

Vulnerable Marine Ecosystem Database (VME DB)

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Introduction

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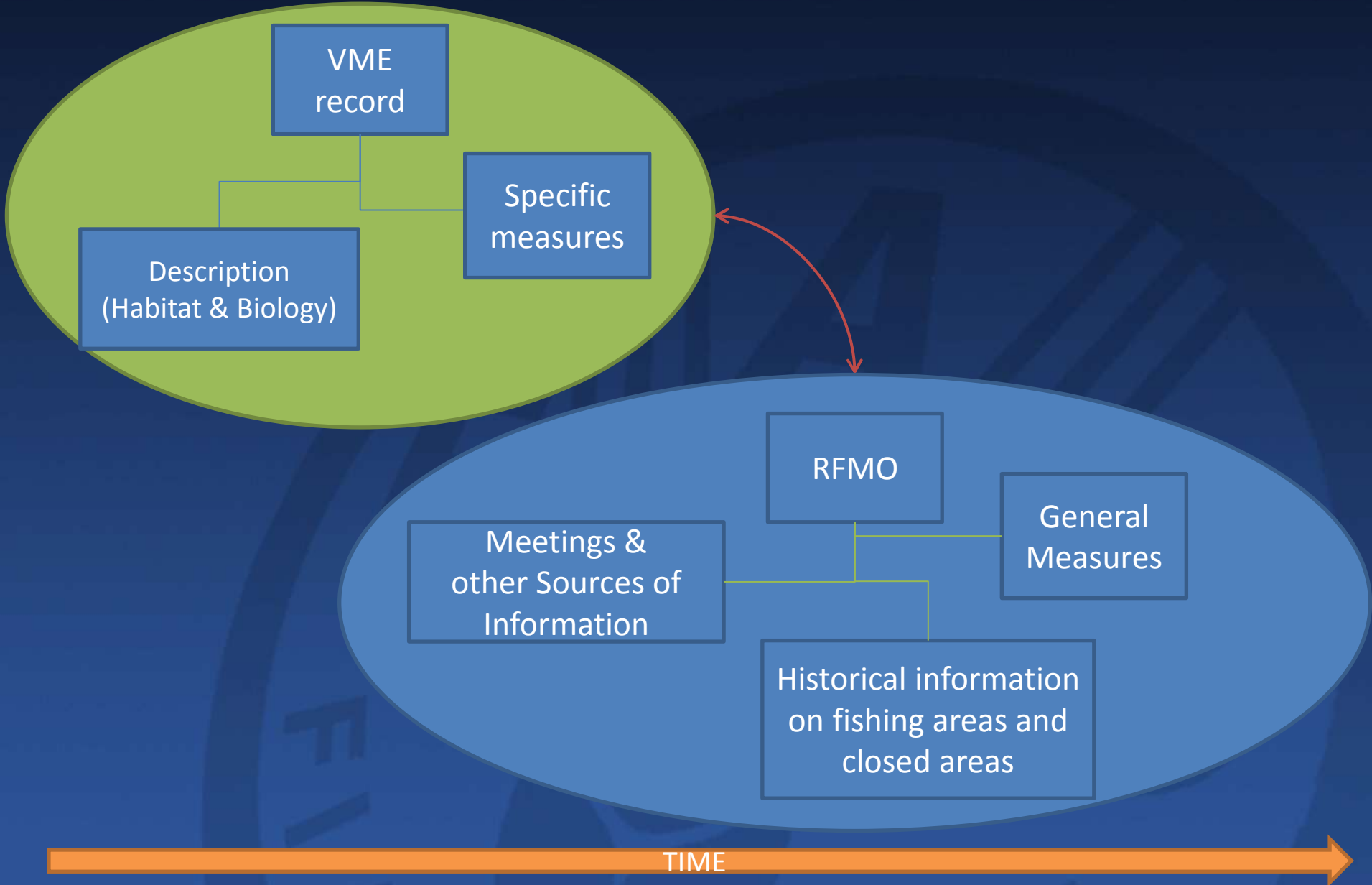
Background

- Understanding the **impacts** of bottom contact gears used by deep-sea fisheries on the seafloor is of the utmost priority.
- The United Nations General Assembly adopted **resolutions** that inspired FAO to coordinate the development of The International Guidelines for the Management of Deep-Sea Fisheries on the High Seas.
- Since 2006, RFMO/As have developed **measures** to protect benthic VMEs and their coral and sponge communities.
- This has generated a large amount of dispersed and difficult to access information that is now being entered on to a VME database to **assist in informed decision making** and the development of further measures **to increase sustainability and reduce impacts**.
- This system is also aiming to **facilitate partnerships and create networks** among the community of users, information contributors and those working on the protection of VMEs in the high seas.

