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UNDERSTANDING DEEP ATLANTIC ECOSYSTEMS



Legislative and regulatory developments for deep-sea fisheries

Atlas

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United Nations resolutions on managing the impacts of deep-sea fisheries in ABNJ



UN General Assembly resolutions on deep-sea fisheries and protecting VMEs on the High Seas (2002-2016)

- Debate and negotiation at the UNGA prompted by concerns of scientists and NGOs over impact of bottom fishing (trawling) in deep-sea
- Issues: Sustainability, biodiversity conservation, equity, governance, the precautionary approach, the ecosystem approach, compliance with international law
- “recognizing the immense importance and value of deep-sea ecosystems and the biodiversity they contain”
- Six UNGA resolutions (57/141, 59/25, 61/105, 64/72, 66/68, 71/123)
- Core Agreement: Prevent “Significant Adverse Impacts” on “Vulnerable Marine Ecosystems” and ensure sustainable fishing for deep-sea species
- UNGA REVIEWS of implementation of previous resolutions
(2006, 2009, 2011, 2016)

Prevent “Significant Adverse Impacts” on VMEs through:

- **Prior Environmental Impact Assessments**
- **Identify and close areas where VMEs are “known or likely to occur” unless SAIs can be prevented**
- **Sustainable catch of deep sea fish, including non-target species**
- **Move on Rule**

Adopt and Implement these provision or else prohibit HS bottom fishing

International Guidelines for the Management of Deep-Sea Fisheries in the High Seas (2008)

negotiated / agreed:

Standards for conducting impact assessments (para 47)

Criteria for identifying Vulnerable Marine Ecosystems VMEs (para 42 and Annex)

Criteria for determining whether significant adverse impacts to VMEs would/likely occur (paras 17-20)



