Risk Management

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NERC Moorings Policy

NERC wants to provide the best and most efficient service from the National Marine Equipment Pool (NMEP) for its users. In order to do this NERC needs to ensure that the equipment is put to best use and not used in circumstances which put it at significant risk of loss or damage, accepting there will always be some risk whenever equipment is deployed at sea. NERC mooring operations are currently estimated to be worth in the region of £20m.

NATURAL ENVIRONMENT RESEARCH COUNCIL

Risk Management

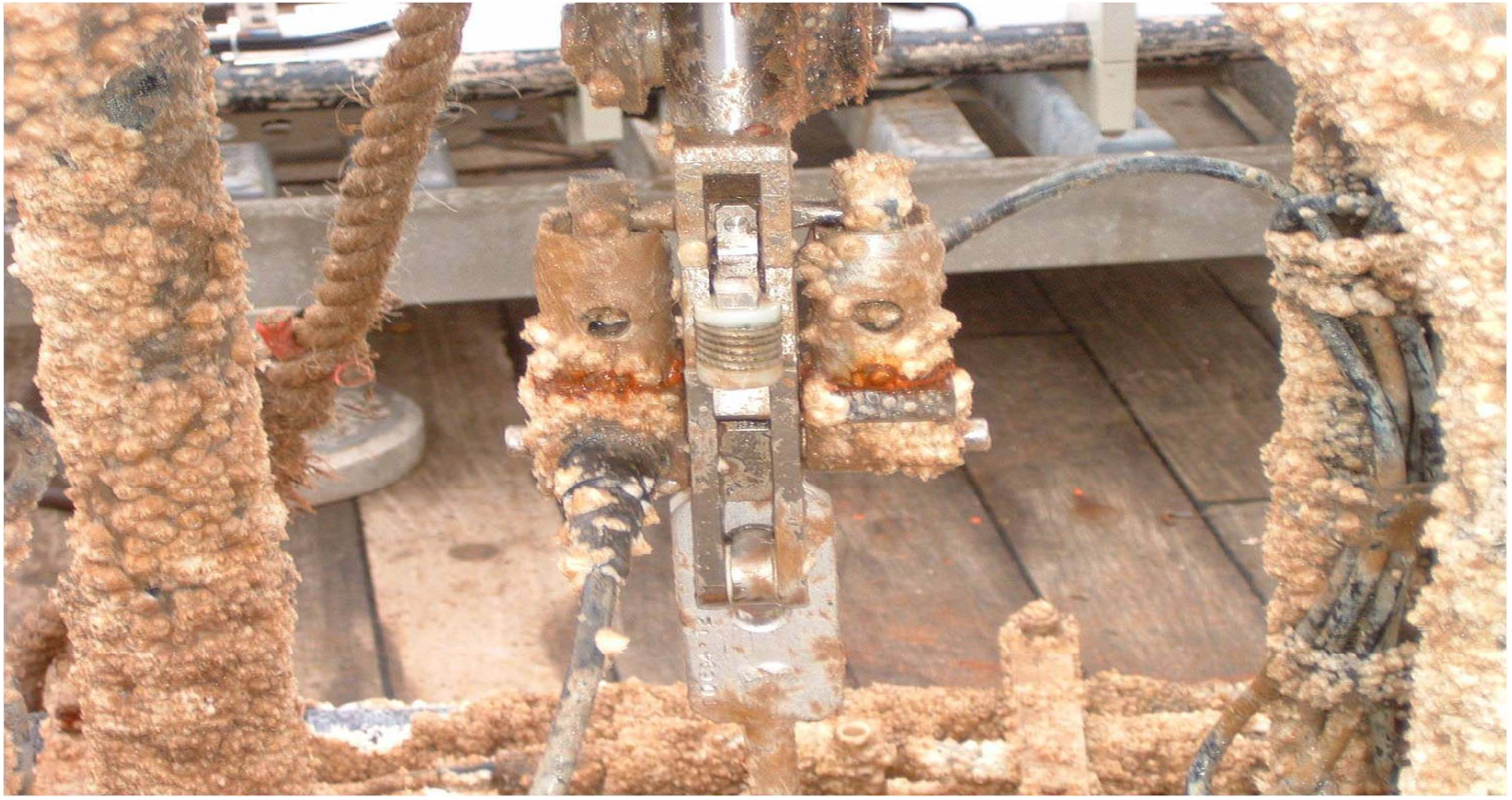
- Three categories of risk will be assigned:
- Low: there is a low risk and the equipment will be provided (if available).
- Medium: there is a significant risk and the proposal will be reviewed to assess the likelihood of equipment loss etc. and whether this risk is acceptable, taking into account scientific importance of results, impact on future programmes, and cost of replacement. On the basis of the review it will be decided whether the NMEP should provide some or all of the equipment.
- High: the risk is too great, equipment will not be provided by the NMEP and, proposers must provide their own equipment.

