ICES Response to NEAFC’s Request for Advice

Presented by:

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1.5.4.1

ECOREGION
SUBJECT

General advice
Standing NEAFC request on vulnerable deep-water habitats in the NEAFC Regulatory Area

Request

Standing NEAFC request on vulnerable deep-water habitats in the NEAFC Regulatory Area

NEAFC requests ICES to continue to provide all available new information on distribution of vulnerable habitats in the NEAFC Convention Area and fisheries activities in and in the vicinity of such habitats.
Advice Summary

• Revised boundaries for the Northwest Rockall, the Southwest Rockall, and the Hatton Bank closures
• A new closed area for Edora’s Bank
• Support for a MPA boundary proposed by OSPAR for the Josephine Seamount area
• Further VME surveys in the area between the recent observations of *Lophelia* in the NW Rockall closure are recommended
Advice Summary
New information on distribution of VMEs on NW Rockall Bank

Figure 1.5.4.1.1  Map showing new evidence on VMEs in the vicinity of the NW Rockall closed area. Green lines show towed video transects from Marine Scotland Science (yellow circles show observations of cold-water coral that indicate VMEs). Grey boxes show Autosub data from Huvenne et al. (2011). ROV transects are shown within these acoustic areas. The green square is depicted on the left.
Figure 1.5.4.1.2  Map showing video transects (coloured line) and observations of VME indicator species along these transects in the south-western corner of the Northwest Rockall closure. The blue area is the current NEAFC closure. The shaded blue area is ICES past advice for boundary modification. Historical Russian trawling paths are shown. The area to the west of the video observations is where new surveys should be focused in order to decide if further boundary modification is warranted.
Southwest Rockall
Empress of Britain Bank
Figure 1.5.4.1.3 Map showing the position of two trawl hauls (with red 1200 m buffer zones) where VME-indicator species were encountered, and the proposed extension (unshaded area) to the currently closed area (shaded grey area).
Hatton Bank
Figure 1.5.4.1.4  Map of the Hatton bank showing the three proposed area extensions (grey areas 1–3) to the current NEAFC closure (pink area). Records of VME indicators are shown.
Edora Bank, SW of Hatton Bank: Updated information on presence of VMEs and recommended closure area.

Legend

WGDEC VME indicators
- Black coral
- Cold-water coral (Lophelia or Madrepora)
- Cup coral
- Gorgonians
- Soft coral
- Sponges

Existing Fisheries Closed Areas
Edora Bank recommended closure

Figure 1.5.4.1.5 Map of Edora Bank, SW of Hatton Bank showing the proposed closure. Records of VME indicator species are shown. The overview map shows the proposed closure together with the existing closed areas.
Josephine Seamount
Figure 1.5.4.1.6  Map of Josephine Seamount showing the proposed MPA border by OSPAR and the distribution of gorgonians. The red square on the overview map shows the proposed MPA.
ECOREGION
SUBJECT

General advice
Review of NEAFC bottom fisheries regulations

Request

Review of NEAFC bottom fisheries regulations

The bottom fisheries regulations\(^1\) implemented in the NEAFC RA are to be reviewed in 2012. In order to facilitate the revision ICES is requested to advice NEAFC on following issues:

a) Impact assessments:

ICES is asked to propose elements to be included in impact assessments, required to satisfy the NEAFC bottom fishing regulations in the NEAFC RA.
ANNEX 5 of the Regulations of Bottom Fishing Activities in the NEAFC Regulatory Area

1. Type(s) of fishing conducted or contemplated, including vessels and gear types, fishing areas, target and potential bycatch species, fishing effort levels and duration of fishing (harvesting plan)

   • Temporally resolved information on the bottom fishing activities
   • Highly resolved spatial information on the bottom fishing activities, including proposed locations of new fisheries

2. Best available scientific and technical information on the current state of fishery resources and baseline information on the ecosystems, habitats and communities in the fishing area, against which future changes are to be compared

Species-level information will allow for determination of biological traits and hence comparison with life history characteristics in the FAO Guidelines
ANNEX 5 of the Regulations of Bottom Fishing Activities in the NEAFC Regulatory Area