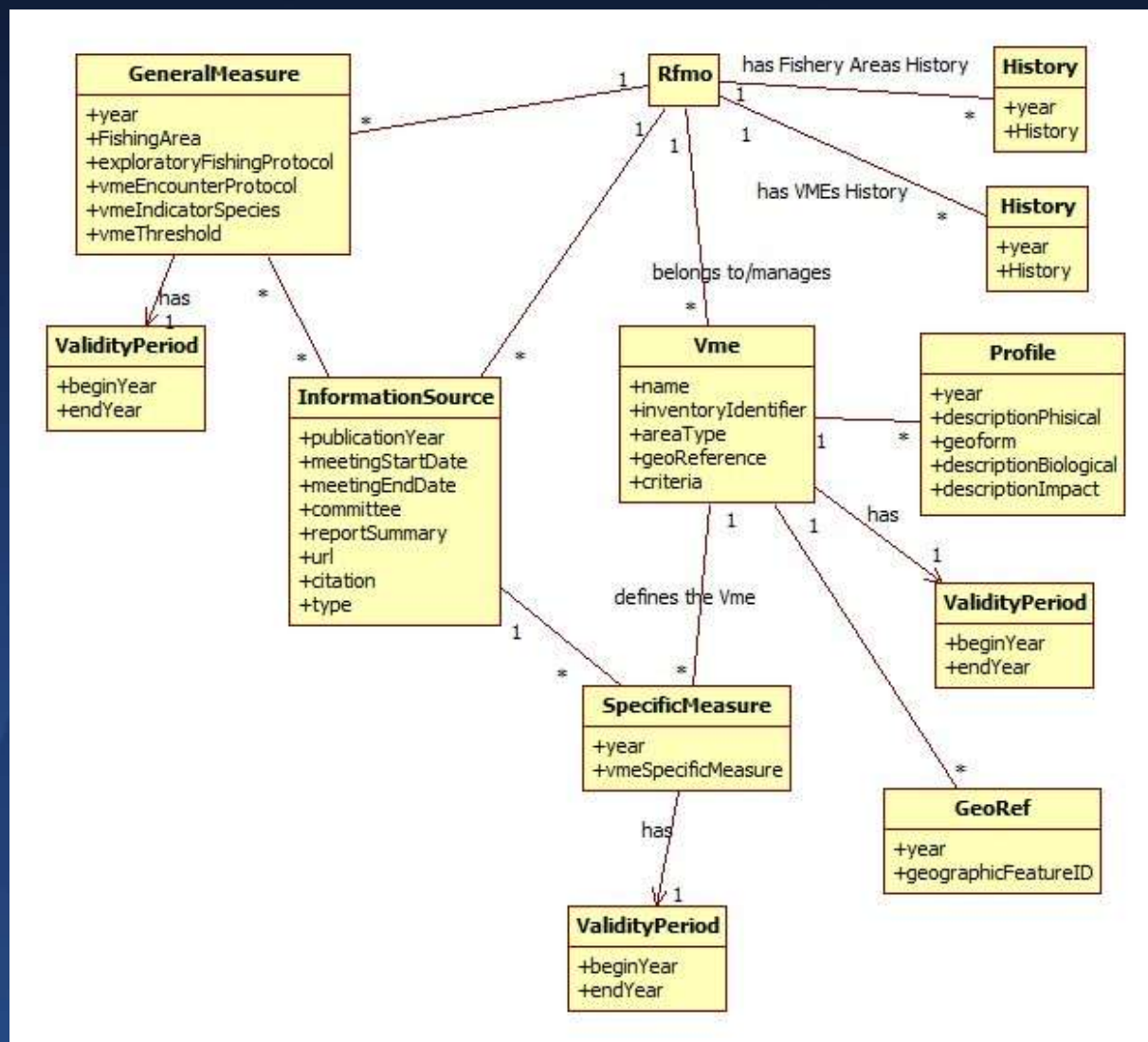
Timeline

- 2006: UNGA Res 61/105 FAO to create a global VME database
- 2007: FAO COFI agreed to request
- 2011: FAO Workshop for the Development of a Global Database for Vulnerable Marine Ecosystems (VMEs) . Rome, 7–9 December 2011 ***Start of the VME-DB development***
- 2012: Regional Workshop on Vulnerable Marine Ecosystems (VMEs) in the Indian Ocean Flic en Flac, Mauritius, 25–27 July 2012
