

East Marine Ecosystems

Reporting Annual Change in the
East Region & Building Social Capital



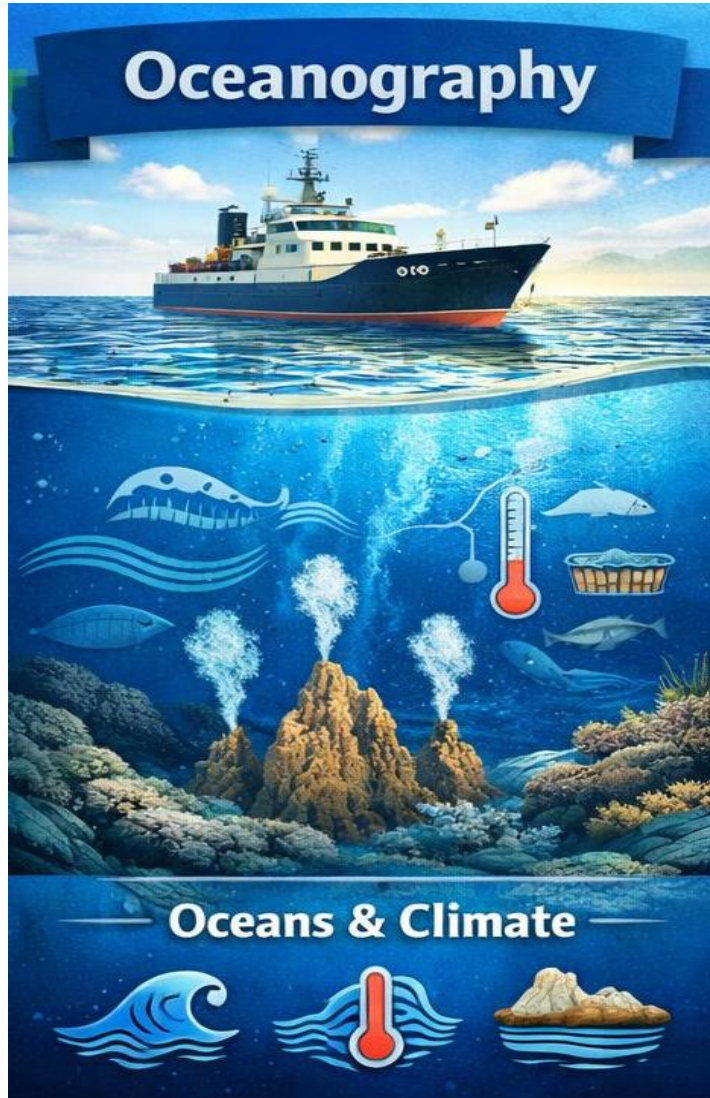
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Oceanography of the EastMe Region 2025

Benjamin Whitcombe,
Rodney Forster



What is Oceanography?



The study of the physical, chemical, and biological features of the ocean

Analyses the ocean's history, its current condition, and its future

Presentation will focus on temperature, salinity, turbidity and climatology



Why does it matter?

Monitoring changes in the ocean can help us:

- Identify anomalies in patterns
- Predict future weather patterns
- Assess the impact on humans
- Predict habitat change and species diversity

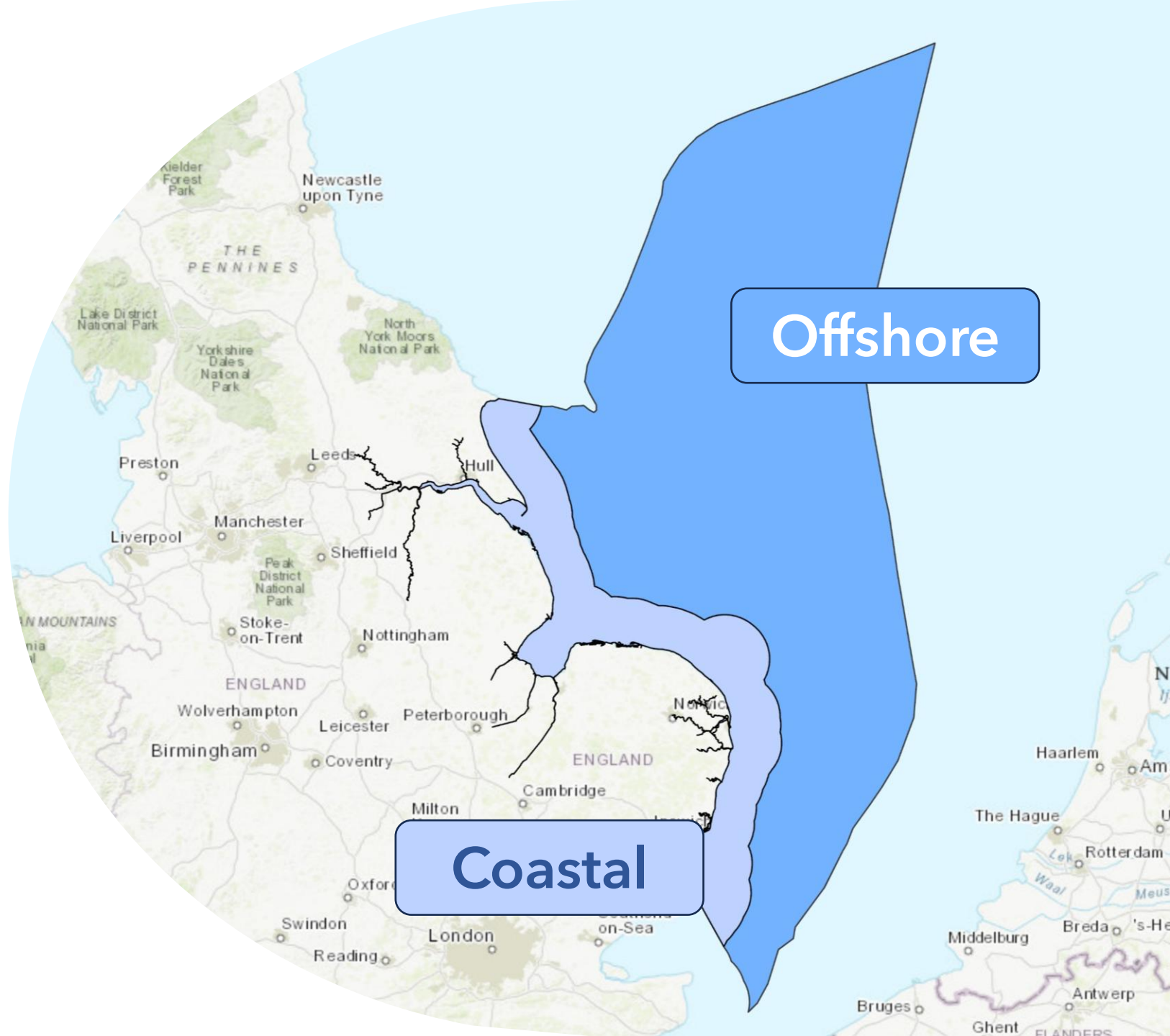
Record warm seas help to bring extraordinary new species to UK waters

Grey seals, minke whales and bluefin tuna: is the North Sea bouncing back to its glory days?