INTERNATIONAL GUIDELINES
FOR THE MANAGEMENT OF DEEP-SEA FISHERIES
IN THE HIGH SEAS

DIRECTIVES INTERNATIONALES
SUR LA GESTION DE LA PÊCHE PROFONDE
EN HAUTE MER

DIRECTRICES INTERNACIONALES
PARA LA ORDENACIÓN DE LAS PESQUERÍAS
DE AGUAS PROFUNDAS EN ALTA MAR

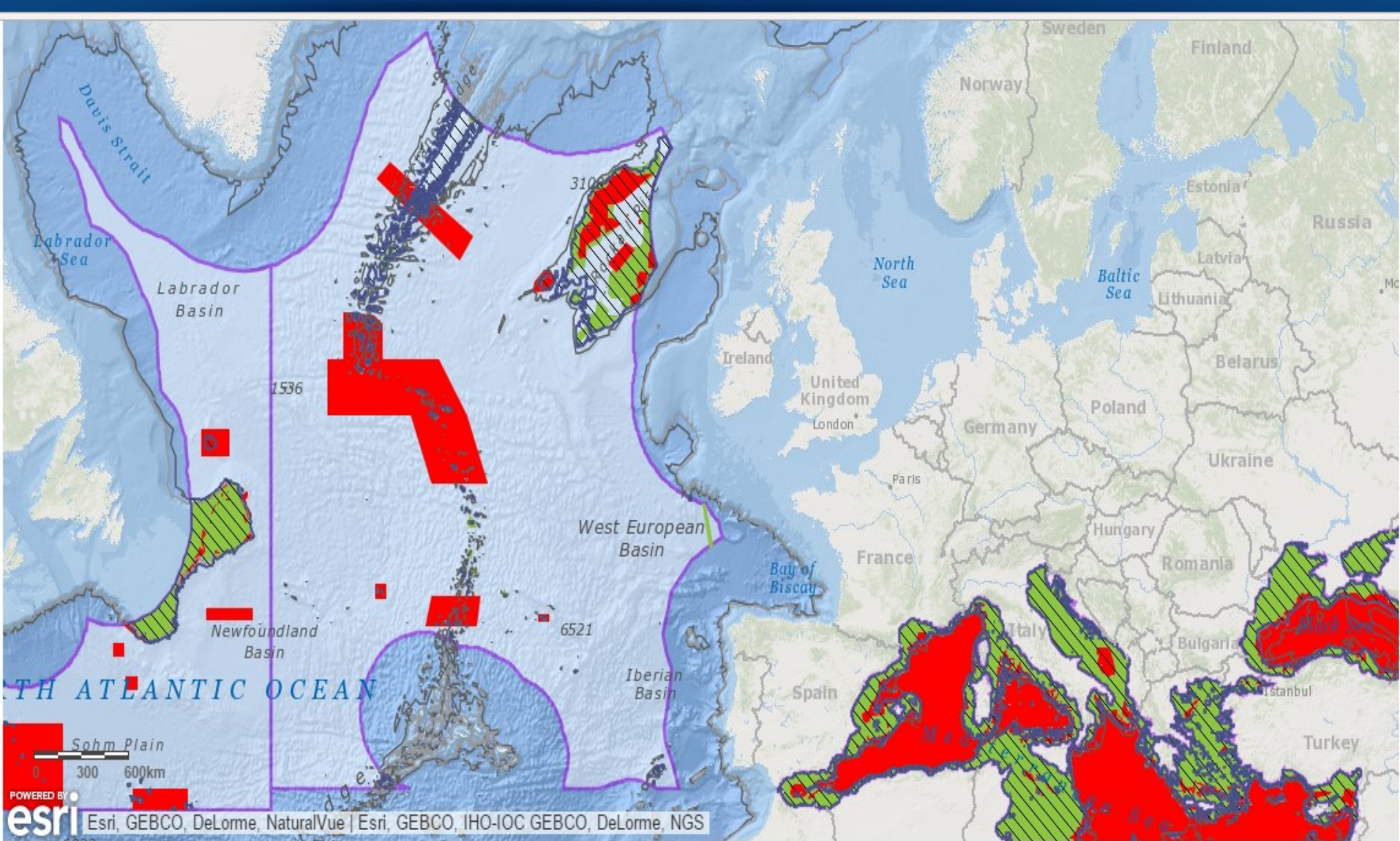


Guidelines endorsed/incorporated
into UNGA resolution 64/72 (2009)

Criteria for conducting Impact Assessments in deep-sea fisheries Paragraph 47 International Guidelines Deep-Sea Fisheries in the High Seas

(UNFSA 5 (d) “assess the impacts of fishing, other human activities and environmental factors on target stocks and species belonging to the same ecosystem or associated with or dependent upon the target stocks;”)

- **Determine area where fishing will occur**, gear types, likely catch and bycatch etc (fishery plan)
- **Obtain baseline information on ecosystems, habitats and communities** in the fishing area
- **identification, description and mapping of VMEs (para 42) in fishing area**
- Data and methodology to assess impacts, **address gaps and uncertainties in the information**
- **identification, description and evaluation of occurrence, scale and duration of likely impacts, including cumulative impacts** on low productivity fish and VMEs
- risk assessment to **determine which impacts are likely to be significant adverse impacts (paras 17-20)**
- **Mitigation, management and monitoring measures to prevent significant adverse impacts on VMEs** and ensure long term conservation and sustainable utilization of low-productivity fish species

