

Stronger Together: Developing the framework for a sustainable National Research Infrastructure EirOOS (Irish Ocean Observing System) as an effective component of the European Ocean Observing System (EOOS)

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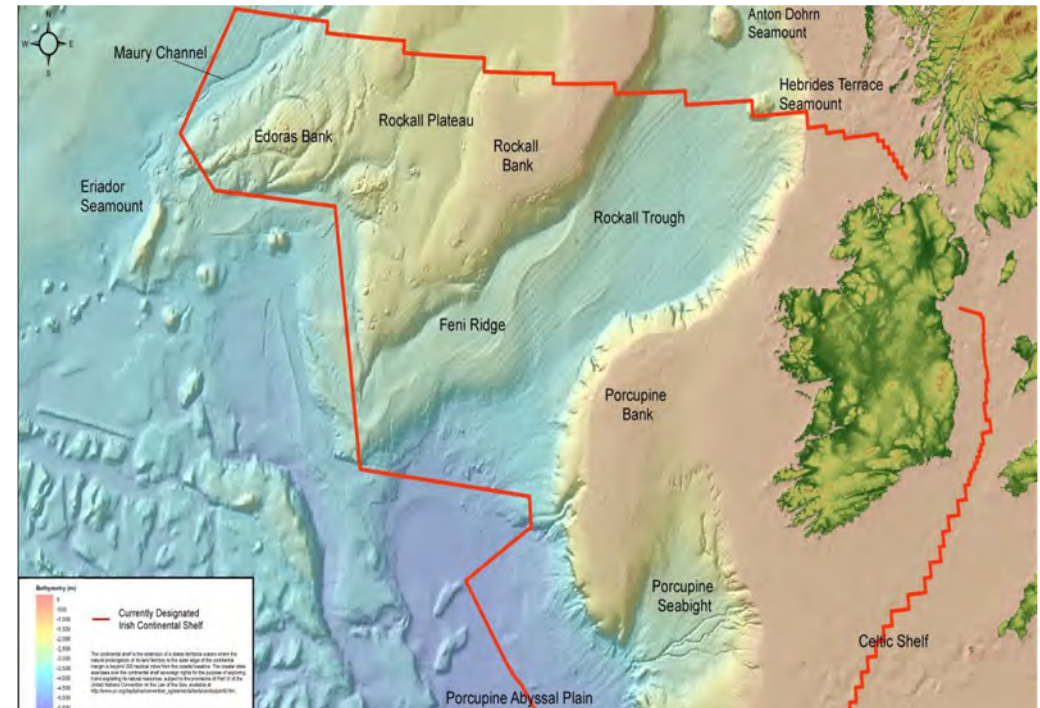
Context

