

FAO Workshop on the Global Database for Vulnerable Marine Ecosystems FAO, Rome, Italy – 7-9 May 2014

Session 2: Detailed review of the database

(Overview and Maps)

Session 1: Introduction to global database for vulnerable marine

- Demonstrated the VME Database
- Placed it within the context of a VME portal and the FAO Deep Sea program
- And received independent reviews of the VME DB

Session 2: Detailed review of the database

To discuss issues raised by “users” on the VME DB and to agree on solutions. Remember there is:

- Output - Users – many and varied
 - Inputer – Regional bodies, FAO
- Regional content, regional body commitments, and handover will be discussed in session 3 (day 2 afternoon)
 - Key points and agreed actions from sessions 2 and 3 will be discussed in session 4 (day 3 morning)

Plan of Work for Session 2

To proceed through the VME DB in logical order:

- “Home” (first) page – General, map, pan and zoom, layer buttons, legend, search. Pop-ups (Day 1 14:00-15:00)
- “Factsheets” (second) page – General, description, map, (Day 2 09:15-10:30) management, regional overview, meeting reports, media (Day 2 11:00-12:30)
- Other aspects – errors, help menu, surveys, encounters (Day 2 19:00-23:00)
- Summary/conclusions (Day 2 09:00-09:15 and Day 3 09:00-10:30)

Plan of Work for Session 2

Comments have come from:

- FAO during development
- Regional bodies via data input work
- During working groups when VME DB has been presented
- From DGroups
- From the questionnaire distributed on 15 April
- During this meeting

Plan of Work for Session 2

- Some of the issues presented can likely be dealt with quickly, whereas others may need more discussion.
- Sometimes solutions will be suggested.
- The document you have on session 2 is designed to guide you and to allow you to make notes on it. If helpful, you could had a copy into FAO at the end of the meeting.

VME

During the presentations, I am going to use the term “VME” to describe any benthic area that has, may have, or likely to contain a VME (as per FAO DSF Guidelines criteria). Please don't correct me all the time for this!!

BUT, for the text on the actual database, we need to be more careful to follow the RB requirements/terminology.

VME “definition”

There isn't one! The DSF Guidelines gives criteria. It is up to RBs to see what fits best in their region and with their fisheries.

Remember, VME is basically a measure not a habitat type (though only certain marine ecosystems can be VMEs under UNGA Res 61/105)

Comments after next slide

VMES: Measures vs no measures

What do we want to display for “VMES”?

- Only those declared as VMES in the measure?
- Include all areas with measures to protect known or likely VMES (often called by other names or simply “closed areas”)?
- Include areas protected under other measures eg many CCAMLR registered VMES?
- Include VMES under consideration eg NAFO VMES 13 and 14 (2013 FC report)?
- Include areas where VMES may exist eg CCAMLR Fine-scale rectangles?
- Include areas recommended by SC but not afforded protection by FC?

Ontology for “VME” Areas and Fishing Areas

There are many different labels given to “VME” Areas and Fishing Areas.

I think it will be difficult to group them into anything meaning full. Should we avoid doing this?

Thoughts???

[Labels are discussed later]

VME DB: Only ABNJ (and EEZ??)

Why only ABNJ?

- Its what UNGA Res 61/105 (para 83) applies to.
- The FAO DSF Guidelines are for ABNJ (but they invite States to apply them in EEZ waters)
- It's a good starting point

What's the difference between ABNJ, High Seas and Deep-seas?

VME DB : Home page – map, etc

vulnerable marine ecosystems
DATABASE

Global inventory of fisheries measures adopted in ABNJ to prevent significant adverse impacts of high-seas bottom fisheries on vulnerable marine ecosystems (VMEs) and associated information

Login

Advanced Search | Legend | Embed | ...

Area types

Footprints

Reset

Change projection

- Mercator
- South Polar
- WGS84
- Mollweide

100 -40 93.007 18.20

Pacific Ocean

Atlantic Ocean

Indian Ocean

2014

FAO

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For this agenda item we will discuss the home map page

Overall impression

Comments generally positive but noted (1) redundant areas, (2) buttons too spread out, (3) Some things need more emphasis

Brief comments?

vulnerable marine ecosystems
DATABASE

Global inventory of fisheries measures adopted in ABNJ to prevent significant adverse impacts of high-seas bottom fisheries on vulnerable marine ecosystems (VMEs) and associated information

Login

Advanced Search | Legend | Embed

By Management Body/Authority(ies):
Select...