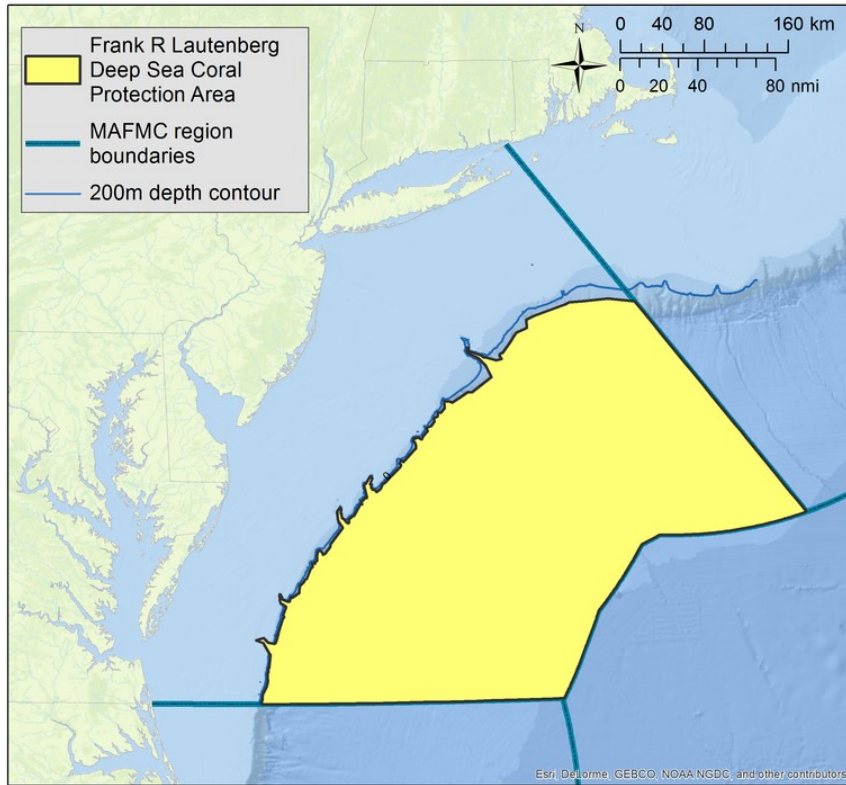




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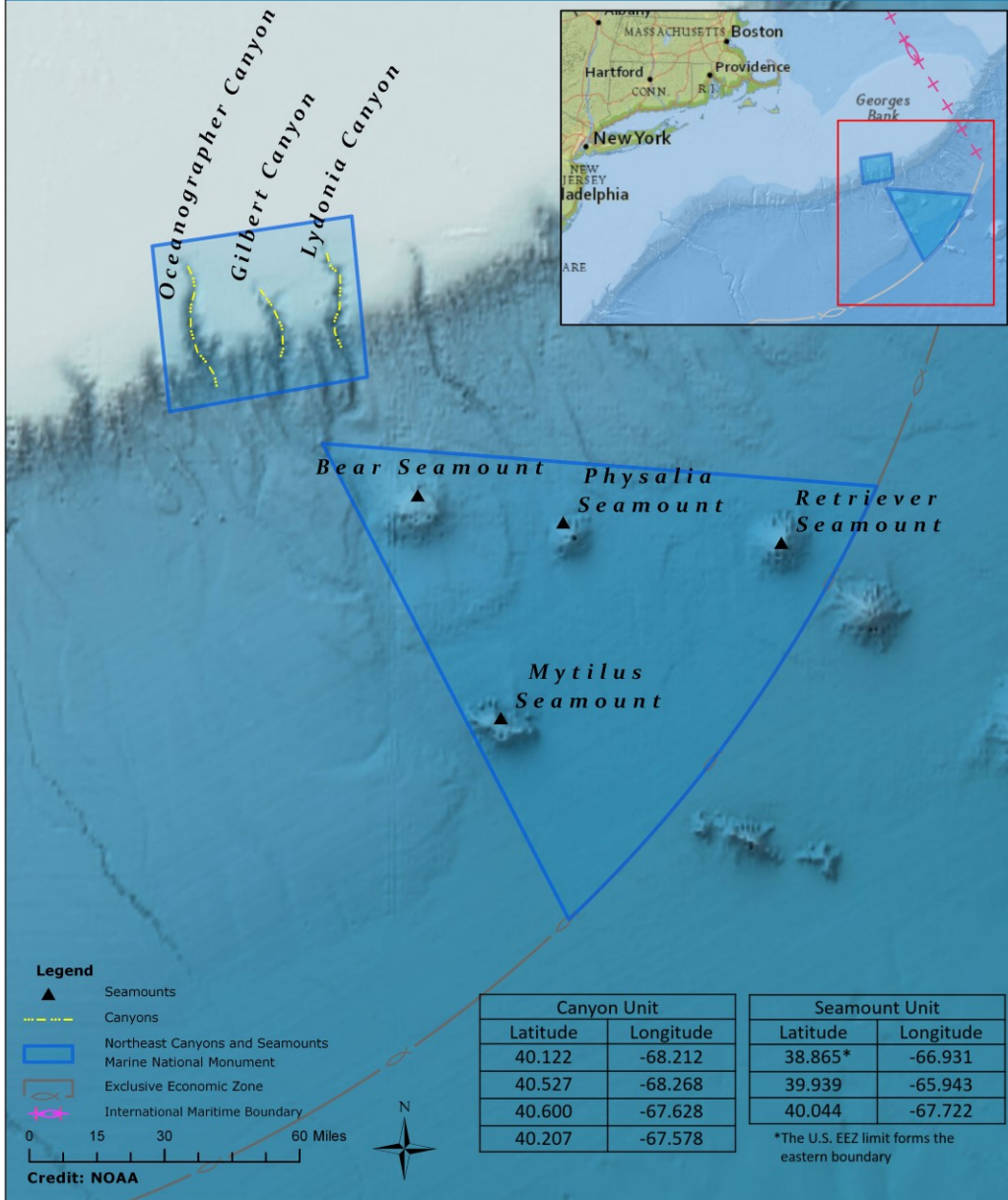
United States – Mid Atlantic coral protection zone

US waters off Connecticut to Virginia. App 100,000 km² (38,000 sq mi.)



