respond, and communicate it within their networks.
- Responses can be submitted on line from an individual or on behalf of a group or sector. Please encourage stakeholders to respond via the online consultation tool [\[available from this link\]](#).
- Other options for responding are: emailing, or posting a hard copy of, your responses, using the downloadable response form (also found on the same web link). These response options are set out in more detail in the consultation document.

What happens after the draft strategy consultation?

- We will consider all the responses to the external and internal consultation over the summer which will help us to finalise the strategy ready to lay before parliament in the autumn.

7 Next steps

How will the implementation of the final strategy be governed?

- We will develop arrangements for monitoring and reporting of progress with risk management authorities. Alongside the final strategy, we will publish an action plan on how we will take forward the objectives and measures with partners.
- We will govern the final strategy by providing leadership and direction in delivering our ambitions, reporting on progress and outcomes, reflecting and learning from our progress, and tracking benefits.

- We will also continue to report to the Minister under Section 18 of the Flood and Water Management Act 2010.

What happens next?

- We are asking for your feedback during the formal strategy consultation period. We want to hear your thoughts on the vision for 2100, the steps along the way, and what needs to happen to implement them. We will use your views and others to explore further the concepts being proposed and ultimately finalise the strategy.
- In late 2019, we will lay the strategy before parliament and the final strategy will be published in 2020. We will then hold conversations and work with people to deliver the strategy's ambitions from 2020. Ultimately, we want everyone to share the high-level vision collaboratively with our partners to steer the work of the flood and coastal management sector over the next 30 years.