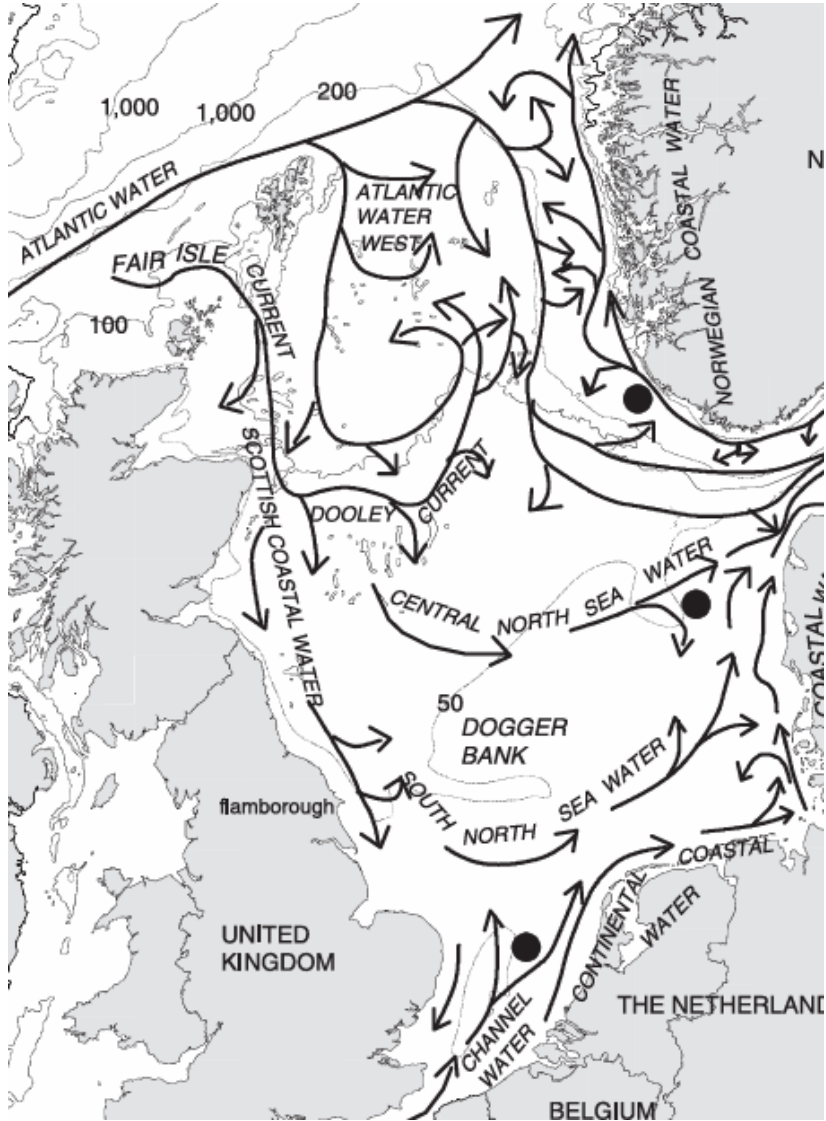
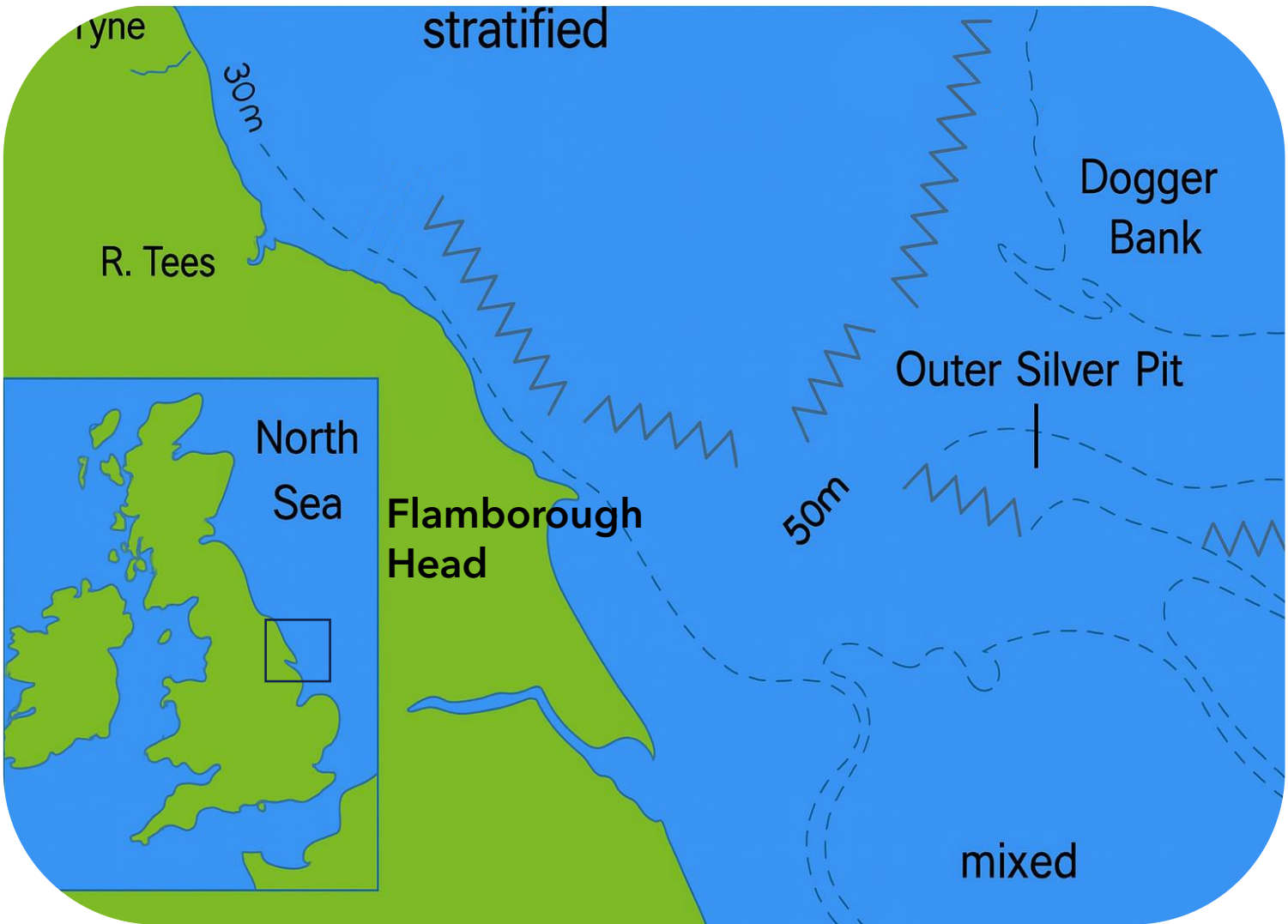
Squid and chips? How UK's warming waters could change which fish we eat

Rapid changes to ocean temperatures bring obstacles and opportunities to UK's fishing fleet

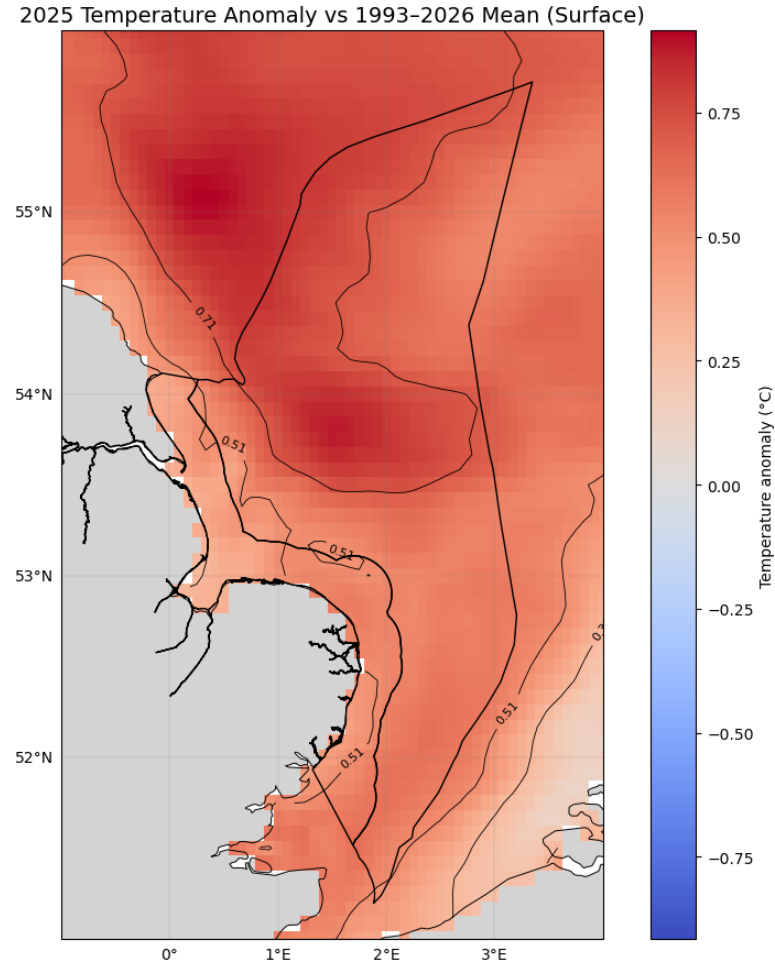
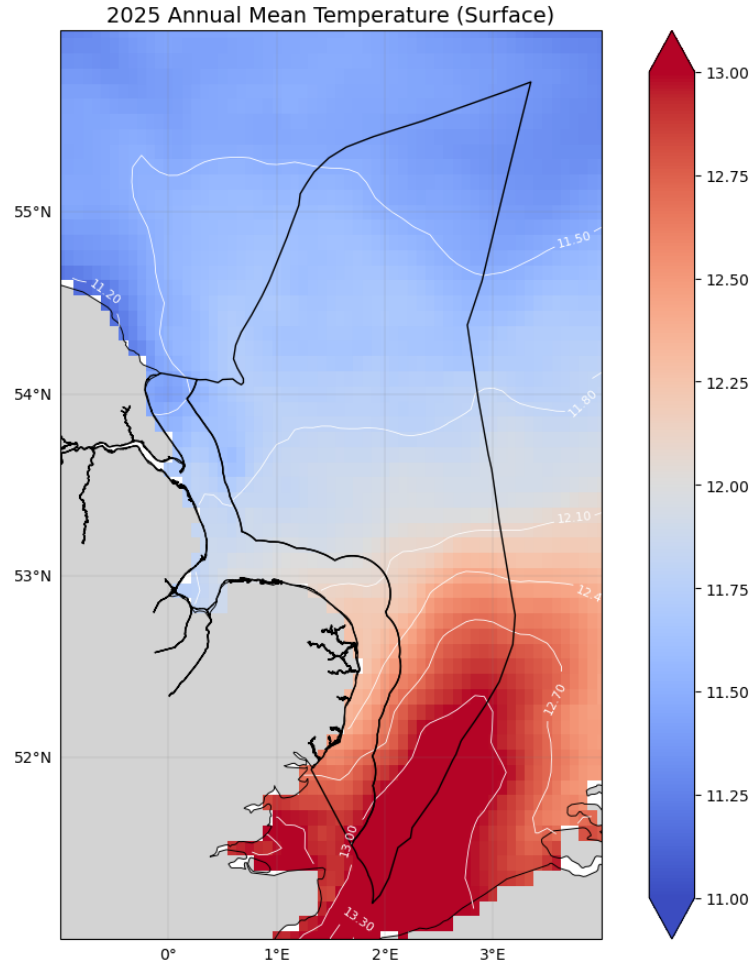
The EastMe Region in 2025