- 2013: FAO Regional Workshop on Vulnerable Marine Ecosystems (VMEs) in the Southeast Atlantic Ocean. Swakopmund, Namibia, 15 – 17 April 2013
- 2014: FAO Regional Workshop on Vulnerable Marine Ecosystems (VMEs) in the North Pacific Ocean. Tokyo, Japan, 11-13 March 2014

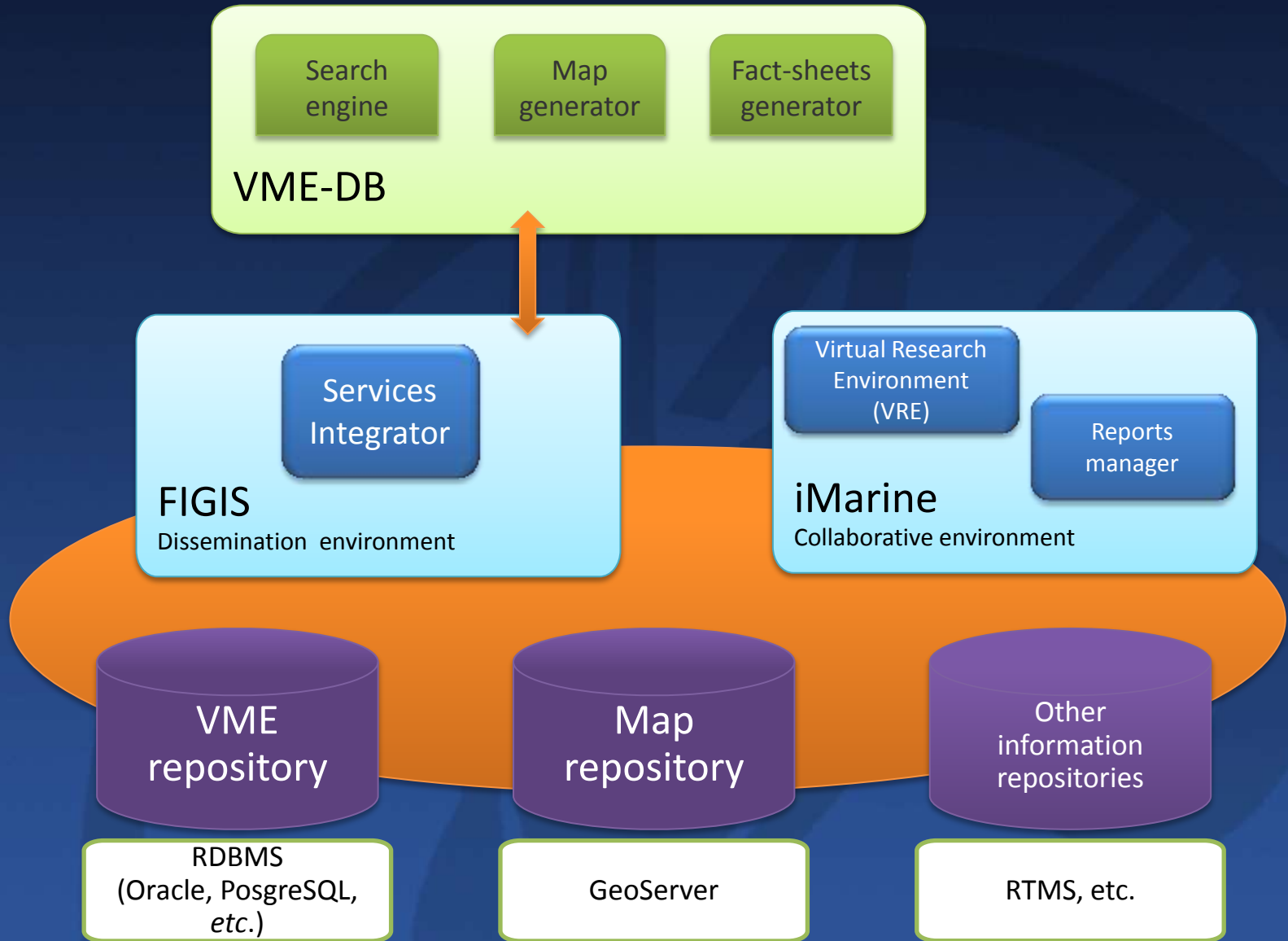
VME database – data structure (simplified)



VME database – data structure (UML)



VME database – main Components



VME Maps & Fact Sheets

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.