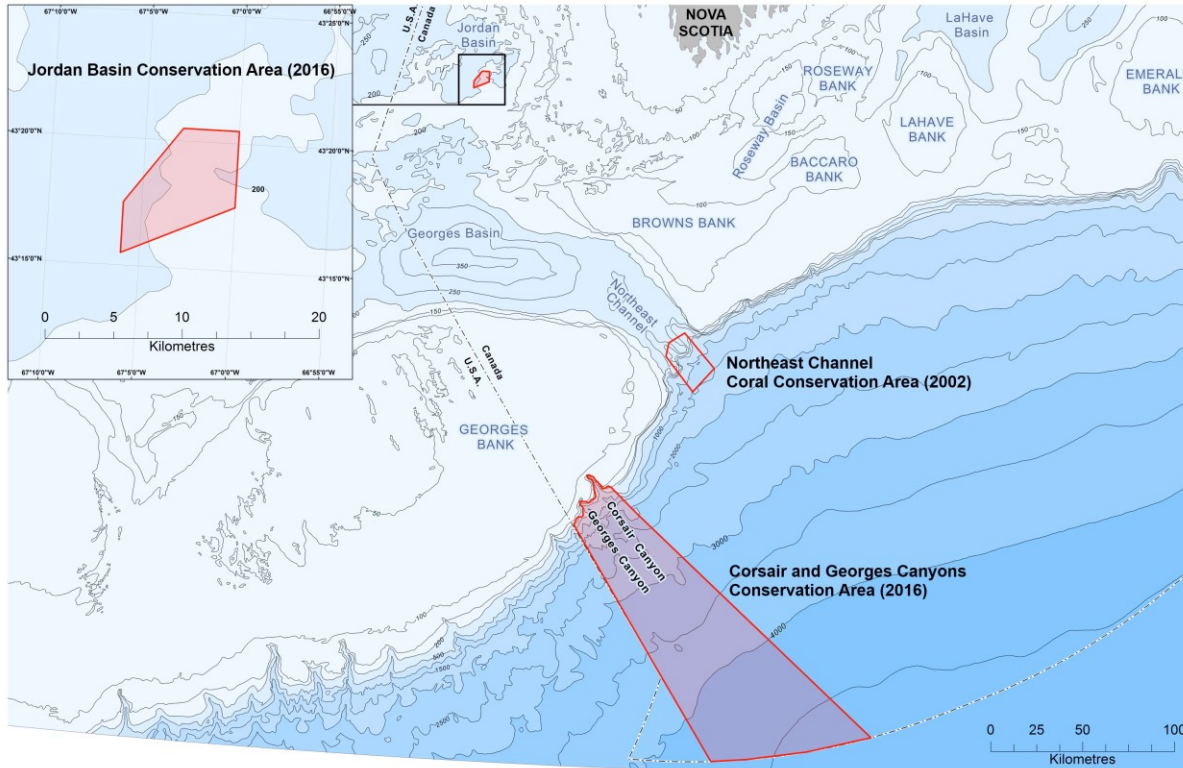
- Designates a large “deep sea coral zone” in areas where corals have been observed or where they are likely to occur.
- Covers depths averaging >450m
- Prohibits bottom trawling, gillnetting, longlining. Allows limited trap/pot fishery for crab and lobster
- Entered into force January 2017
- New England Council (FMC) now considering coral protection zones

Northeast Canyons and Seamounts Marine National Monument



US Northeast Canyons and Seamounts National Monument

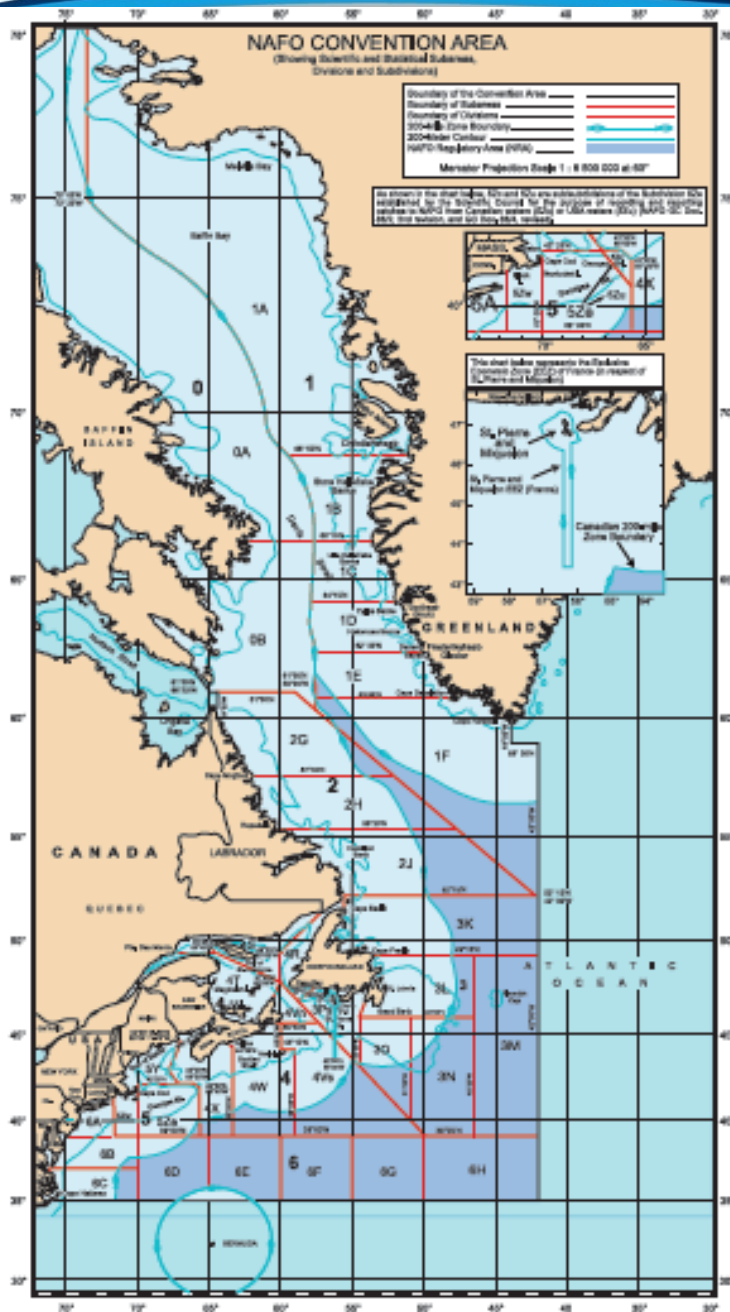
- Designated in September 2006
- 3 canyons/4 seamounts
- 4,913 square miles /12,720 km²
- Off limits to extractive activities