Stratified vs Mixed Waters



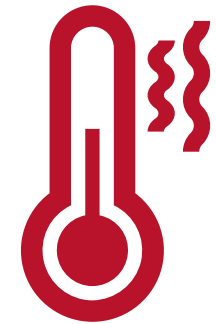
2025 Annual Temperature



Colder waters in the **North**

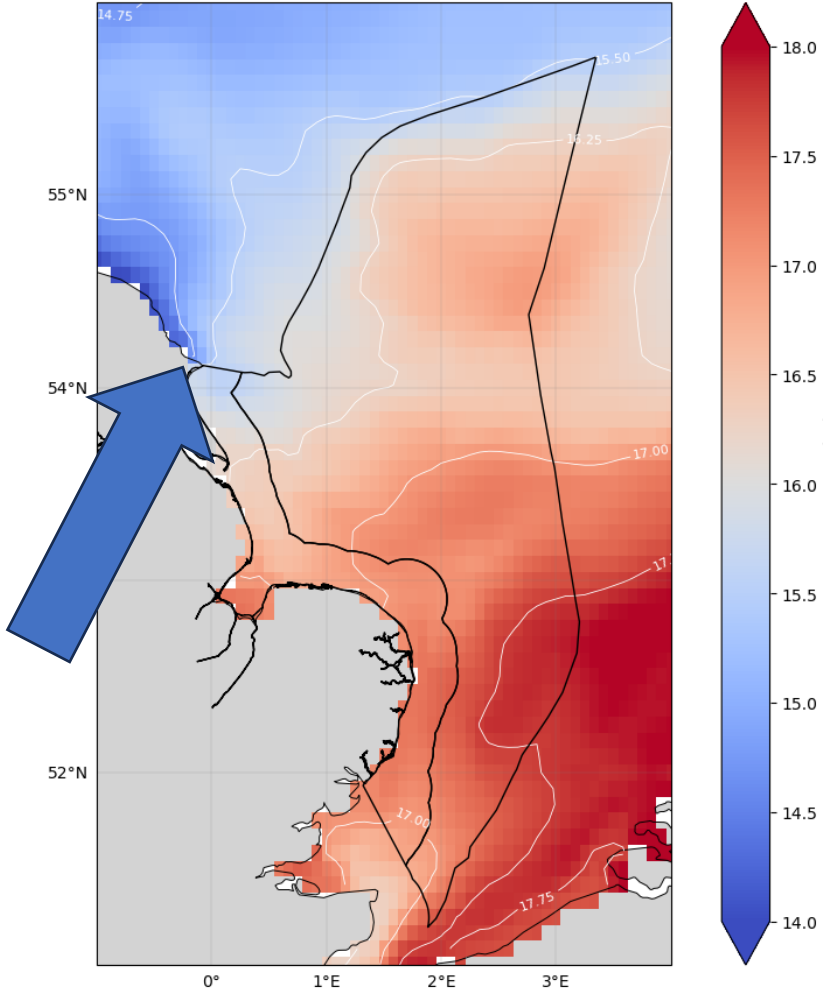
Warmer Channel waters to the **South**

The whole EastMe region was **warmer** in 2025 than the long-term average

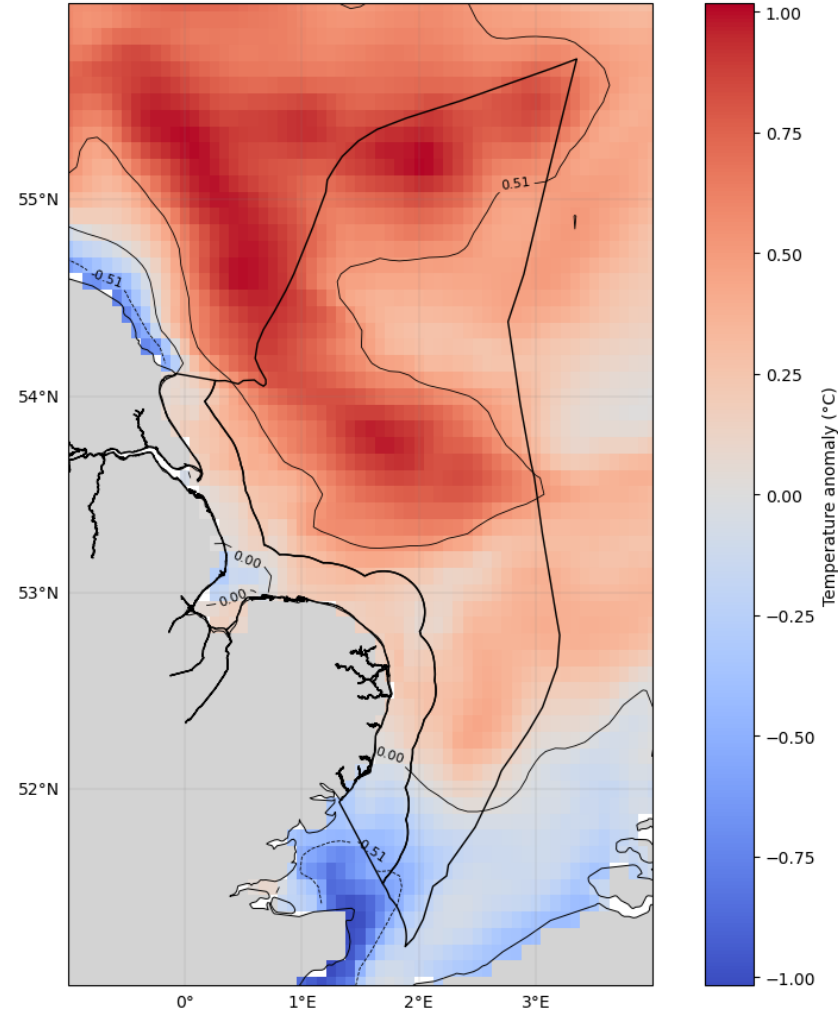


September 2025 Temperature

September 2025 Mean Temperature (Surface)



September 2025 Temperature Anomaly vs September 1993–2025



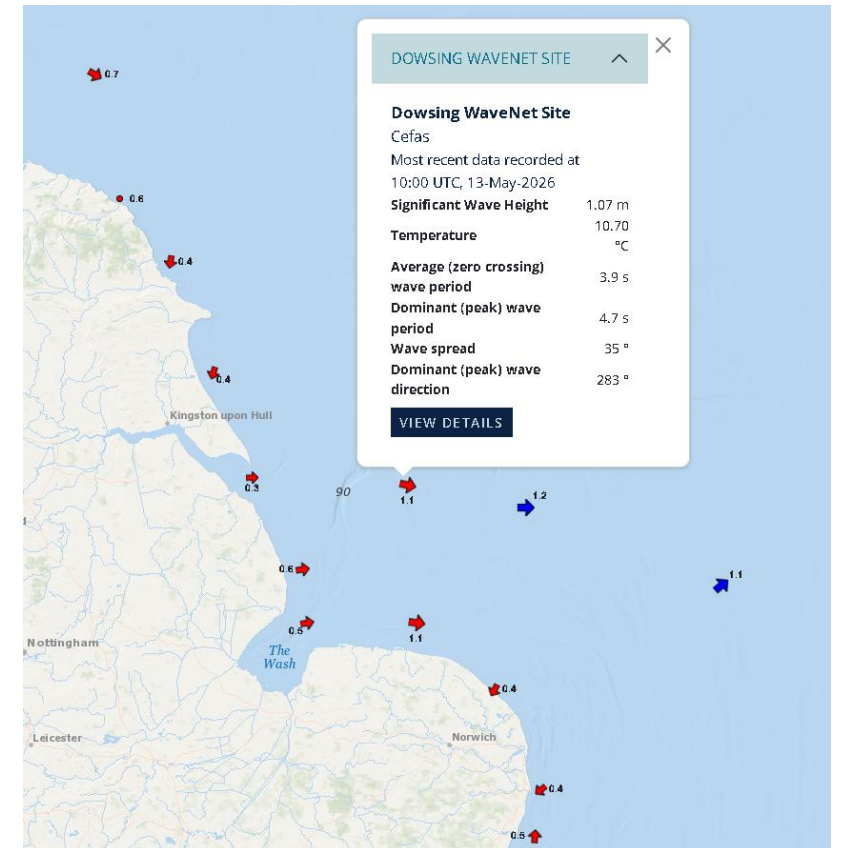
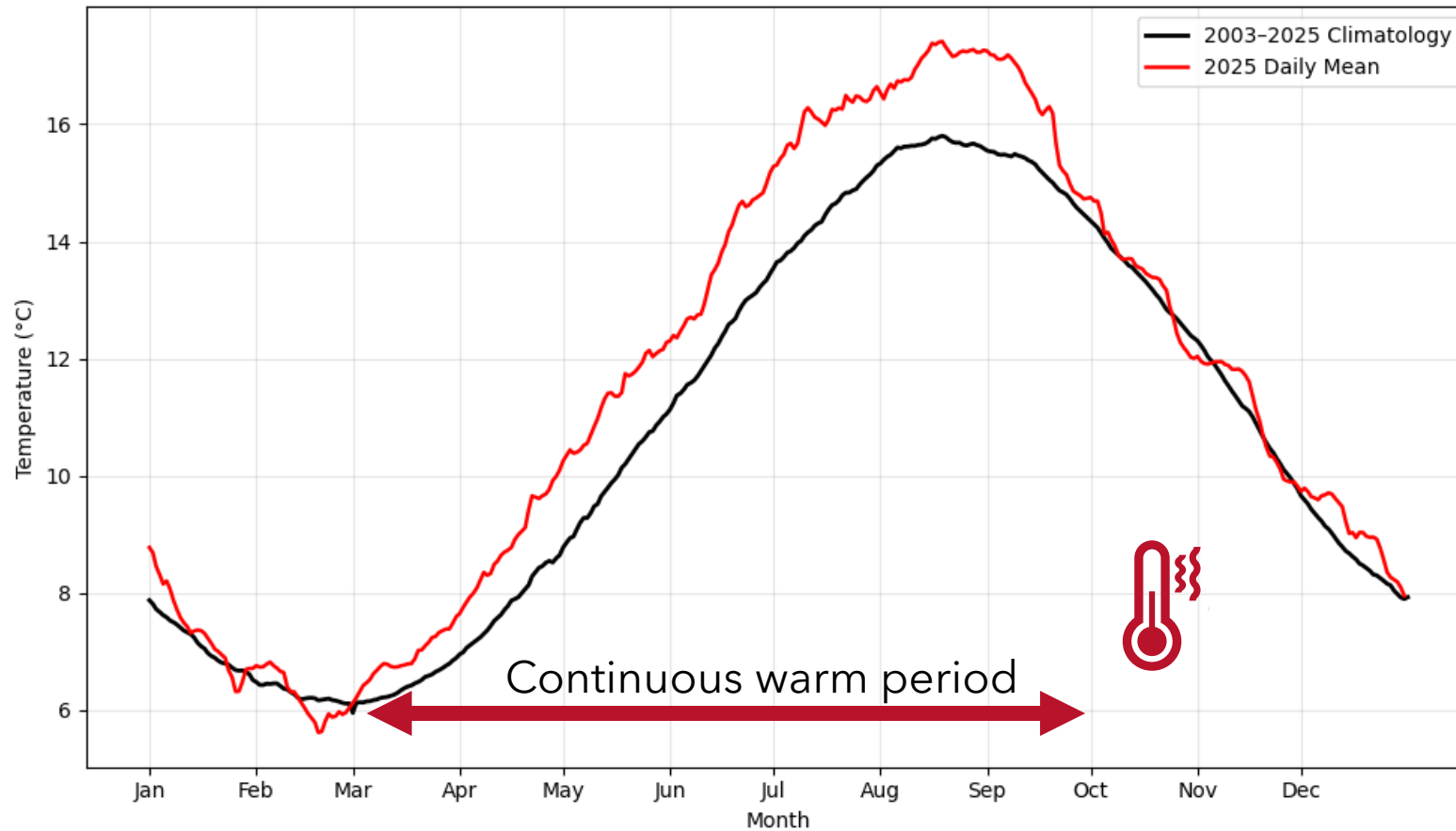
Warmer waters **south** of
Flamborough Head

