

Impact of fisheries on other components of the ecosystem

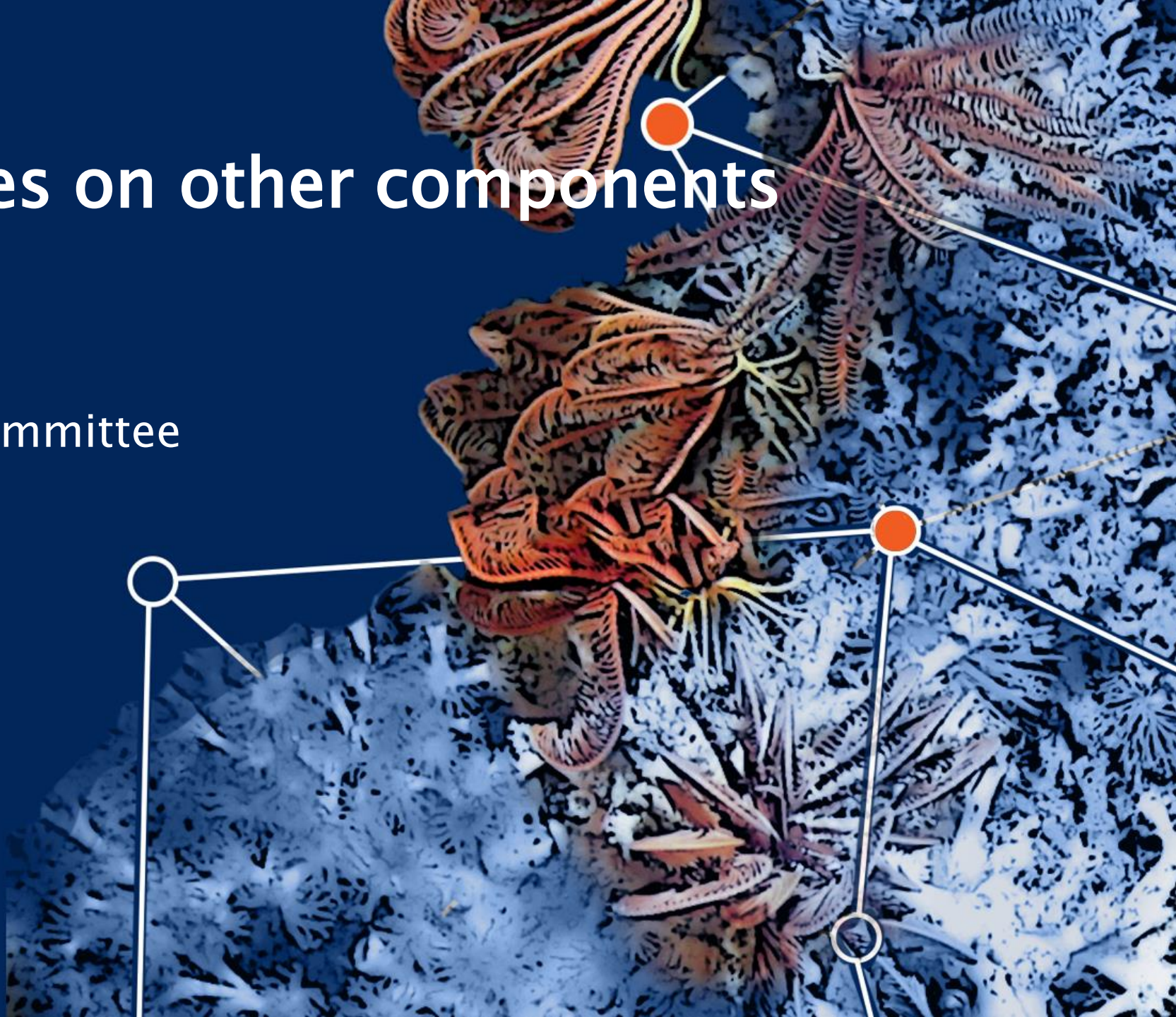
Mark Dickey-Collas,
Chair of ICES Advisory Committee

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Science for sustainable seas





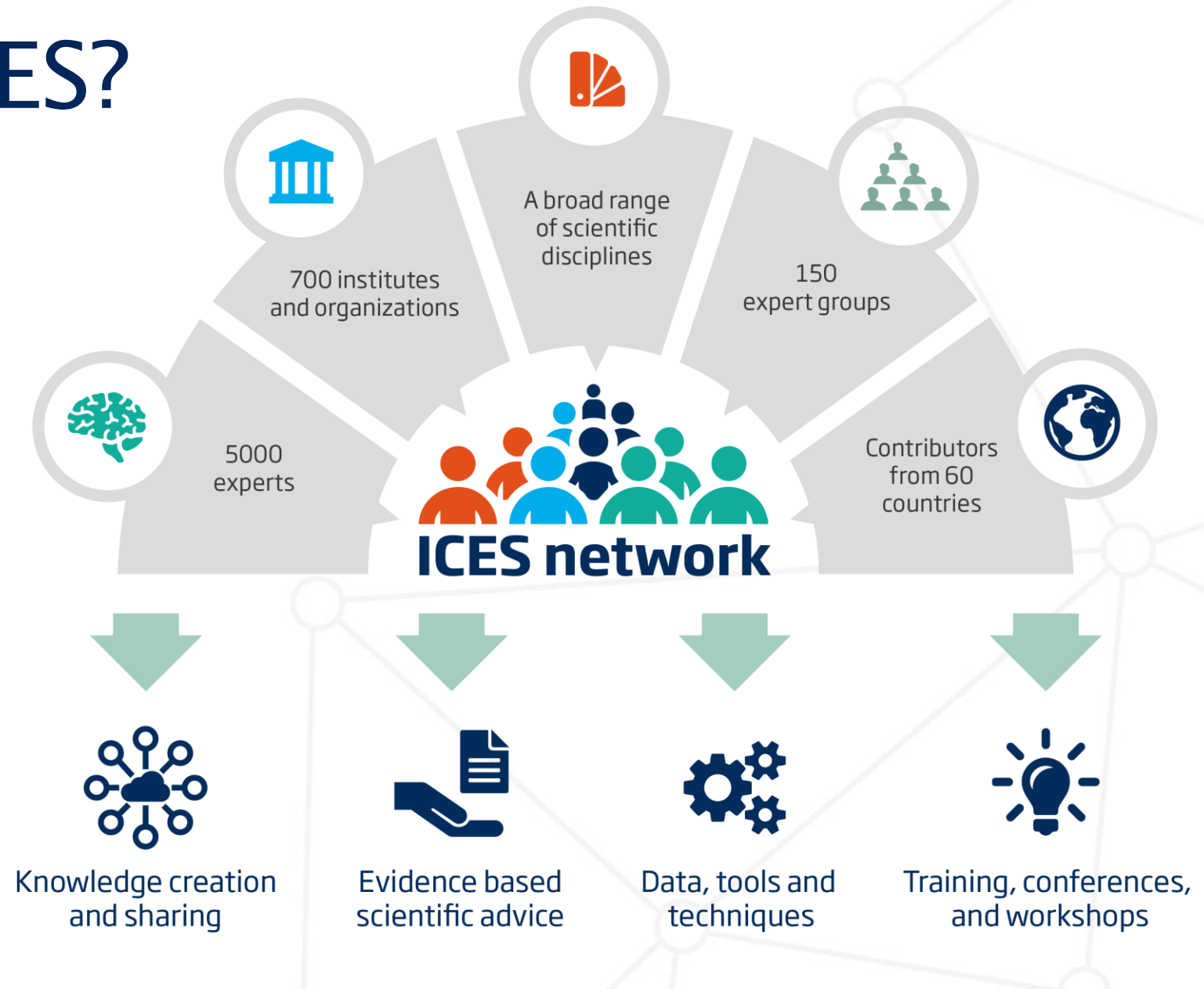
Vision

To be a world-leading marine science organization, effectively meeting societal needs for impartial evidence on the state and sustainable use of our seas and oceans.

Mission

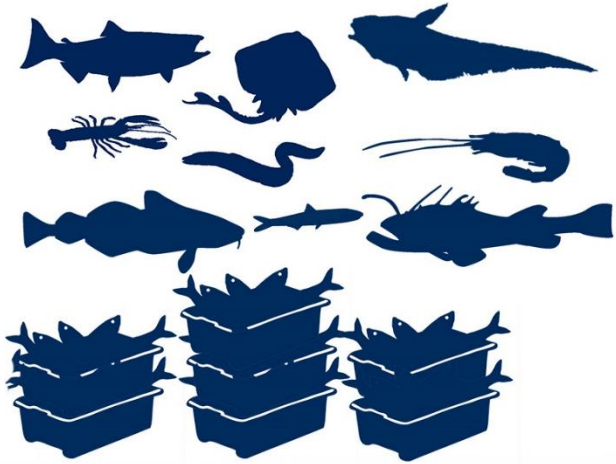
To advance and share scientific understanding of marine ecosystems and the services they provide, and to employ this knowledge to generate state-of-the-art advice on meeting conservation, management and sustainability goals.