Mooring design.

Has the mooring been designed within the context of the best practice document ?

The risks:- Fishing, corrosion, wear & tear, fish bite, excessive knockdown, component failure, unsuitable design (chicken & egg), fouling, remoteness, ice ..

Fouling



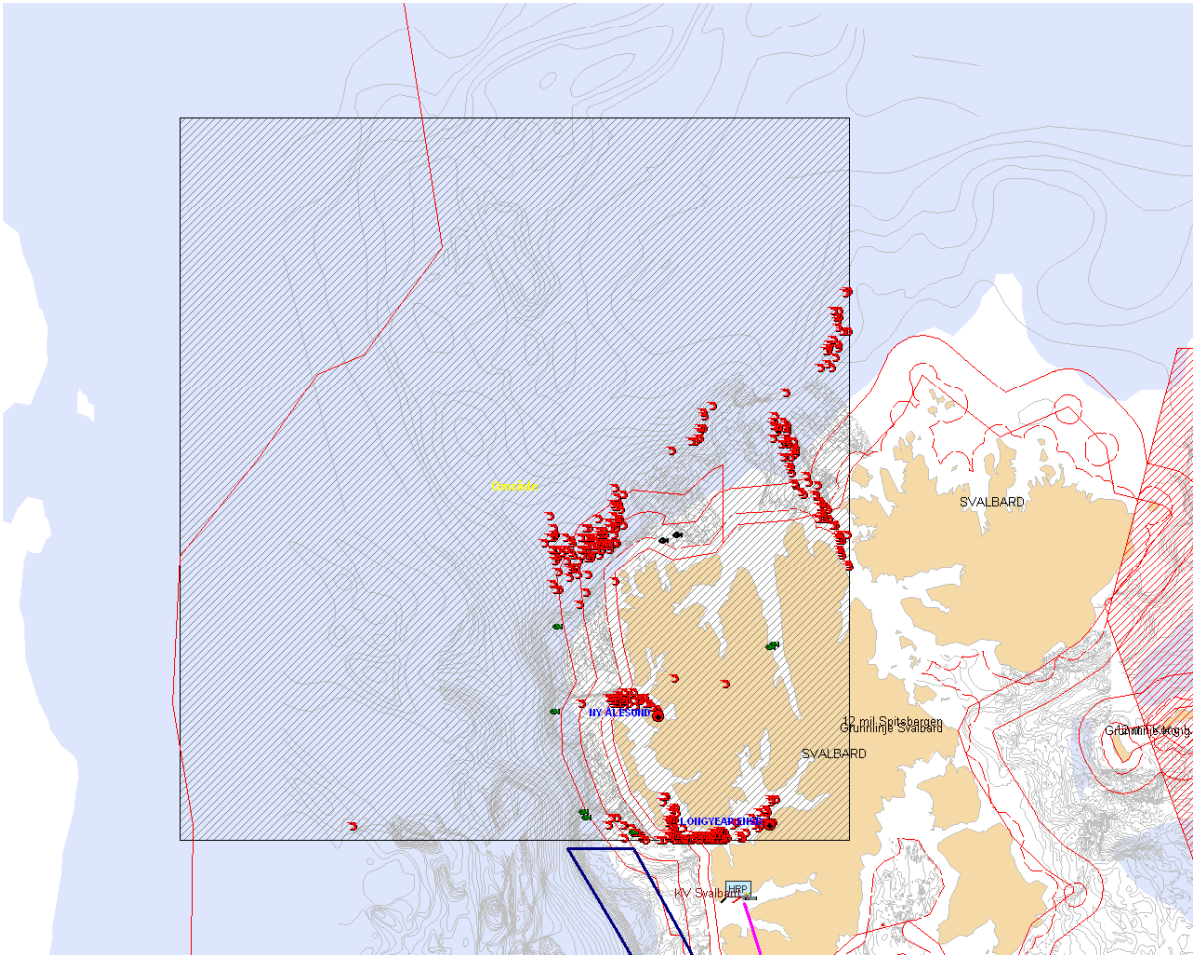
Corrosion

Mooring environment

Is the deployment in a “risky” environment?

Is the area heavily fished ?

Fishing Activity



Mooring environment

Geographical regimes:-

Shelf (<200m)

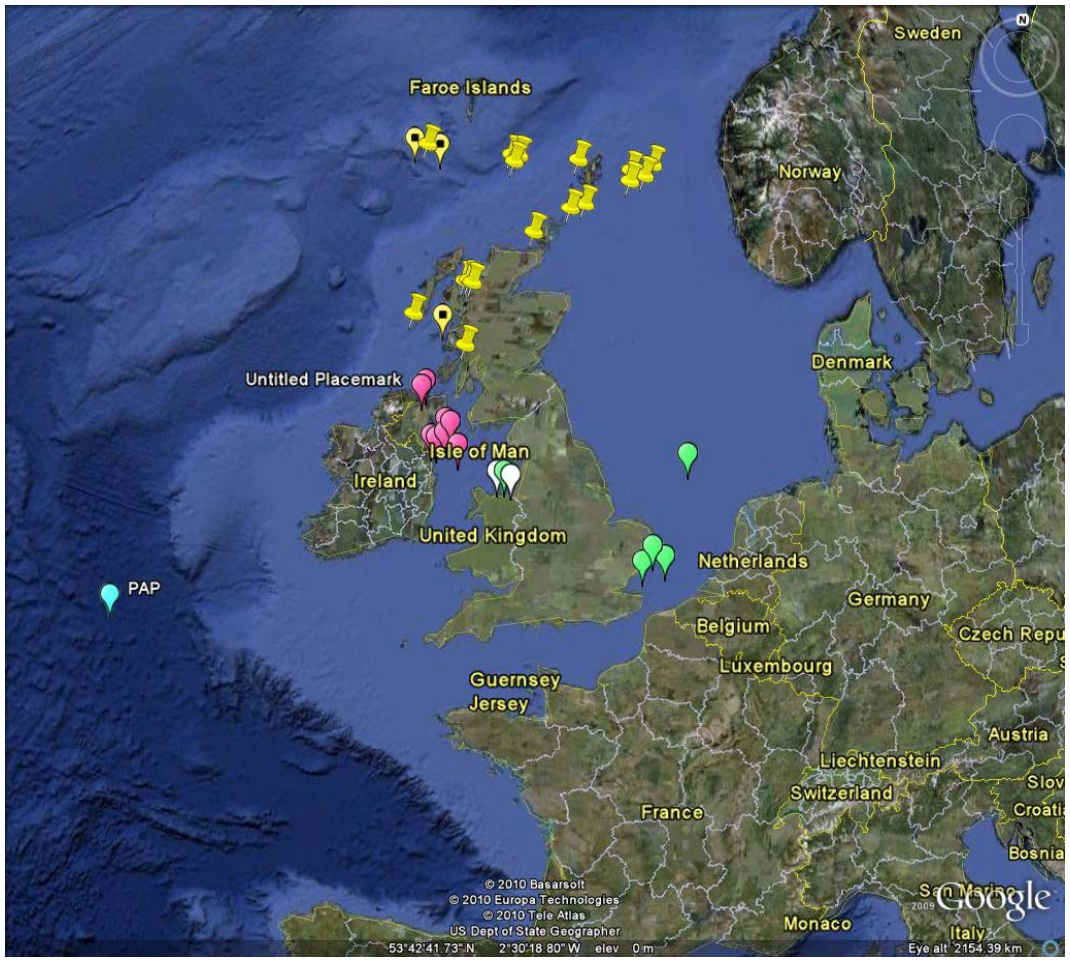
Slope (>200m & <1000m)