Waters in the **Northern
Region** are **0.50°C warmer**
than average

Waters in the **Southern
Region** are **0.50°C cooler**
than average

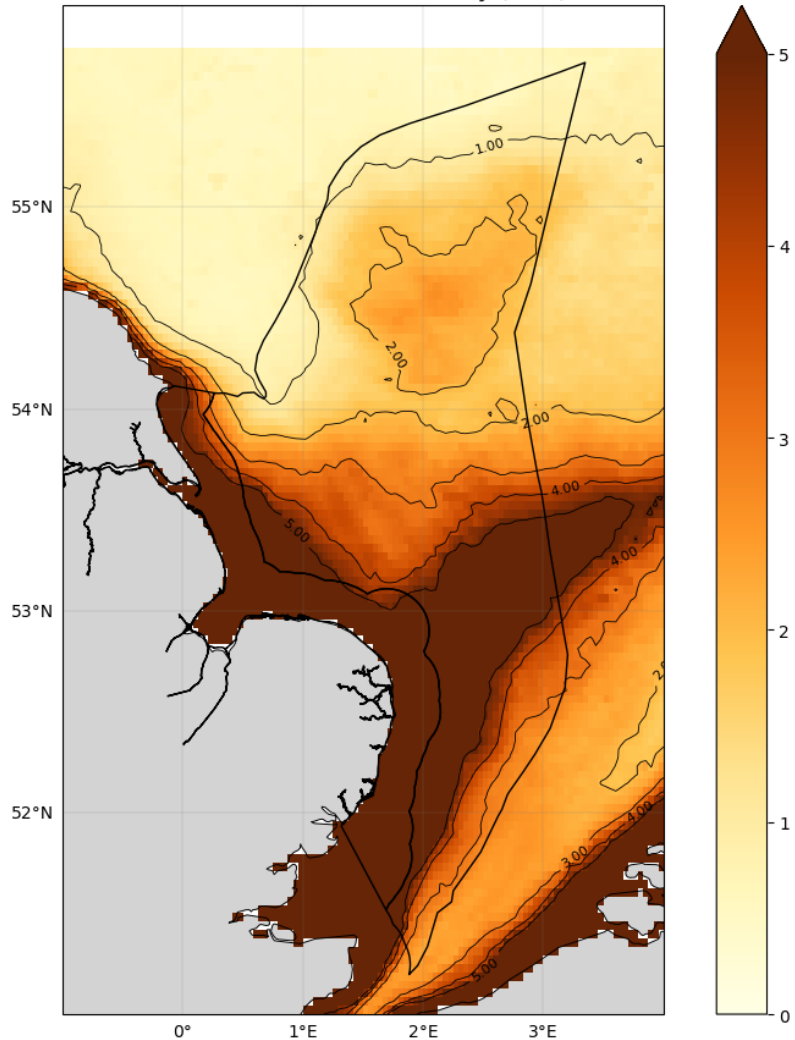
Dowsing WaveNet Temperature

Dowsing WaveNet Daily Temperature: 2025 vs Long-Term Climatology (2003-2025)

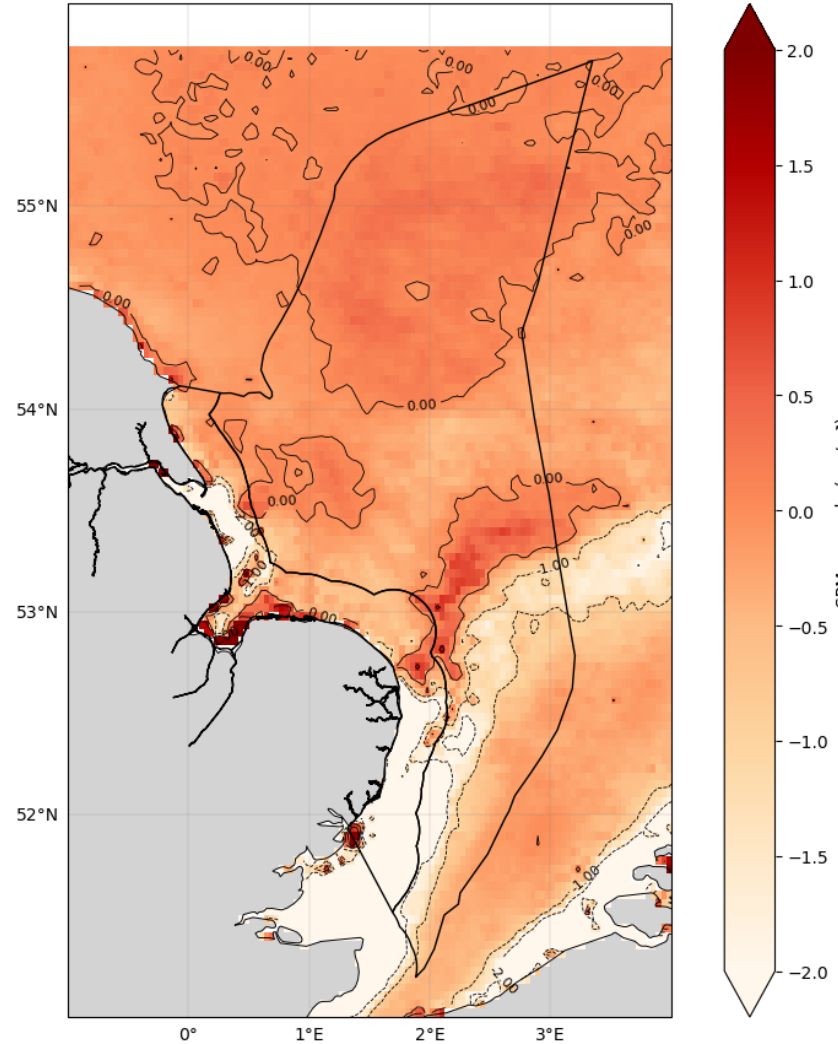


2025 Annual Turbidity

2025 Annual Mean Turbidity (SPM)



2025 Turbidity Anomaly vs 1998-2025 Mean



Less turbidity around the **Thames** and **Humber** in 2025

Overall, the offshore EastMe area is **more turbid in 2025** than average

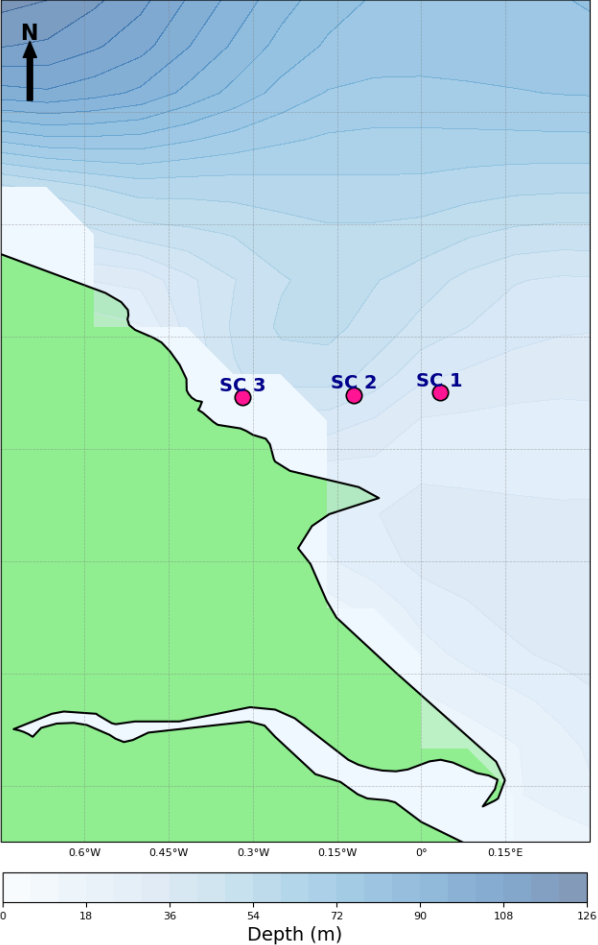
Followed drought season – more on this during Rodney Forster's talk