Ireland's marine territory = 880 thousand Km²

Irish Coastline = 7,711 Km

Population within 5 Km coast = ~ 40 %

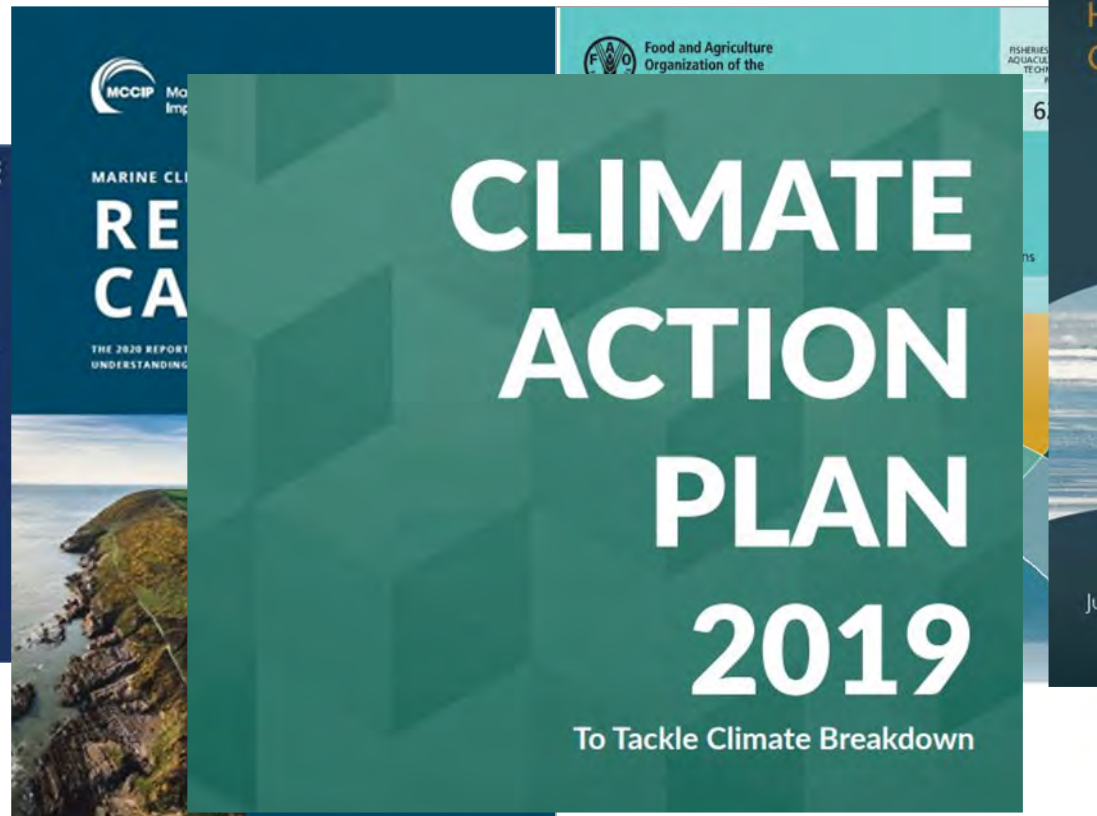
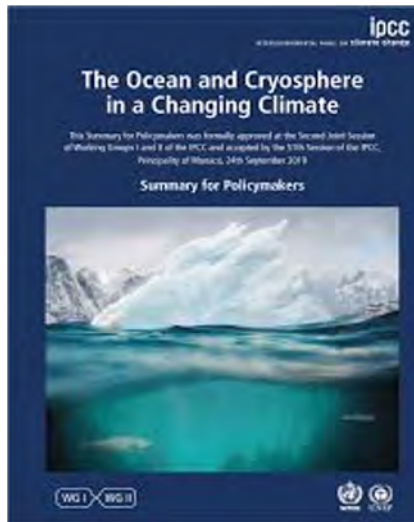
