

New information regarding the impact of fisheries on other components of the ecosystem

Advice summary

In 2018, ICES has received more than 248 new records of VME indicator and/or VME habitat data in EU waters. These are on Rockall Bank, George Bligh Bank, Anton Dohrn Seamount, Rosemary Bank, the UK/Irish Continental Shelf slopes, Darwin Mounds, Faroe-Shetland Channel, the Explorer Canyon, and Ormonde Seamount. ICES notes that VME habitats are not currently being protected from bottom fishing in parts of the Rockall Bank, Anton Dohrn Seamount, George Bligh Bank, the Faroe-Shetland Channel, and in the area of the Explorer Canyon (also known as the Whittard Canyon Complex).

Request

As part of the MoU with the European Commission, ICES is requested to: Provide any new information regarding the impact of fisheries on other components of the ecosystem including small cetaceans and other marine mammals, seabirds and habitats. This should include any new information on the location of habitats sensitive to particular fishing activities.

Elaboration on the advice

New information on the location of habitats sensitive to particular fishing activities

ICES has received 248 new VME records, 154 of which were VME indicator records and 94 VME habitat records within EU waters. These records were from Rockall Bank, George Bligh Bank, Anton Dohrn Seamount, Rosemary Bank, the UK/Irish Continental Shelf slopes, Darwin Mounds, Faroe-Shetland Channel, Explorer Canyon, and Ormonde Seamount. These habitats will be particularly sensitive to mobile bottom-contacting gear.

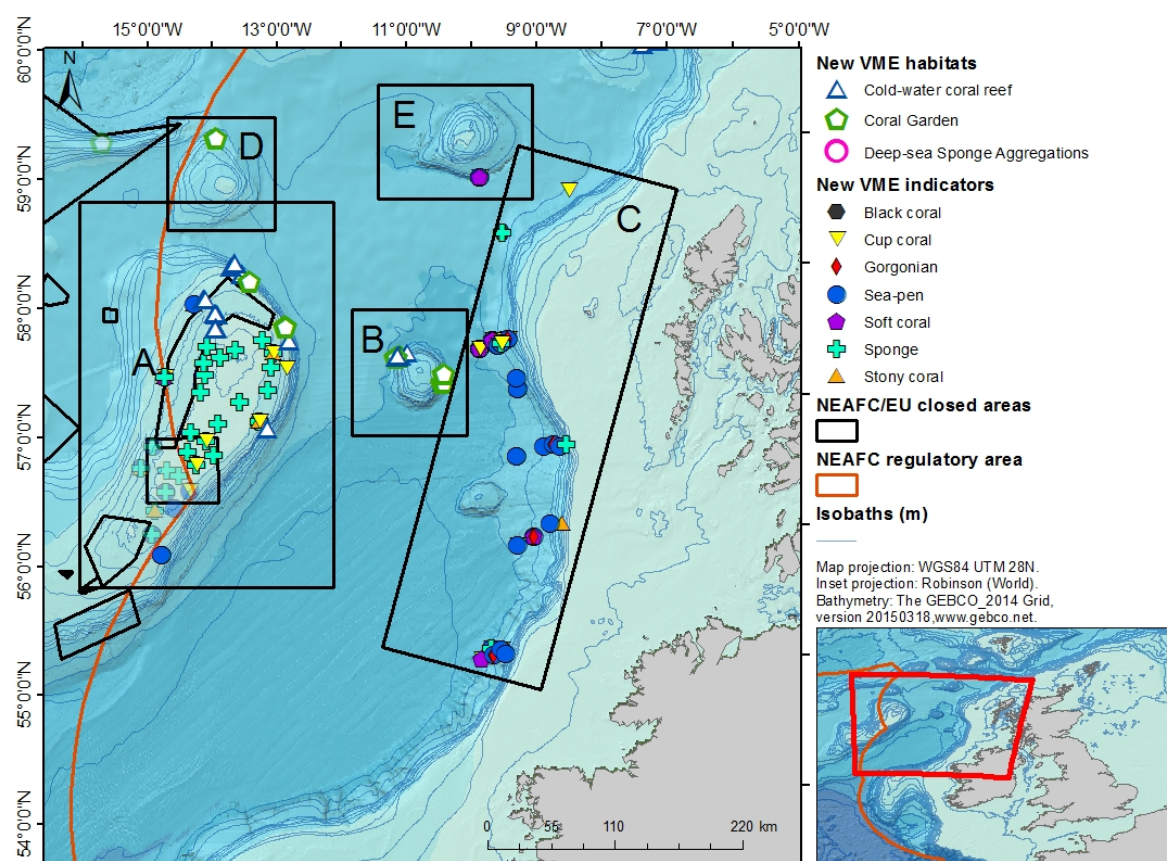


Figure 1 New VME habitat and VME indicator records for areas within EU waters bordering the Northeast Atlantic. The rectangles indicate the areas covered by more detailed maps; A = Rockall Bank, B = Anton Dohrn Seamount and C = UK/Irish Continental Shelf (Figure 3), D = George Bligh Bank and E = Rosemary Bank (Figure 4). Records shown in transparent are not within EU waters.