Turbidity: Coastal vs Open Sea

Station 1- Blue

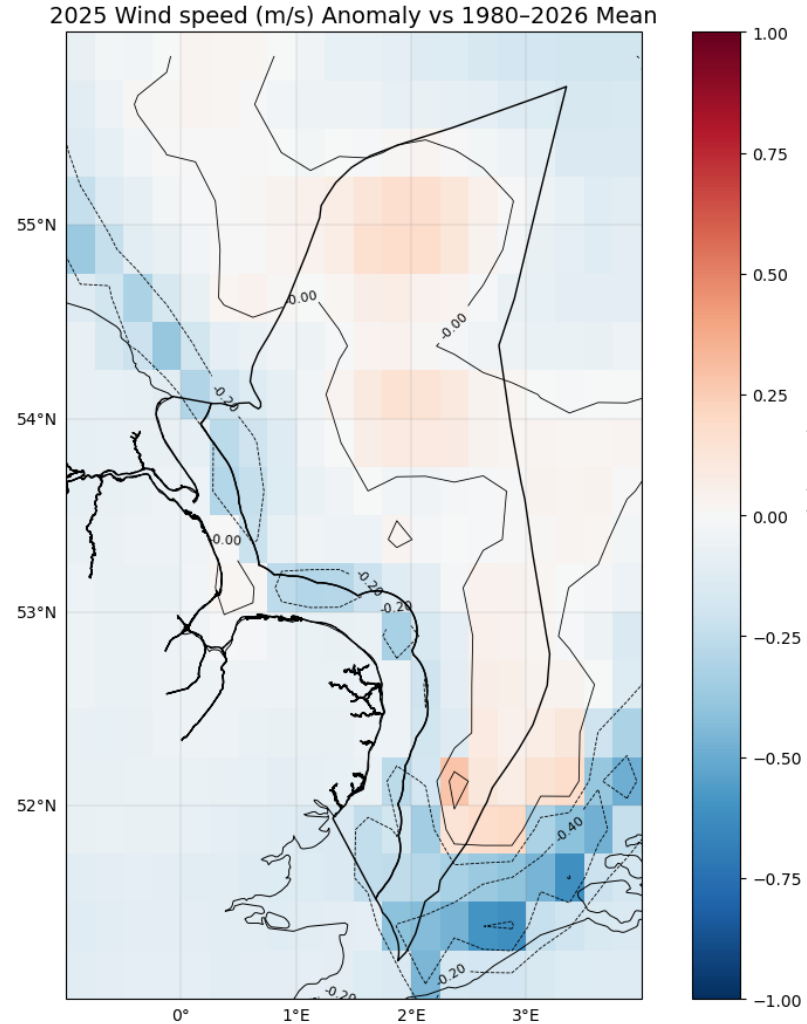
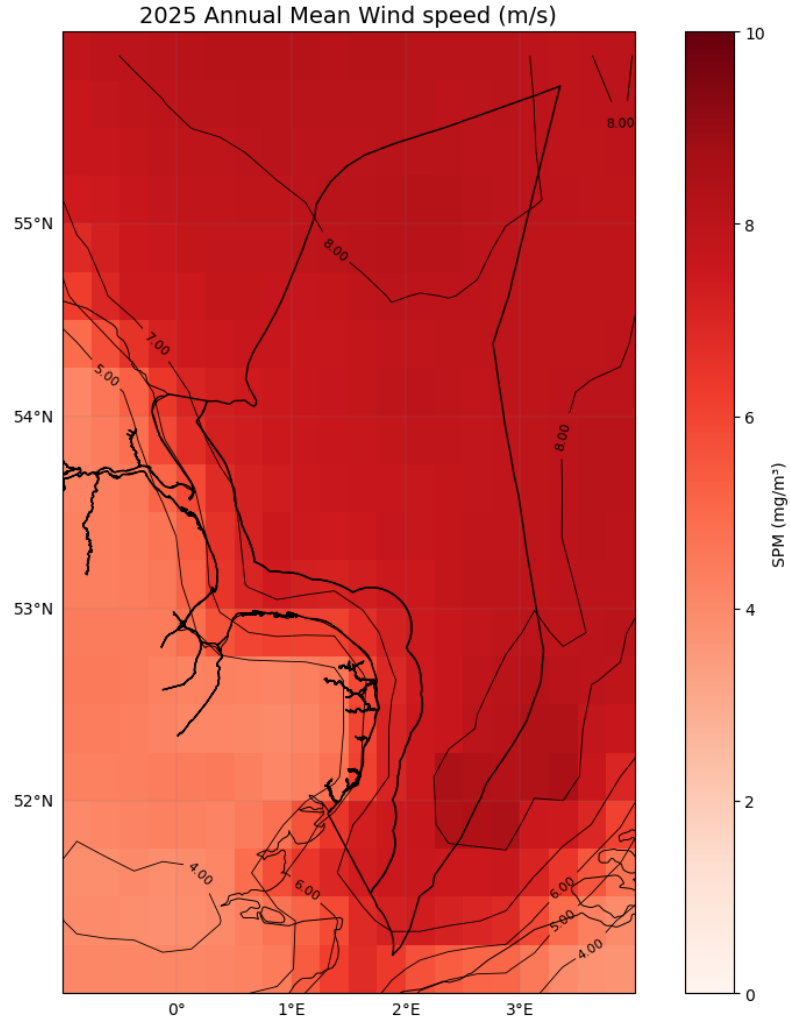
Station 2 - Green

Station 3- Red/Brown



Wind, Waves and Storms

Wind speed

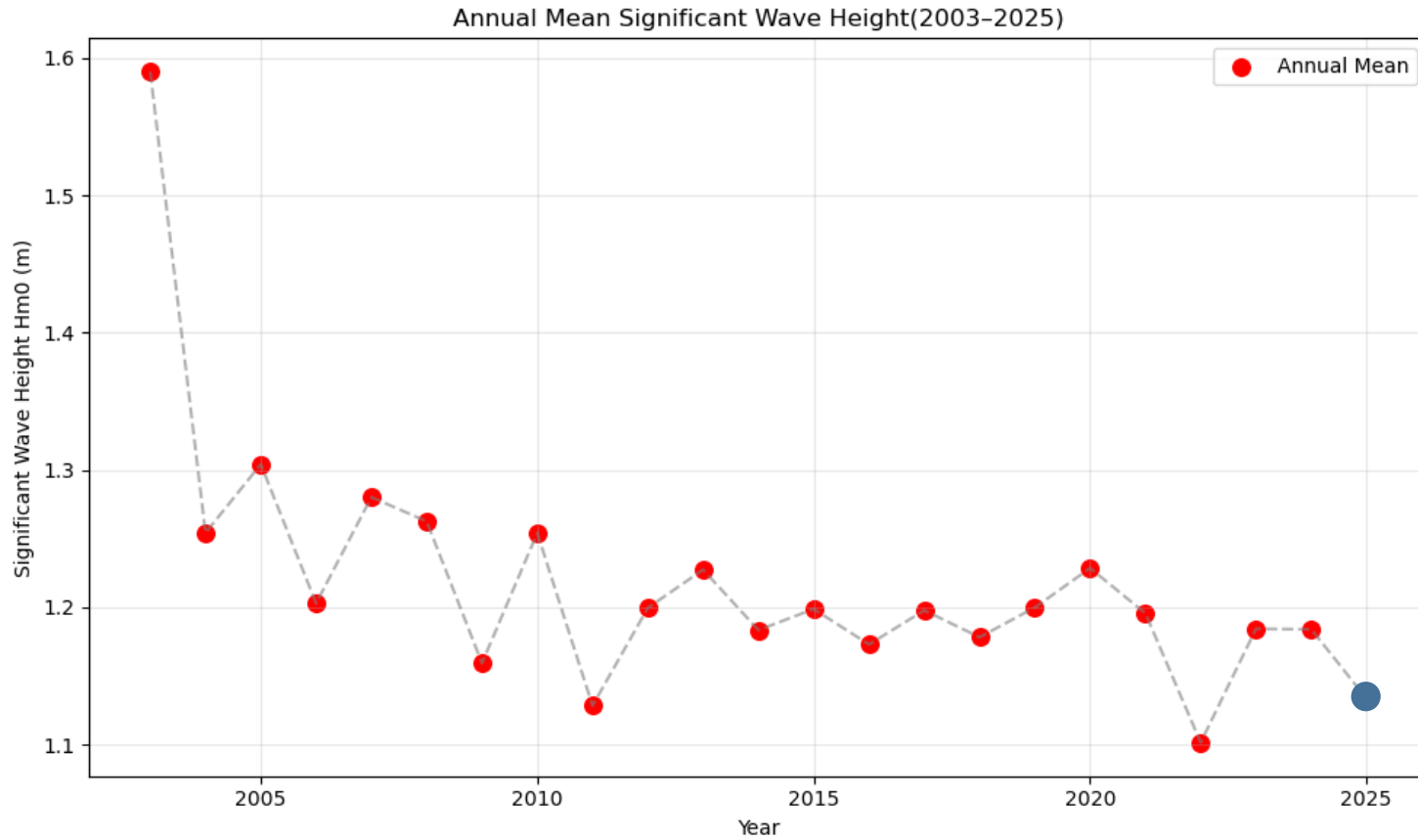


The North Sea experiences greater wind speed than land

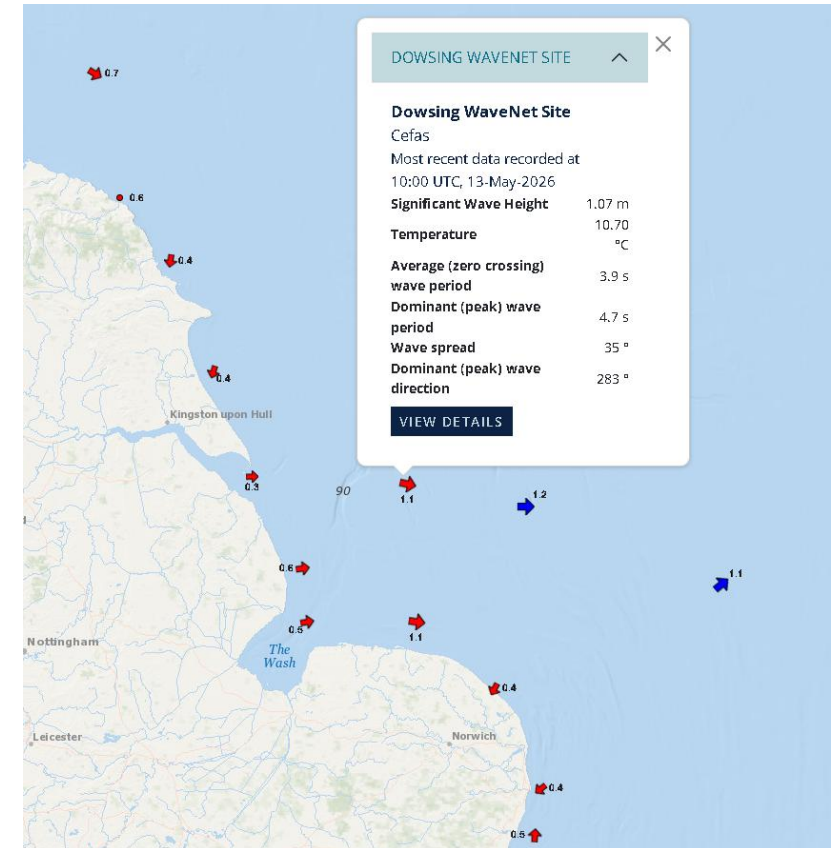
The North Sea wind speed anomaly is **overall negative**

