Broadland Futures Initiative

Using climate scenarios and timeframes to develop the BFI Plan

What is the Broadland Futures Initiative?

The Broadland Futures Initiative (BFI) is a partnership working to improve the resilience of people, homes, businesses, nature, and heritage to flooding across Broadland. As our climate changes and sea levels rise, we need new approaches to keep communities safe whilst looking after the natural environment that makes Broadland special.

How climate change will affect the Broads

We've looked at three different ways climate change might happen:

- Base or Design climate scenario – what is likely to happen if there is little reduction in global emissions to curb climate change
- Severe climate scenario – if climate change happens faster than expected
- Extreme scenario – if climate change is much worse than expected

We use these different scenarios to test whether Flood Risk Management (FRM) actions will work under all conditions.

Without action, flood risks will significantly increase over the next 100 years, threatening homes, businesses, wildlife habitats, heritage, and the unique landscape of the BFI Plan area.

Three time periods for planning

We've split the 100-year BFI Plan into three periods shown below together with the assumed changes arising under the Design climate scenario. There is potential for a fourth time period, extending beyond 2130 to capture longer-term costs, benefits and impacts of large infrastructure implemented in the 2070-2130 period.

2030 to 2040 (10 years)	2040 to 2070 (30 years)	2070 to 2130 (60 years)
• In 2040, sea level 25cm higher than today • River flows about 3% higher than today • Focus on smaller, cheaper flood protection measures • Quick actions we can start right away	• Sea level in 2070 about 53cm higher than today • River flows about 8% higher than today • Time for bigger flood protection projects • More significant changes to how we manage flooding	• Sea level could be over 1 metre higher than today in 2130 • River flows about 11% higher than today • Major flood defences may be needed
This period focuses on providing certainty for next-step actions to begin the BFI Plan implementation and represents the transition between current FRM approaches and more significant future changes.	This period aligns with typical local authority planning horizons. It also reflects greater uncertainty about when changes may occur and anticipates larger scale actions, accommodating greater degrees of climate change.	This period contains the greatest uncertainty and most dramatic changes.

Flexible planning approach

It is impossible to precisely predict the impacts and timings of climate change, nor what future funding and societal values will be, so it is important that the BFI Plan remains flexible to potential changes. This flexibility is achieved through adaptive pathways.

Adaptive pathways have been used in planning future flood risk management approached across the world and BFI has drawn on examples from the Thames, New Zealand and Netherlands. For managing flood risk, the approach is made up of a series of flood risk management actions that could be taken at various, pre-agreed decision points in the future. As more information becomes available, FRM actions are adjusted where necessary.

For the Broads this means:

- We don't have to decide everything now
- We can change our plans if climate change happens faster or slower than expected
- We monitor for warning signs that tell us when to take the next step
- If sea levels rise faster, we'll act sooner
- If they rise slower, we can wait longer

Changes in FRM actions may be triggered by predictable changes in flood risk driven by physical climate and asset condition, as well as less predictable events such as unforeseen funding opportunities or infrastructure failures. The pathways are designed to accommodate both likely changes and sudden shocks, with the assumption that unexpected events will likely bring forward or delay actions already included in the pathways.

The BFI will be developing a monitoring regime which will be implemented once the strategy is finalised. This monitoring regime will be important for assessing when decision points are being approached and how the strategy is performing against real world events.

How we'll monitor progress

Below are some examples of the things that will be included in our monitoring regime:

- How fast sea levels are rising
- Changes in river flows
- The condition of existing flood defences
- New climate predictions
- How well our FRM actions are working

We will also review the whole BFI Plan about every 10 years and make changes if needed. The Plan is designed to give people and organisations time to prepare and adapt while keeping everyone safe from flooding.

Retaining flexibility

The final BFI Plan (expected in 2028) will set out the preferred approach for managing flood risk over the next 100 years, ensuring the Broads area remains a thriving place for people, wildlife and the economy.

Shorter time periods in the near term provide greater certainty for immediate decision-making that requires the highest confidence levels, whilst longer time periods accommodate increasing uncertainty in future projections. The adaptive pathways approach focuses particularly on the 'next step', providing certainty that FRM decisions made in the near future set an appropriate direction for potential future changes.

As we learn more about climate change and develop better technology, we can adjust our approach. The important thing is that we're prepared for different possibilities and can act when needed.