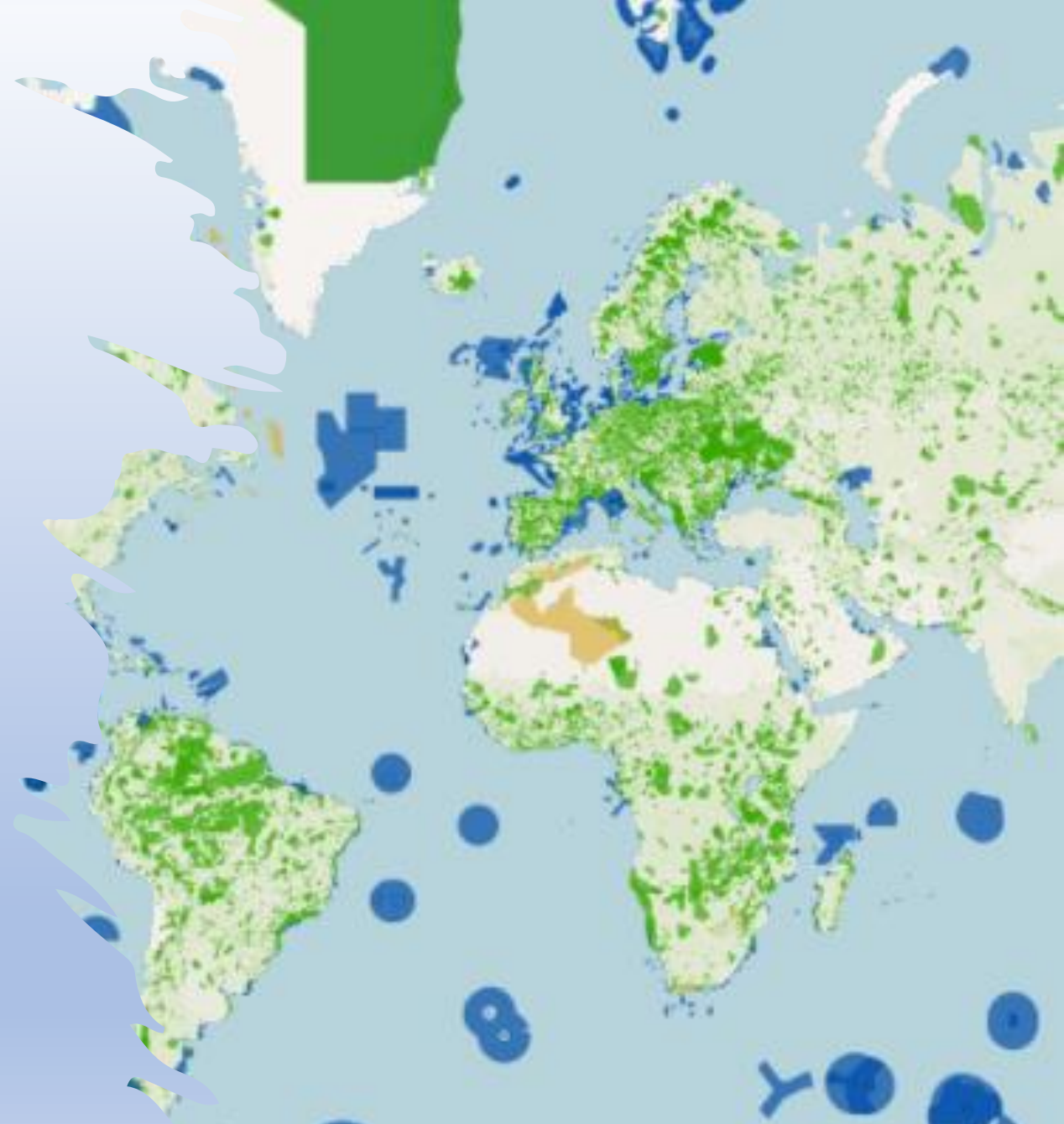


# Examples of potential fishery-OECMs

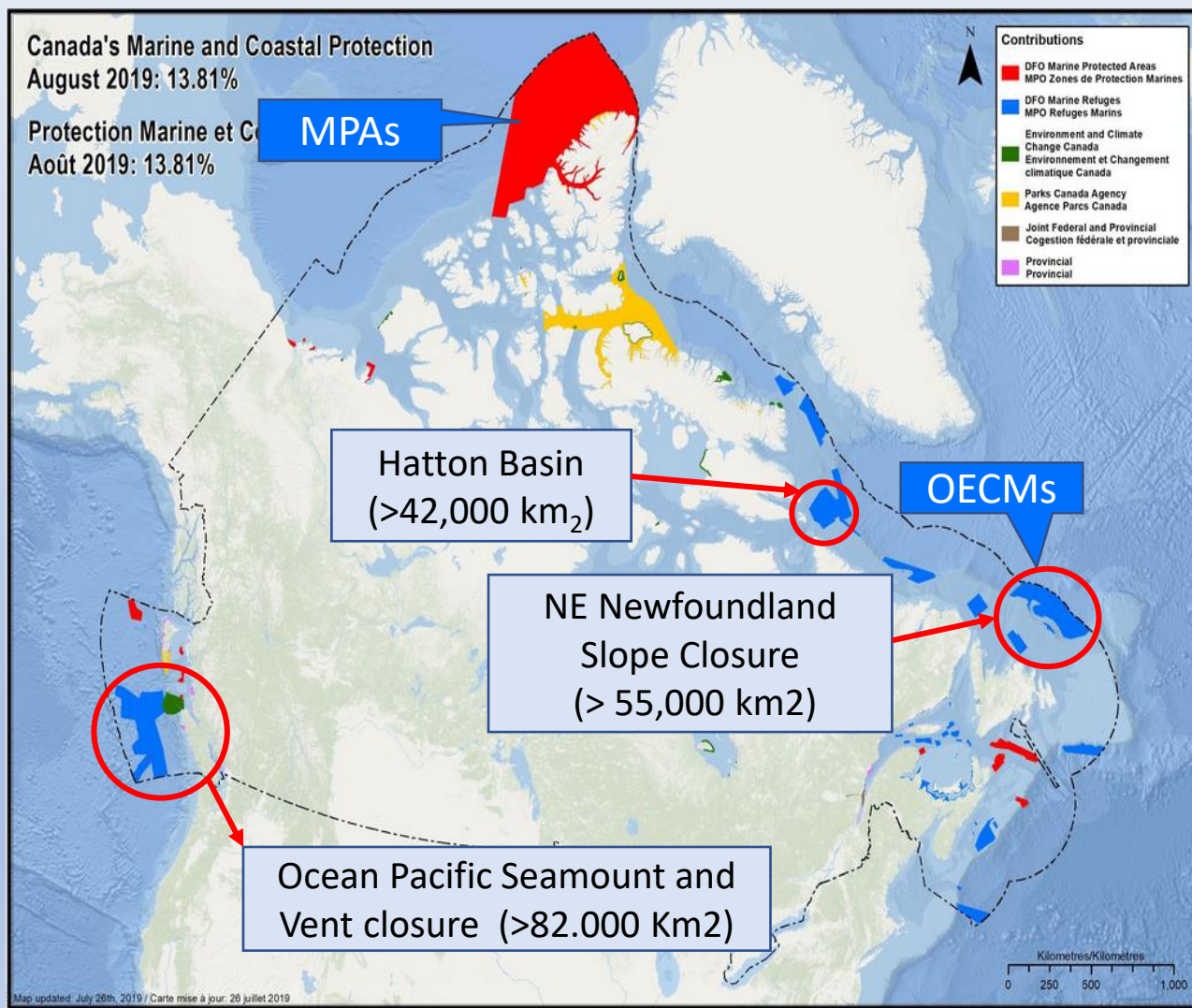
Serge M. Garcia

IUCN-CEM Fisheries Expert Group

Reunión sobre OMCES-pesca, Madrid, España, Viernes 7  
Junio 2024

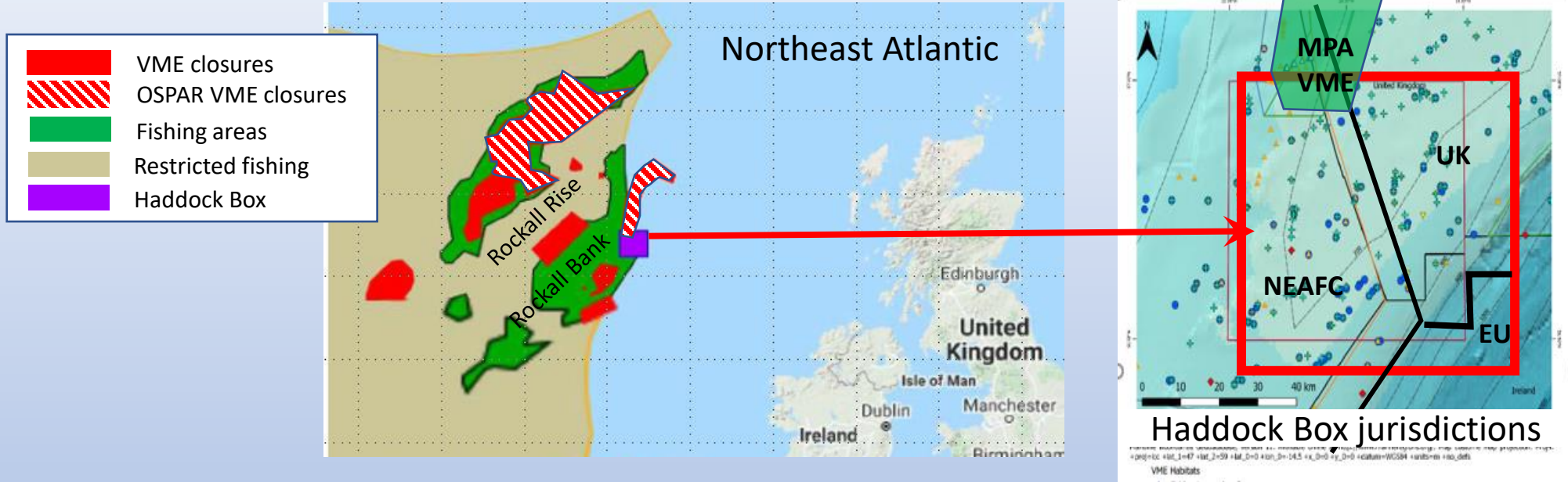