Deep (>1000m)

Ice

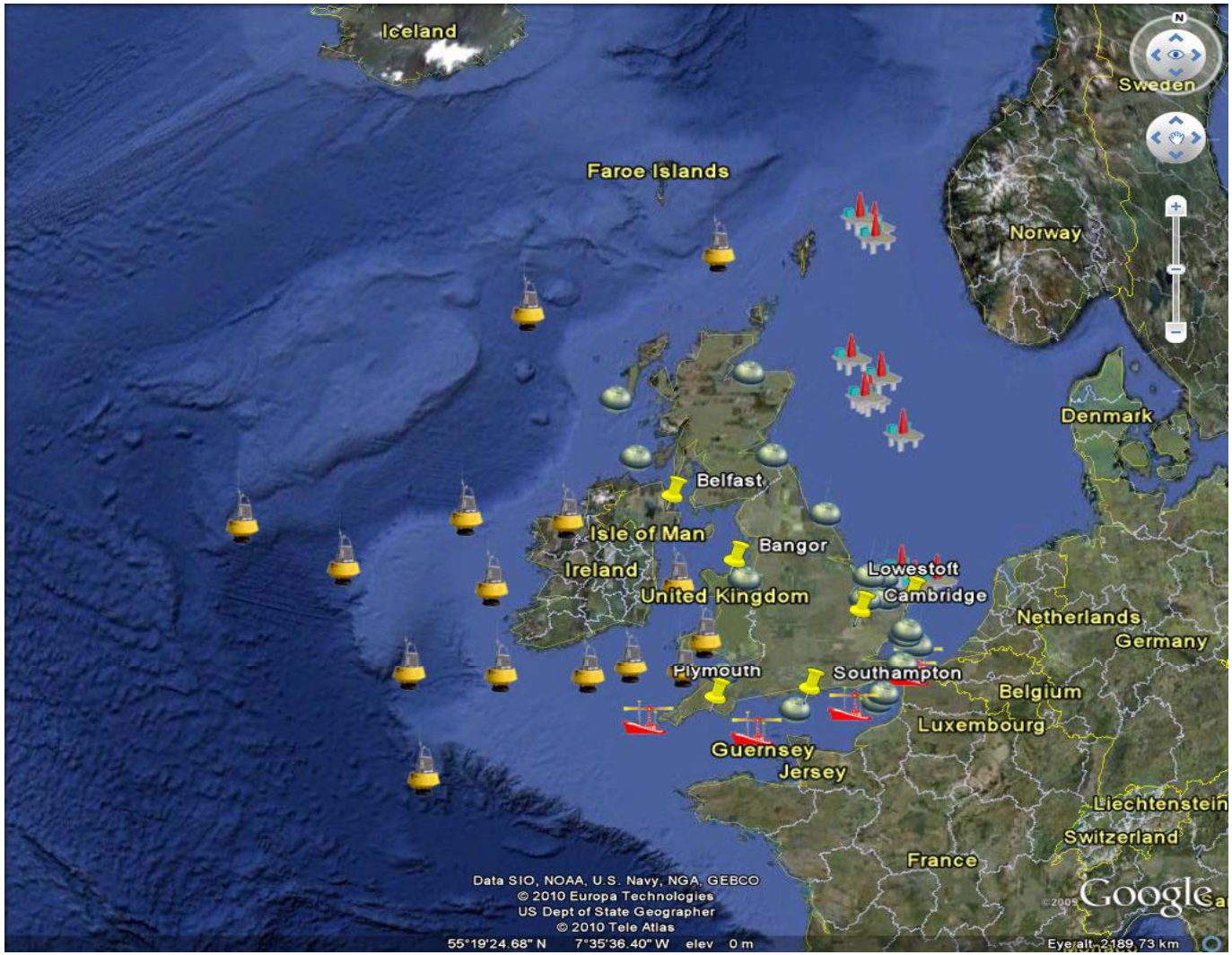
Risk gradient:- fishing, remoteness, duration, currents ….