Corsair Canyon & Jordan Basin

- Protected from bottom fishing under Canada's *Fisheries Act*
- Closed in September 2017
- ~9000km²
- Protecting sensitive benthic areas including deep sea corals
- Committed to protect 5% of marine environment by 2017





NAFO Work Related to VMEs

- Identification and distribution completed for Regulatory Area (NRA)
- Focus on quantifying significant adverse impacts (SAI)
- Incorporation of benthic functioning into production models (ongoing)
- New (2016) bycatch reporting on tow by tow basis (CEM ANNEX IIA, IC)
 - Commercial and non-commercial fish, invertebrates (mostly crustaceans listed by code)

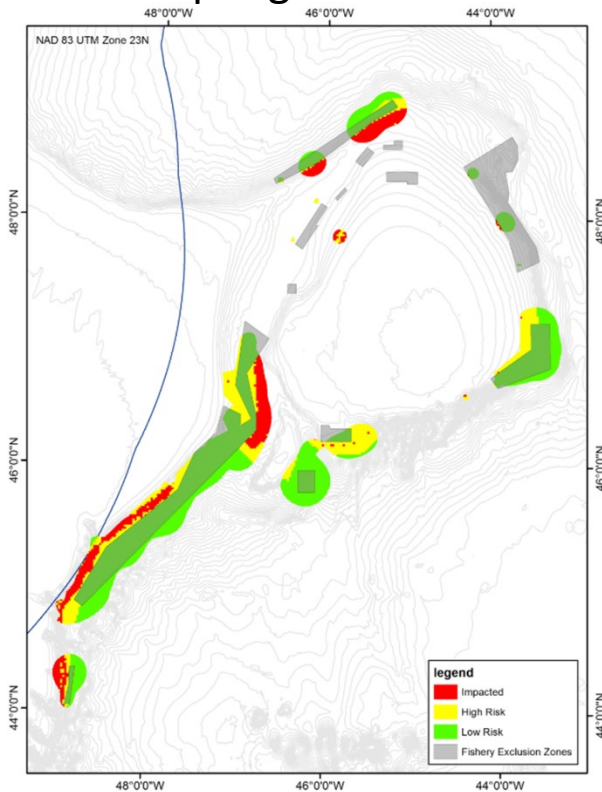
“When determining the scale and significance of an impact, the following six criteria should be considered:

- i. The intensity or severity of the impact at the specific site being affected.
- ii. The spatial extent of the impact relative to the availability of the habitat type affected.
- iii. The sensitivity/vulnerability of the ecosystem to the impact.
- iv. The ability of an ecosystem to recover from harm, and the rate of such recovery.
- v. The extent to which ecosystem functions may be altered by the impact.
- vi. The timing and duration of the impact relative to the period in which a species needs the habitat during one or more of its life-history stages.”

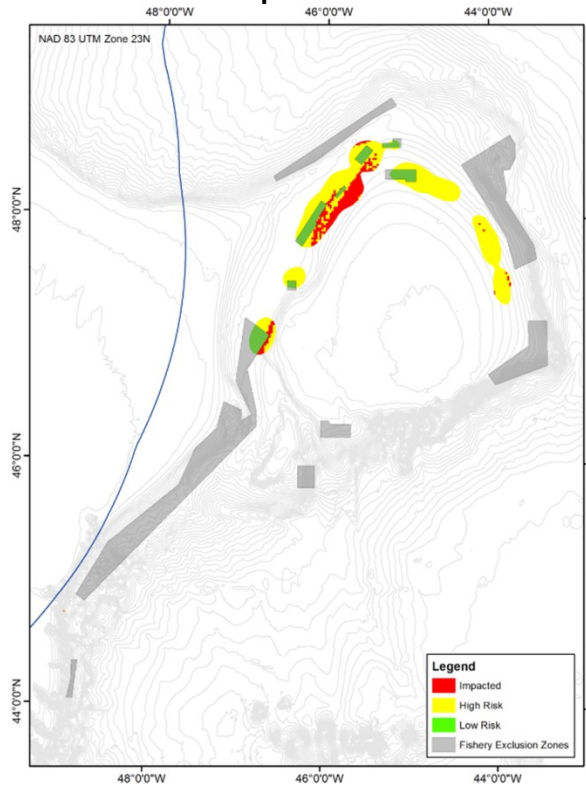
Work to date on steps i to iii. SponGES and to some degree ATLAS may help with steps iv to vi.
Following slides courtesy of Dr. Mariano Koen-Alonso, DFO, former Chair of NAFO WGESA.