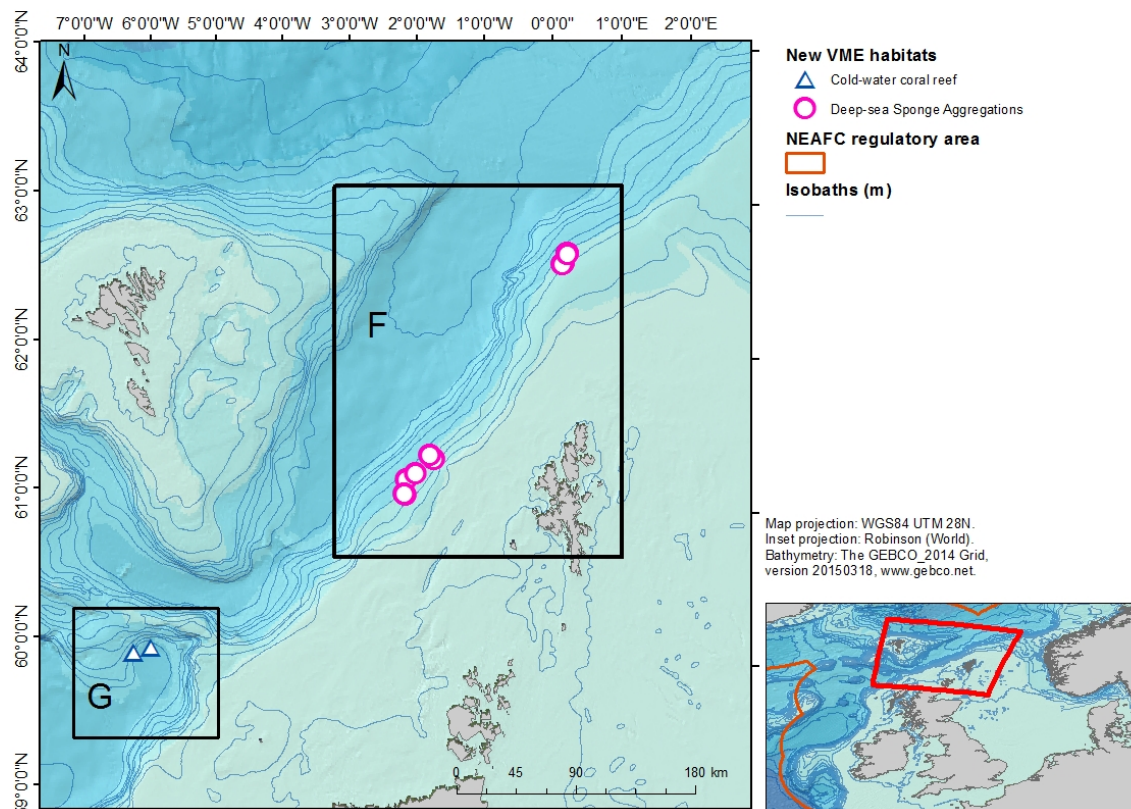


Figure 2 New VME habitat records for areas within EU waters bordering the Northeast Atlantic. The rectangles indicate each of the areas covered by more detailed maps; F = Faroe Shetland Channel and G = Darwin Mounds.

Rockall Bank

A total of 53 new VME indicator records and 36 VME habitat records have been added for Rockall Bank within EU waters (rectangle A, Figure 3). All of the new VME habitat records are located within two Special Areas of Conservation (SACs) (purple dotted lines in Figure 3). One of these SACs (NW Rockall Bank) is closed to bottom trawling fisheries under NEAFC Recommendation 19 2014: Protection of VMEs in NEAFC Regulatory Areas, as amended by Recommendation 09:2015, Recommendation 10:2018 and EC Regulation No 40/2008, although part of this site is not covered by these measures. Draft fisheries management measures for the second SAC (East Rockall Bank) have been proposed among relevant EU Member States by the UK.

Anton Dohrn Seamount

A total of 23 new VME habitat records were added for Anton Dohrn Seamount (rectangle B, Figure 3). All of these new records are located within a UK SAC (purple dotted lines in Figure 3). Draft fisheries management measures for this SAC have been proposed among relevant EU Member States by the UK. In 2011, ICES advised the EU that VME indicators are present on the seamount, and recommended an area that should be closed to all bottom-contacting fishing gears to protect these VMEs.

UK/Irish continental shelf

A total of 92 new VME indicator records have been added (rectangle C, Figure 3). Some of these records occur within two UK marine protected areas (purple dotted lines in Figure 3), where draft fisheries management measures have been proposed to relevant EU Member States by the UK. The remainder of the VME indicator records are located outside any current or proposed protection measures.

Figure 4 shows the VME index (based on all records for the area) and Figure 5 its associated confidence for the Rockall Bank (A), Anton Dohrn Seamount (B), and the UK/Irish Continental Shelf (C).