3. Identification, description and mapping of VMEs known or likely to occur in the fishing area

- Data on the distribution and abundance of VME species is a pre-requisite for risk assessment analyses

4. Identification, description and evaluation of the occurrence, scale and duration of likely impacts, including cumulative impacts of activities covered by the assessment on VMEs

- Data on the location of fishing effort at high spatial resolution is a pre-requisite for risk assessment analyses
ANNEX 5 of the Regulations of Bottom Fishing Activities in the NEAFC Regulatory Area

5. Data and methods used to identify, describe and assess the impacts of the activity, the identification of gaps in knowledge, and an evaluation of uncertainties in the information presented in the assessment

• Data quality and lack of information on the impacts of bottom fishing can lead to uncertainties that effect the type of risk assessments that can be performed

6. Risk assessment of likely impacts by the fishing operations to determine which impacts on VMEs are likely to be significant adverse impacts
### Table 1.5.4.3.1
Guidance on the usage of risk assessment methodologies based on data availability (ICES, 2012b).

<table>
<thead>
<tr>
<th>Data availability/ quality</th>
<th>Type of assessment</th>
<th>Comment</th>
<th>Reliance on expert judgment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data poor – no detailed distribution information.</td>
<td>Initial screening</td>
<td>Assessments ending at this stage must be accompanied by documentation supporting the decision-making. Where risk is identified, one must move to a higher level of assessment.</td>
<td>High</td>
</tr>
<tr>
<td>Some biological information and some knowledge of interaction available.</td>
<td>Semi-quantitative assessment</td>
<td>Requires information on biologically relevant components of the habitat and fishing effort and how these interact. Effort and habitat maps are highly desirable but not essential. Some evaluation of the overlap between the fishing and the habitat is required or it has no relevance.</td>
<td>Intermediate</td>
</tr>
<tr>
<td>High quality spatially resolved habitat and fishing effort data. Good biological information on life history traits and knowledge of interaction between fishing and habitats available.</td>
<td>Spatially resolved assessment: extended overlap analysis</td>
<td>Habitat and fishing effort maps. The priority of this type of assessment is to evaluate the overlap in the spatial distribution of habitats and fishing effort. This analysis incorporates the traits and sensitivity of the habitat component. This analysis incorporates the traits and sensitivity of the habitat component. This should be quantitative.</td>
<td>Low</td>
</tr>
<tr>
<td>High quality spatially resolved habitat and fishing effort data. Quantitative information on life history traits and quantitative knowledge of the interaction between fishing and habitats available.</td>
<td>Fully quantitative risk assessment</td>
<td>Habitat and fishing effort maps. Fully quantitative information on the biological traits and sensitivity. The priority of this fully quantitative assessment is to accurately evaluate the overlap between the fishing effort and the distribution of the habitats. Fully spatially resolved risk assessment is possible, as the recovery and mortality rate can be fully modelled.</td>
<td>None</td>
</tr>
</tbody>
</table>
Special request, Advice June 2012

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Review of NEAFC bottom fisheries regulations

The bottom fisheries regulations\(^1\) implemented in the NEAFC RA are to be reviewed in 2012. In order to facilitate the revision ICES is requested to advice NEAFC on following issues:

a) Impact assessments:

ICES is asked to propose elements to be included in impact assessments, required to satisfy the NEAFC bottom fishing regulations in the NEAFC RA.

b) Encounter thresholds

ICES is asked to assess the appropriateness of the current quantitative thresholds of VME indicator organisms, i.e. live coral and sponge, adopted in the NEAFC bottom fishing regulations. The assessment should include an evaluation of the likelihood of achieving conservation objectives, i.e. the prevention of significant adverse impacts on VMEs as defined in the FAO guidelines.
Encounter Thresholds

- ICES considers that the current encounter thresholds of 60 kg of live coral and 800 kg of live sponge are too high and advises a reduction of between 30 to 70% for both live corals and sponges.
- This is more likely to achieve conservation objectives.