Coastal Regions were calmer in 2025

Wave Height

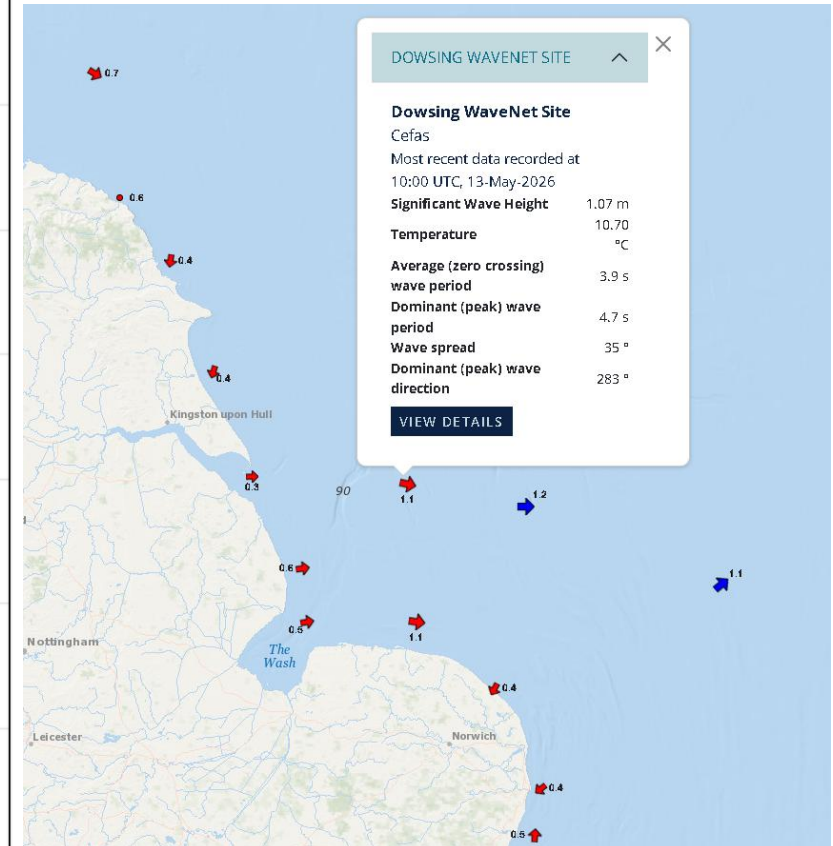
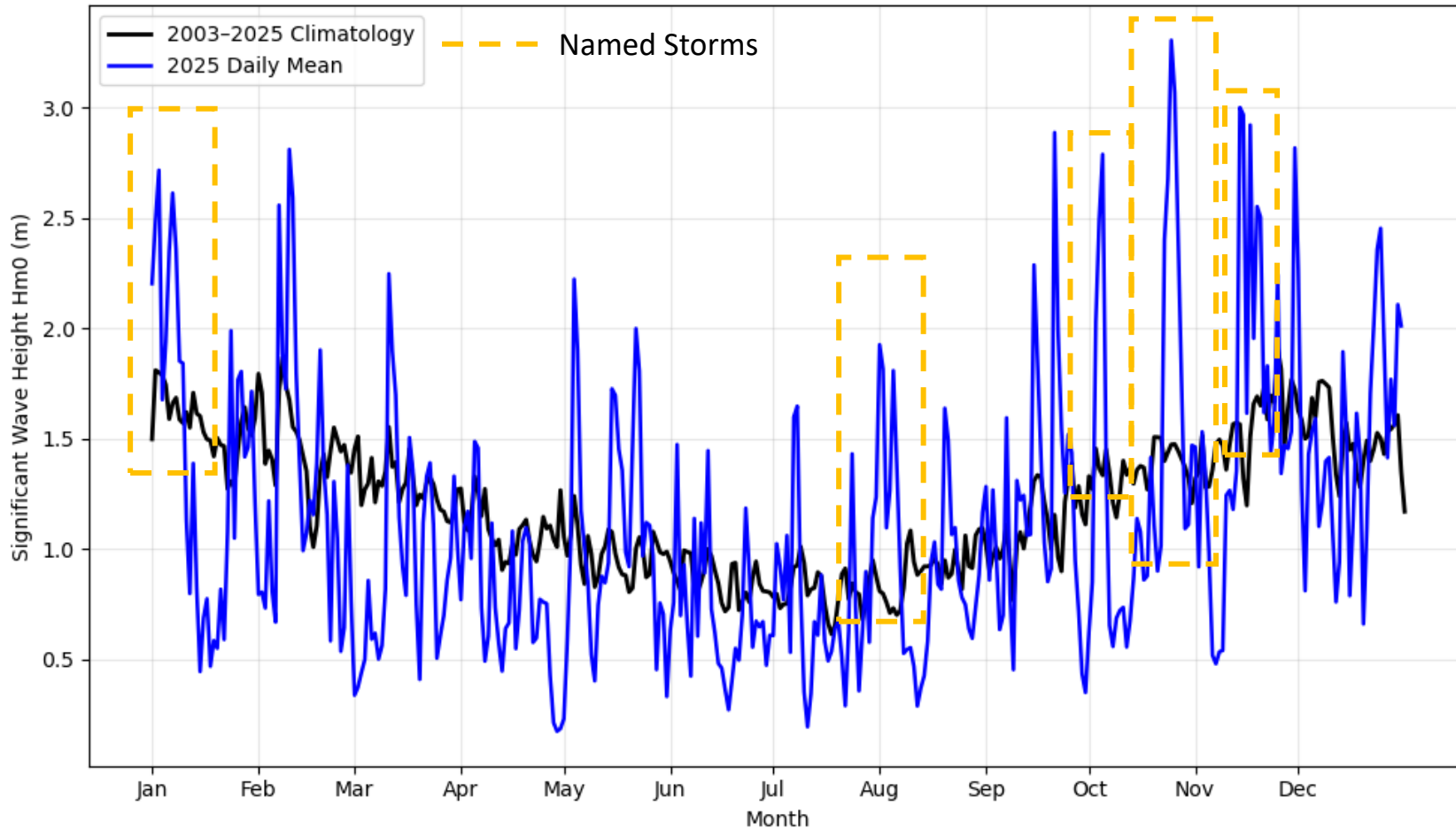


Calmer seas coastally overtime



Wave Height

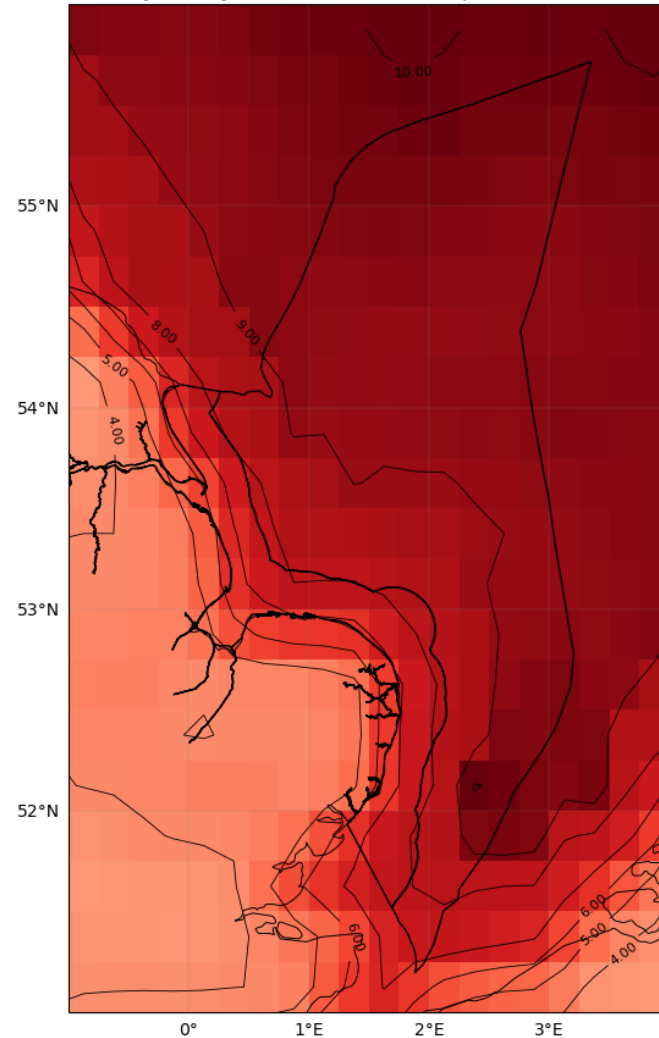
Dowsing WaveNet Daily Wave Height: 2025 vs Long-Term Climatology (2003-2025)