UK Mooring Sites

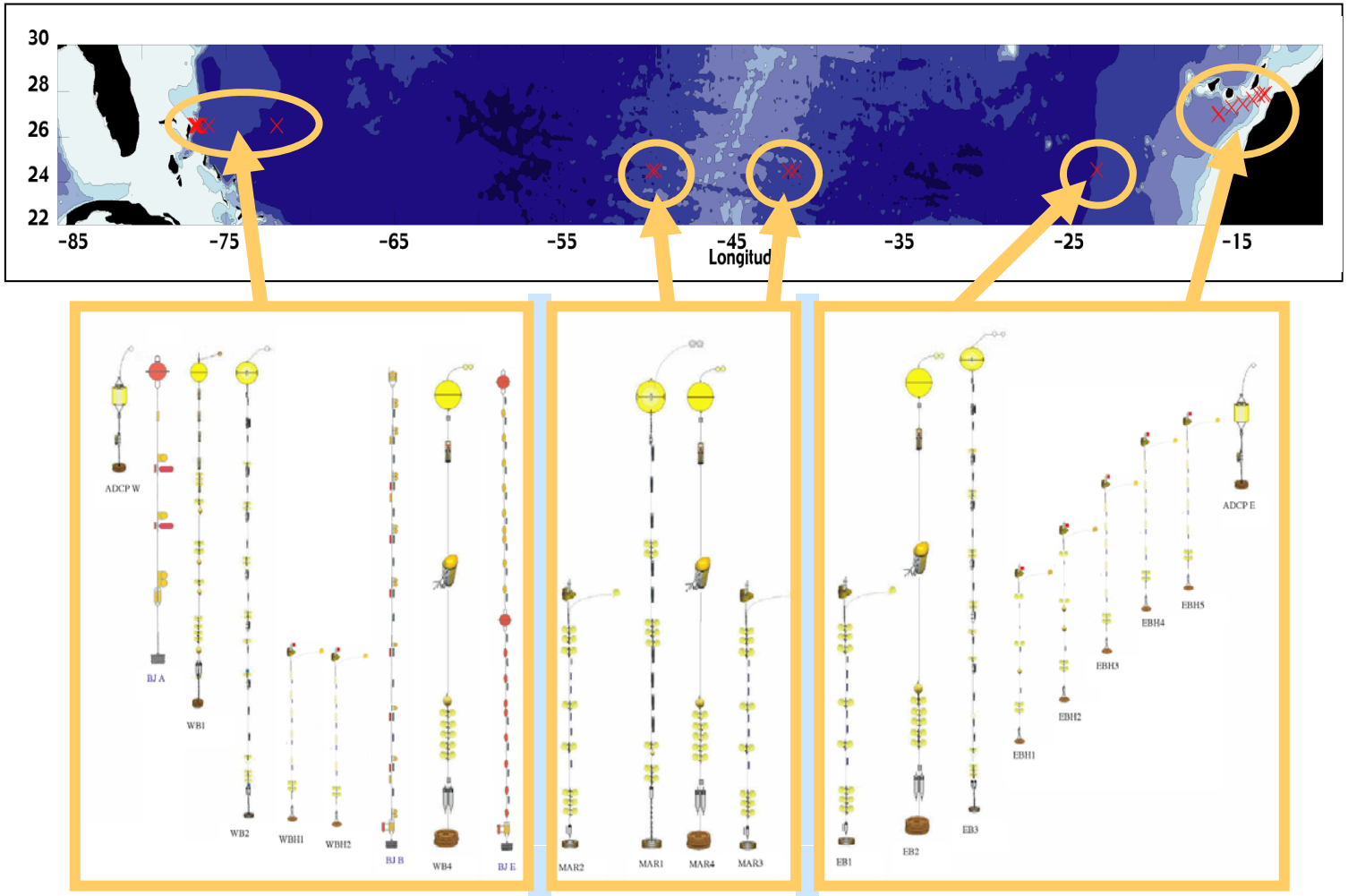


Wavenet Array

http://www.cefas.co.uk/data/wavenet.aspx



RAPID 26.5°N Array 2004>2014

