

Case Study 2: Rockall

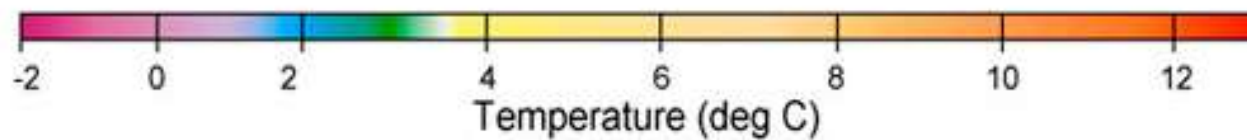
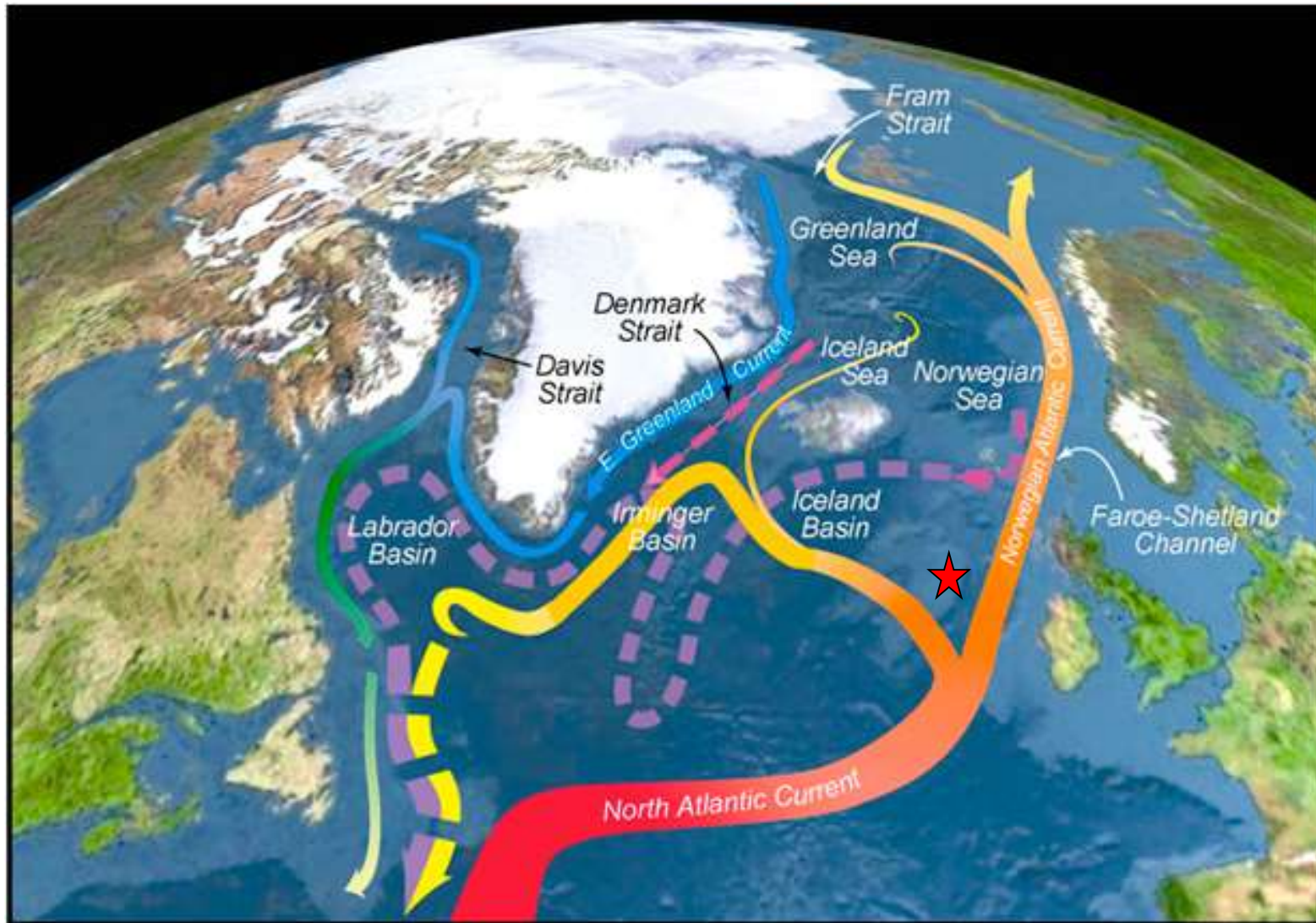