By Area Type:
Select...

By VME Criteria:
Select...

By Year:
Select...

Clear Search

VME Area

New England Seamounts

Management Body/Authority: Northwest Atlantic Fisheries Organization
Measure first applied in: 2007
Area Type: VME

Change projection

196 -123.71, 41.7684

< 2014

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BETA 1.0



Database name

UNGA Res. 61/105 Para. 90. “... global database of information on vulnerable marine ecosystems in areas beyond national jurisdiction to assist States in assessing any impacts of bottom fisheries on vulnerable marine ecosystems, ...”

CHOICES for names

- Global database of information on Vulnerable Marine Ecosystems
- Global database for Vulnerable Marine Ecosystems
- Vulnerable Marine Ecosystem Database (abbreviated to VME database, VME DB)





Description text in header

Global inventory of fisheries measures adopted in Areas Beyond National Jurisdiction (ABNJ) to prevent significant adverse impacts of bottom fisheries on vulnerable marine ecosystems (VMEs)

Suggestion to shorten text, comments??
(white is current; blue additions)

Legend

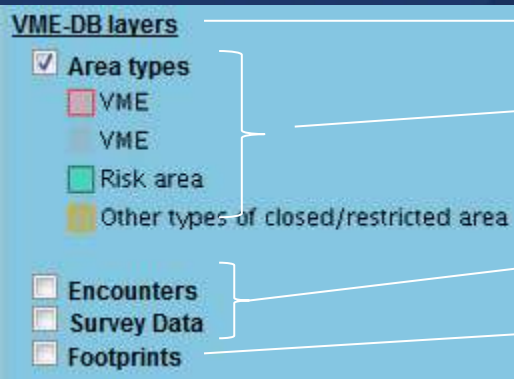


Legend | E

Change to "Layers" OK?



Duplication noted in left-hand toggle.
Do we need it?

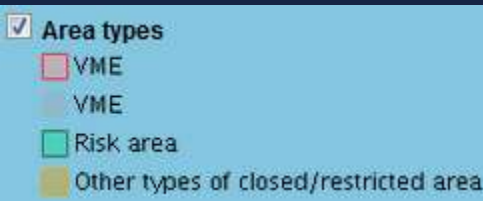


Change VME-DB layers to Areas?
Benthic habitats (see next slide)
Remove? (also discussed later)
Bottom fishing (see over-next slide)



OK but add:
Regional Bodies (Convention areas, management areas) OK?

Legend: “VME” areas



The database is to “assist States in assessing any impacts of bottom fisheries on vulnerable marine ecosystems” (UNGA 61/105). This is broad, and so it is reasonable to include all “potential or recognised VMEs”. But these should be connected with the protection of VMEs from SAI by bottom fisheries.

Classification of benthic habitats by RBs

CCAMLR	VME Risk area Fine-scale rectangle Shallow water management (<550m, toothfish)
GFCM	Fisheries Restricted areas (FRA) Deepwater Fisheries Management (> 1000m)
NEAFC	VME
NAFO	Coral closure Area of higher sponge and coral concentration Seamount (and Knoll) Areas under consideration
SEAFO	Vulnerable Deep Water Habitats and Ecosystems - Closed areas - Open areas

Solution:

In Legend

– have a single label “Benthic areas”

On pop-up

– have RB name e.g. Risk area

Discuss?



Legend: “Bottom fishing” areas



The existing and new fishing area designations are part of the measures to protect VMEs. **So they should both be included on the map?**

Footprints

“Footprint” seems a poor term to use. Its definition varies. Use “Bottom fisheries”

Classification of fishing areas by RBs

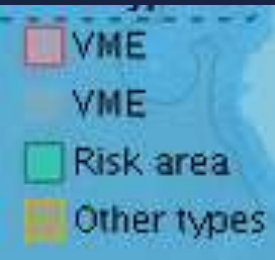
CCAMLR	New fisheries Exploratory fisheries Established fisheries (by fishery) Closed to fishing
GFCM	Not provided
NEAFC	Existing bottom fishing areas New bottom fishing areas Exploratory fisheries
NAFO	Existing bottom fishing areas Unfished bottom fishing areas Exploratory fisheries
SEAFO	Existing bottom fishing areas New bottom fishing areas Exploratory fisheries

Solution:

- A general thought was that only existing bottom fishing areas (established fisheries) need be included.
- **What about “exploratory” fisheries?**
- There was a request to **also include new fishing areas** as they were subject to an exploratory fishing protocol (c.f. areas that have no measures at all).