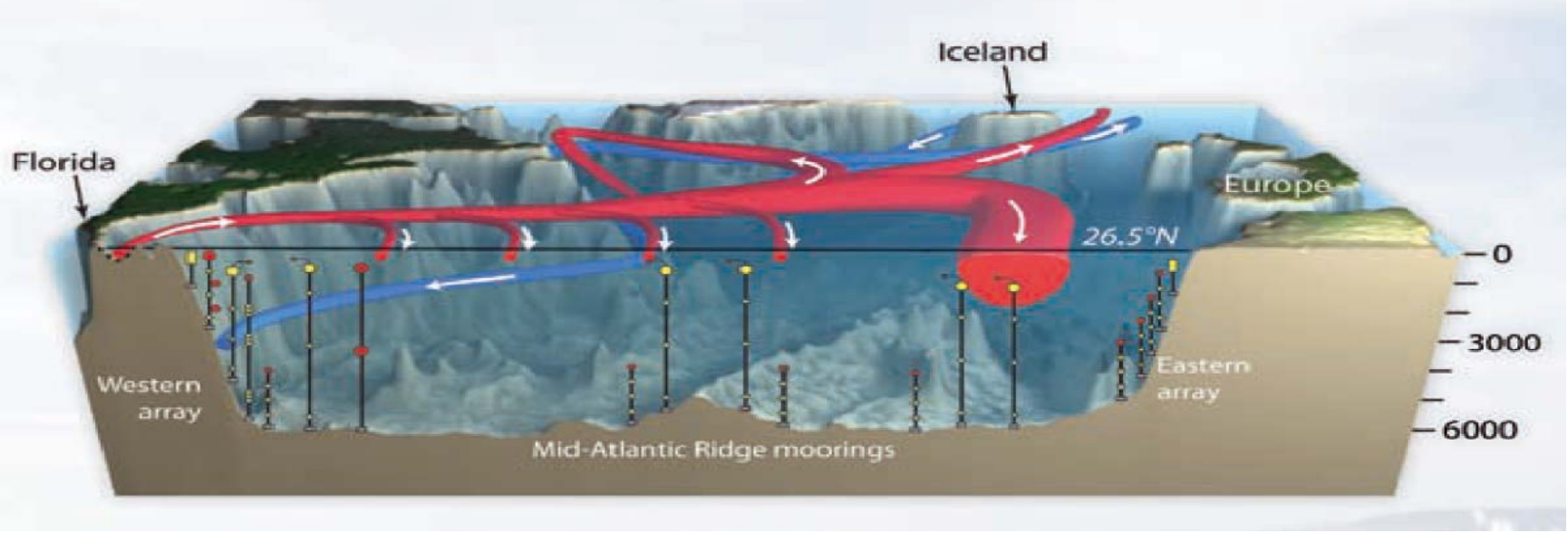


Rapid Array – 3 sub-arrays

Eastern Boundary (EB), Western Boundary (WB) and the Mid-Atlantic Ridge (MAR)