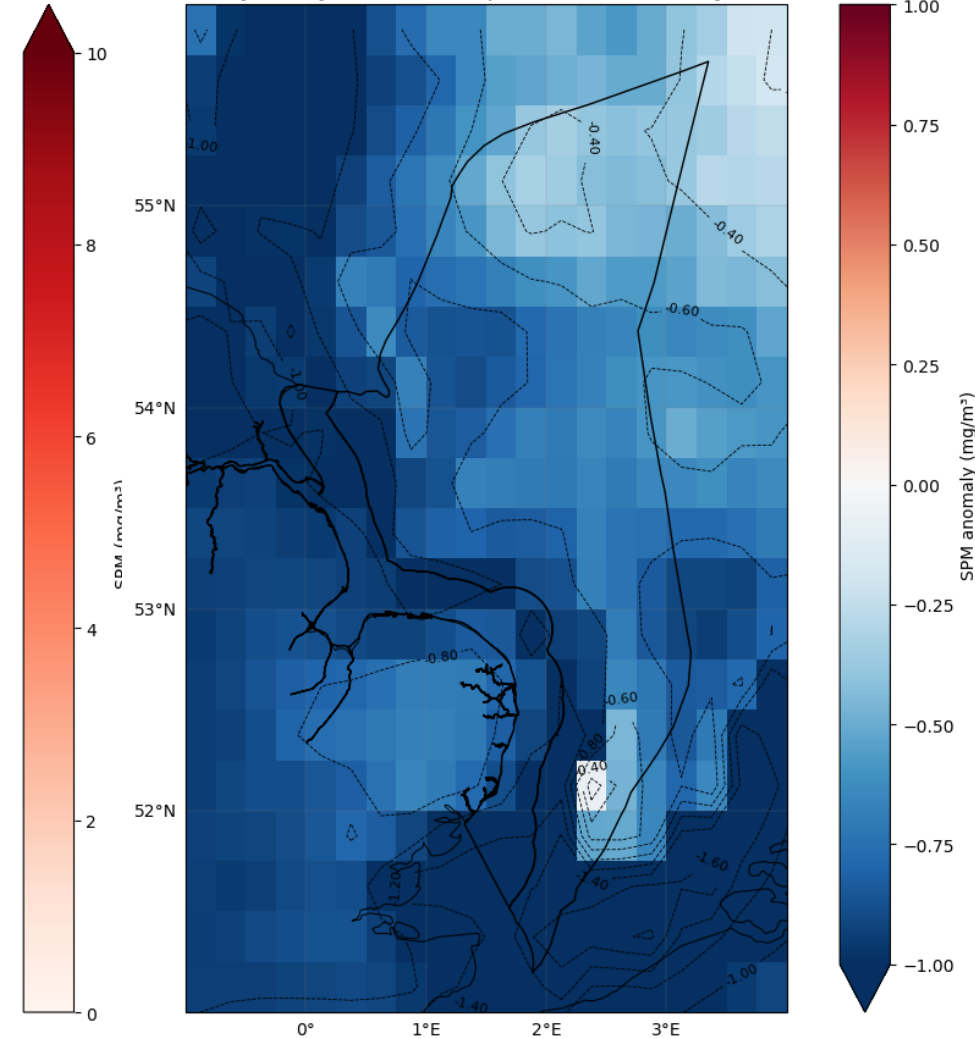
Storm Éowyn January 2025

- The UK's most powerful storm for over a decade.
- However, had limited effect on the Eastme region
- One of the calmest Januarys since 1995

January 2025 Mean Wind speed (m/s)



January 2025 Wind speed (m/s) Anomaly



Storm Floris 4-5th August

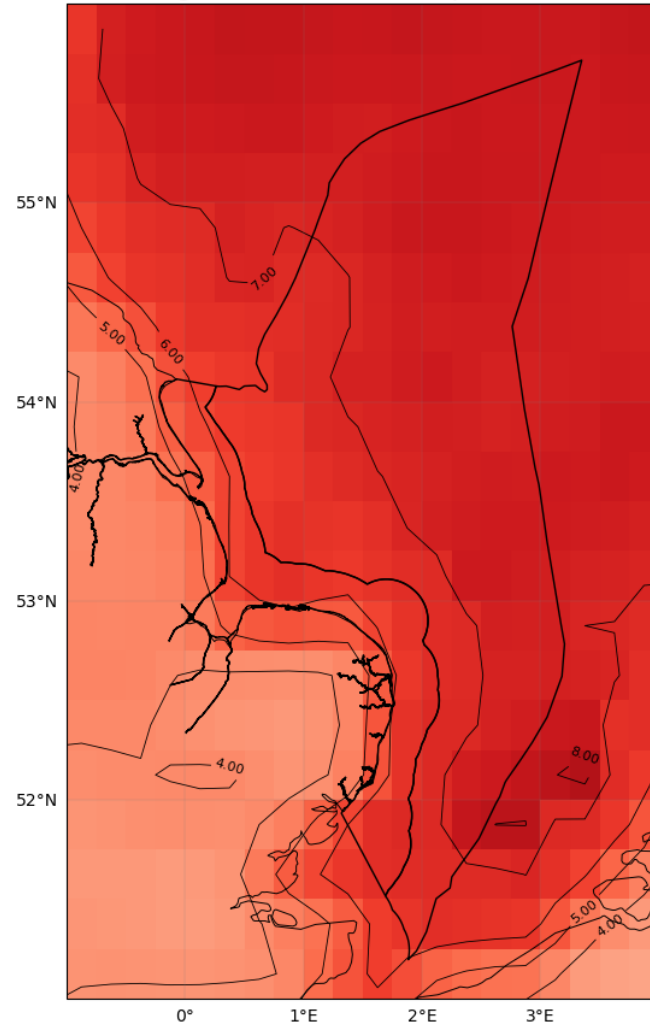
Storm Floris to bring 'unseasonably disruptive' rain and wind to UK



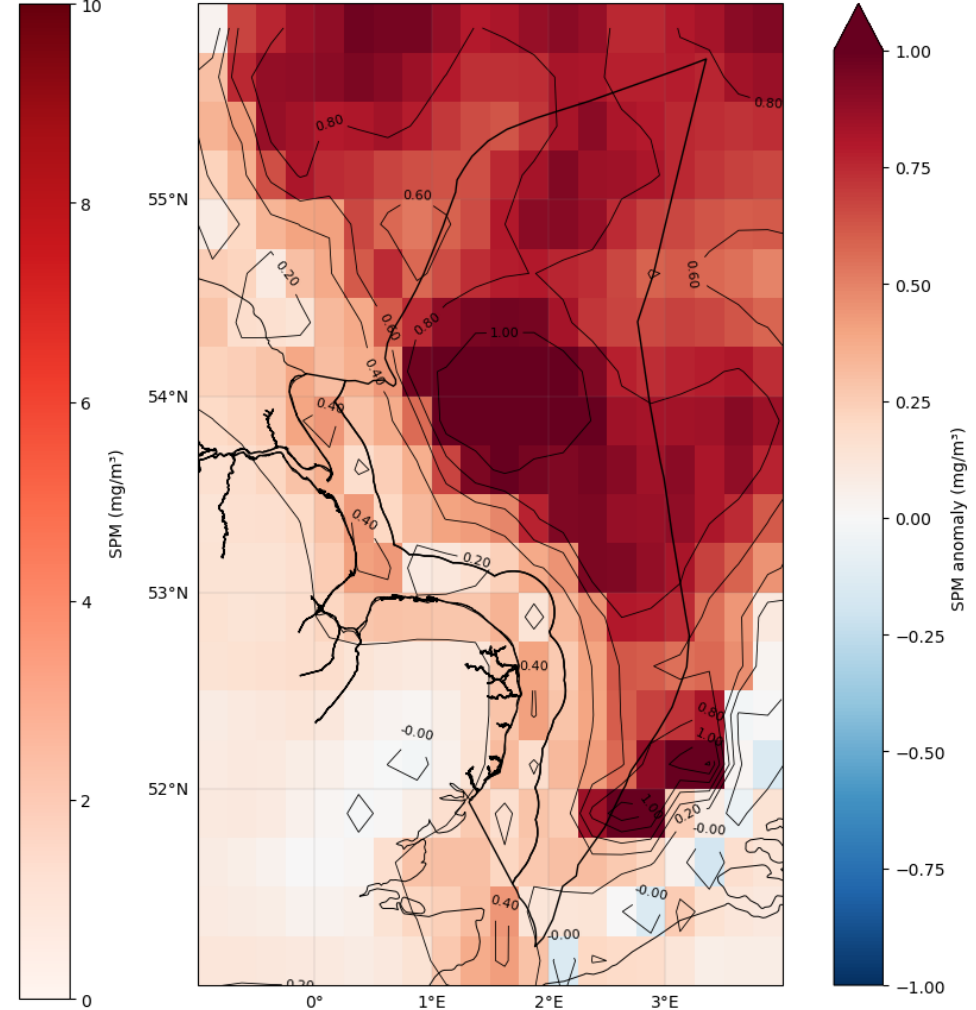
Elizabeth Rizzini, Lead weather presenter and Matt Taylor, Lead weather presenter

1 August 2025 1 479 Comments
Updated 2 August 2025

August 2025 Mean Wind speed (m/s)



August 2025 Wind speed (m/s) Anomaly



Storm Amy and Benjamin: October

- Storm Amy 3-4th Oct
- Storm Benjamin 22-23rd Oct

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Damage and disruption as Storm Amy hits UK



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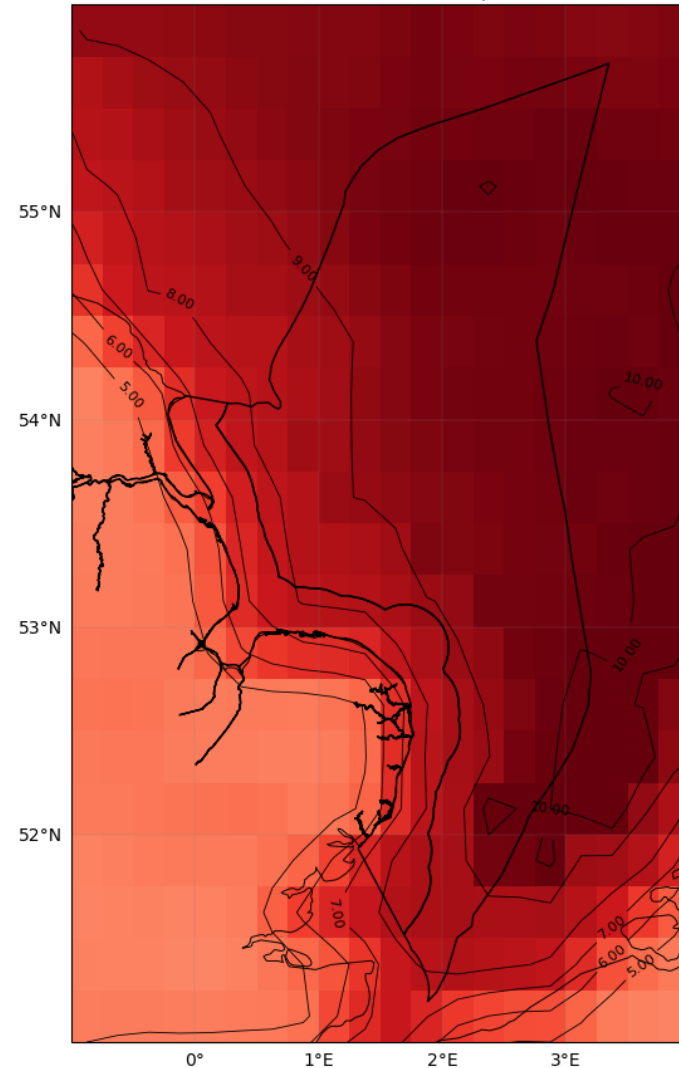
Storm Benjamin to bring gusty winds and flooding rain to UK on Thursday