What is ICES?



What does ICES advise on?

Fish & fisheries



*Fishing opportunities
Data limited
Precautionary MSY
Management strategy
Mixed fisheries
IUCN approaches*

Species & habitat biodiversity



*Assessment & monitoring
Indicators
Bycatch & impacts
Vulnerable marine ecosystem
EBAS & MPAs
Habitat loss & disturbance*

Marine activities

Spatial footprint, biofouling, invasive species, renewables, trade-offs, contaminants



Who does ICES advise?

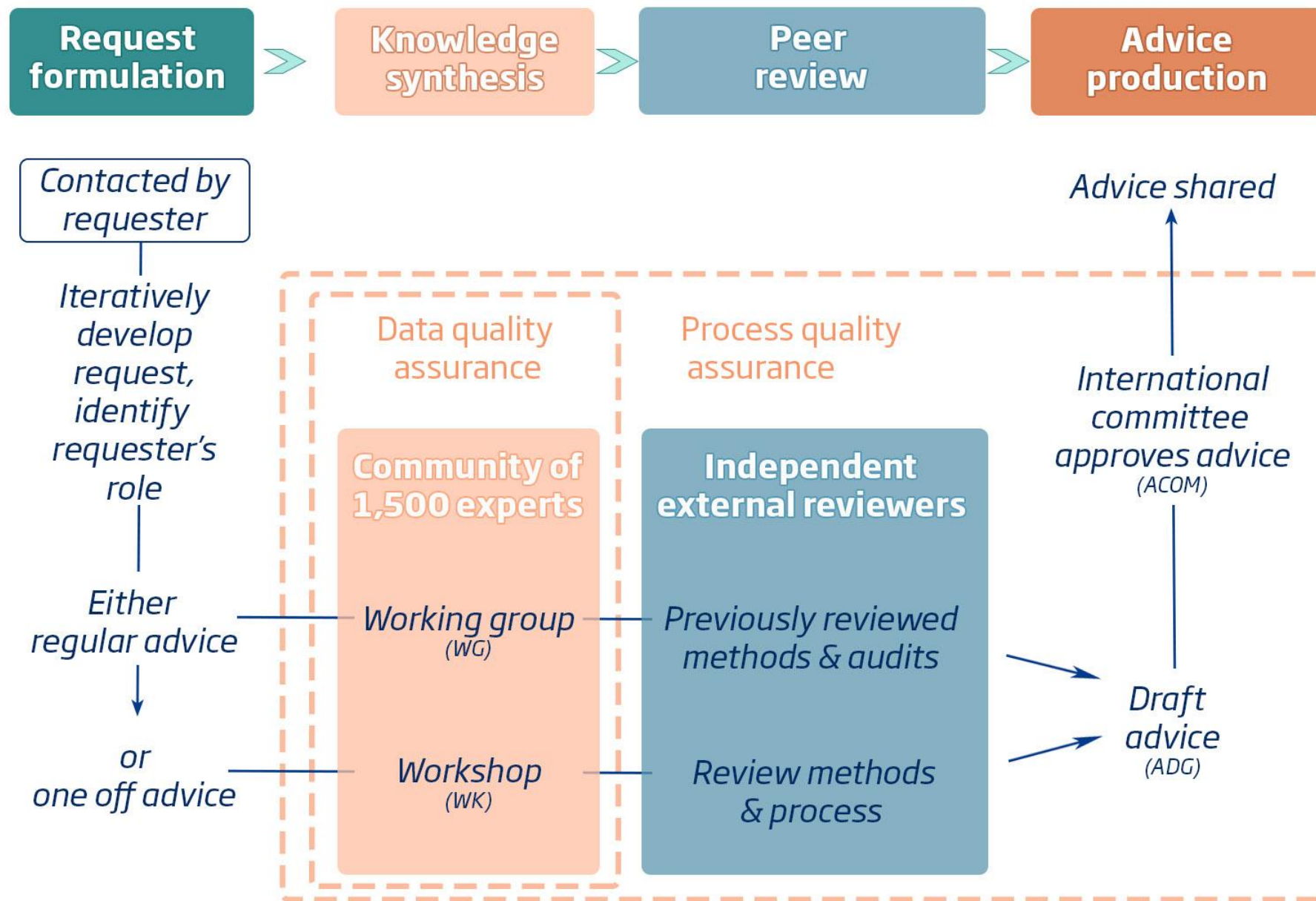
ICES provides best available, scientific advice to international & national authorities



How?

Ensuring best available, relevant, independent, credible advice

Framework for ICES provision of advice



Context of ICES fisheries advice

International agreements and policies:

- UN Convention on the Law of the Sea (UNCLOS 1982) -MSY
- UN Conference on Environment and Development (UNCED, 1992) -precautionary approach
- UN Straddling Fish Stocks Agreement of 1995 (UNFSA 1995) - precautionary approach
- Convention on Biological Diversity (UN CBD, 1992) - ecosystem approach
- Johannesburg Declaration of the World Summit on Sustainable Development (WSSD UN 2002)- ecosystem approach & MSY

Precautionary approach, MSY, ecosystems approach

National and regional legislation:

including CFP, MSFD, Norwegian Marine Resources Act, Russian Federal Law on Fisheries, Icelandic Fisheries Management Act, Faroe Islands Fisheries Management Act



New advice on VMEs



<http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2019/2019/vme.neafc.pdf>

*ICES Special Request Advice
Ecoregions in the Northeast Atlantic and adjacent seas
Published 24 September 2019*



New information regarding vulnerable habitats in the NEAFC Regulatory Area

Advice summary

ICES advises to maintain the existing closed areas to protect vulnerable marine ecosystems (VMEs). No additions to, or extensions of the existing closed areas to protect VMEs in the NEAFC Regulatory Area are advised at this time.

Further records of VME indicators were obtained inside and around the Haddock Box on the Rockall Bank. Assuming that the Haddock Box remains closed, ICES does not consider that any changes are needed to the boundaries of NEAFC bottom-fishing closures in this area.

ICES notes that fishing activity is taking place outside of the existing NEAFC bottom-fishing areas in the Barents Sea and the Mid-Atlantic Ridge.

Request

2008 Identification of VME criteria, bottom fishing activities adverse impacts on VME, information available on Mid-Atlantic Ridge, extension to NW Rockall fishing closure.



2010 Exploratory bottom fisheries, “move-on” provisions when potential VME is encountered.

2011 Proposed boundary revision for Northwest Rockall closure

2012 Revised boundaries for Northwest Rockall, Southwest Rockall, Hatton Bank closures, review of NEAFC bottom fisheries regulations

2013 Evaluation of appropriateness of buffer zones, VME indicators at taxonomic family level, Mid-Atlantic Ridge be regarded as continuous VME, Rockall Hatton area, isolated sea mounts, hydrothermal vents.

A decade of VME advice from ICES

2017 Appropriateness of NEAFC bottom fishing closures.

2018 New information (including Hatton Bank)

2019 Request: to provide new information on the distribution of vulnerable habitats in the NEAFC Area and fisheries activities in and in the vicinity of such habitats, and provide advice relevant to the Regulatory Area and the above mentioned objectives.



ICES advice:

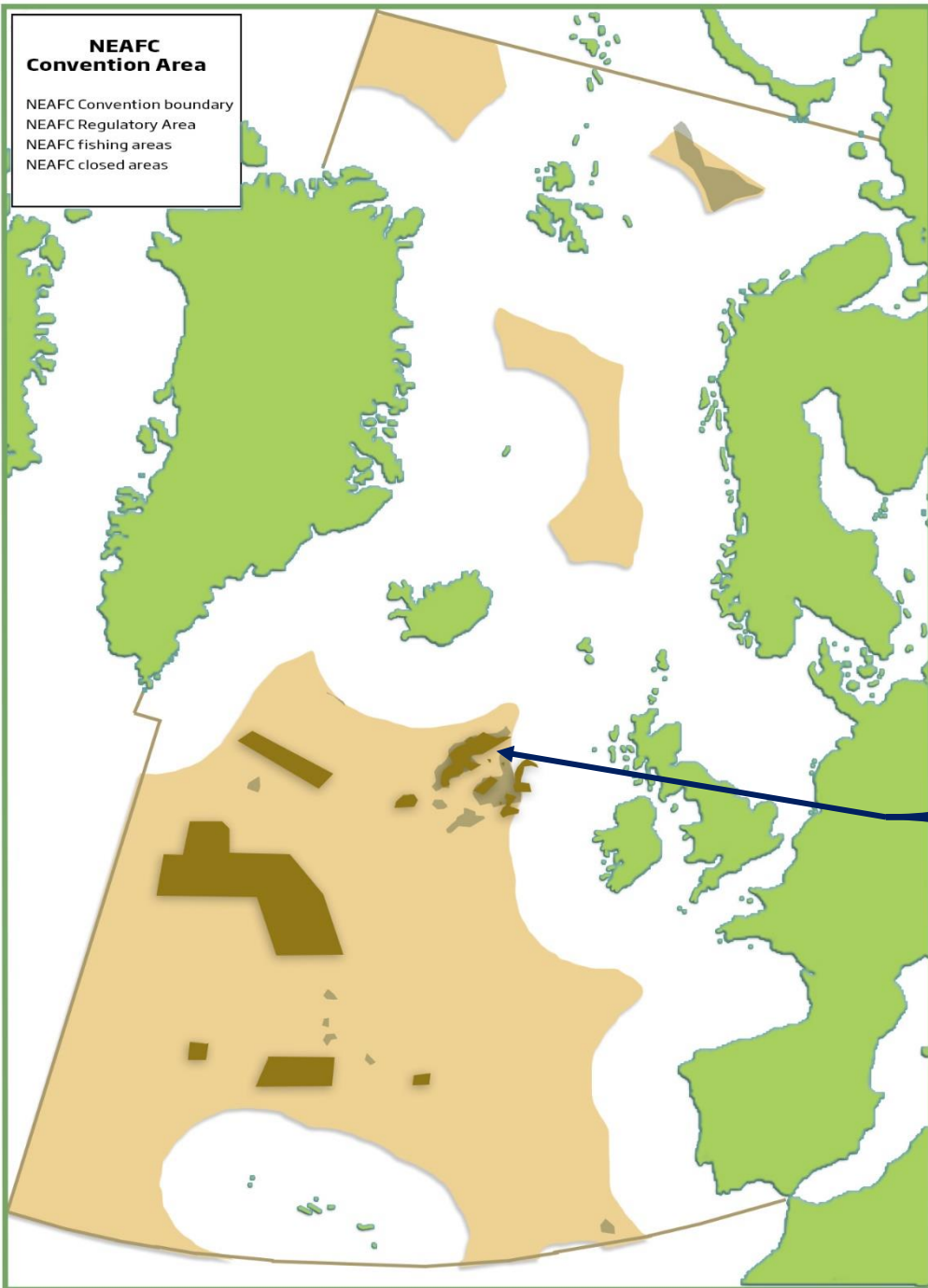
- maintain the existing closed areas - no additions to, or extensions at this time.
- further records of VME indicators were obtained inside and around the Haddock Box. Assuming that the Haddock Box remains closed, no changes to NEAFC bottom-fishing closures in this area.

ICES notes:

- fishing activity is taking place outside of the existing NEAFC bottom-fishing areas in the Barents Sea and the Mid-Atlantic Ridge.

NEAFC Convention Area

NEAFC Convention boundary
NEAFC Regulatory Area
NEAFC fishing areas
NEAFC closed areas



Summary fishing in/near closed areas

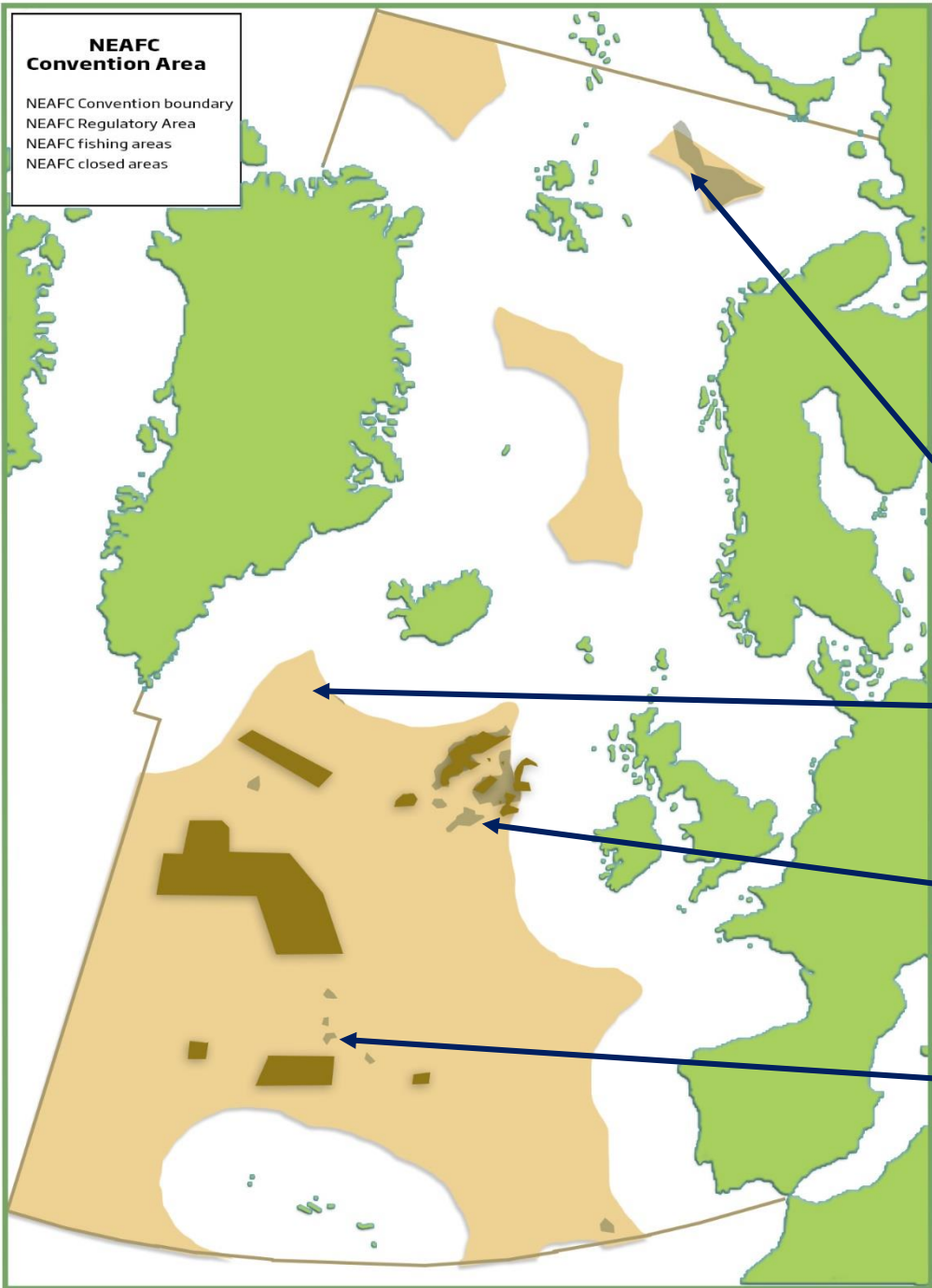
2018 Fishing activities in and near NEAFC closed areas:

Generally confined to Rockall Bank and Hatton Bank closures.

Appears to be minor infringements into closures in these areas.

Some trawling occurring in NW part of the Haddock Box.

There were no records of such fishing near other closures.