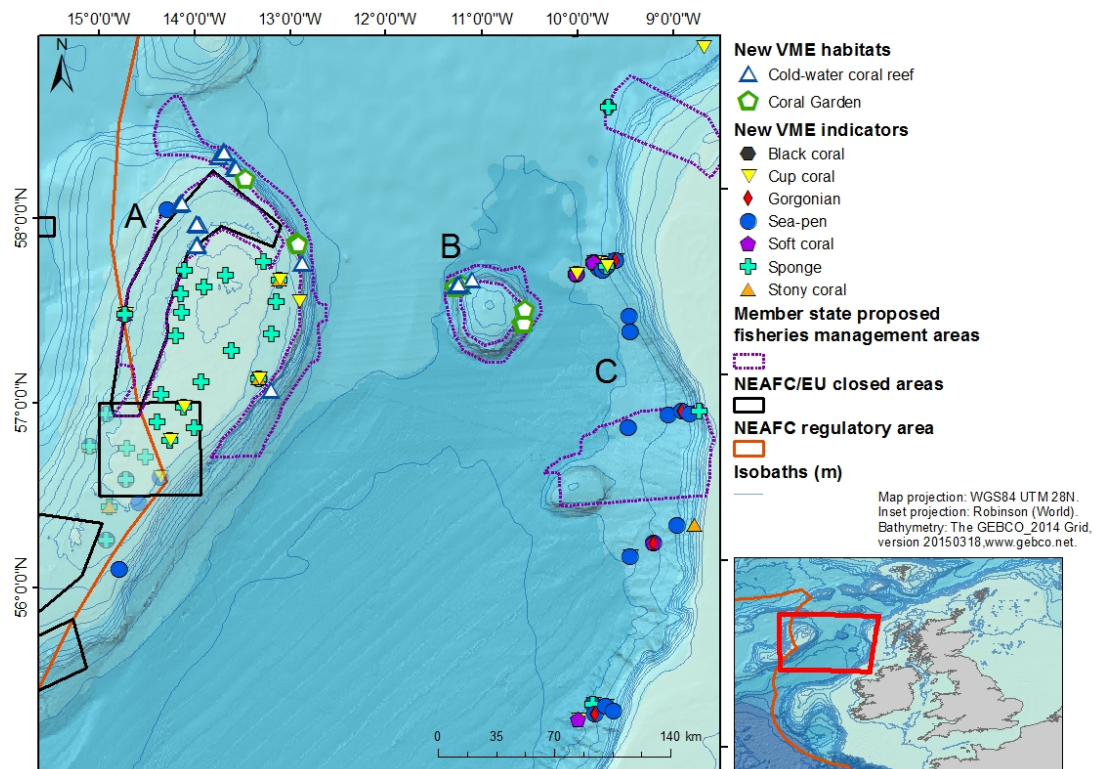
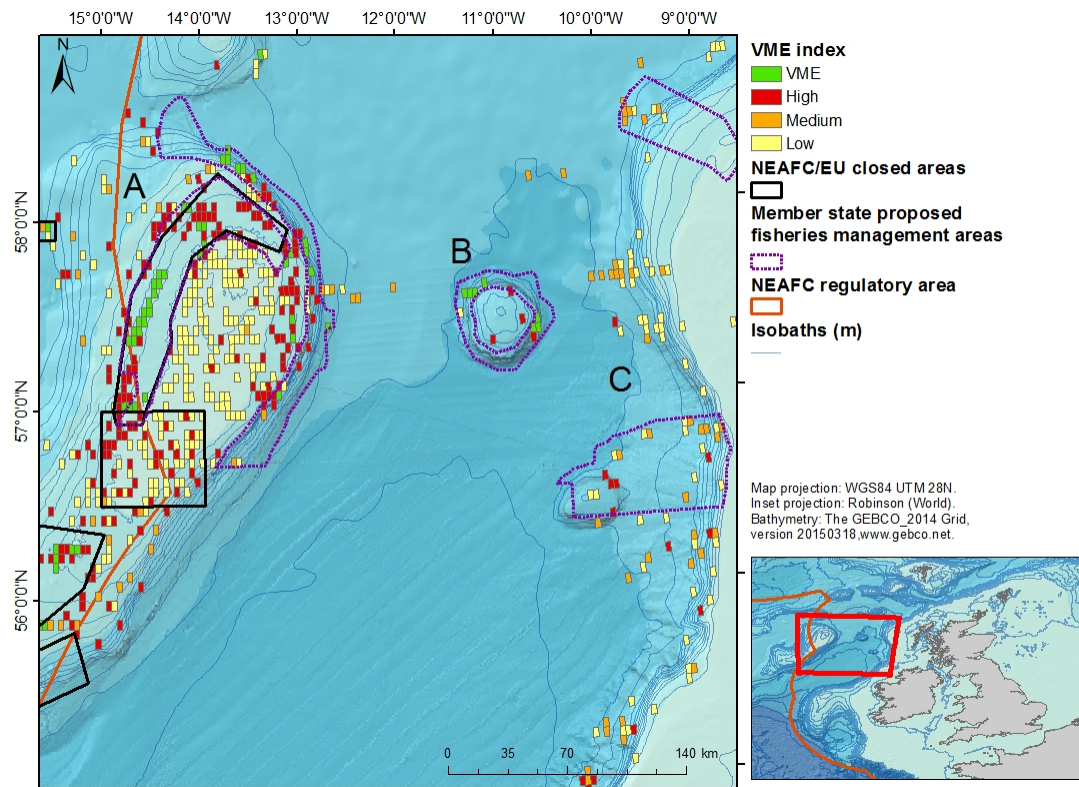
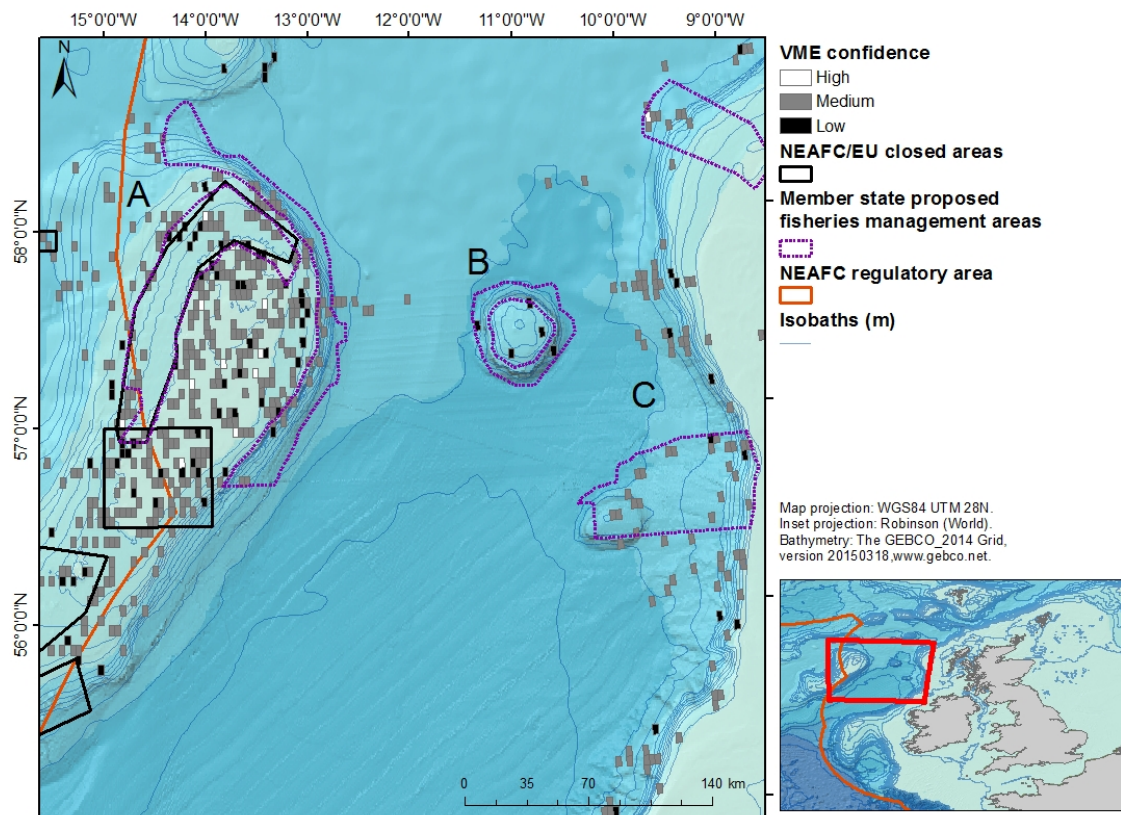


Figure 3 New VME indicator and habitat records for the Rockall Bank (A), Anton Dohrn Seamount (B), and the UK/Irish Continental Shelf (C). Records outside EU waters are displayed as transparent.

**Figure 4**

VME index for Rockall Bank (A), Anton Dohrn Seamount (B) and the UK/Irish continental shelf (C) showing presence of actual VME (green cells) and the likelihood of encountering a VME within each grid cell (ranging from low to high).

**Figure 5**

VME index confidence for Rockall Bank (A), Anton Dohrn Seamount (B) and the UK/Irish Continental Shelf (C) (ranging from low to high).

George Bligh Bank

Two new VME habitat records were added for George Bligh Bank (D, Figure 6). These are located outside any current protection measures.

Rosemary Bank

A total of nine new VME indicator records were added for Rosemary Bank Seamount (E, Figure 6). All of these new records are located within a UK marine protected area (purple dotted lines in Figure 6). Draft fisheries management measures for this MPA have been proposed among relevant EU Member States by the UK.

Figure 7 shows the VME index (based on all records for the area) and Figure 8 its associated confidence for George Bligh Bank (D) and Rosemary Bank Seamount (E).