# Canadian marine refuges OECMs



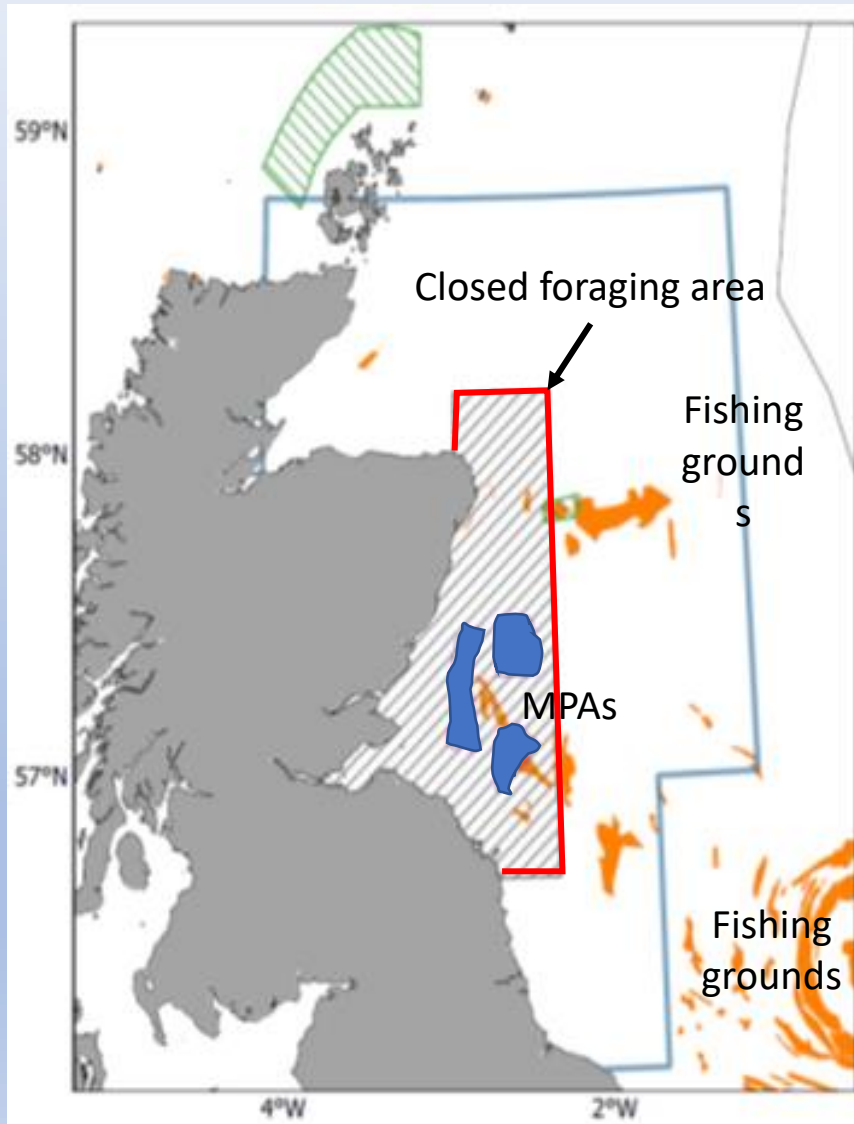
- These numerous refuges are large fisheries closures under the Fisheries Act
- They protect marine ecosystems structures, sensitive habitats, vulnerable species, species of high traditional value (Narwhal) and of concern for fisheries (like rockfish) spp.
- **All bottom-contact fishing activities are prohibited**
- They do not seem to be particularly connected to MPAs. They may better relate to VMEs
- They can be created much more quickly than MPAs
- They may not protect from other activities like mineral or oil and gas extraction