Corner Seamounts
Management Body/Authority: North-West Atlantic Fisheries Organization (NAFO)
Measure first applied in: 2007
Area Type: VME

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.

Corner Seamounts

Selected year: 2014

Print PDF XML Source Citation

Description	Map	Management	Regional overview	Meeting reports	Media
Geographical reference Northwest Atlantic Management Body/Authority Northwest Atlantic Fisheries Organization (NAFO) Area Type: VME Measure first applied in 2007					
Habitat and Biology Information was available which suggested fishing on the Corner Seamounts had encountered hard corals, that fixed gear (e.g. Pots) had been used in some areas and was likely lost due to entanglement in corals, although exact locations were not available. Physical description of the environment: Seamounts					
Impacts The shallow peaks have been heavily fished. Spanish fisheries information available in this area between 2005 and March 2007 (SCR Doc. 07/26) showed that one seamount in particular, and western Corner Rise in general, seem to have more species diversity.					

Management Body/Authority
Northwest Atlantic Fisheries Organization (NAFO)

The Northwest Atlantic Fisheries Organization's (NAFO) main objective is to contribute through consultation and cooperation to the optimum utilization, rational management and conservation of the fishery resources of its area of competence, and to ensure the long-term conservation and sustainable use of the fishery resources and, in so doing, to safeguard the marine ecosystems in which these resources are found.

Web site
<http://www.nafo.int/>

Regional Fishery Body fact sheet
<http://www.fao.org/fishery/rfb/NAFO/en>

In 2013 the VME-DB interface was completed, ready to disseminate content in form of maps and fact sheets

VME Maps & Fact Sheets

The screenshot shows the 'vulnerable marine ecosystems DATABASE' interface. At the top, it states: '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.' Below this is a world map with a red dot in the North Atlantic. A pop-up window titled 'VME Area' and 'Corner Seamounts' is displayed, containing the following text: 'Management Body/Authority: North-West Atlantic Fisheries Organization (NAFO)', 'Measure first applied in: 2007', and 'Area Type: VME'. The map includes navigation controls like 'Login', 'VME areas', 'Footprints', and 'Name'. A scale bar at the bottom left shows '2000 km' and '2014'.

The screenshot shows the 'Corner Seamounts' fact sheet page. At the top, it repeats the database's purpose: '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.' The page title is 'Corner Seamounts' with 'Selected year: 2014' and options for 'Print', 'PDF', 'XML', 'Source', and 'Citation'. Below the title is a tabbed interface with the following tabs: 'Description', 'Map', 'Management', 'Regional overview', 'Meeting reports', and 'Media'. The 'Description' tab is active, showing: 'Geographical reference: Northwest Atlantic', 'Management Body/Authority: Northwest Atlantic Fisheries Organization (NAFO)', 'Area Type: VME', and 'Measure first applied in: 2007'. The 'Habitat and Biology' section states: 'Information was available which suggested fishing on the Corner Seamounts had encountered hard corals, that fixed gear (e.g. Pots) had been used in some areas and was likely lost due to entanglement in corals; although exact locations were not available. Physical description of the environment: Seamounts'. The 'Impacts' section states: 'The shallow peaks have been heavily fished. Spanish fisheries information available in this area between 2005 and March 2007 (SCR Doc. 07/26) showed that one seamount in particular, and western Corner Rise in general, seem to have more species diversity.' At the bottom, the 'Management Body/Authority' is 'Northwest Atlantic Fisheries Organization (NAFO)', with a 'Web site' link to 'http://www.nafo.int/' and a 'Regional Fishery Body fact sheet' link to 'http://www.fao.org/fishery/rfb/NAFO/en'.