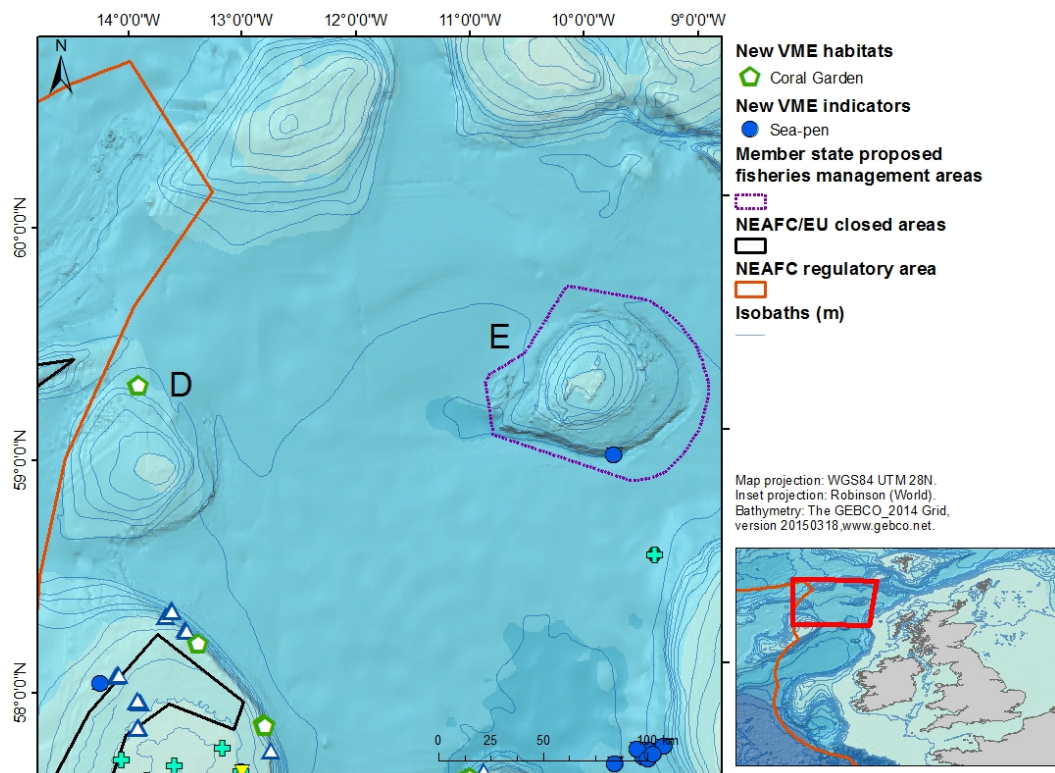


Figure 6 New VME indicator and habitat records for George Bligh Bank (D) and Rosemary Bank Seamount (E).

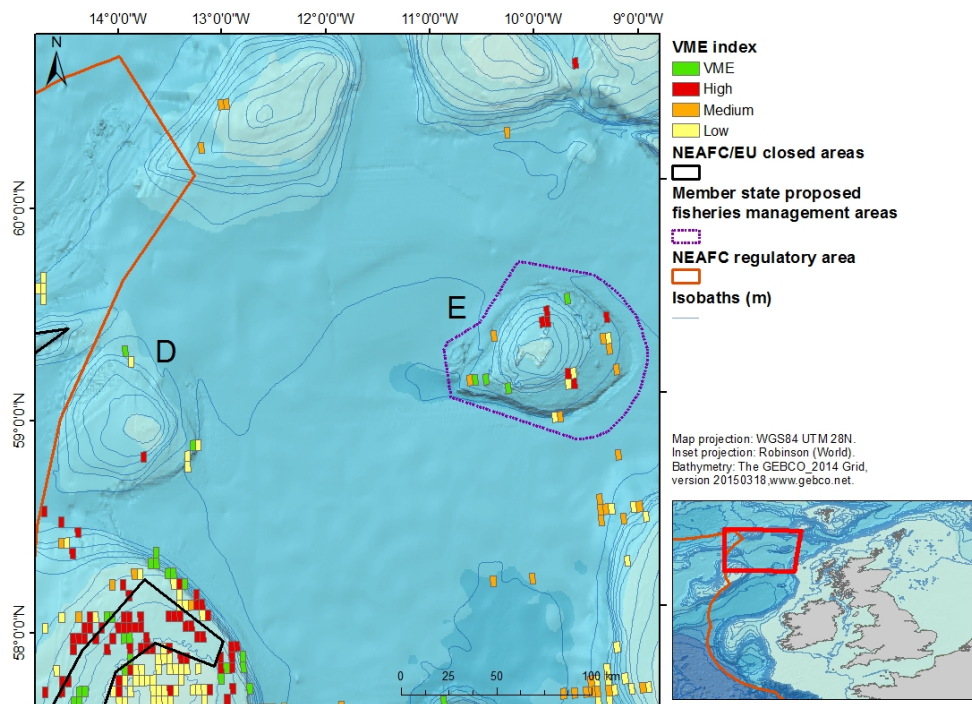


Figure 7 VME index for George Bligh Bank (D) and Rosemary Bank Seamount (E) showing presence of actual VME (green cells) and the likelihood of encountering a VME within each grid cell (ranging from low to high).

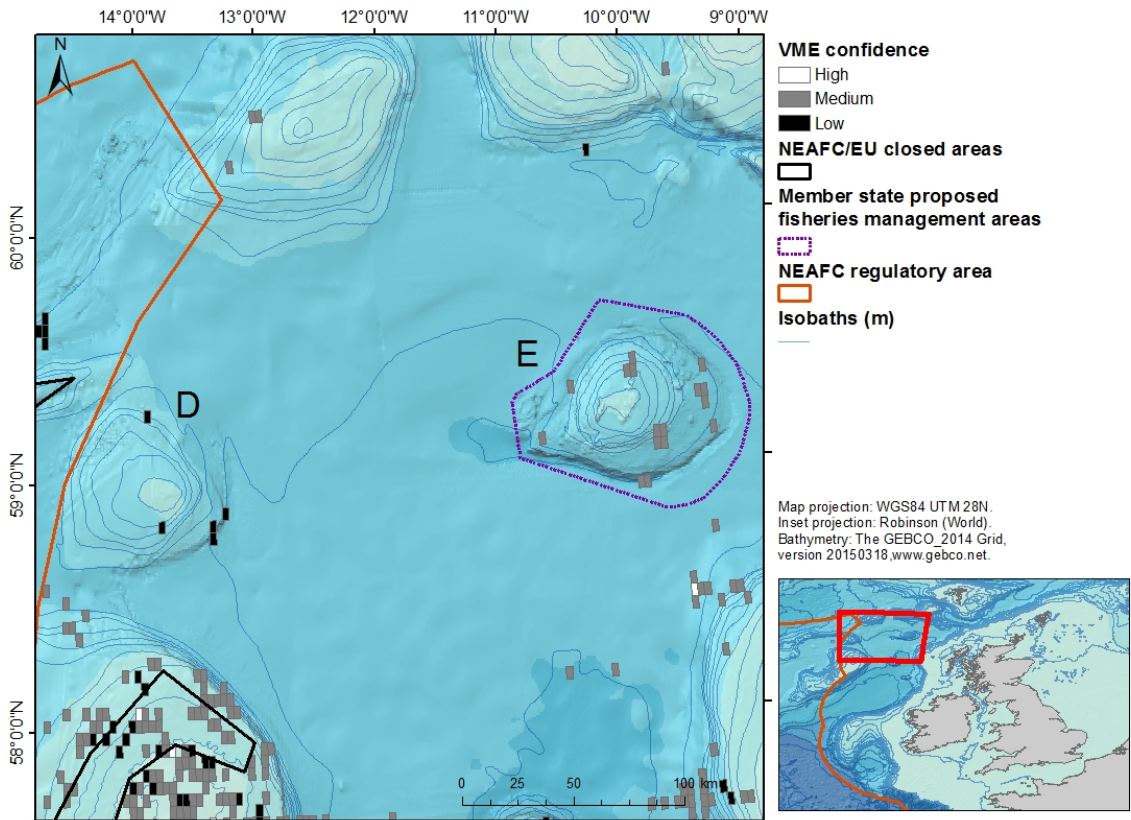


Figure 8 VME index confidence for George Bligh Bank (D) and Rosemary Bank Seamount (E) (ranging from low to high).