Legend/Map: Area colours

There are currently different colours for “VMEs”. I would propose we only use red for “VMEs”, and green for fishing areas, but we could have different fill patterns.



What do we do with e.g.:
GFCM deepwater and CCAMLR shallow water?
CCAMLR Risk areas?
NAFO closed areas?





Search function : simple

Simple search e.g. sea pens



Returns 19 NAFO Areas (as “sea pens” is in general measures for 2014)

Defaults to current year

Searches all fields



Search function : advanced

sea pens

Advanced Search | Legend | EmbedLink X

By Management Body/Authority(ies):
NAFO

By Area Type:
|

By VME Criteria:
Select...

By Year:
2008

Clear Search

Advanced search

- Key words qualified by further filters.
- Returns 6 NAFO Areas (as “sea pens” was discussed by SC in 2008).

[note: Area type could be the RB collective names for their areas, e.g., VME, Risk area, Fisheries Restricted Area, etc. This could also be used on the pop-up]

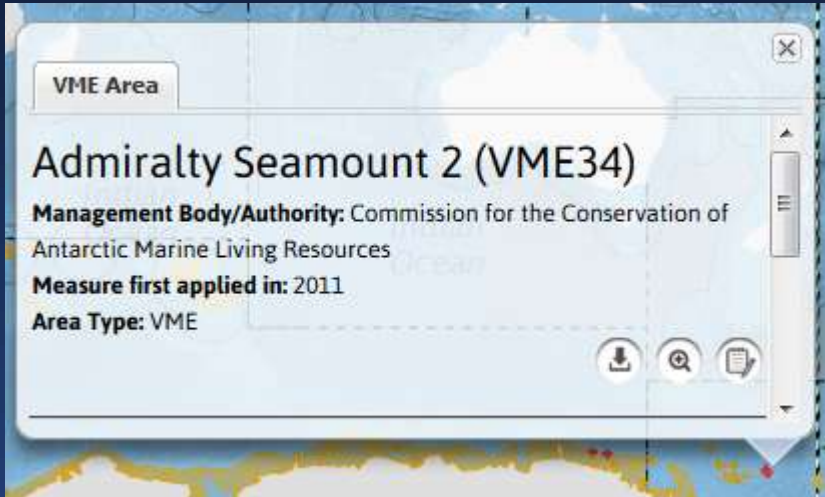


Advanced search/Legend covering map

The drop down can be cancelled by the X

Can we have a timer to shrink it?

Pop-ups



The pop-ups appear when a VME or fishing area is clicked. They contain basic information and are the entry point to the factsheets (plus shape files and zoom).

- The “VME Area” should be changed to what ever is agreed for the legend “Benthic Areas???”.
- Should we have the RB name for the area under “Area type”.
- Measure first applied in: this has caused problems. Before it was the validity period, but this is mis-leading as the start and end years mean very little (review periods). It gives the impression that the closures will open when they are reviewed.
- Should we include boundary changes?

THOUGHTS??

VME Criteria

FAO DSF Guidelines list
5 criteria

- Uniqueness or rarity
- Functional significance of the habitat
- Fragility
- Life-history traits
- Structural complexity

These are currently hidden within the database but can be entered via iMarine:

Criteria	
<input type="radio"/>	Uniqueness or rarity
<input type="radio"/>	Functional significance of the habitat
<input type="radio"/>	Fragility
<input type="radio"/>	Life-history traits
<input type="radio"/>	Structural complexity
<input type="radio"/>	Unspecified
<input type="radio"/>	Not applicable

Thoughts??



Time slider / Year selector

In right place?

Do we need dots below it?



“Year” increments (requires thought!)

The VME DB is set up to run in annual increments. A closure from 1 August 2008 to 31 July 2010 would have a validity period of 2008-2009. However, this causes problems for the follow up measure, and I think what happens actually is that it defaults to the beginning of the year. So, we have:

<u>Full years</u>	Actual dates	Annual dates on VME DB
	1 January 2008 – 31 Dec 2010	2008-2010
	1 January 2011 – 31 Dec 2013	2011-2013

<u>Partial years</u>	Actual dates	Annual dates on VME DB
	1 August 2008 to 31 July 2010	2008-2009
	1 August 2010 to 31 July 2012	2010-2011

<u>Combination</u>	Actual dates	Annual dates on VME DB
	1 January 2008 – 31 Dec 2010	2008-2010
	1 January 2010 – 31 March 2010	2010-2010*
	1 April 2010 – 31 Dec 2013	2010-2013

* Actually this does not show up on the database map (or factsheet if not combined with the follow-on measure).