[EU classification, > 90% of the island is considered a coastal zone]



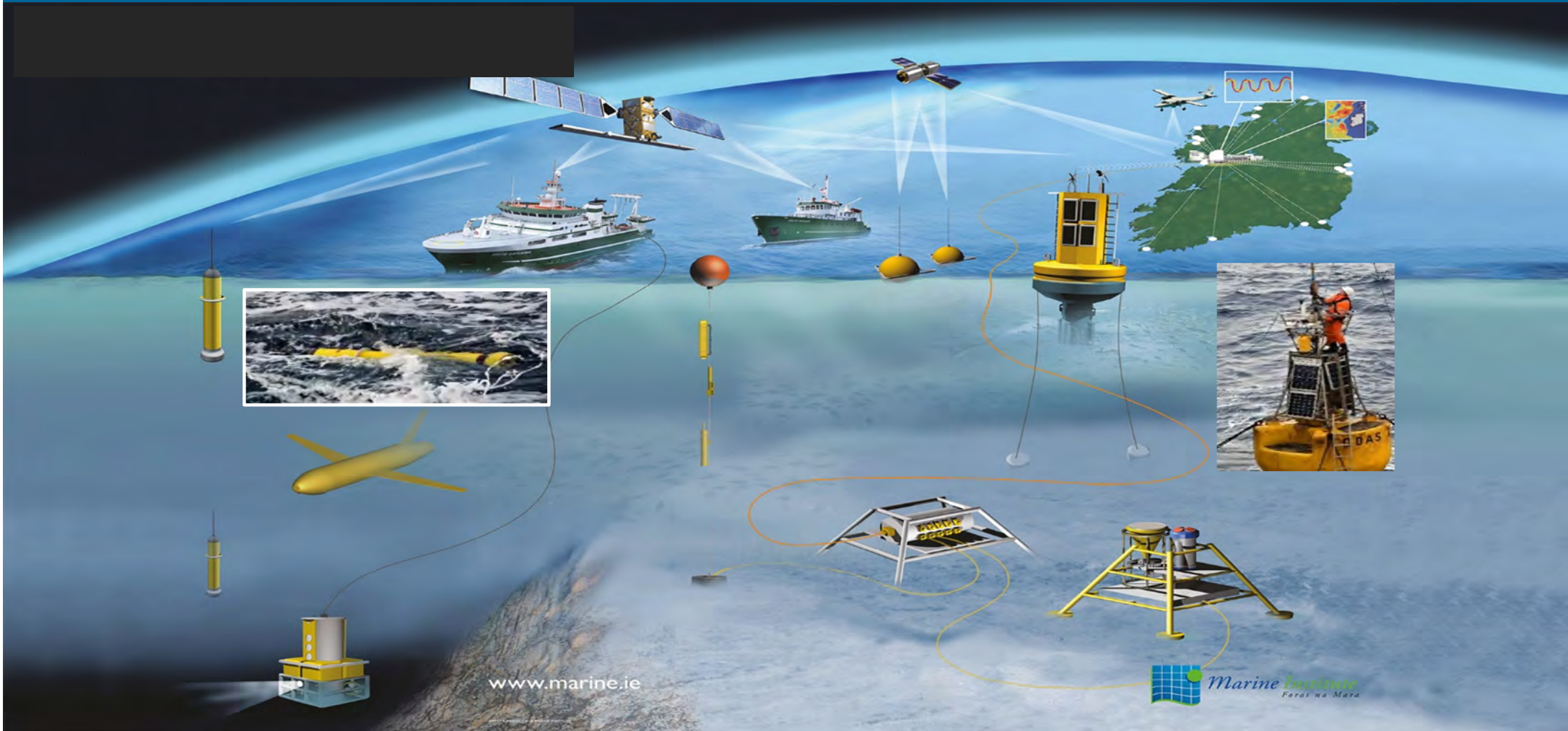
EIROOS – A Component of the European Ocean Observing System ([EOOS](#))