Faroe-Shetland Channel

A total of 24 new VME habitat records were added for the Faroe-Shetland Channel (rectangle F, Figure 9). All of these new records are located within two UK marine protected areas for which draft fisheries management measures have been proposed to relevant EU Member States by the UK.

Darwin Mounds

Three new VME habitat records were added for the Darwin Mounds (G, Figure 9). All of these new records are located within a UK SAC. Fisheries operating within the site are subject to regulation under the EU Common Fisheries Policy. Under Council Regulation (EC) No. 602/2004, the use of bottom-trawl or similar towed nets has been prohibited for use within Darwin Mounds SAC since 2004.

Figure 10 shows the VME index (based on all records for the area) and Figure 11 its associated confidence for the Faroe-Shetland Channel (F) and Darwin Mounds (G).

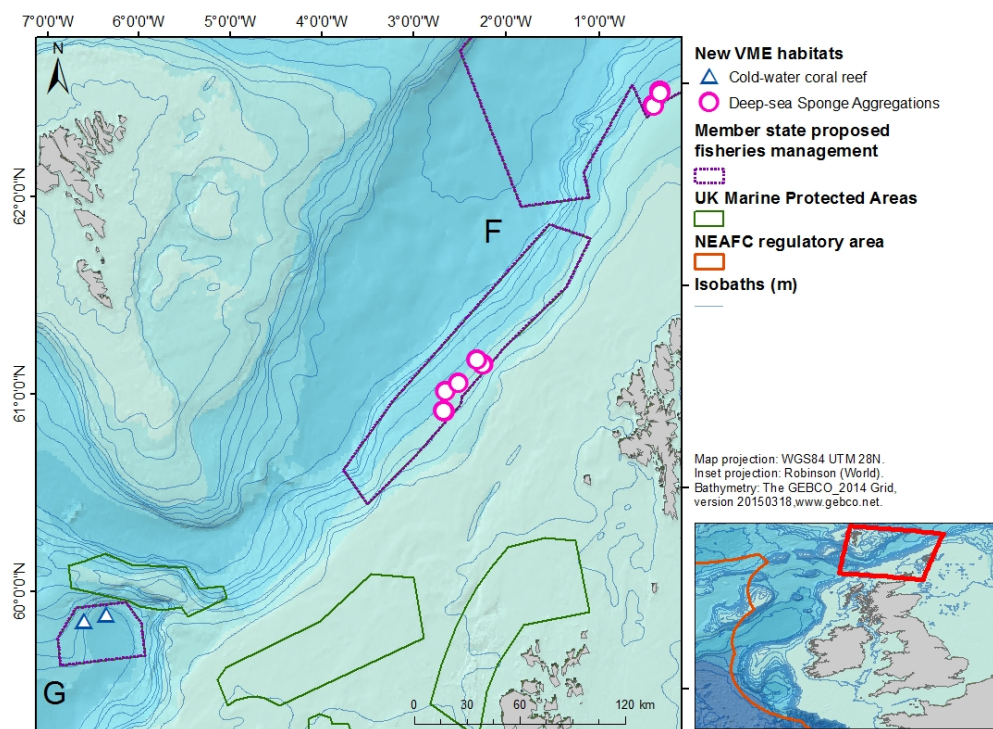


Figure 9 New VME habitat records for the Faroe-Shetland Channel (F) and Darwin Mounds (G).

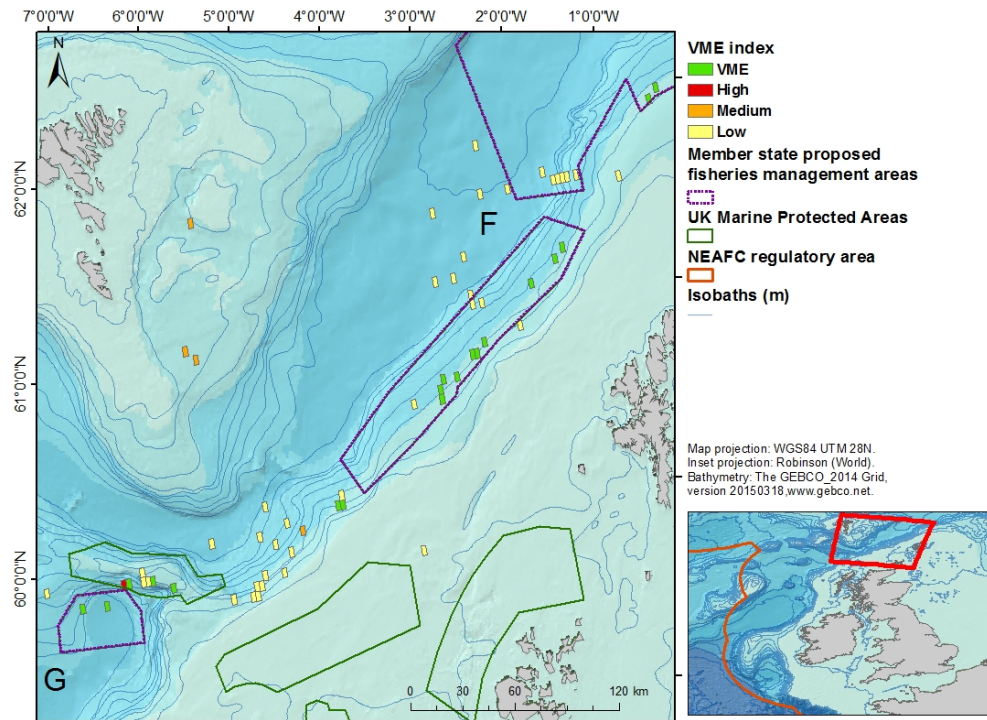


Figure 10 VME index for the Faroe-Shetland Channel (F) and Darwin Mounds (G) showing presence of actual VME (green cells) and the likelihood of encountering a VME within each grid cell (ranging from low to high).