Do we need to include the actual date the measures become effective (active)?
How do we deal with this on the map?

Place markers and accuracy

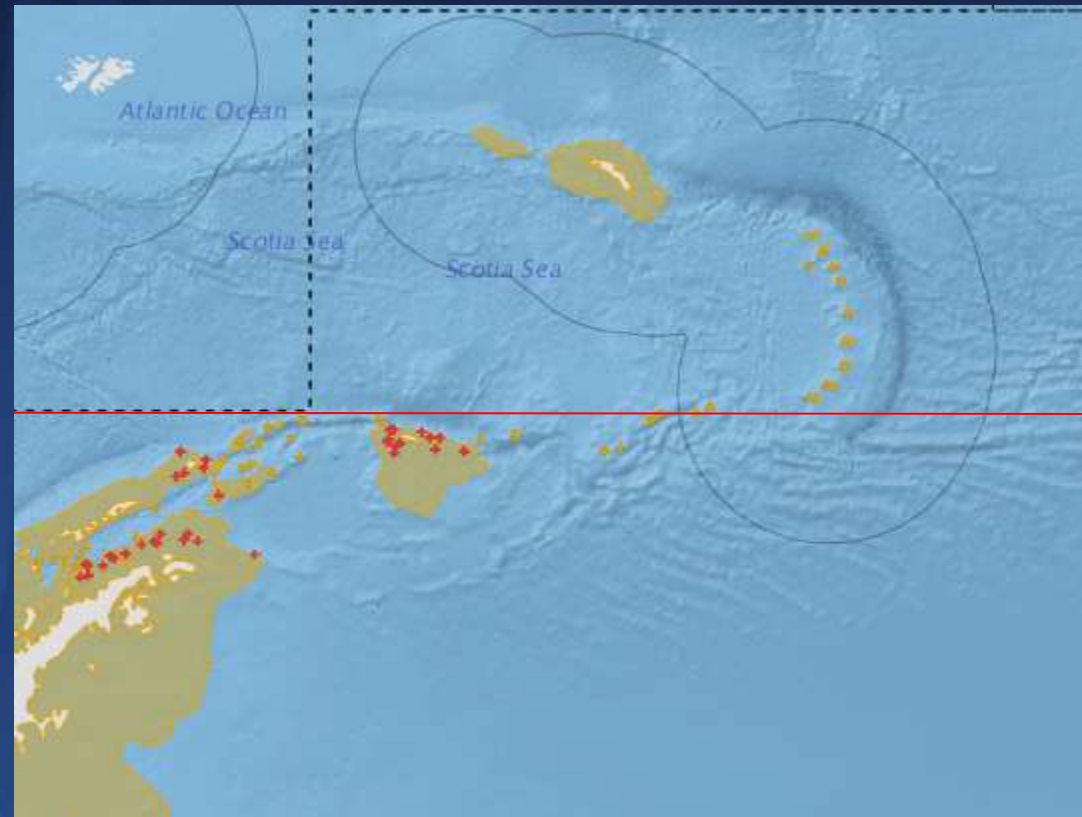
I found that the Discovery Guyot label, in the Southeast Atlantic, is not associated to any mark and is also displaced eastward from its right position. I believe that there are discrepancies in the information coming from “Undersea Features Gazetteer – GEBCO” and “Marine Gazetteer Placedetails – Marineregions.org”.

Mainly seamounts.
Hydrothermal vents
useful.

Tony: Wust seamount is at 33 50 S 3 30W, but on map the pointer locates it at 33 84 S 3 50 W.

EEZ Issues

I do not know which the source of this data is but I consider these should be checked. good, however the representation of EEZs in Antarctic waters is incorrect. The Antarctic Treaty extends north to 60°S, hence there are no internationally recognised water and land claims south of 60°S. The Antarctic continent does not have a 200 nmile EEZ, and neither does Bouvet Island in the SE Atlantic (only a 12-nmile territorial limit). And I think that the maritime zone at the South Sandwich Islands in the SW Atlantic is truncated at 60°S, and not implemented at the South Orkney Islands.