# Rockall Haddock Box (NEAFC)



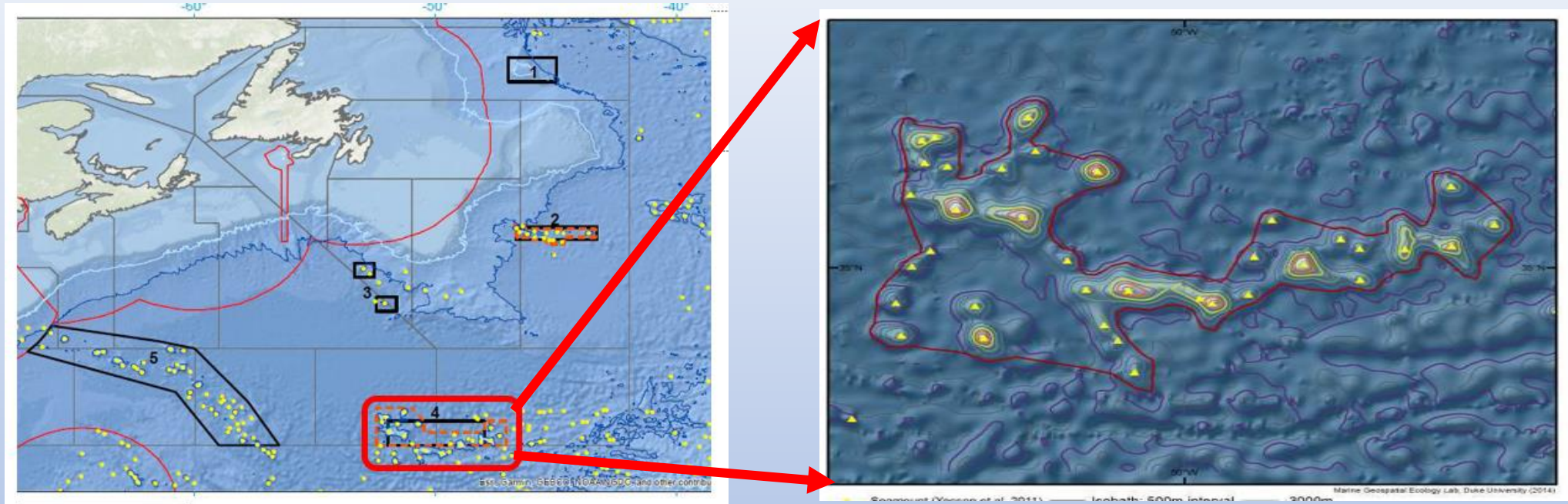
- Closed in 2002.
- Multiple jurisdictions (NEAF, UK, EU, OSPAR)
- Main objective: Protect Haddock juveniles
- Endangered Blue Skate; Untouched VMEs
- The Box is part of a large EBSA
- In the box: Prohibits all fishing except longlines
- Some VMEs are protected by OSPAR MPAs
- Restricted areas require exploratory protocol
- Management measures apply across all jurisdictions.
- No formal management plan yet.
- Small overlap with a VME in the North
- Monitoring is only on access to the area (VMS)