Aims: Increase scientific and technical research capacity in key areas such as **sea level science**, **ocean circulation** and **carbon sequestration**, to better understand the connection between Ireland and the Atlantic.

Drivers for EIROOS - Strategic, Government Policy, Scientific.



Components Of EIROOS : Physical Infrastructure



Irish National Tide Gauge Network

Public portal

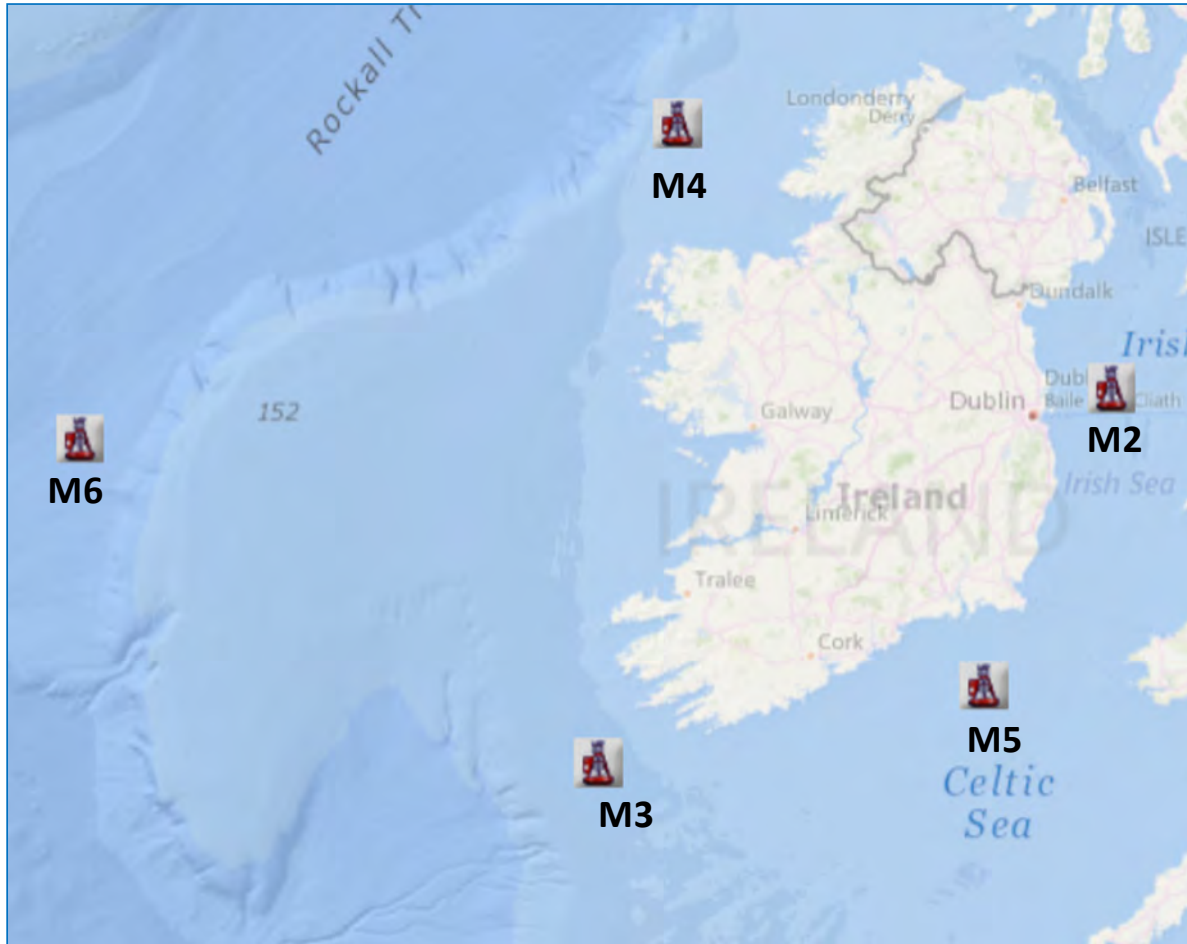
Real-time data www.irishtides.ie

Predictions www.irishtides.ie/predict



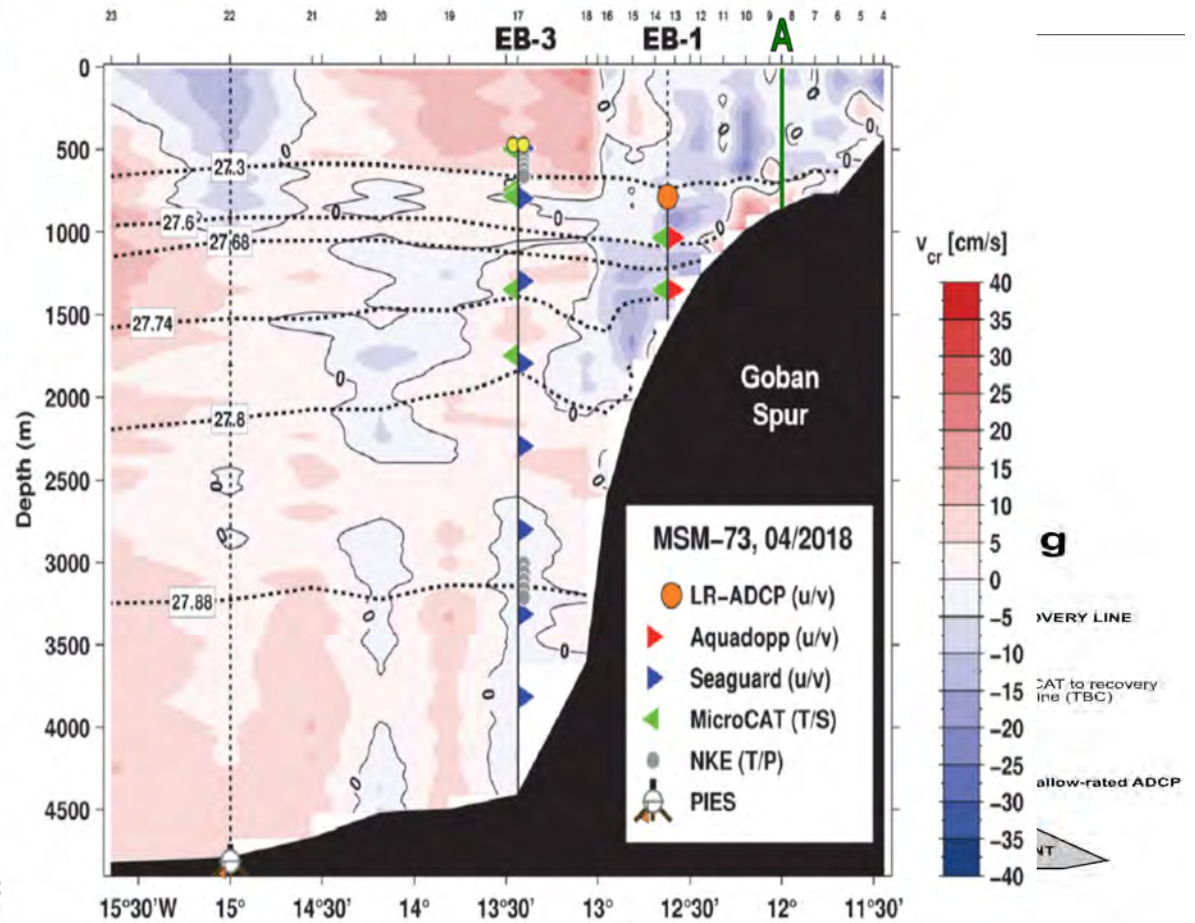
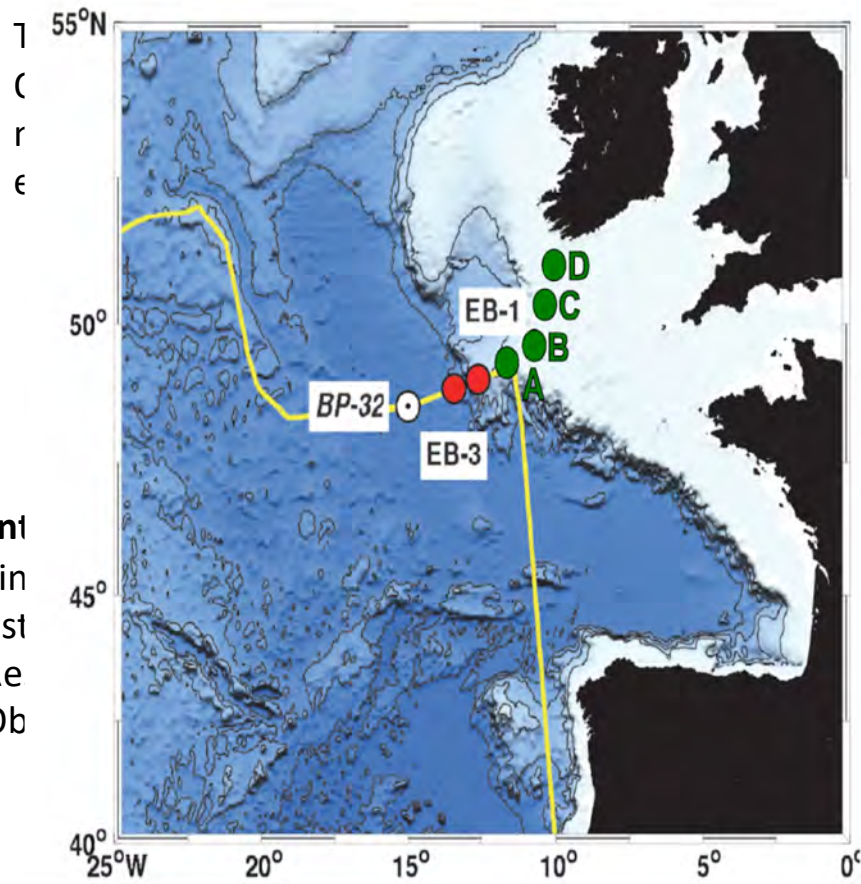
- **18 MI operational tide gauges**
(of a network of ~ 28 including OPW stations)
- **Maintenance** - All gauges are serviced and calibrated each year (preventative maintenance). Current contract (up for renewal 2019) is with National Vibration Monitoring Ltd. High level of performance to date
- **Repairs** - Breakdown between services are dealt with on a case by case basis subject to funding being available
- **Research / investigation** into improving survey and calibration techniques, bring the 2 MI GLOSS stations on stream (Howth, Union Hall)
- **Sea level averages** - preparing to begin reporting various node data to PSMSL
- **Predictions** from Irish observations combined with highly sophisticated ocean modelling
- Conditions can be hind / forecast for any time