marinescotland
science

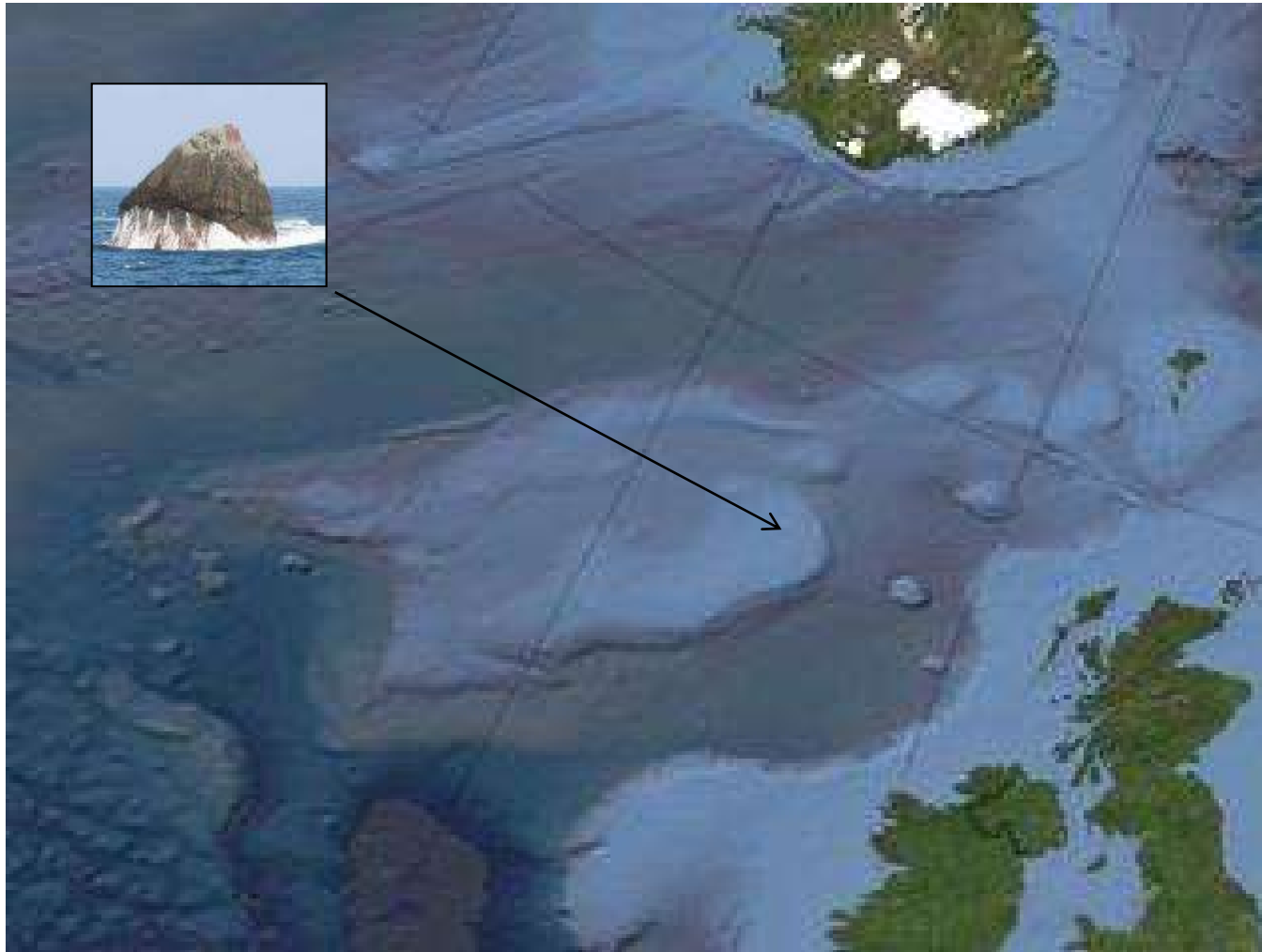
Francis Neat



Rockall



Rockall



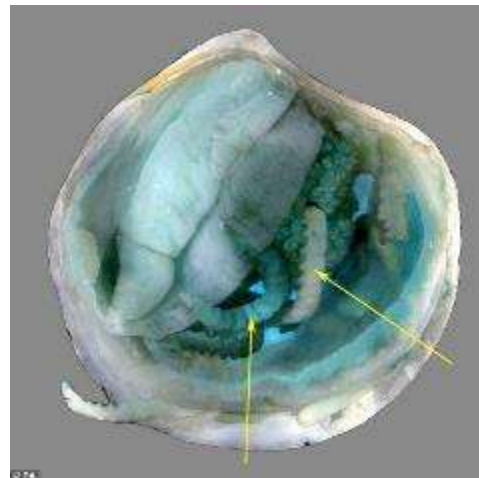
Main aim

- Integrate maps of human activities with areas of conservation interest and assess the economic value of the human activities.



