



UK Hydrographic  
Office

# UK: Implementation of S-104/S-III

NSHC TWG27 4-5 February 2025  
UKHO, Taunton

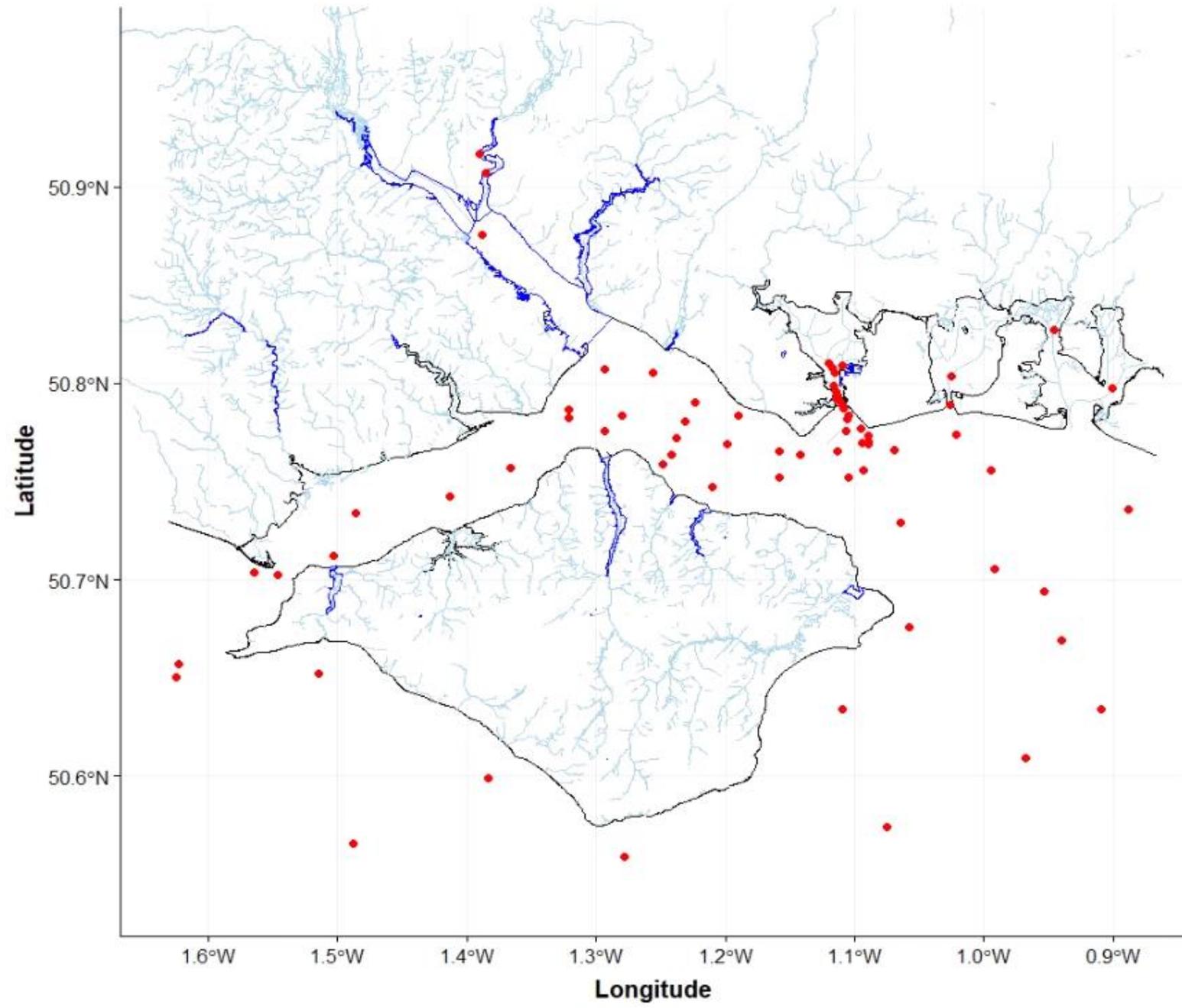
Dr Tom Cropper  
UKHO



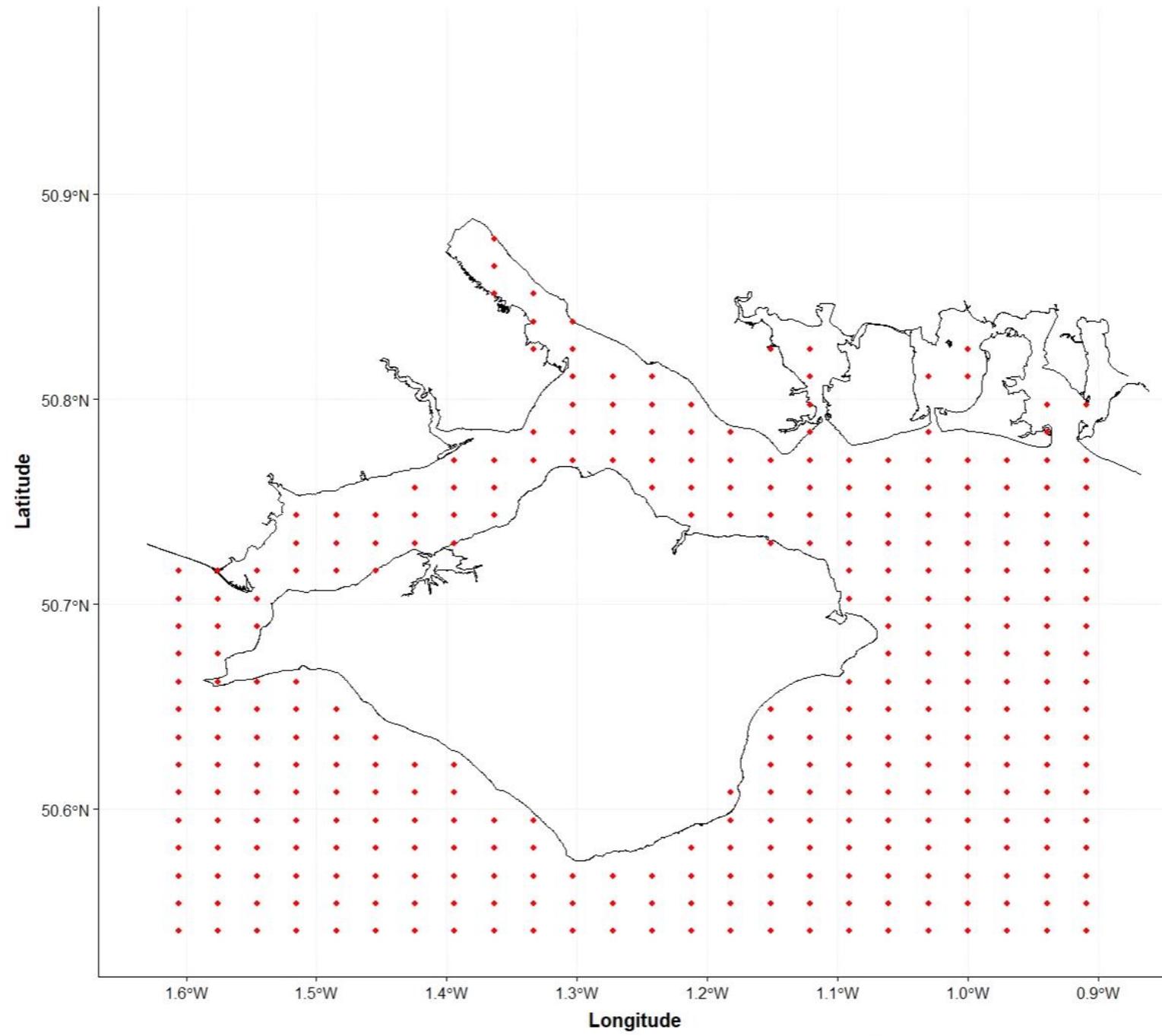
## What have we done

- › Internal Pipeline from *.nc* to output *.hdf5* + *CATALOGUE.xml* (python)
- › North-west shelf model (~ 1.5 km grid density)
- › Analysed outputs of three high resolution “Port”- scale models (10 – 100 m grid density)
- › Validation (S-III ADCP, S-104 Tide Gauges + TotalTide, Catalogue file)
- › UK Port Trials – Tested in SEAiq + custom charts (whilst waiting for ECDIS)
- › S-III high resolution well-received
- › S-104 not perfect