Irish Marine Data Buoy Observation Network



EirOOS Shelf and Shelf Edge Moorings

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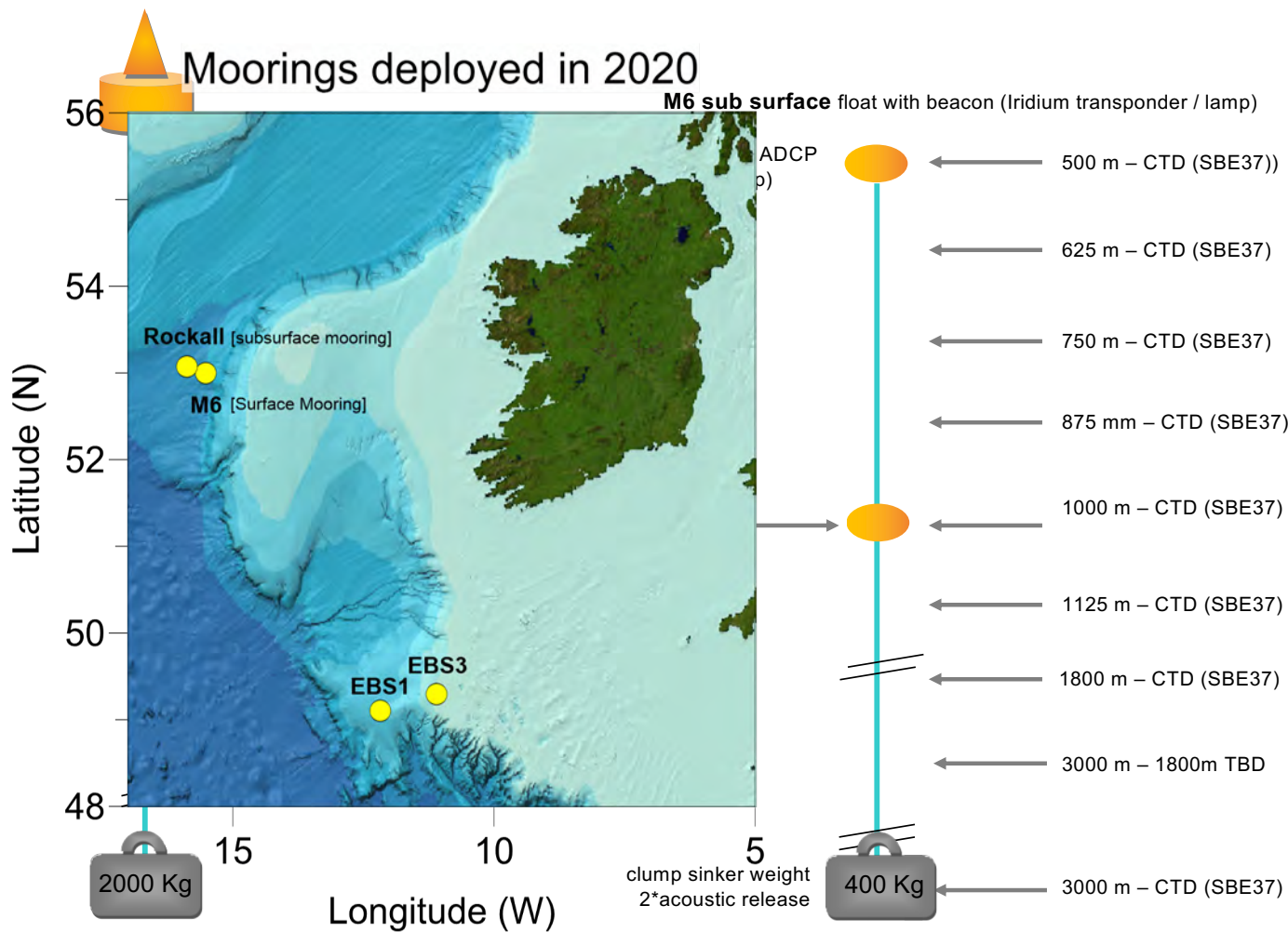
EIROOS Moorings in the South Rockall Trough