Summary

Fishing outside fishing area



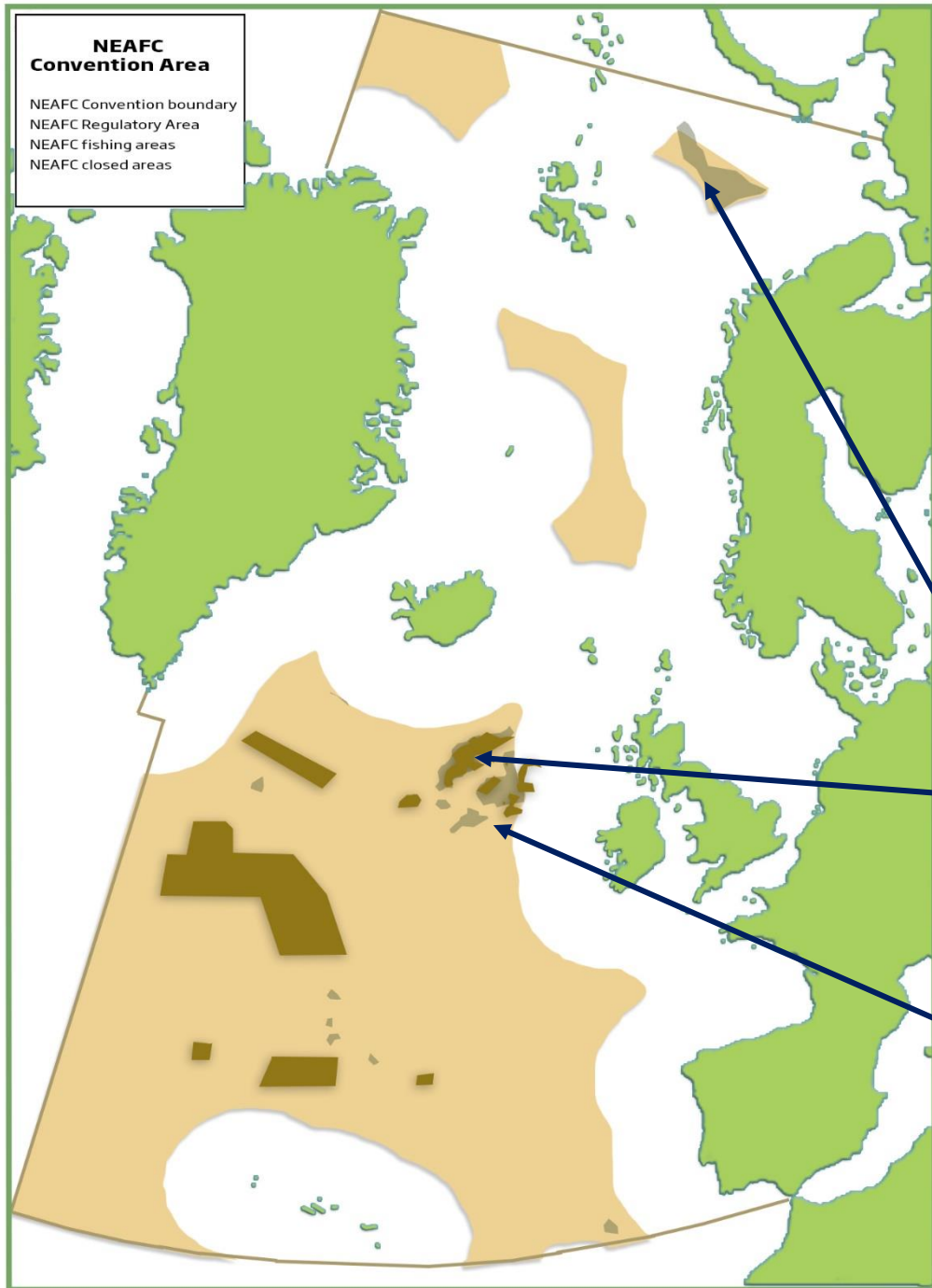
2018 Fishing activities outside NEAFC bottom-fishing area

Suggestion of activity westward beyond the Barents Sea NEAFC bottom-fishing area, for vessels with no reported gear type.

One potential area of actual bottom-fishing northwest of the Reykjanes Ridge Existing Area (1300-1500 m)

Some trawling occurring outside fishing areas southwest of Rockall.

Bottom-trawling activity at two locations one north and one south of the existing NEAFC bottom-fishing areas 3, 4 and 5 on the Mid Atlantic Ridge



Summary

VME habitat/indicators



2018 New VME habitat or VME indicator records :

All records provided through the 2019 ICES data call were 'VME indicators' from trawl surveys rather than *bona fide* VME habitat records (e.g. from imagery data).

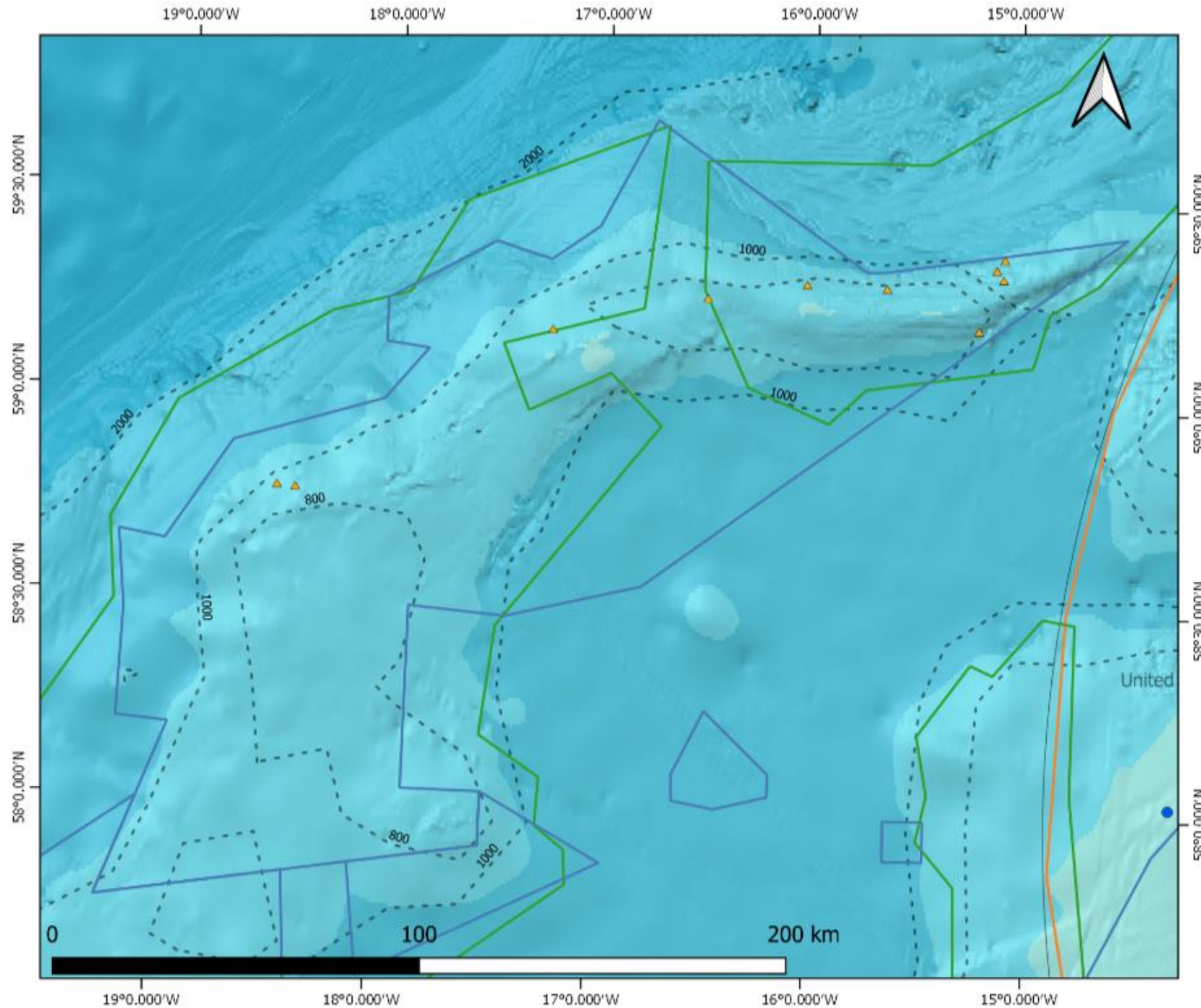
49 new sponge VME indicator records for the Barents Sea (1st)

10 new VME indicator historical (1987) records submitted to VME database within the Hatton Bank closed areas – these were considered when determining the Hatton Bank closure

34 new VME indicator records reported inside and around the Haddock Box. 17 within the NEAFC Regulatory Area but outside the existing VME closures.

Hatton Bank

No additions or extensions required.



Hatton Bank – VME Records

Ten new VME indicator records of stony corals (*Lophelia pertusa*). These are from 1987.