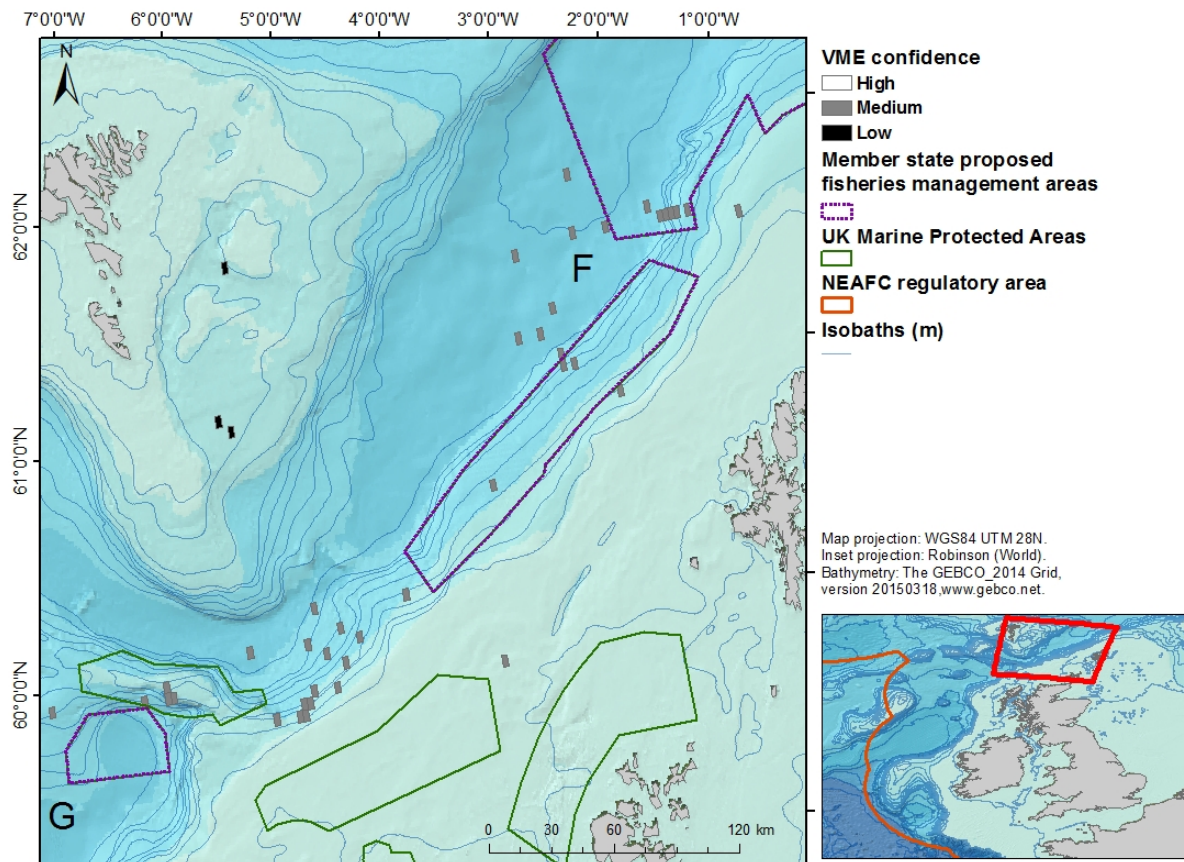


Figure 11 VME index confidence for the Faroe-Shetland Channel (F) and Darwin Mounds (G) (ranging from low to high).

Explorer Canyon

One new VME habitat record was added (Figure 12). This new record is located within a UK marine protected area for which draft fisheries management measures have been proposed to relevant EU Member States by the UK.

Figure 13 shows the VME index (based on all records for the area – also known as the Whittard Canyon complex) and Figure 14 its associated confidence for the Explorer Canyon.

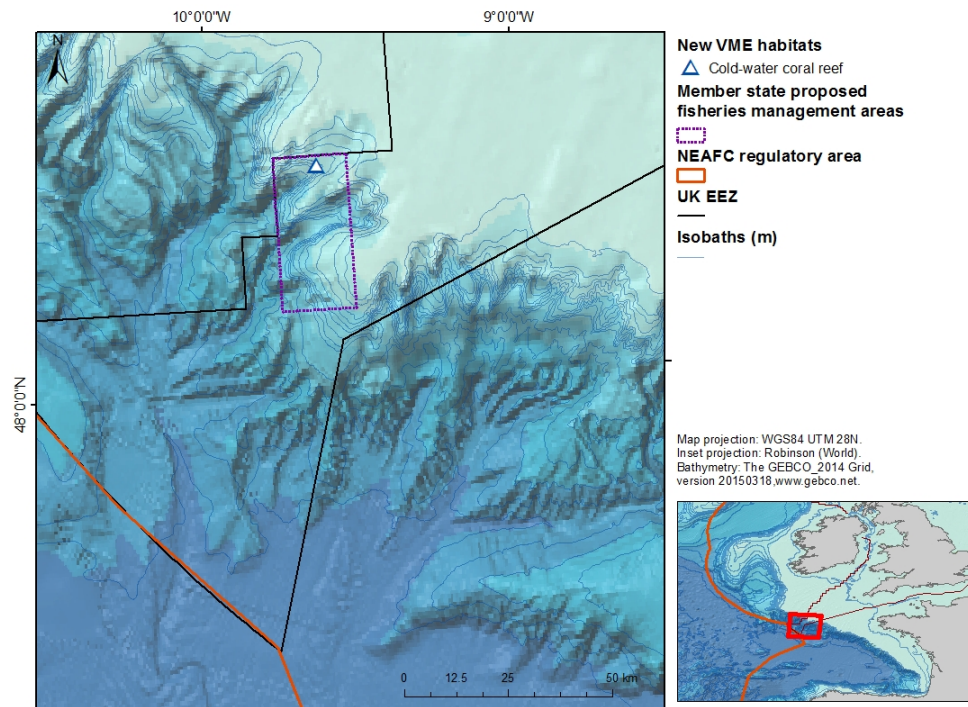


Figure 12 New VME habitat record for the Explorer Canyon.