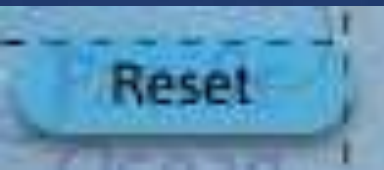




Zoom to region



The zoom buttons on the navigation bar do not work.
The zoom using the mouse scroll is erratic and the map is slow to update.



The globe is a reset button, so why do we need a separate reset?

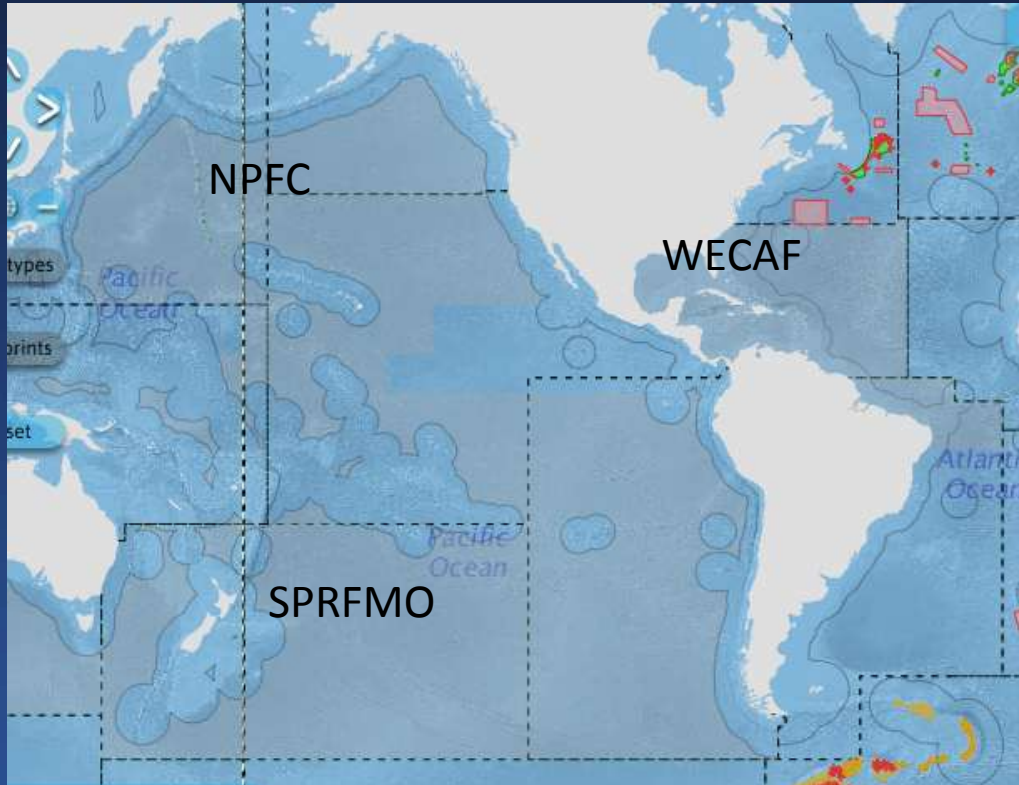


The map is slow to update. Is this because of the seabed topography and do we need it? Can we use just the 400m and 1500m contours (as the approximate fishing limits)?

HELP Button

Do we need/want one?

Layer: RFB Competence areas

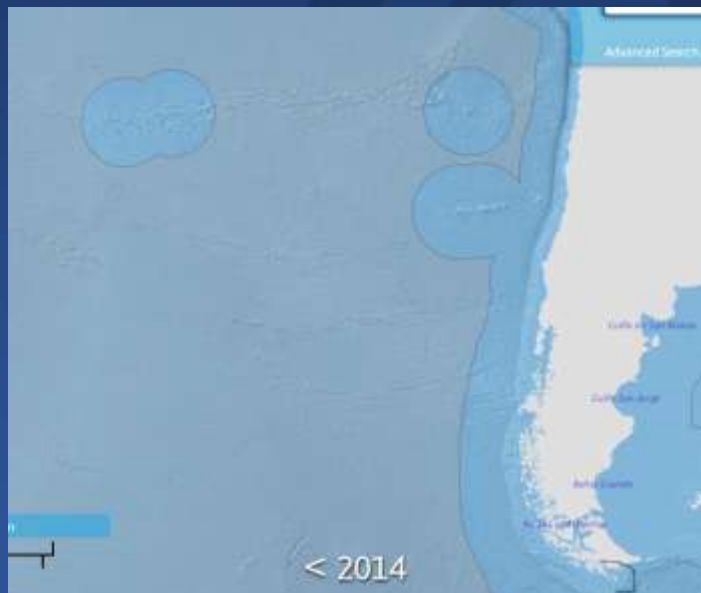


These are added to the map for three regions (actually for a different reason to give a clickable area to call up the factsheets).