Information pop-up

Global map

Fact sheet content arranged in tabs

VME Map interface



Global map

Time Slider

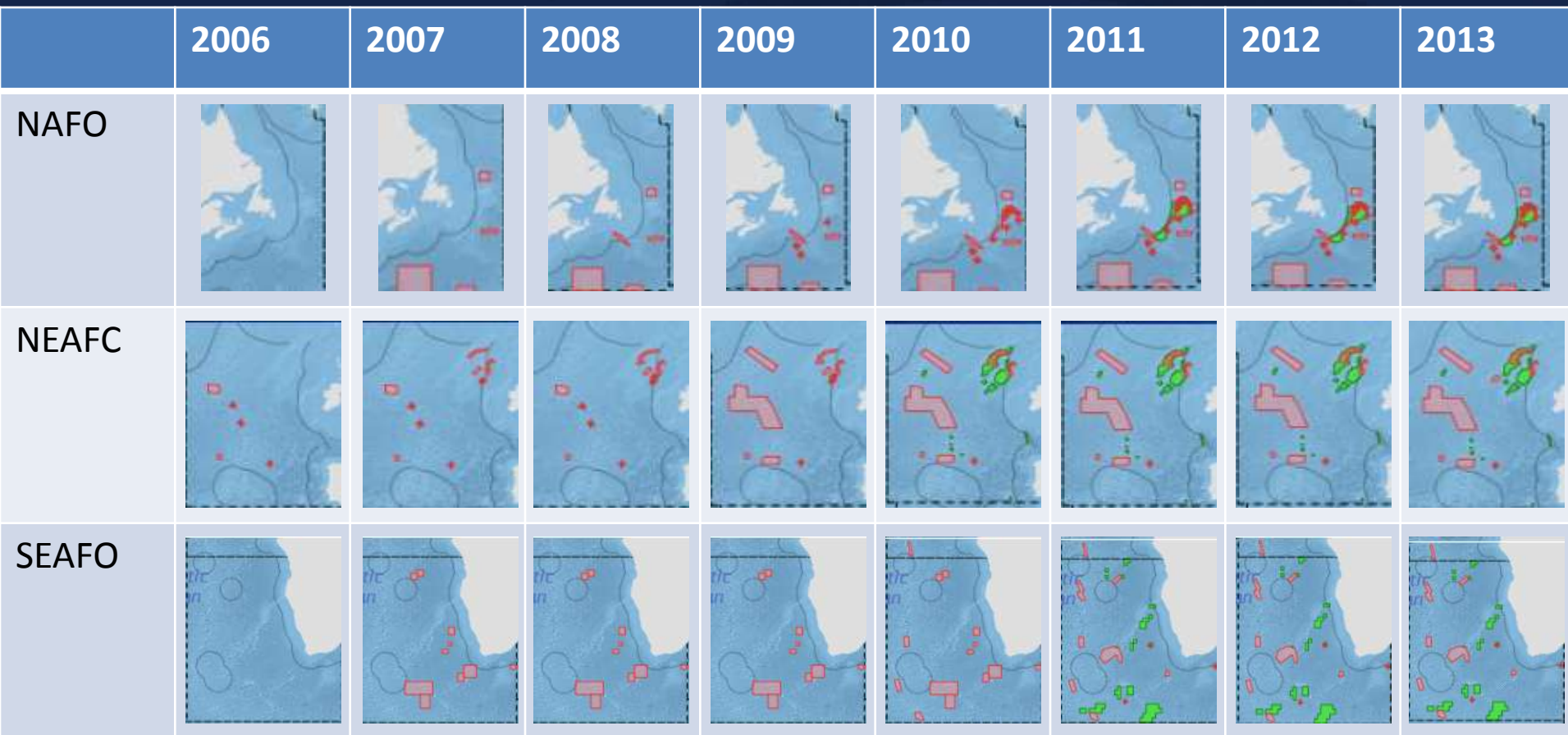
Legend

Simple & Advanced search

Link & Embed facilities

The Atlantic

NAFO, NEAFC, SEAFO



= closed to (bottom) fishing



= existing bottom fishing area

VME Fact Sheet

Corner Seamounts Selected year: 2012

Print PDF XML Source Citation

Description Map Management Regional overview Meeting reports Media

Geographical reference
Northwest Atlantic

Management Body/Authority
Northwest Atlantic Fisheries Organization (NAFO)

Area Type
VME

Measure first applied in 2007

Habitat and Biology

General Biology
Information was available which suggested fishing on the Corner Seamounts had encountered hard corals, that fixed gear (e.g. Pots) had been used in some areas and was likely lost due to entanglement in corals, although exact locations were not available.