Benthic habitats and species

- *Lophelia pertusa* reefs
- Coral gardens
- Black corals
- Gorgonians
- Sponge grounds
- Seapen fields
- Cold seeps
- ICES VME database



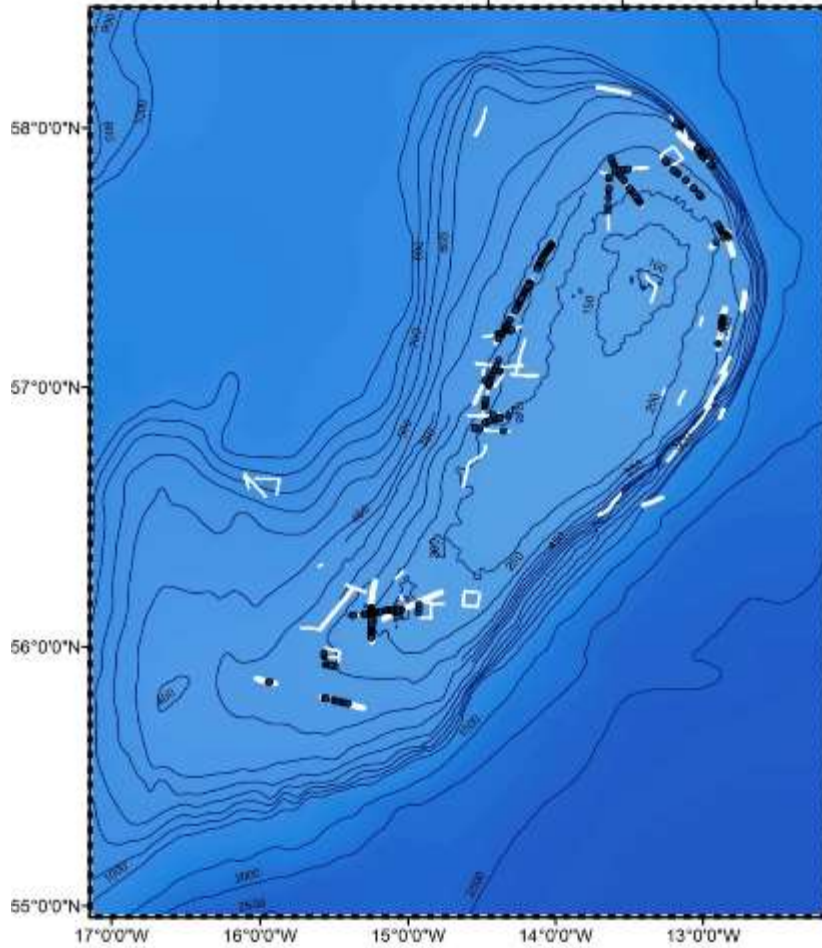
Mapping *Lophelia pertusa* reefs using towed video