Measure

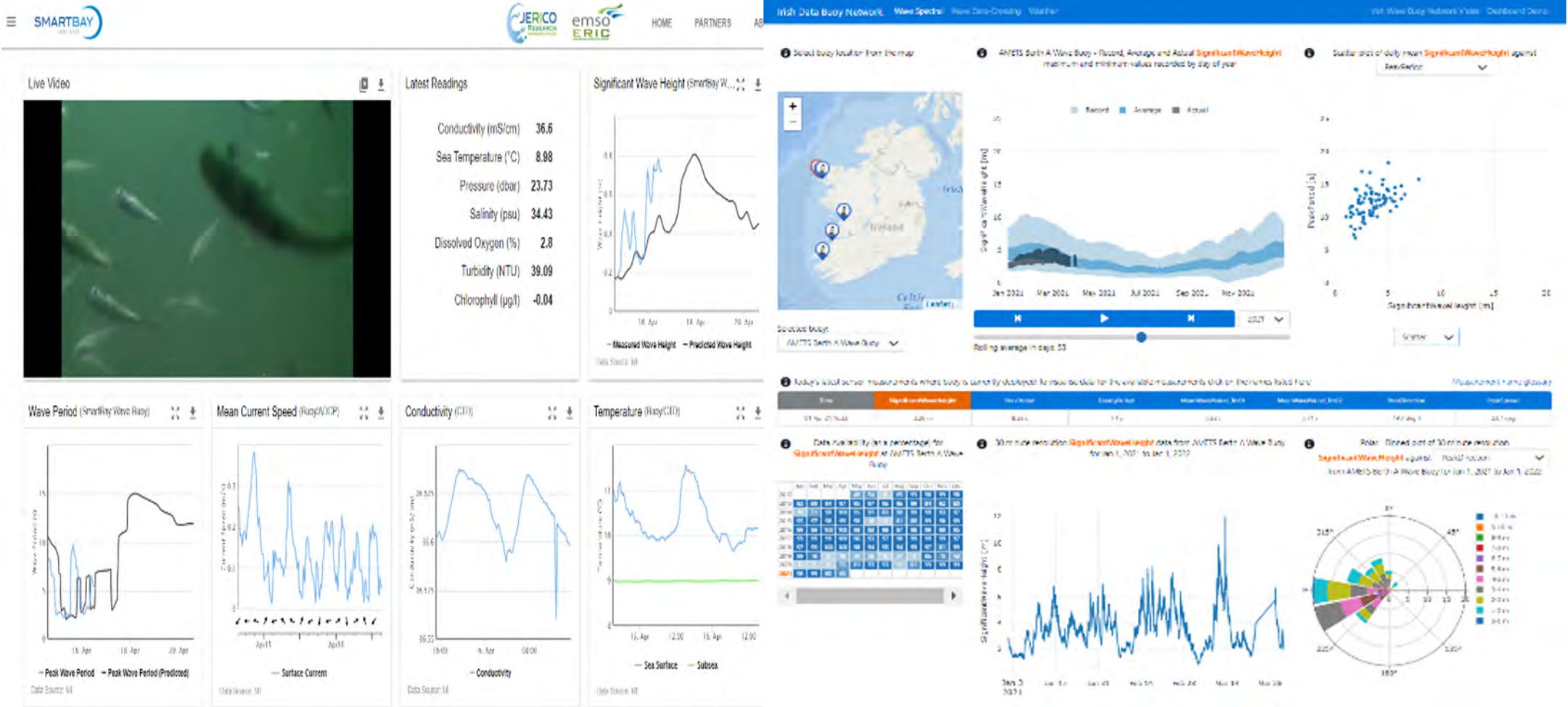
- Water masses, subsurface currents
- Weather [sea safety etc.]