Impacts
The shallow peaks have been heavily fished. Spanish fisheries information available in this area between 2005 and March 2007 (SCR Doc. 07/26) showed that one seamount in particular, and western Corner Rise in general, seem to have more species diversity.

Management Body/Authority
Northwest Atlantic Fisheries Organization (NAFO)

The Northwest Atlantic Fisheries Organization's (NAFO) overall objective is to contribute through consultation and cooperation to the optimum utilization, rational management and conservation of the fishery resources of its area of competence, and to ensure the long term conservation and sustainable use of the fishery resources and, in so doing, to safeguard the marine ecosystems in which these resources are found.

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Print and Cite

Tabs

Data provider box

VME Fact Sheet


Corner Seamounts Selected year: 2012 [Print](#) [PDF](#) [XML](#) [Source](#) [Citation](#)

[Description](#) [Map](#) **Management** [Regional overview](#) [Meeting reports](#) [Media](#)

Measures specific to this VME area

Area closed to bottom fishing until 31 Dec 2014, with exploratory fishing option. Vessels fishing this area shall have a scientific observer onboard. (Art 16.1-3)

Period in force: 2007 – 2014

Source of information
NAFO Conservation and Enforcement Measures 2012 (NAFO FC Doc. 12/1 Serial No. N6001)  Fisheries Commission 2012

General measures

Fishing areas

The comprehensive map of existing bottom fishing areas (as delineated by the coordinates shown in Table 1 and illustrated in Figure 4) shall be revised regularly to incorporate any new relevant information. Contracting Parties may, in the future, consider the possibility of refining the comprehensive map on the basis of haul by haul information, if available. (Art.17)

Exploratory fishing protocol


Exploratory fishing covers all bottom fishing activities (a) outside of the existing bottom fishing area and (b) to fisheries within the existing bottom fishing area that show significant change. (Art 15.8). Exploratory fisheries must be conducted according to an exploratory fisheries protocol (Art 18; Annex 1E.I-IV) and are subject to review FC and SC. Exploratory fisheries will be allowed only if there are adequate mitigation measures to prevent SAI to VMEs (Art 19).

Encounter protocols

In existing bottom fishing areas, encounters with VME indicator species above a threshold value are reported to the Executive Secretary and trigger a 2 nmile move on rule. In new fishing areas, such encounters also result in temporary closures of 2 nmile radius and require a more detailed report

Management Body/Authority

Northwest Atlantic Fisheries Organization (NAFO)