marinescotland
science

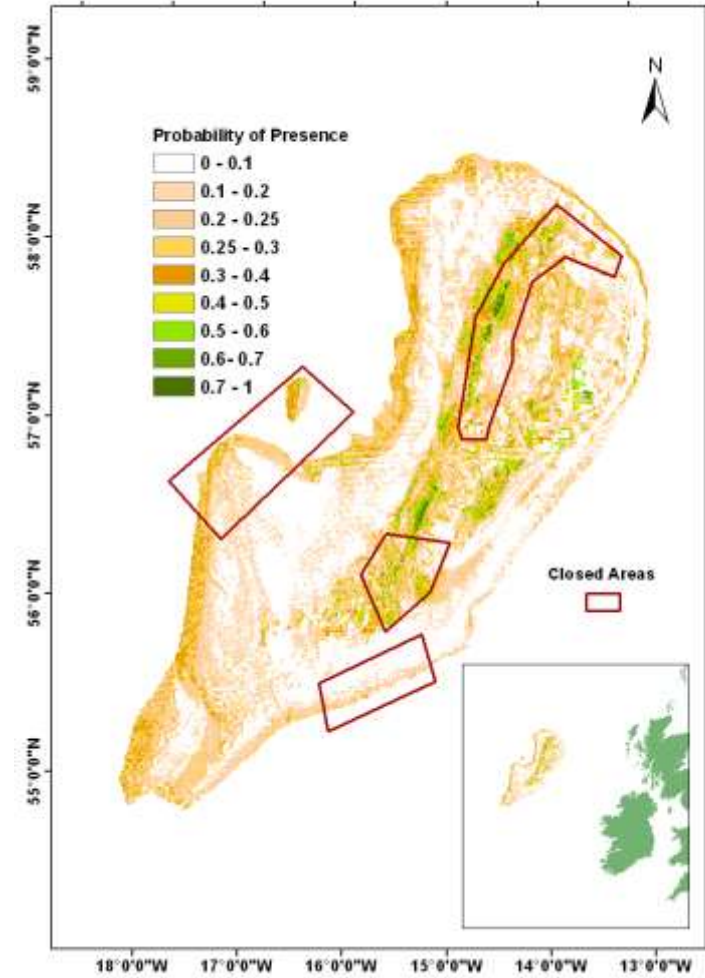


Over 600 km of transects
from 150 m to 1000 m

Video transects and habitat mapping



Presence-absence



SDM

Fishing at Rockall

£3-4 M per year



£0.5 M per year



£0.2M per year



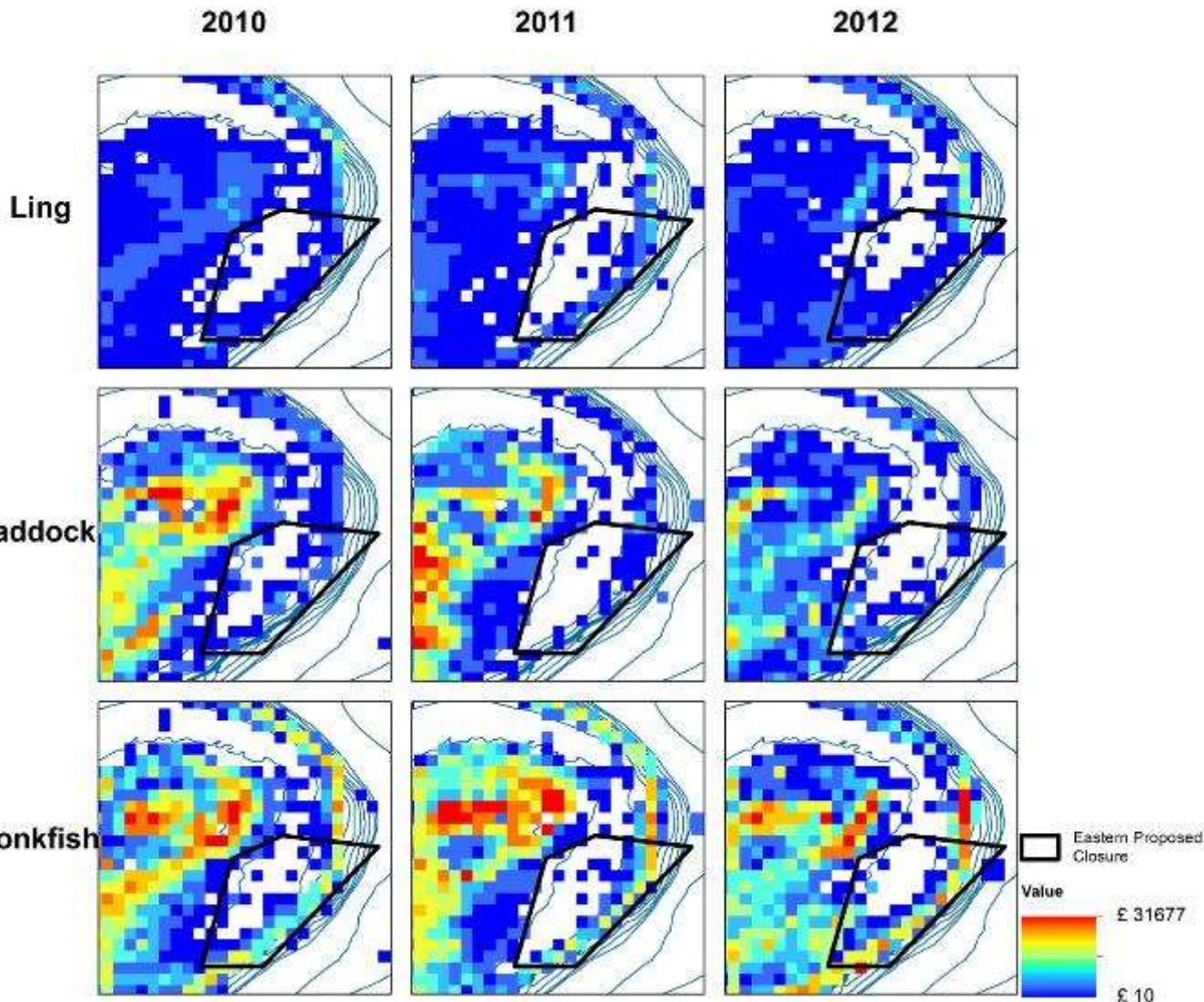
£4-6 M per year



£0.5 M per year