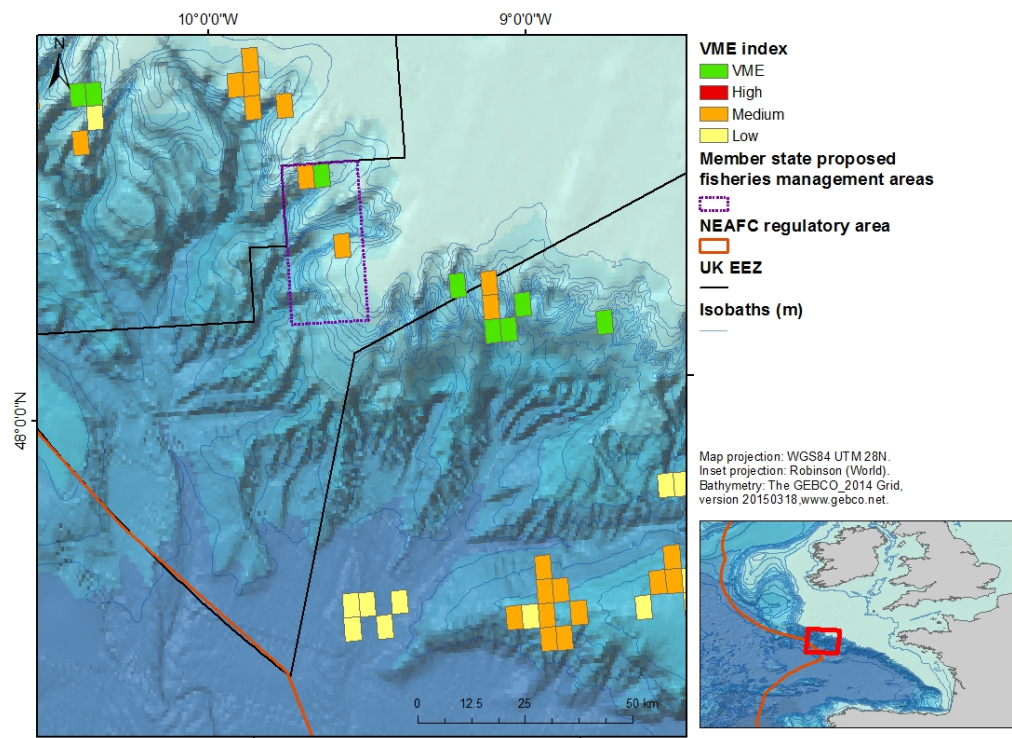


Figure 13 VME index for the Explorer Canyon and surrounding area (the Whittard Canyon complex) showing presence of actual VME (green cells) and the likelihood of encountering a VME within each grid cell (ranging from low to high).

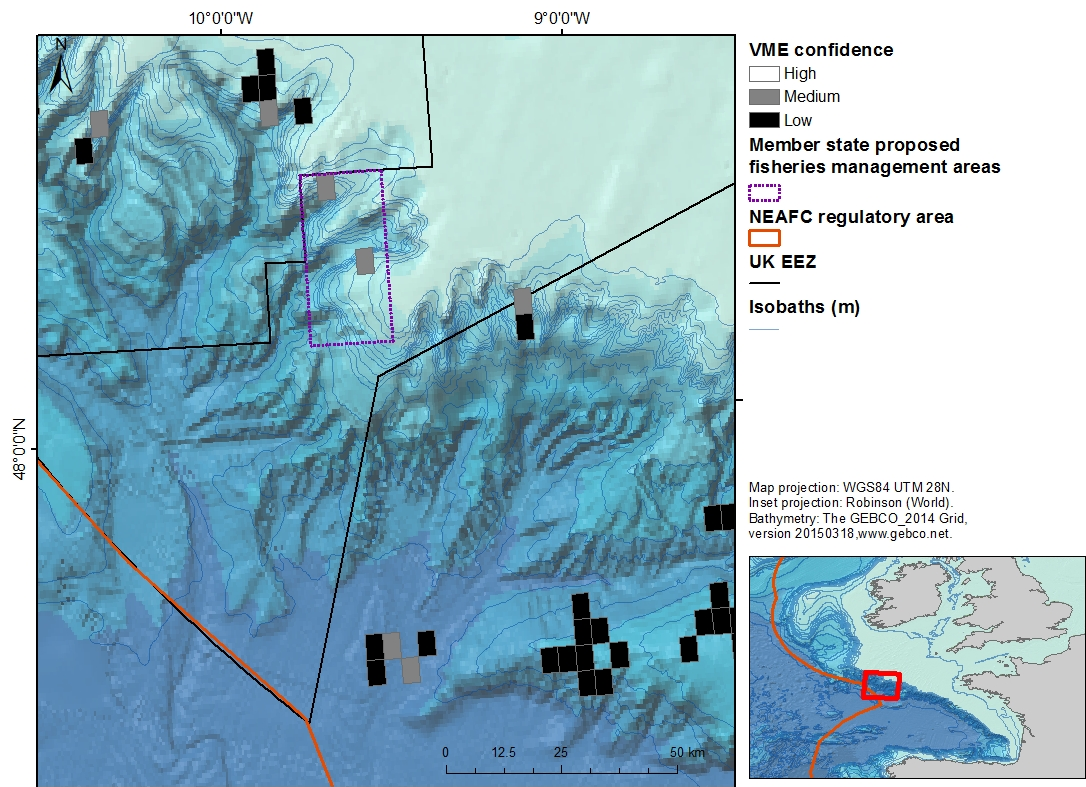


Figure 14 VME index confidence for the Explorer Canyon and surrounding area (the Whittard Canyon complex) (ranging from low to high).

Ormonde Seamount

Six new VME habitat records were added for the Ormonde Seamount on the Gorringer Ridge (Figure 15). These records are within a Portuguese Site of Community Importance (SCI). Portugal has banned all fishing activities using bottom mobile gears from the site. Draft management measures for this SCI are in preparation by Portugal.

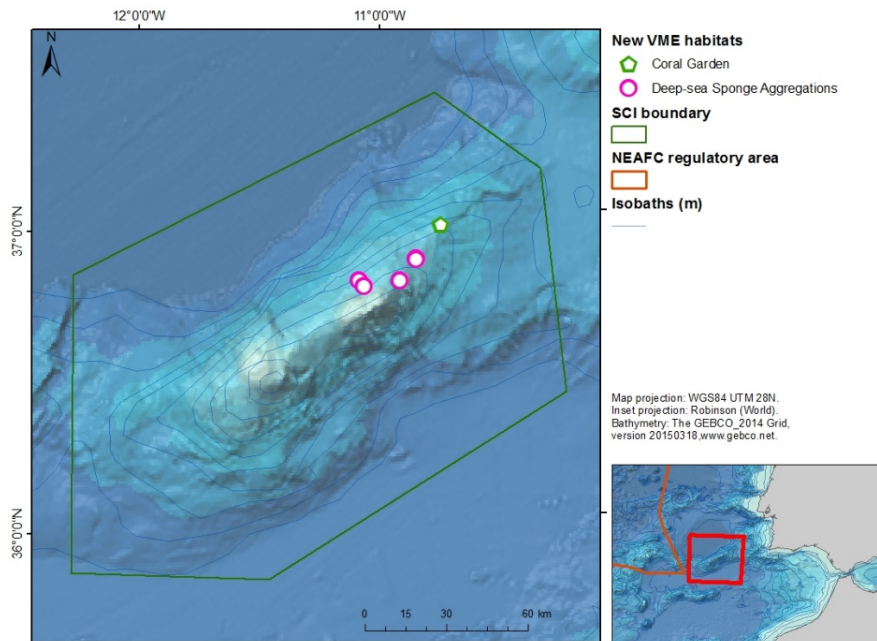


Figure 15 New VME habitat records for Ormonde Seamount on the Gorringer Ridge.