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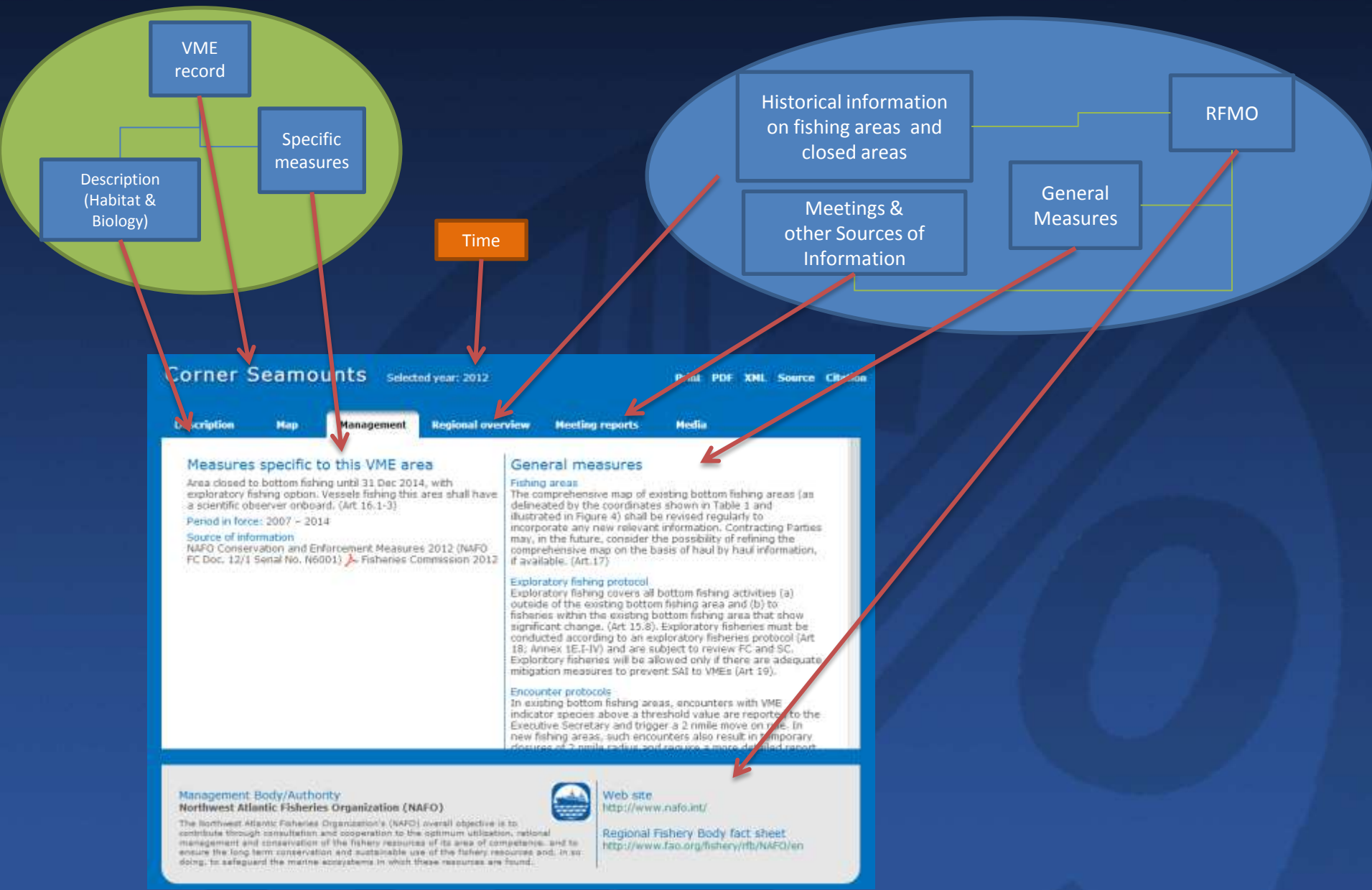
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General measures Box

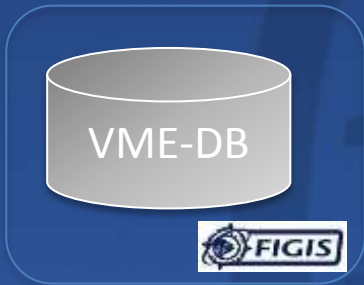
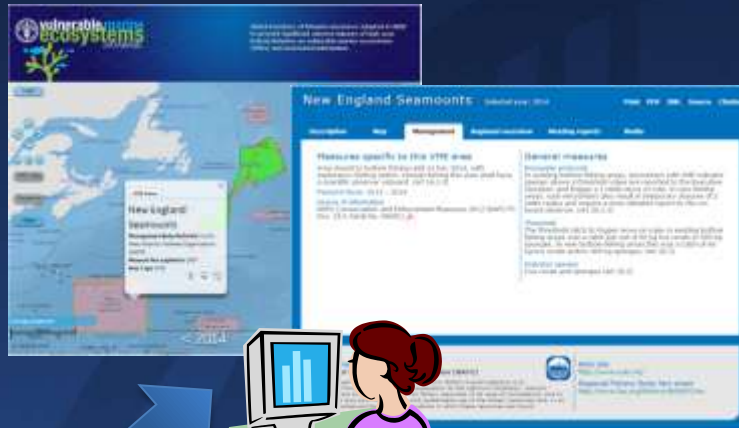
Specific measures Box

VME database – data structure (simplified)



VME-DB & iMarine

Content Management



Acknowledgments

- FAO Team: M. Balestra, E. Blondel, F. Carocci, F. Fiorellato, A. Gentile, J. Sanders , F. Sibenì, M. Taconet , M. Tandstad , A. Thompson, E. Van Ingen
- iMarine Team: M. Assante, A. Ellenbroek, P. Pagano
- GeoSolutions Team: T. Di Pisa, S. Giannecchini, L. Natali



Thank You