Hatton Bank – Results Area F

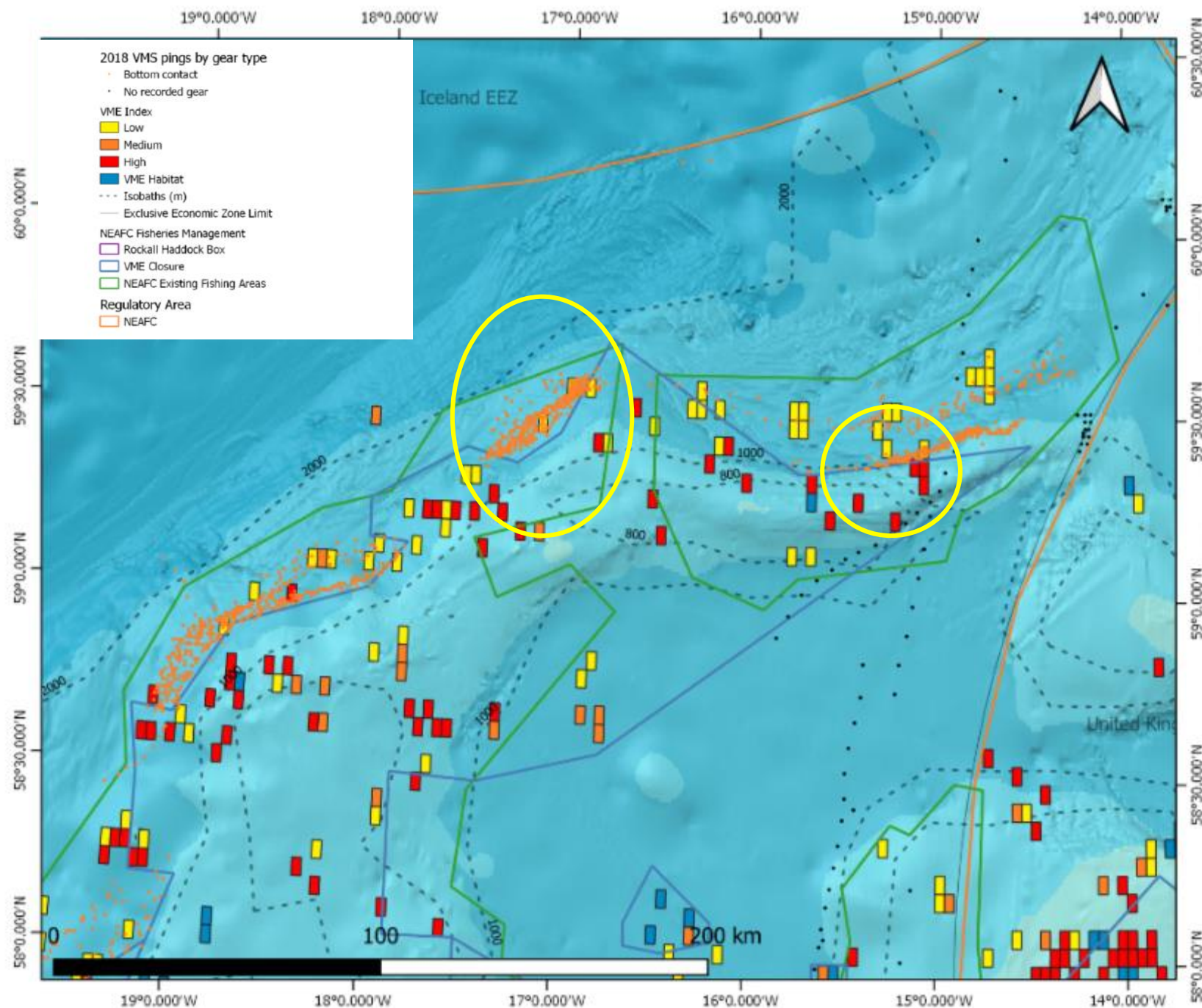
Closures are generally well observed.

Highest levels of fishing closely associated with the boundary of the closed areas.

Small number of bottom trawl appear to extend into the eastern and northern most part of the existing bottom-fishing closed area

Little evidence of static bottom-contacting gears, or of vessels without a registered gear type, in this area.

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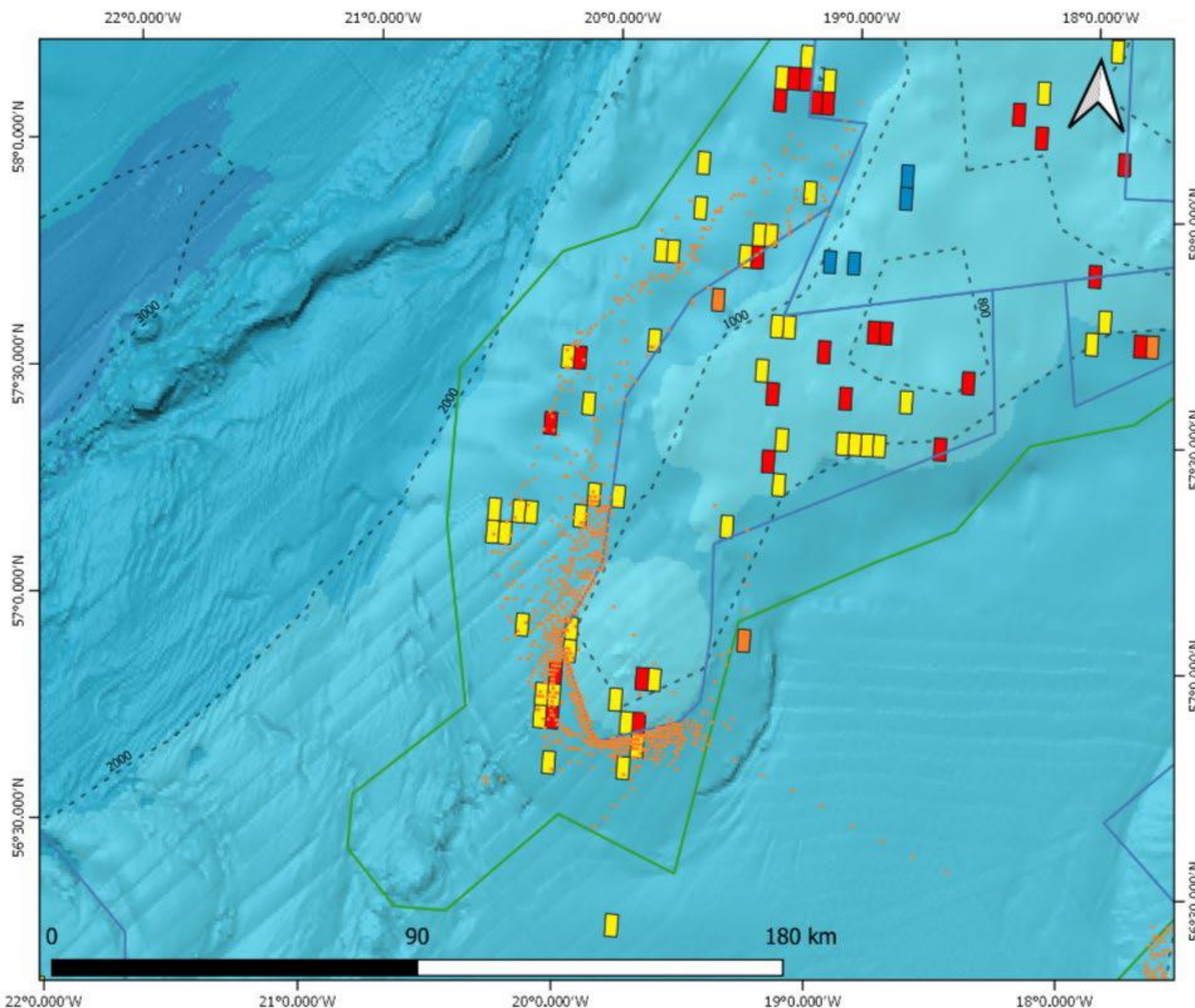


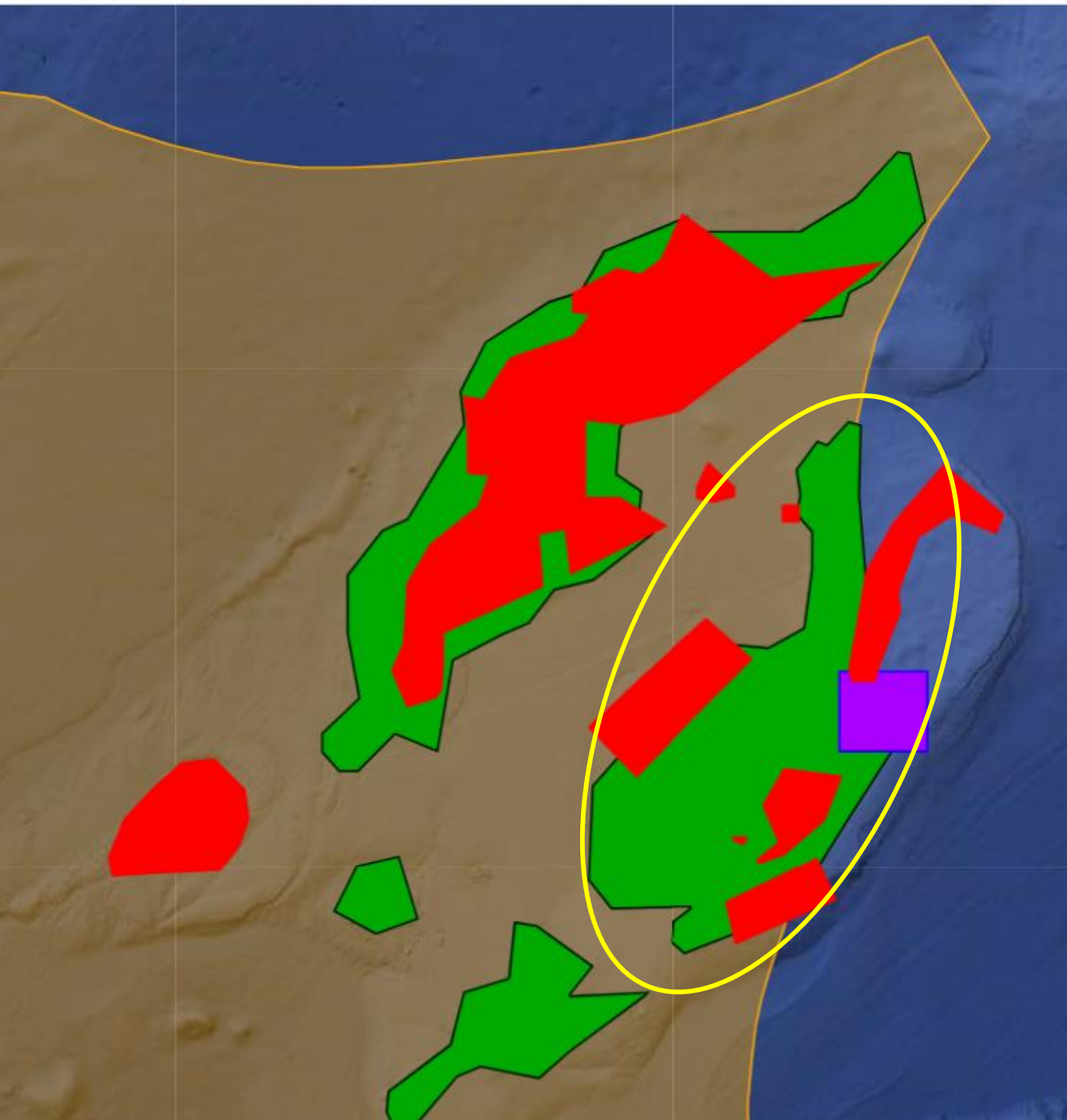
Hatton Bank – Results Area 2

There was little evidence of vessels using static bottom-contacting gears, or activity of vessels without a registered gear type, in this area.