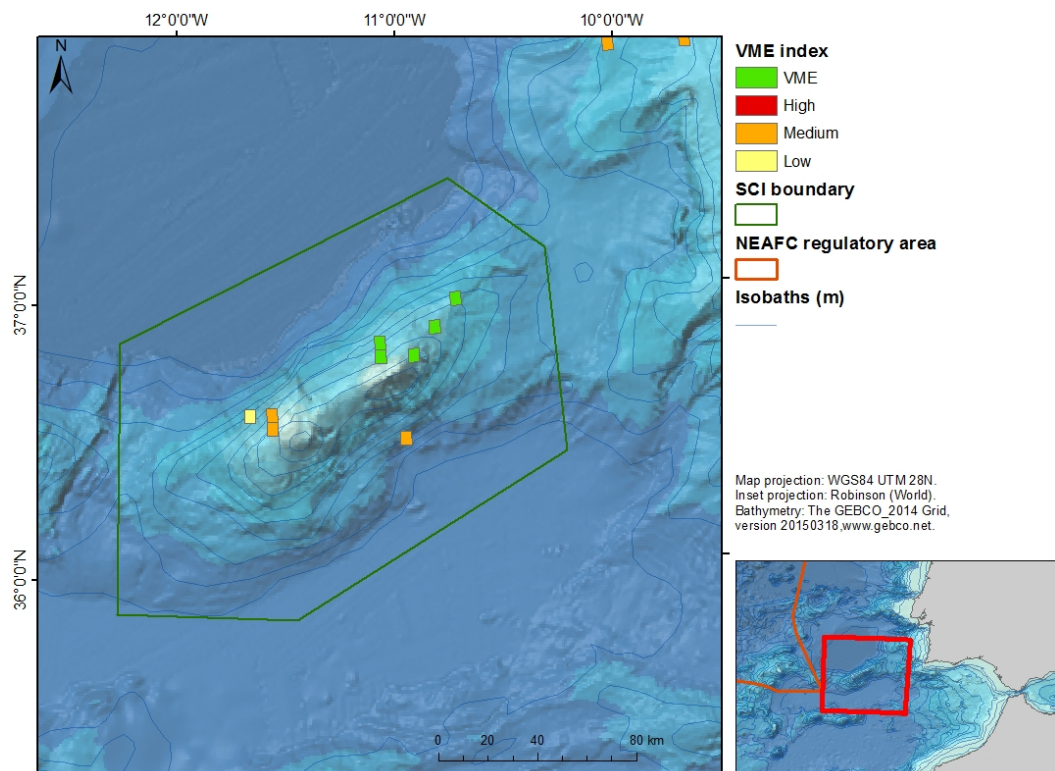


Figure 16 VME index for the Gorringer Ridge (Ormonde and Gettysburg Seamounts) showing presence of actual VME (green cells) and the likelihood of encountering a VME within each grid cell (ranging from low to high).

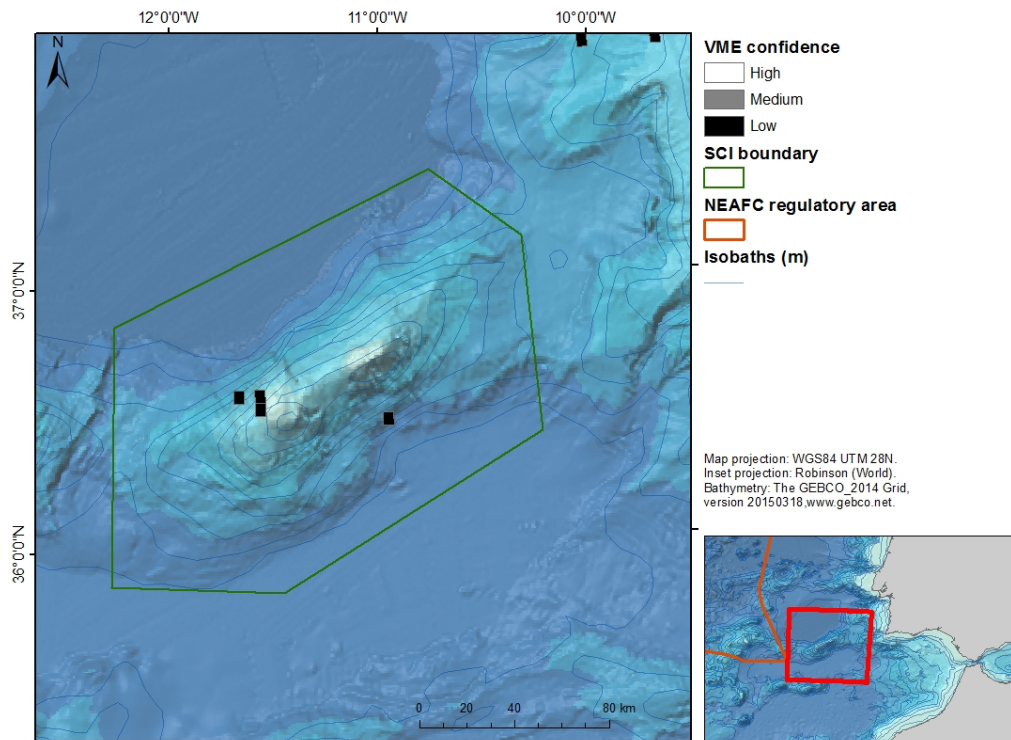


Figure 17 VME index confidence for Gorringer Ridge (Ormonde and Gettysburg Seamounts) (ranging from low to high).

Basis of the advice

Methods

ICES has applied its standard VME weighting algorithm to VME information held within the ICES VME database for Rockall Bank, George Bligh Bank, Anton Dohrn Seamount, Rosemary Bank, the UK/Irish Continental Shelf slopes, Darwin Mounds, Faroe-Shetland Channel, Explorer Canyon, and Ormonde Seamount. This database consists of two main types of records: (1) confirmed VMEs that are based on, e.g. high quality underwater imagery; and (2) VME indicator records with varying degrees of confidence, e.g. trawl bycatch records or low-quality underwater imagery. These two types of record are treated separately. The VME weighting system assigns each VME indicator a score of between 1 and 5, based on expert judgement for each of the five FAO criteria for what classifies a habitat as a VME, and also examines whether record abundances are above or below NEAFC weight thresholds. The final VME weighting output shows the likelihood of encountering a VME for each 5' × 5' grid cell. Those grid cells that contain *bona fide* records of VME habitat are shaded green, and are excluded from the VME weighting algorithm. The VME index for the areas detailed above are shown in Figures 4, 7, 10, 13, and 16. Associated with the VME index layer is a confidence layer, which includes a consideration of the survey method, number of surveys, and age of the data. Cells range from low confidence (black) to high (white). The VME confidence layer for the areas detailed above are shown in Figures 5, 8, 11, 14, and 17.

Sources and references

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