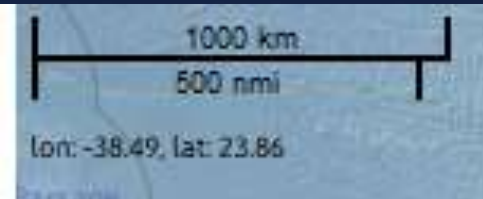
Add to map??

Layer: International dateline and Island country names

1. To SPRFMO: Why is the international dateline important?
2. Can we add Island names? Also country names on land? Is this useful?



Layer: Latitude and longitude Grid



Would this be better expressed as lat and longitude in degrees and minutes?

Would it be useful to have a grid (as occurs in the factsheet map)?

Layer: FAO Fishing areas

(<http://www.fao.org/fishery/cwp/handbook/H/en>)

Major fishing area

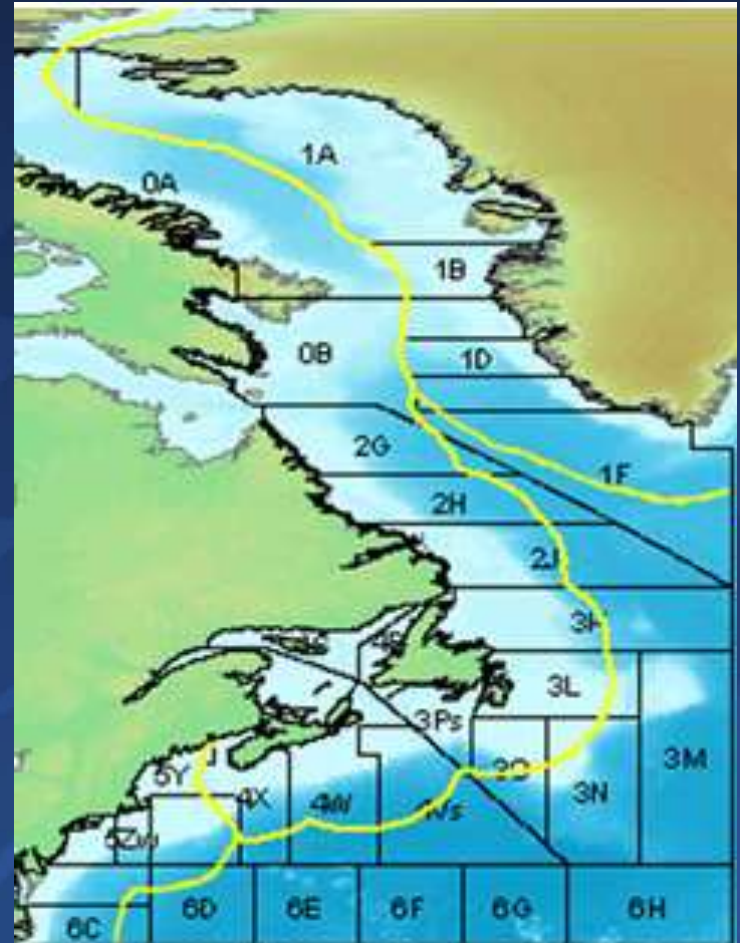
Subarea

Division

Subdivision

The VME DB provides the
major divisions

Useful?



Layer : VME Predictions

It was suggested to have a layer for predicted VMEs.

[Note: this would likely be predictions for coral/sponges/etc perhaps combined with fishing pressure overlays to generate “risk” statistics]

Thoughts??

Layer: Survey data

Comments

- Can we show on the map areas that have been surveyed for “VMEs”?
- Can we show survey data?
- Can we use the VME DB as a data repository?

Layer: Encounters

FAO DSF Guidelines 21.vii. “ensure transparency and public dissemination of information, in accordance with appropriate standards for confidentiality, as well as enable participation of relevant stakeholders.

Note: The VME DB only shows information that is in the public domain (cf login area)

Comments

- Is encounter data available?
- Can we show on the map areas where encounters have occurred?