The highest levels of fishing are closely associated with the boundary of the closed areas.

Closures on the western side of the bank are also well observed.





Rockall Bank

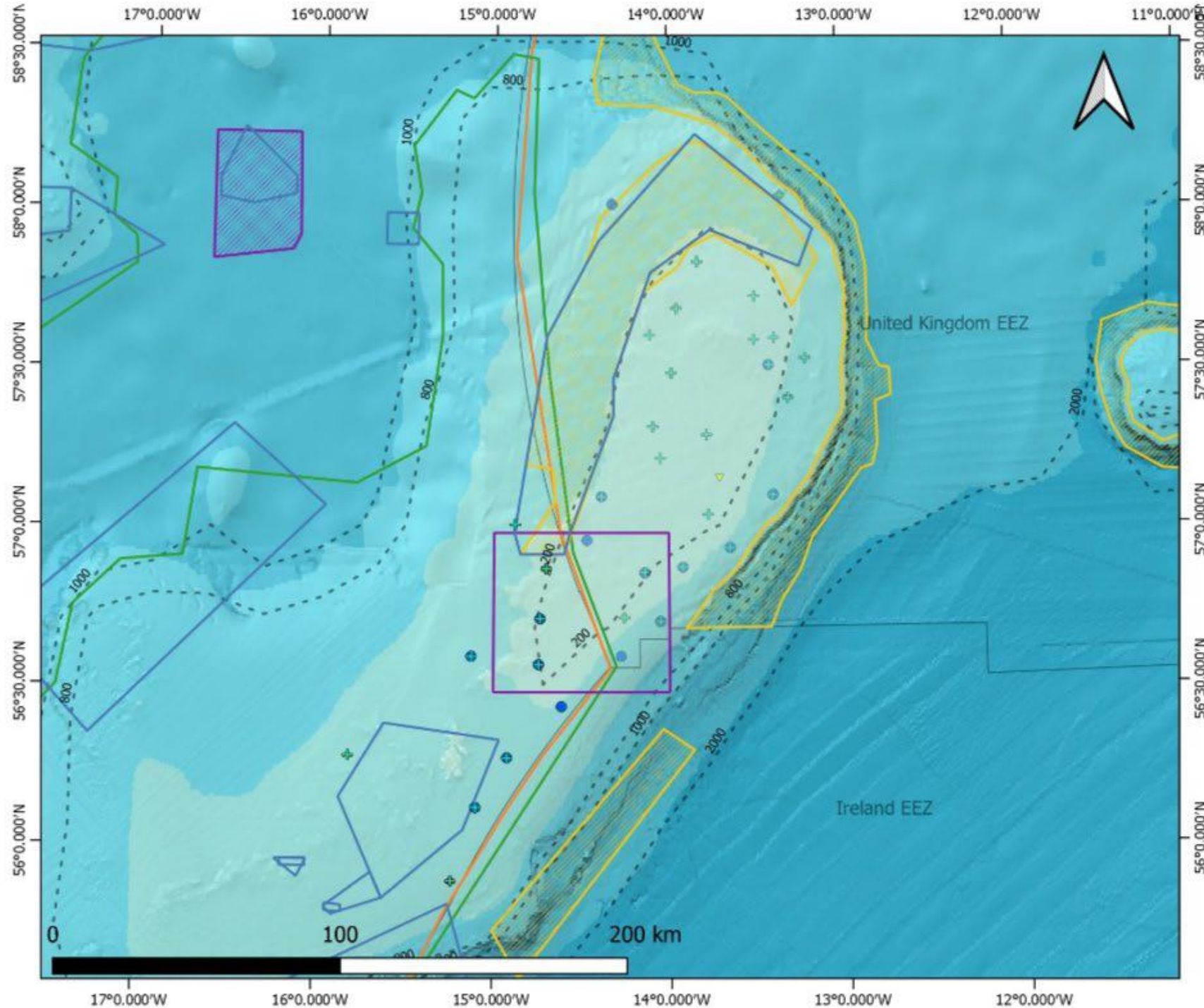
No additions or extensions required.

Rockall Bank - VME Records

Excluding the Haddock Box, no new VME habitat or indicator records within the closed areas

Inside and around the Haddock Box, 34 new VME indicator records reported

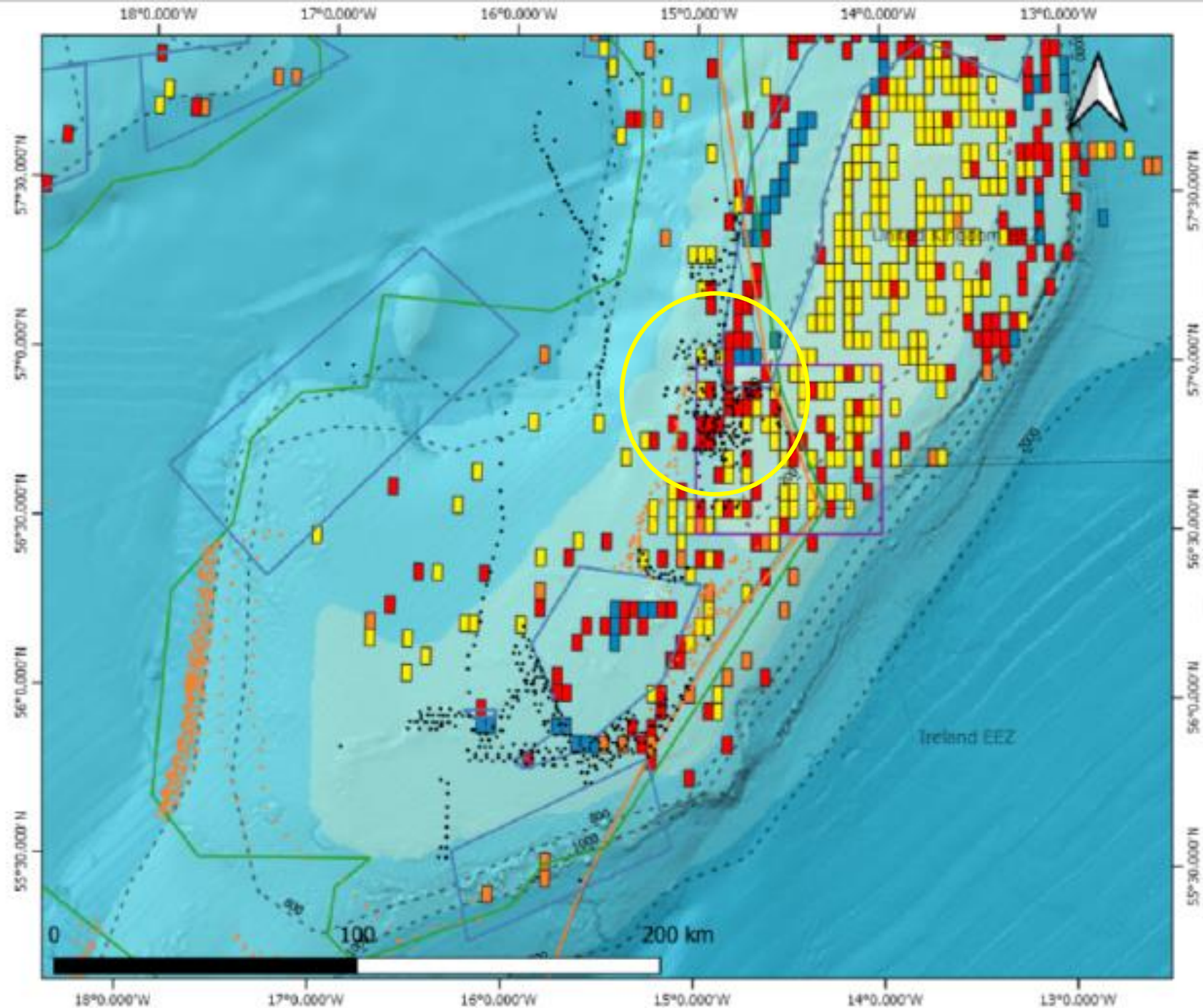
17 of these (stony coral, sponge, gorgonian, and sea-pen) VME indicators within the NEAFC Regulatory Area