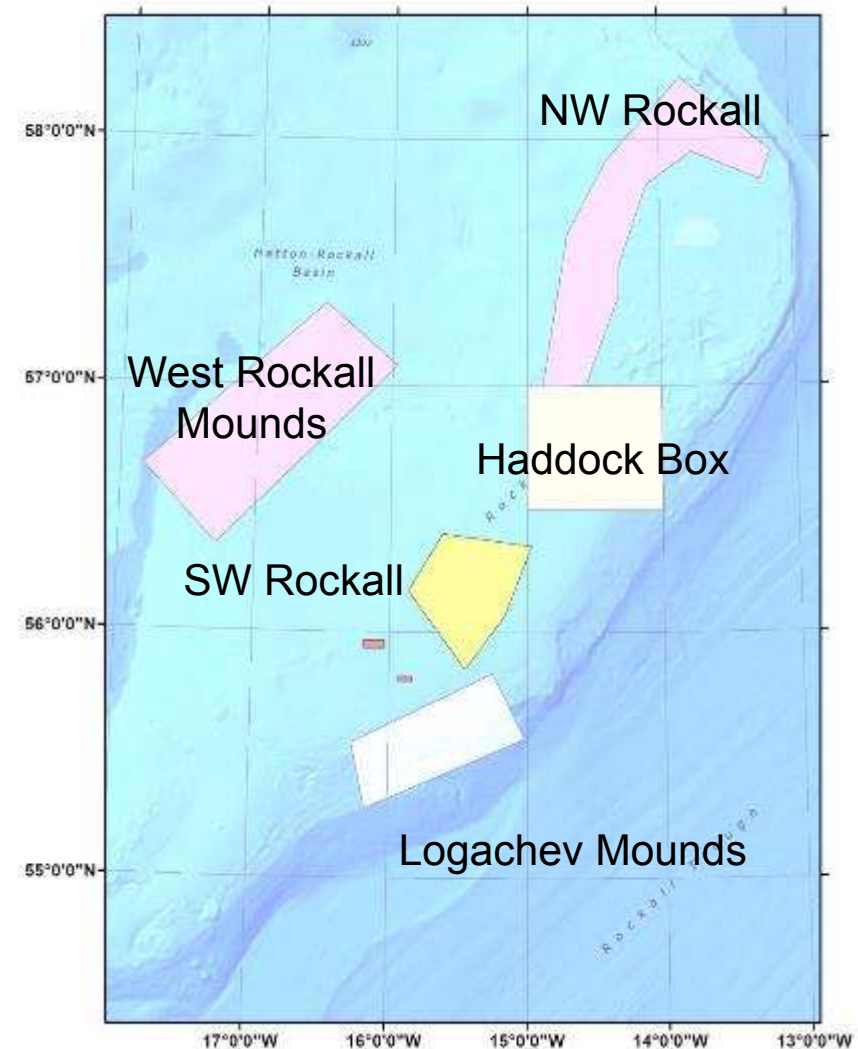
Spatial and economic data on fisheries



- VMS systems gives vessel position every 2 hours
- E-logs books provide daily catches
- Assign an average daily value across the locations of the vessel for that day
- Grid these data at ~ 5 X 3 km.
- Raise this over the year
- Assess the economic value
- Spatially evaluate