Risk of SAIs to VMEs

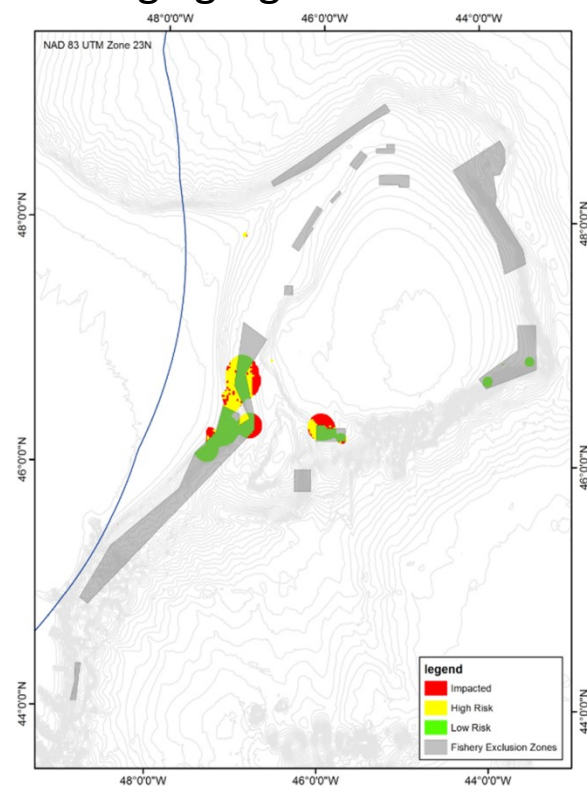
Sponge VMEs



Seapen VMEs



Large gorgonian VMEs



Risk Categories

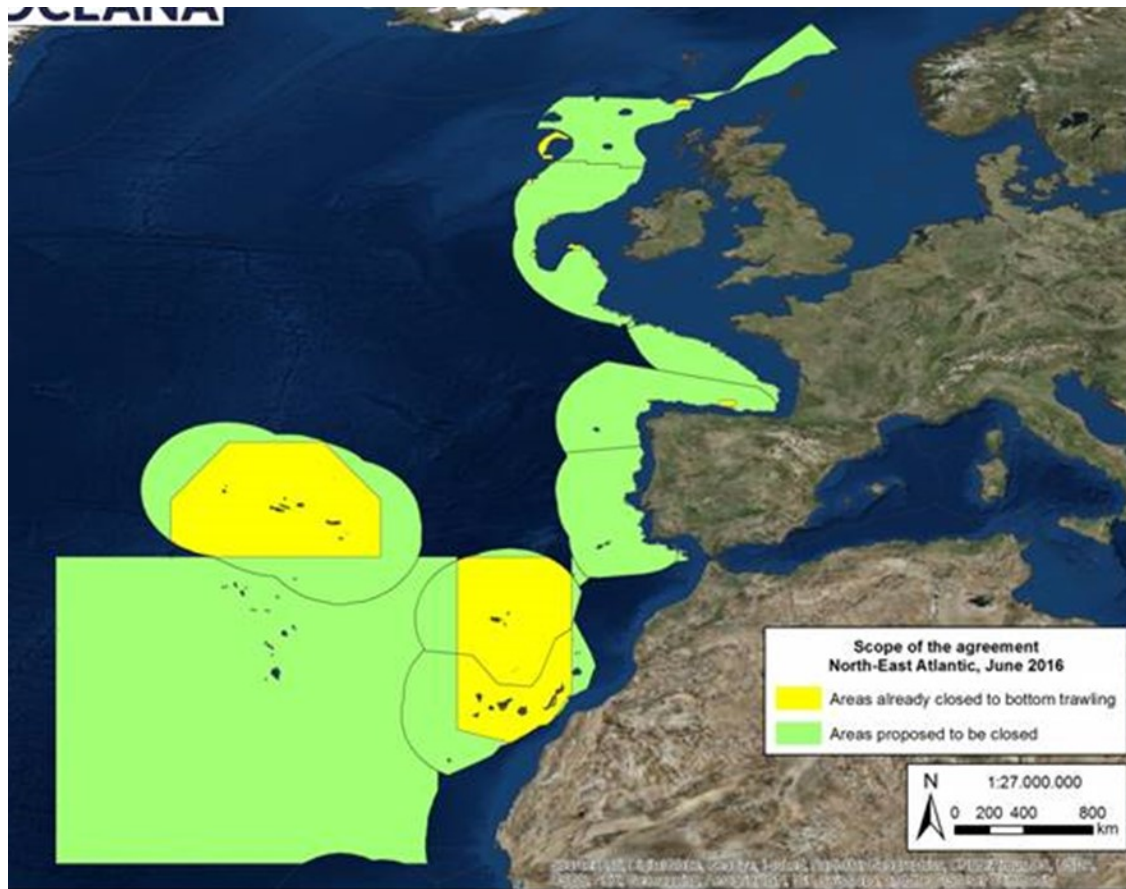
Impacted

High Risk

Low Risk

EU deep-sea fisheries regulation (EU) 2016/2336

- Prohibit bottom trawling below 800m
- ID areas where VMEs known or likely to occur below 400m
- Freeze footprint of bottom fisheries targeting DSF
- Exploratory fisheries/EIA provisions
- Move-on rule
- Entered into force January 2017





EU deep-sea fisheries regulation (EU) 2016/2336

- Article 9.4: “Member States shall use the best available scientific and technical information, including biogeographical information... to identify where VMEs are known to occur or are likely to occur” and a competent scientific advisory body shall be requested by the Commission to carry out an annual assessment of areas where VMEs are known to occur or are likely to occur. That assessment shall be conducted in accordance with the 2008 FAO International Guidelines for the Management of Deep-Sea Fisheries in the High Seas, shall apply the precautionary approach to fisheries management...and shall be made publicly available.

Largely mirrors NEAFC process