# Northeast UK Sand eel closure



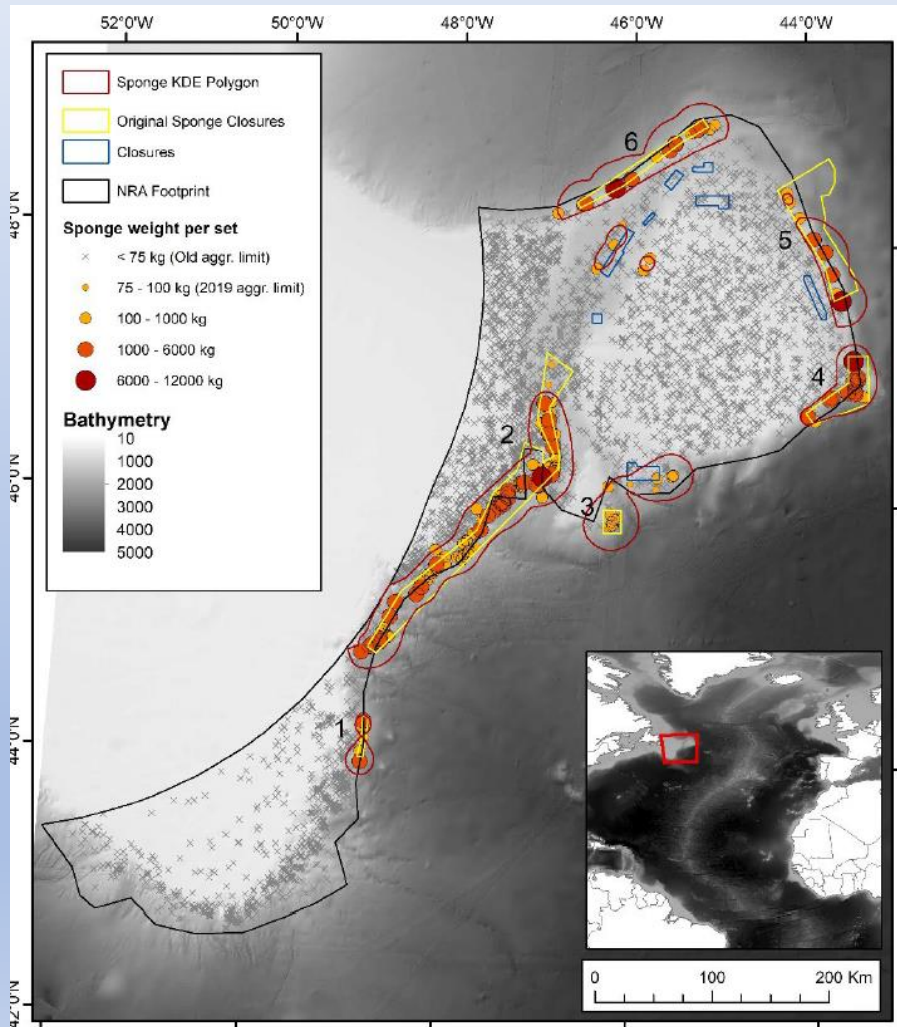
- Established inside a fishing ground since 2000.
- Maintained after Brexit
- Protects sand eels from depletion as forage species for seabirds
- Protects 20,000 km<sup>2</sup> in the foraging range of breeding seabirds
- Benefits measured by from long-term monitoring of seabirds colonies
- The Firth of Forth MPAs created in 2014 overlap with this closure