GETTY IMAGES

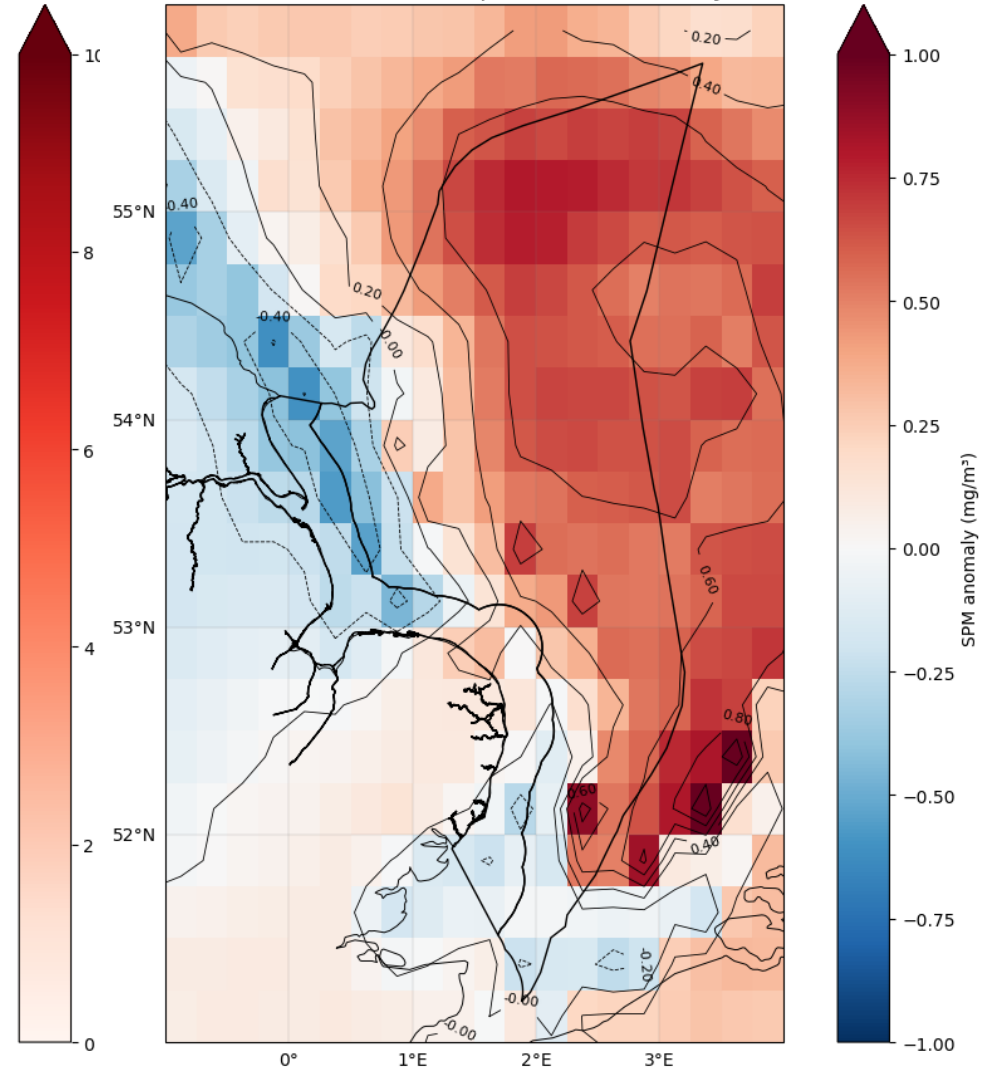
Simon King, Lead Weather Presenter and Suzanne Leigh

3 October 2025
Updated 4 October 2025

October 2025 Mean Wind speed (m/s)



October 2025 Wind speed (m/s) Anomaly



Storm Claudia 14th November

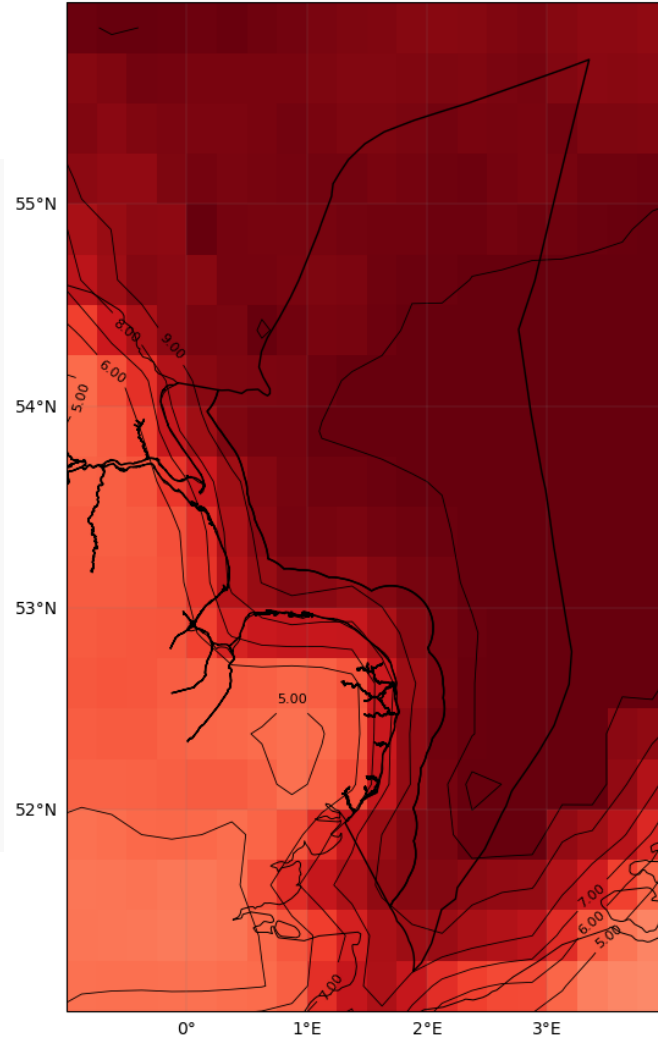
Amber warnings come into force as Storm Claudia brings heavy rain and flooding to UK



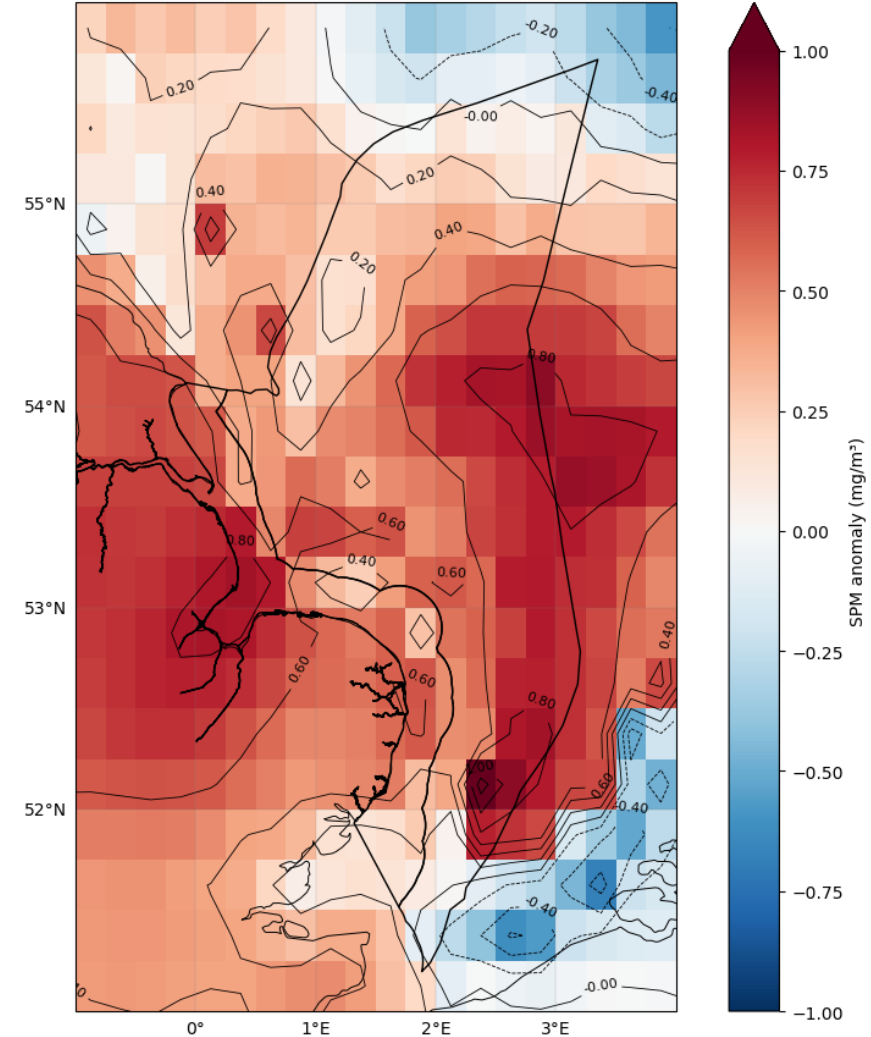
Watch: Weather forecast as Storm Claudia passes over the UK

Simon King
Lead Weather Presenter

November 2025 Mean Wind speed (m/s)



November 2025 Wind speed (m/s) Anomaly



Overview

- 2025 was a **warmer year** than average
 - Prolonged period March-October
- EastMe offshore region was **more turbid in 2025**
 - Although coastal turbidity was low
- Numerous named storms in the year, bringing high wind speeds and wave heights, mainly in **Autumn**
- However, overall, wind speed and wave height present a **calmer year than average**
- There is a need for in-situ offshore monitoring