UNGA ten year review of implementation since 61/105 (incl 64/72 (2009) & 66/68 (2011))



第七十一届会议
议程项目 73(b)

2016年12月7日大会决议
[未经发交主要委员会而通过(A/71/L.24 和 Add.1)]

71/123. 通过 1995 年《执行 1982 年 12 月 10 日〈联合国海洋法公约〉有关养护和管理跨界鱼类种群和高度洄游鱼类种群的规定的协定》和相关文书等途径实现可持续渔业

大会,

Also available in Fr, SP, En, Ar, Ru

- Reiterates call for use of full set of criteria in FAO Guidelines for ID VMEs, conducting impact assessments, and assessing for significant adverse impacts
- Be particularly precautionary re vulnerable and endangered species (bycatch)
- Take into account impacts of climate change in protecting VMEs
- Calls on other regulatory bodies to protect VMEs (e.g. ISA)



UN GA resolution 71/123 paras 180-181

- Recognizes that different types of marine scientific research, such as, inter alia, seabed mapping, mapping of vulnerable marine ecosystems based on information from the fishing fleet, on-site camera observations from remote vehicles, benthic ecosystem modelling, comparative benthic studies and predictive modelling have resulted in identification of areas where vulnerable marine ecosystems are known or are likely to occur and in the adoption of conservation and management measures to prevent significant adverse impacts on such ecosystems