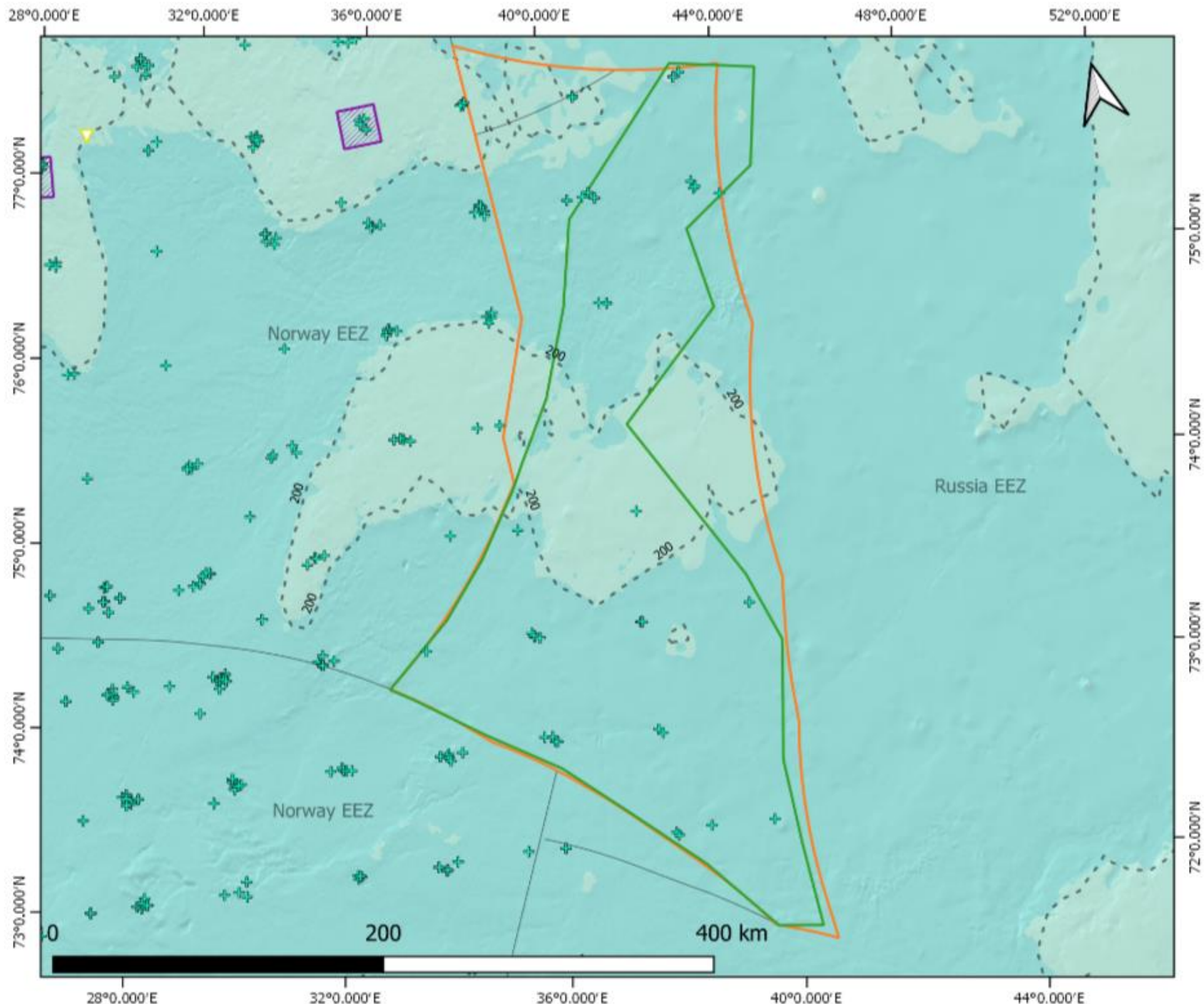


Rockall Bank - Results

The VME closures generally well observed

suggestion of vessels with no registered gear type operating within the Haddock Box





Barents Sea – VME Records

ICES received 49 new sponge VME indicator records within the Barents Sea NEAFC Regulatory Area.

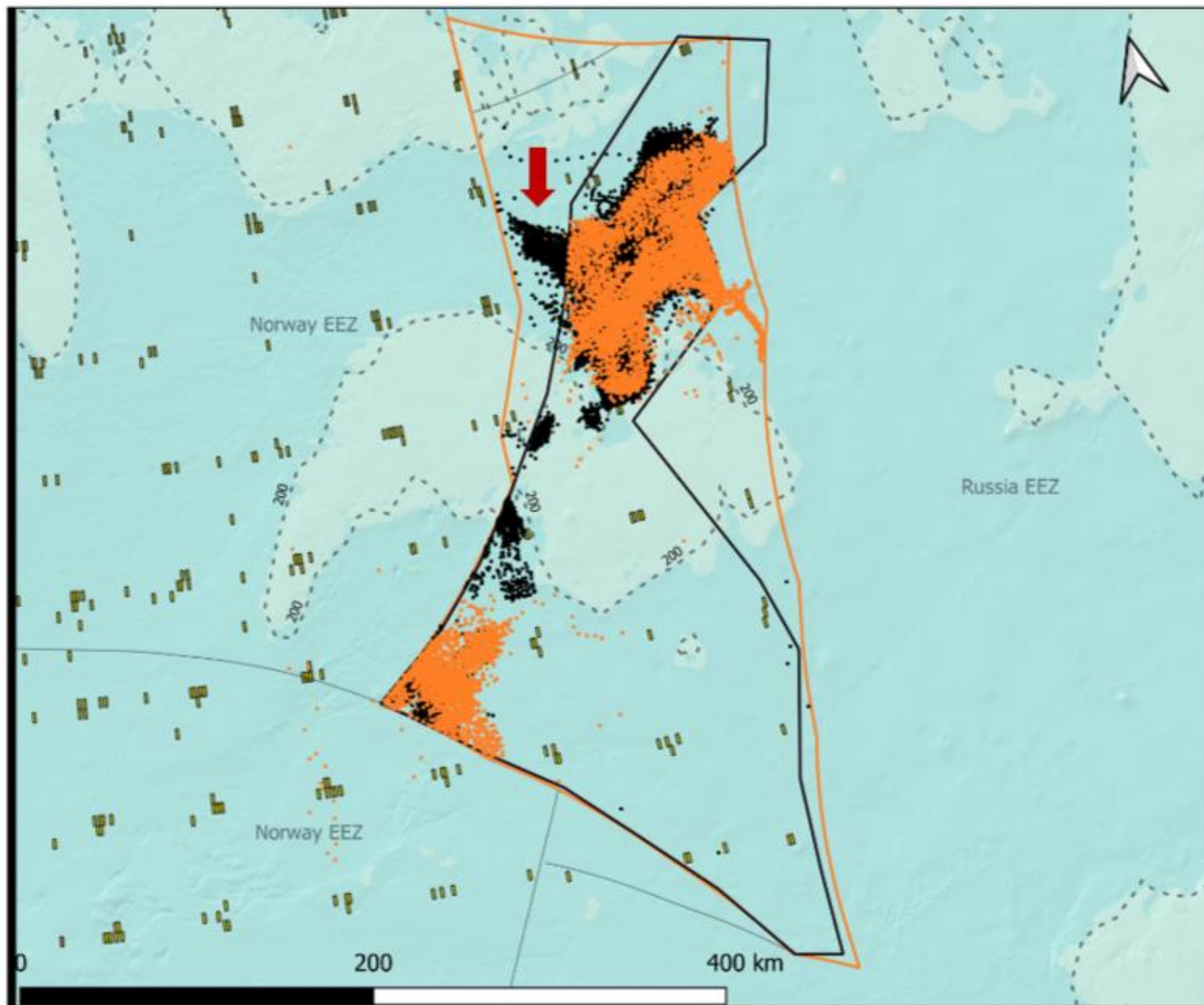
first time VME indicator records have been submitted to the ICES VME database for this region

These records showed “Low VME index” - no recommendations for NEAFC closures are proposed.

Barents Sea - Results

There is some suggestion that activity is expanding westward beyond the existing NEAFC bottom-fishing area, for vessels with no reported gear type

Static gears appear not to be used in this area.