ODAS M6 buoy being retrieved by the RV CE Crew Photo: T. Szumski



Components Of EIROOS: Digital Infrastructure

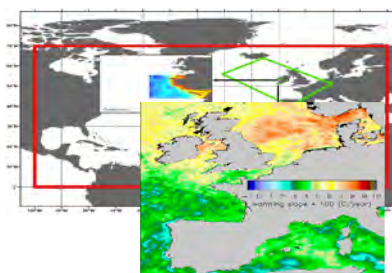


EIROOS: An Integrated Research Infrastructure for Ocean Observations

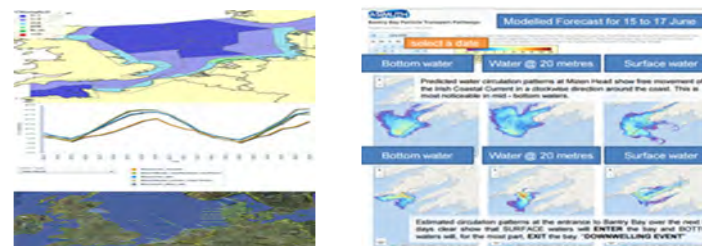
In-situ Technology & Networks



Modelling & Satellite Data



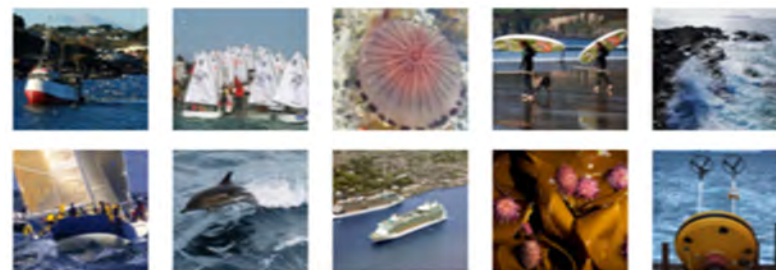
Analytical Tools



Data Archives



Decisions & Actions



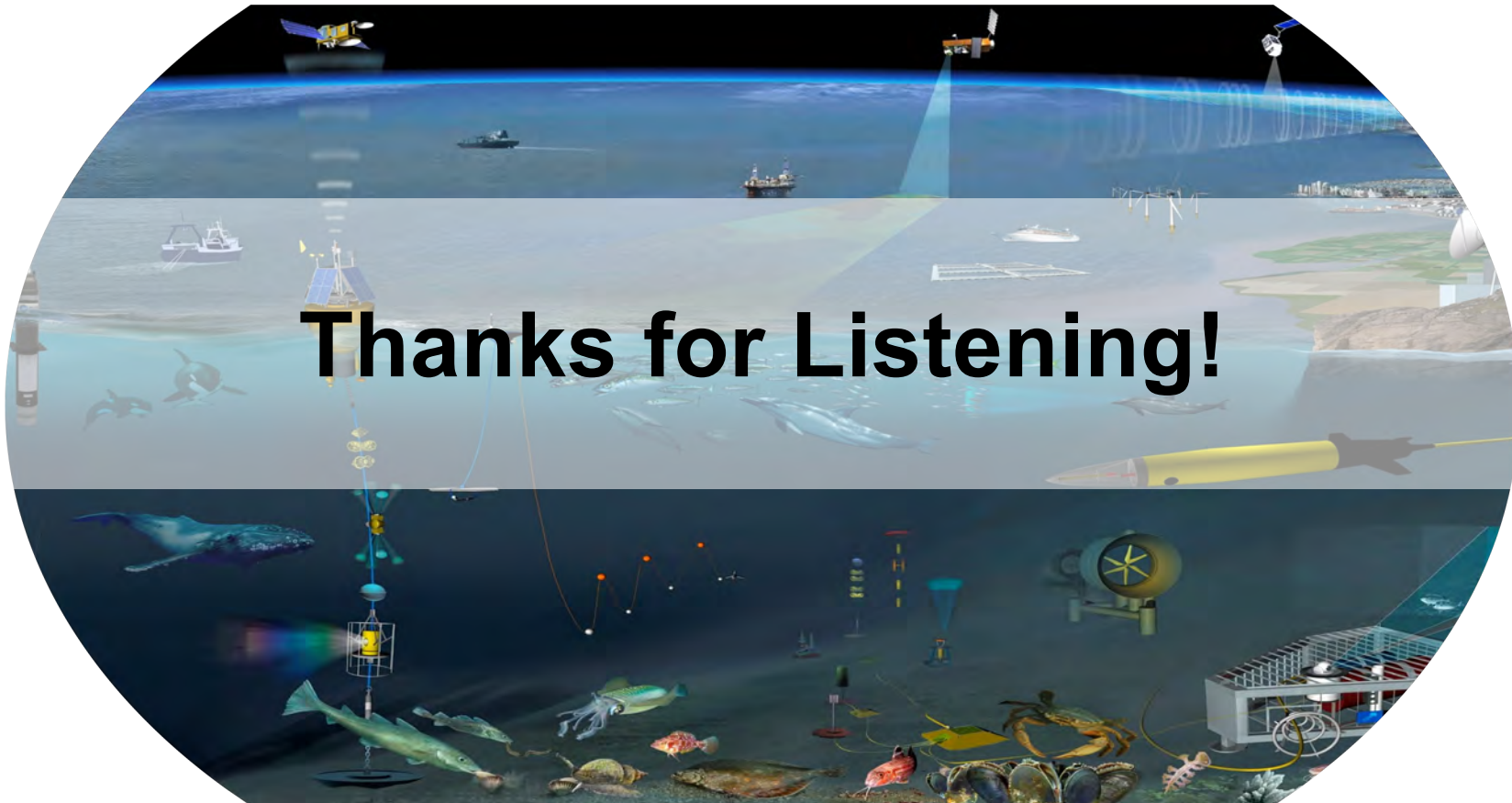
Conclusion

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- EIROOS : key step in establishment of a Long term, Sustainable, Multi-disciplinary, fit for purpose ocean observing infrastructure
- Key ambition for Ireland to bridge historical shortcomings and gaps in observed parameters, spatial and temporal variation in quality and volume of data.
- Expanded marine infrastructure capabilities provided by EirOOS coupled with harnessing the power of state of the art digital infrastructures and modelling tools to bridge these gaps provides the basis and knowledge for the oceanographic ‘community of users’ to investigate and address ocean and coastal processes that are having an increasing impact on society.
- Sustainability a Key Issue: Funding Challenges, Stronger European Networks
- Irish component in the emerging European Ocean Observing System participation in key European Research infrastructure entities



EuroGOOS
European Global Ocean
Observing System



Thanks for Listening!

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