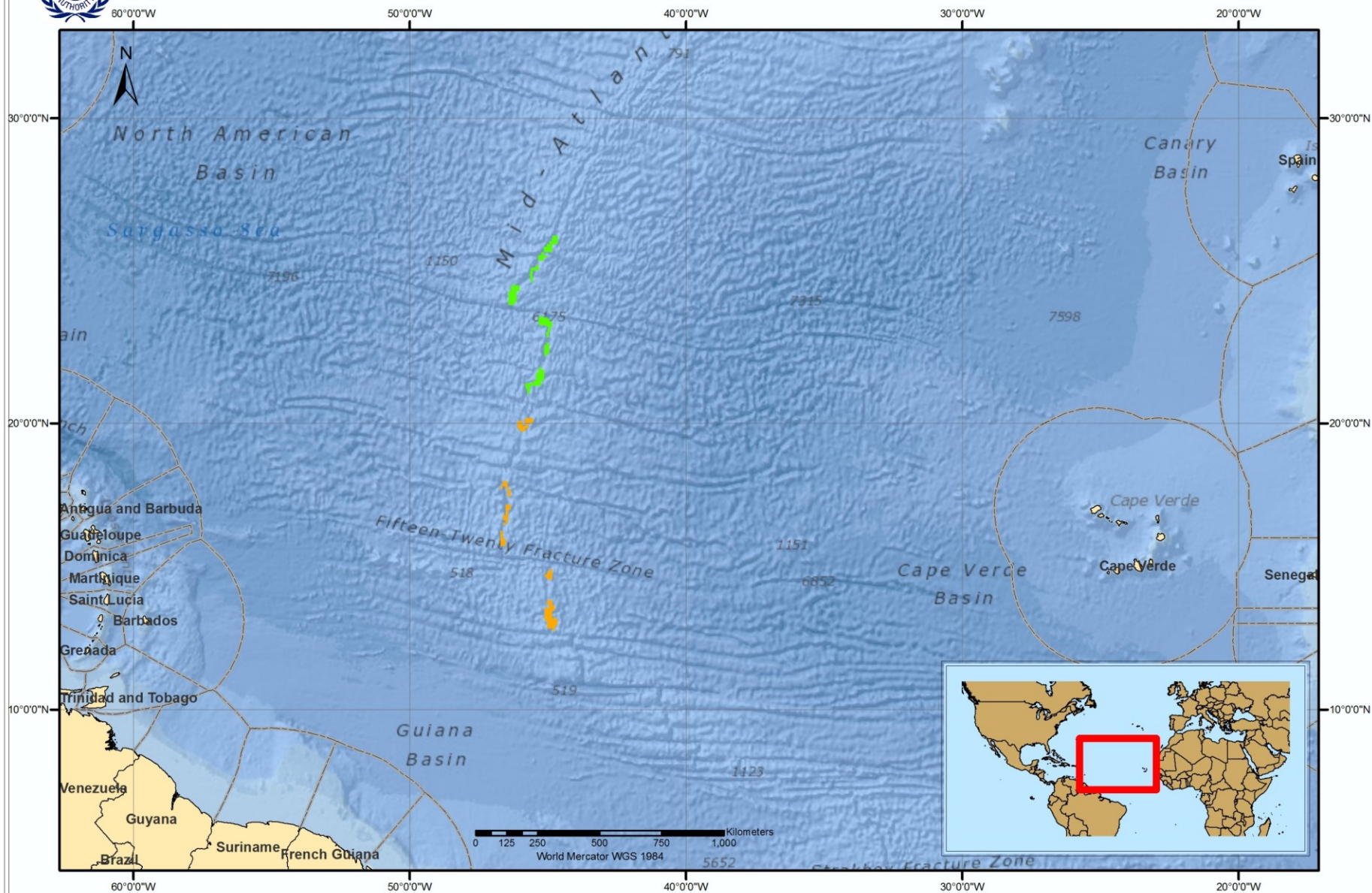


ISA Exploration Regulations SMS (Crusts/nodules)

- Regulation 33.4 “implement procedures for determining... **whether proposed exploration activities in the Area would have serious harmful effects on vulnerable marine ecosystems and ensure that...those activities are managed to prevent such effects or not authorized to proceed.**”
- Regulation 1.3(f) “**Serious harm to the marine environment**” means any effect...which represents a **significant adverse change in the marine environment**”



Polymetallic Sulphides Exploration Areas on the Mid-Atlantic Ridge



Government of the Russian Federation IFREMER (FRANCE) — EEZ Boundaries (VLIZ 2013)



ISA Exploitation regulations under negotiation

- EIAs
- Preservation zones and reference zones
- Regional/Strategic Environment Management Plans
- Cumulative impacts
- Source/sink populations
- VMEs
- Connectivity
- Plumes
- Serious harm to the marine environment
- Measurable and manageable indicators and thresholds for ecosystems impact/change
- Environment review/Committee

UNGA BBNJ process – new treaty for the conservation and sustainable use of marine biodiversity beyond national jurisdiction (UNCLOS Implementing Agreement)

MPAs, EIAs, coordination/coherence in regulation of activities impacting ABNJ

Sustainable Development Goal 14.2

“By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans”

EC review of EU deep-sea fisheries regulation

UNGA review of implementation of the deep-sea fisheries resolutions

Ongoing work NAFO/NEAFC (possibly in central Atlantic)

ISA regulations will be negotiated (may be completed by 2020?)

ISA regional environment management plan may be negotiated for nMAR and possibly Atlantic Basin (SEMPIA)

UNCLOS Implementing Agreement negotiations likely to be underway (2019 -)

Target date for implementation of SDG 14.2

Contributions from Atlas to these processes

Identifying areas where VMEs known or likely to occur (including indicator species beyond sponges and corals)

Predictive modelling VMEs

Connectivity, source and sink populations (VMEs and other relevant components of deep-sea ecosystems)

Appropriate bioregional scales, biomes etc for regulation/MSP

The conduct and review of EIAs and regional EIA and EMPs

Cumulative impacts including past degradation from bottom fisheries and impacts of other activities

Climate change impacts

Providing some idea of future changes/impact scenarios

Multiple Input mechanisms: Annual meetings and scientific meetings of RFMOs/ISA; meetings/briefings with regulators & policy-makers; scientific symposia; UNGA workshops, working groups, negotiating processes etc.

Thank You!



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