# S-111 TotalTide



# S-111 NWS



S-111 Port





# What does it look like

## Search files

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### Exchange sets

You can make a small (250 ENC), custom exchange set here and download it

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### Product Type ^

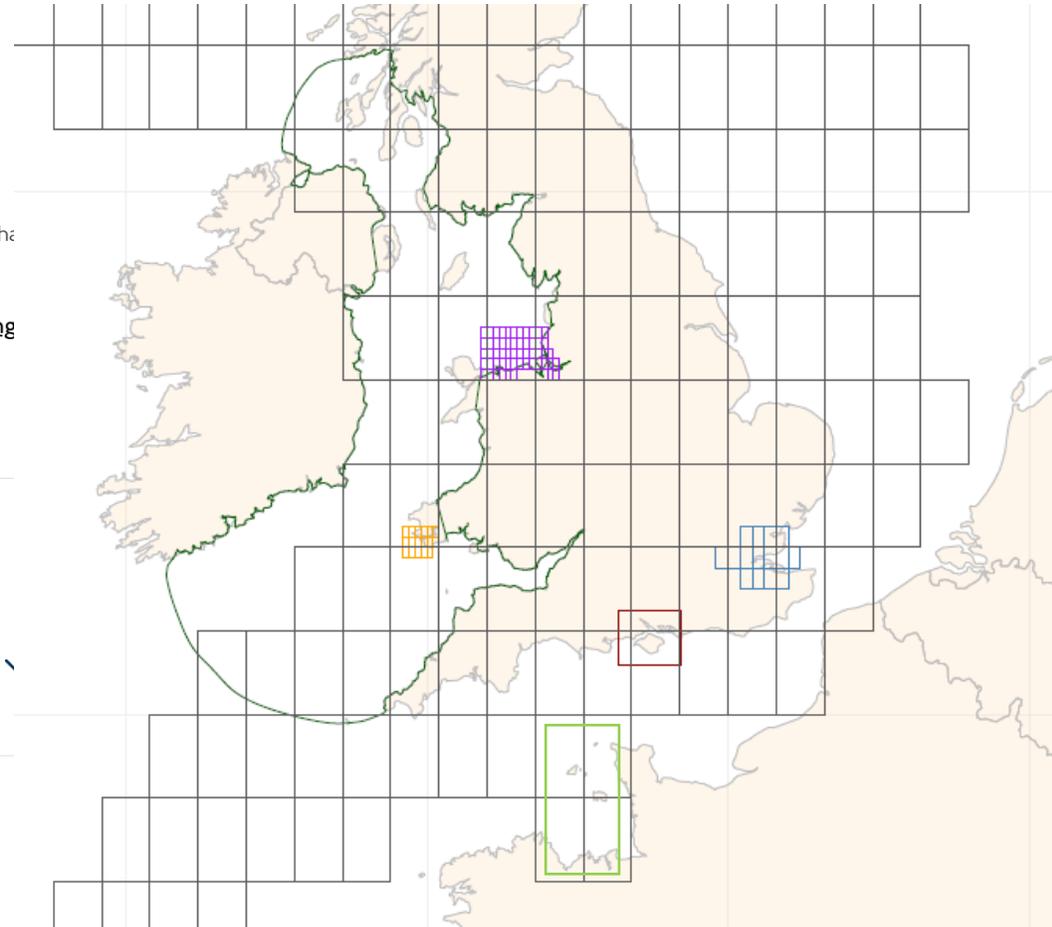
Notices to Mariners

S-104

### Year / Week ^

Content	Data Date	Product Type	Publication Date
UK Coastal	2025-02-02	S-104	2025-02-02T00:00:00

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## Open-source models - footnotes

- › Won't give "Port" scale
- › S-104 values relative to astronomic prediction, variable quality
- › Needs ancillary files (Mean Dynamic Topography + VORF/Tide Model equivalent)
- › Needs splitting up and select areas choosing (10 – 20 mb file size limit)
- › "Free" but at model provider's cadence



## Paid for high-resolution models - footnotes

- › Expensive to both setup and run
- › S-III looks great
- › (S-104) Doesn't guaranteed improve astronomic prediction
- › Calibration
- › Effort / Reward



## What will we continue to do

- › Northwest shelf model – fixes and optimisation of delivery
- › Continue testing different approaches to find the balance between cost and good enough
- › V2 specifications, uncertainty
- › User testing, desk and sea trials with SHOM and UK ports
- › Recommendation: Use Meteorological Office/Research Institute if possible



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# Questions