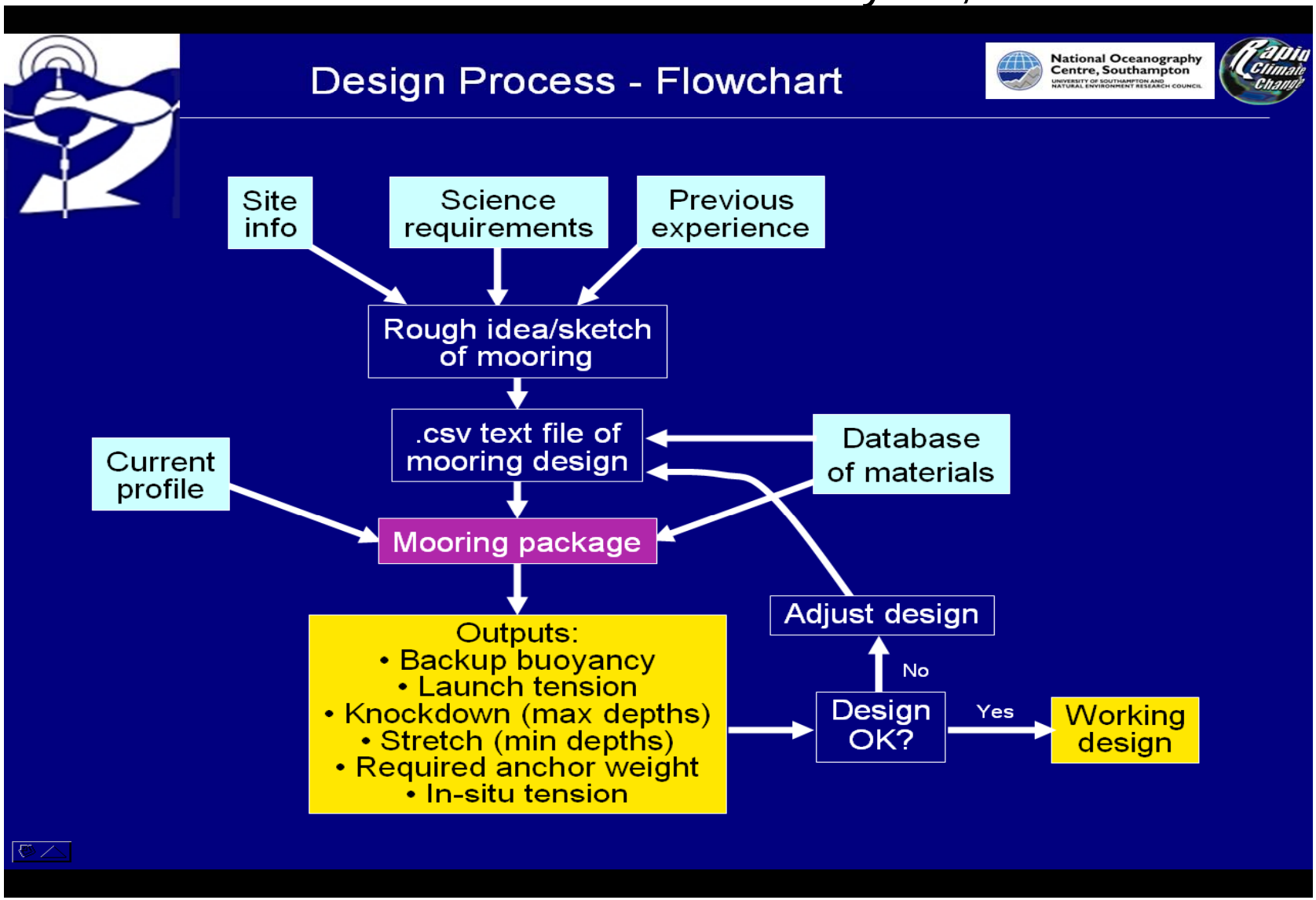
UK contribution currently consists of:-
21 moorings (9 tall)
12 BPRs
2 inverted echo sounders

US contribution currently consists of:-
3 moorings (in WB sub-array)
4 BPRs (in WB sub-array)
Florida Straits cable



Mooring Design

Rob McLachlan and Darren Rayner, NOC.



Past Experience

- CONSLEX 1982>83 NW Scottish shelp/slope
- LOIS/SES early 90s

Success Statistics – last 5 years

- Shelf – >95% - ~200 moorings
- Slope – ?
- Deep – >90% - ~120 moorings
- Ice - ~70% - 40 moorings