- Live coral: 18 to 42 kg live coral per tow
- Live sponge: 240 to 560 kg live sponge per tow
Special request, Advice June 2012

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General advice
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c) Move-on-rule:

ICES is asked to assess the appropriateness of the current move-on-rule adopted in the NEAFC bottom fishing regulations. The assessment should take into account the different habitats where bottom fisheries occur, e.g. continental slopes, mid-ocean ridges and seamounts, as well as the variable amount and quality of information on the relevant spatial distribution of VMEs.

d) Alternatives to thresholds and move-on-rules:

ICES is furthermore asked to inform NEAFC on alternative or additional measures to the currently adopted encounter thresholds and move-on-rule, especially technical measures, that may reduce the risk of encounters with VME indicators.

e) Identifying vulnerable marine ecosystems

ICES is further more asked, using the best available scientific information including bio-geographic information, to identify in the NEAFC Regulatory Area:

- Areas where VMEs do not occur;
- Areas where VMEs are not likely to occur;
- Areas where VMEs are likely to occur;
- Areas where VMEs are known to occur;
Move-On Rules

- ICES considers that the current move-on rule while appropriate for existing fishing areas is inappropriate in steep slope and seamount areas and in new NEAFC fishing areas

Alternatives to Move-On Rules

- Technical measures or alternate fishing practices such as bathypelagic fishing vs. bottom fishing
- High tech mapping
- Reverse onus of proof for new fishing areas, steep slopes and seamounts
Identifying Vulnerable Marine Ecosystems

- **Areas where VMEs do not occur**
  - Large tracts of Rockall bank no VME verified by camera surveys
  - Very difficult to prove absence of VMEs without visual surveys

- **Areas where VMEs are unlikely to occur**
  - Habitat suitability modelling approaches can be useful especially if accompanied by uncertainty maps
  - Heavily trawled areas
  - Combination of data sources needed (e.g., trawl by-catch and video)
Identifying Vulnerable Marine Ecosystems

- Areas where VMEs are likely to occur
  - Habitat suitability modelling approaches can be useful especially if accompanied by uncertainty maps

- Areas where VMEs are known to occur
  - *Lophelia pertusa* coral reef habitat on Rockall Bank and Hatton Bank
  - VME indicator species present but is it a VME?
Special request, Advice June 2012

ECOREGION
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General advice
Assessment of the use of the NAFO guide for identification of corals and sponges in the NEAFC area

Request

Assessment of the use of the NAFO guide for identification of corals and sponges in the NEAFC area.

ICES is asked to assess whether the NAFO coral and sponge guides are appropriate for use in the NEAFC area as onboard tools to identify and quantify VME indicator organisms as defined in the NEAFC bottom fishing regulations. Furthermore, ICES is asked to advice on species that should be added to the guide, and species that are superfluous.
Coral Identification Guide

NAFO Area

**Anthoptilum**

**Physical Description:**
- Elongate and whip-like, often "T" shaped; polyps at an angle to the main stem in two rows running its length; one side of the stem relatively bare of polyps; smooth to touch
- Colour: polyps brown to red, stalk brown to red or yellow
- Bulbous root

**Size Information:**
- Up to 100cm

**Habitat and Depth:**
- Soft bottom, 150-2400m

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NAFO Sponge Identification Guide

**Stelletta spp.**

**Physical Description**
- More or less spherical, sometimes depressed
- Surface rough due to encrusting sponges; often surface is completely covered
- Similar to Geodia spp., but is more rough and much less common. When cut in cross-section, outer skin appears darker than the inner sponge

**Size Information**
- Up to 26cm in diameter

**Colour**
- Brown, reddish and purplish on the exterior; white, pinkish and light yellow on the inside

**Habitat Information**
- Gravel, rock outcrops, etc.
Use of NAFO Coral Guide

- Format useful
- Different species composition
- 33 taxa suggested for inclusion in a similar guide for Rockall/Hatton
- 13 of these in NAFO guide
- 52 taxa recorded in the Northeast Atlantic banks
- 38 not recorded in the NAFO Guide

Use of NAFO Sponge Guide

- Separate guide needed despite large species overlap
- Aimed at the northern section of the NEAFC area
- Focus on large dominating species
Additional information can be found online at [www.ices.dk](http://www.ices.dk)

Expert Group Reports: WGECO, WGDEC, WGDEEP, WGFHTFB