Coral protection at Rockall

- **Spatial data on:**
- **Coral occurrence**
 - Scientific records
 - Fishermen's knowledge
- **Fishing activity – plotter data, VMS data**
- **Find the mutually exclusive areas – i.e. where there is little or no fishing activity and where there is good evidence of corals**
- **Advice provided to NEAFC and to EC**

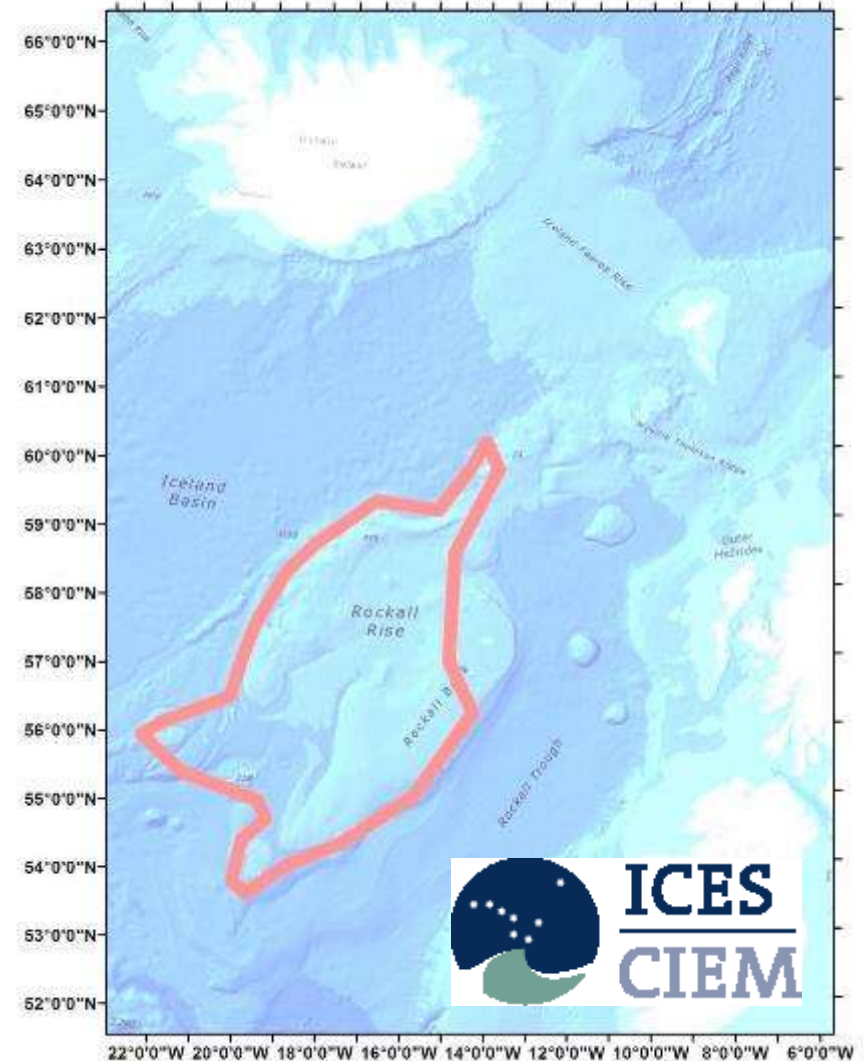


The CBD and Ecologically and Biologically Significant Areas in the ABNJ

EBSA criteria

- Uniqueness/rarity
- Importance for threatened or declining habitats
- Vulnerability

2013 - ICES advised Rockall fulfils these criteria and that this area be designated an EBSA



Data on fish species

- Rockall Haddock Survey (1980's – present day)
- Deepwater surveys (2011, 2012)
 - Time series
 - Map distributions
- Monkfish survey (2005 – present day)
- Cyclical dynamics
- Correlated to AMOC variability?