Reykjanes Ridge – VMS / Results

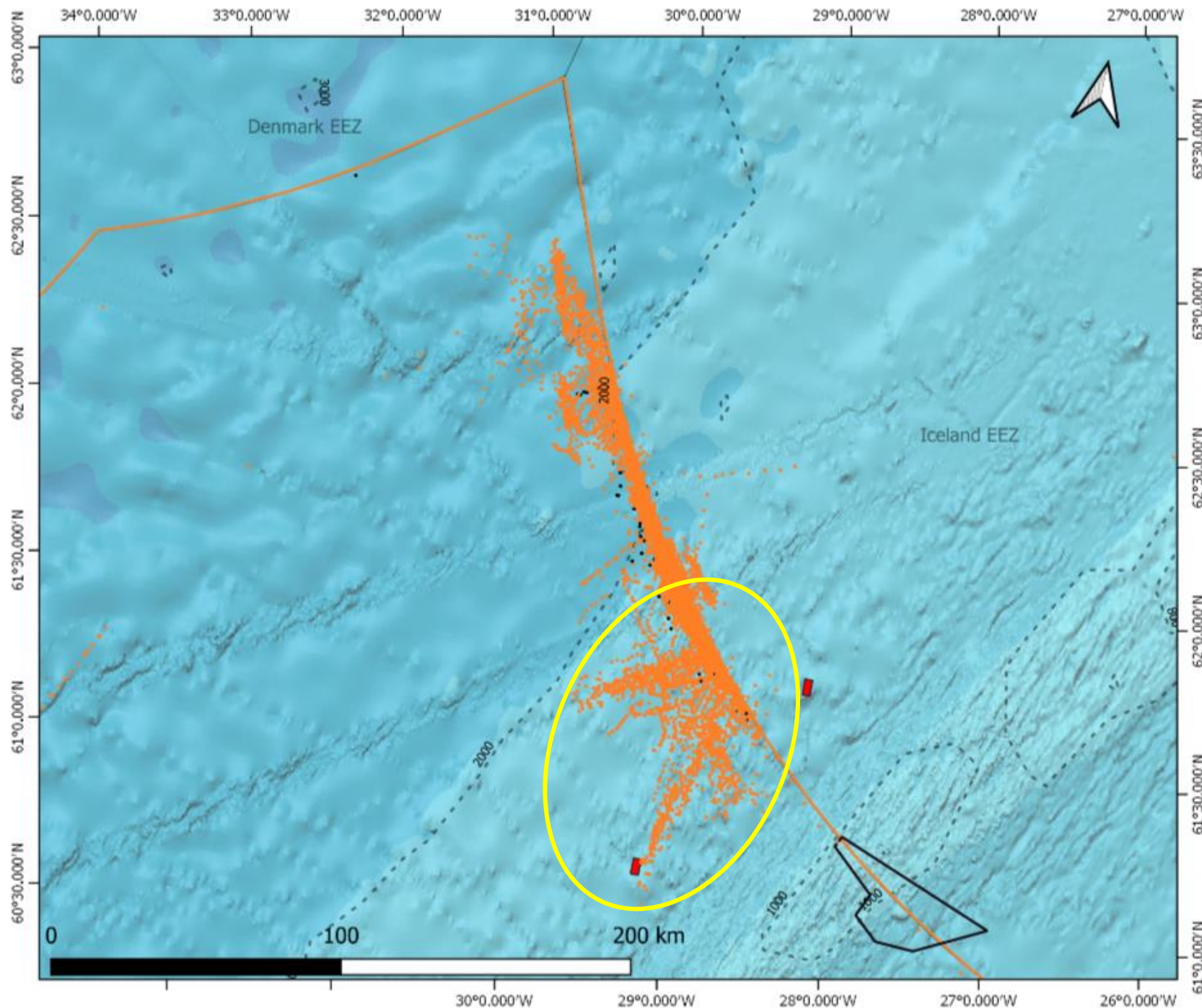
No new VME indicator or habitat records were received

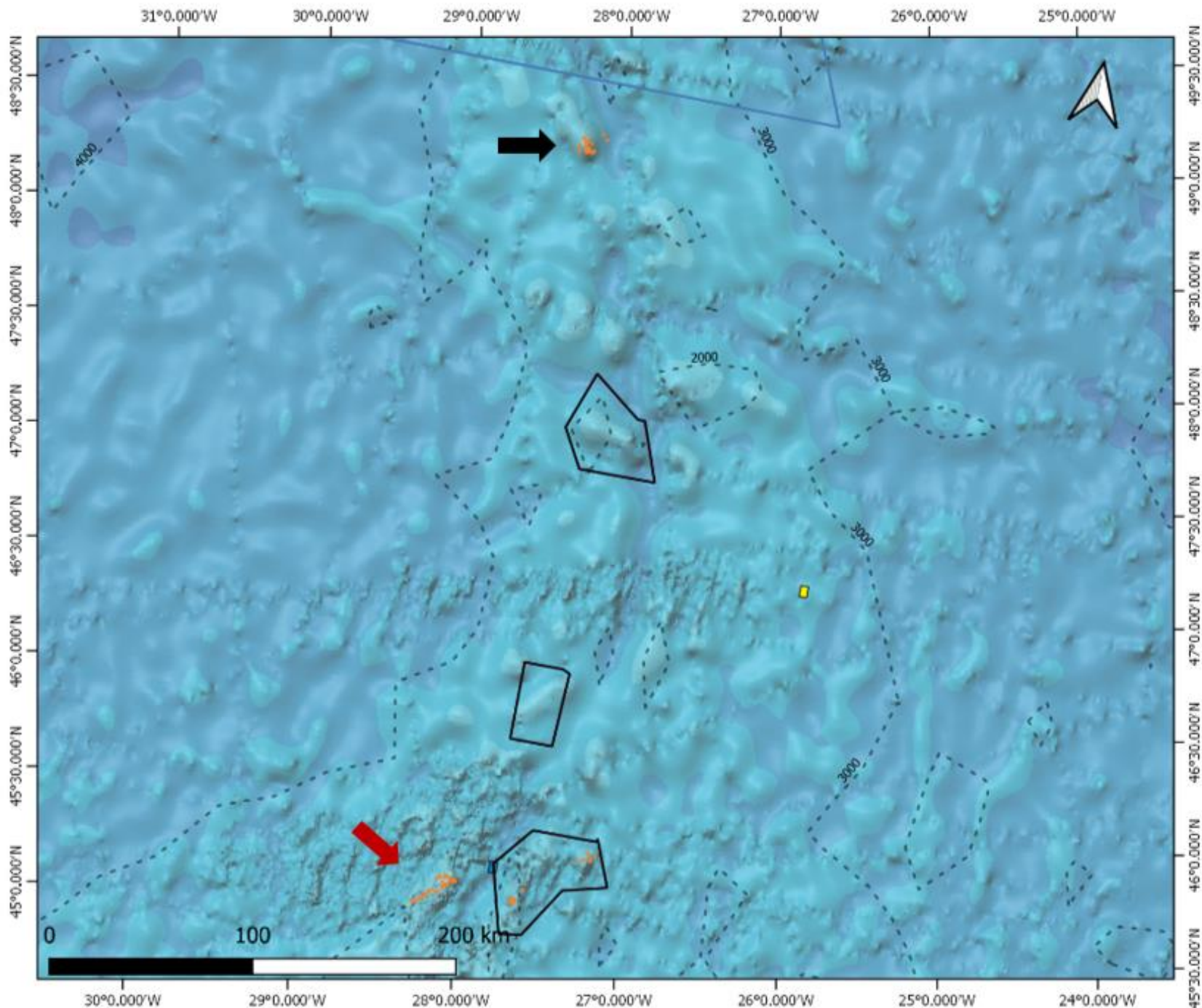
As in previous years the pattern of activity around the Reykjanes Ridge is uncertain

At depth greater than 3000m believed to be vessels targeting mid-water redfish - miscoded

One potential area of actual bottom-fishing is still seen to the southeast of the MAR at depths around 1300–1500 m.

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Mid Atlantic Ridge – VMS/Results

No new VME indicator or habitat records were received

As the previous two years, bottom-trawling activity appears to be taking place on an unnamed seamount to the south of the Mid-Atlantic Ridge closure and outside the existing NEAFC bottom-fishing areas

Bottom trawling takes place inside the existing bottom-fishing area, as well as on a seamount to the west of the Olympus knoll.

Ongoing developments within ICES



- Currently only *bona fide* VME habitat data has been used to support closure recommendations to NEAFC.
- In 2017 WGDEC reviewed how VME indicator data could be used for the detection and representation of VME habitats
- Developed a VME weighting algorithm to calculate vulnerability index for the VME habitats - classification (low, medium, and high).
- only areas of high VME index (e.g. high likelihood of VME presence) and high confidence would be considered further
- More refinement and testing of the method is required before the VME index can be use in assessing the likelihood of VME occurrence.

Deep Sea within the EU EEZ

ICES is working with DGMARE to explore management of fishing activities associated with VMEs in light of the deep sea access regulation.

- list of VME
- existing deep-sea fishing areas “fishing footprint

This includes stakeholder engagement and is based around an iterative approach to developing the knowledge base to decision making and management action.