# Corner Rise seamounts (NAFO)



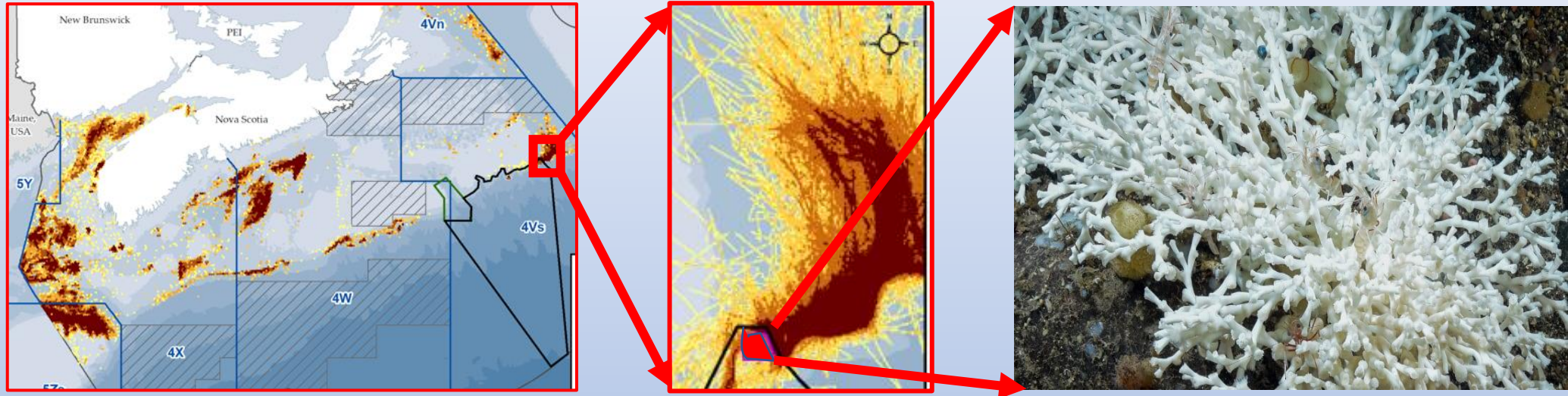
- In the NAFO competence, one of the many areas are already closed.
- Classical deep-sea ecosystem with well-identified biodiversity values
- Area already described as an EBSA (CBD) and VMEs (NAFO)
- Overlap with ISA, IMO and ICCAT competence areas
- Excessive fishing pressure detected
- Impacting gear prohibited since 2016
- Fishing on Alfonsino fish under moratorium since 2019

# NAFO Sponge VME Closed Areas Flemish Cap and Grand Bank (off Canada)



- Established within the Key Greenland Halibut fishing ground
- Rich biodiversity values (VMEs): Sponge focus
- Filters 41-71,000 cubic meters liters of bottom seawater, daily
- Historically stressed by fishing
- Closed in 2008. Well-studied. Actively managed
- Contains 6 VME already enforced
- Protects 60% of sponge biomass from Significant Adverse Impacts
- Under regular performance review

# Lophelia Coral Conservation Area



- Very small area. Closed in 2004.
- Only known living reef of *Lophelia pertusa* in Canadian waters.
- Also rich in other biodiversity values
- Protection and recovery are the primary objectives of the closure
- Fishing is the only immediate threat
- The area is closed to bottom trawling, regularly monitored, and enforced
- Slow recovery has started
- There are some potential threats from oil, gas and cable industries

# Summary conclusions for the North Atlantic

<u>Criteria</u>
A: Not an MPA
B1: Geolocalized
B2: Governed
B3: managed
C1: Effective
C2: Sustained
C3: Cons. values
C4: Monitoring
D1: Eco. services
D2: Other values

Areas considered	Criteria									
	A	B1	B2	B3	C1	C2	C3	C4	D1	D2
Rockall Haddock box	Green	Green	Yellow	Green	Yellow	Green	Green	Green	Yellow	Yellow
Sand eel closure	Green	Green	Green	Green	Yellow	Green	Green	Green	Green	Yellow
Corner rise seamounts	Green	Green	Yellow	Yellow	Yellow	Yellow	Green	Yellow	Yellow	Yellow
NAFO sponge VMEs areas	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow
Lophelia coral cons. areas	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow

Criteria were easily met	Criteria unclear / incomplete
--------------------------	-------------------------------

- For many of the OECM criteria, necessary information was available, and the criteria were met.
- In fewer cases, information was incomplete, or the criteria was not considered clear enough
- None of the selected areas area was found to be excluded as clearly inappropriate



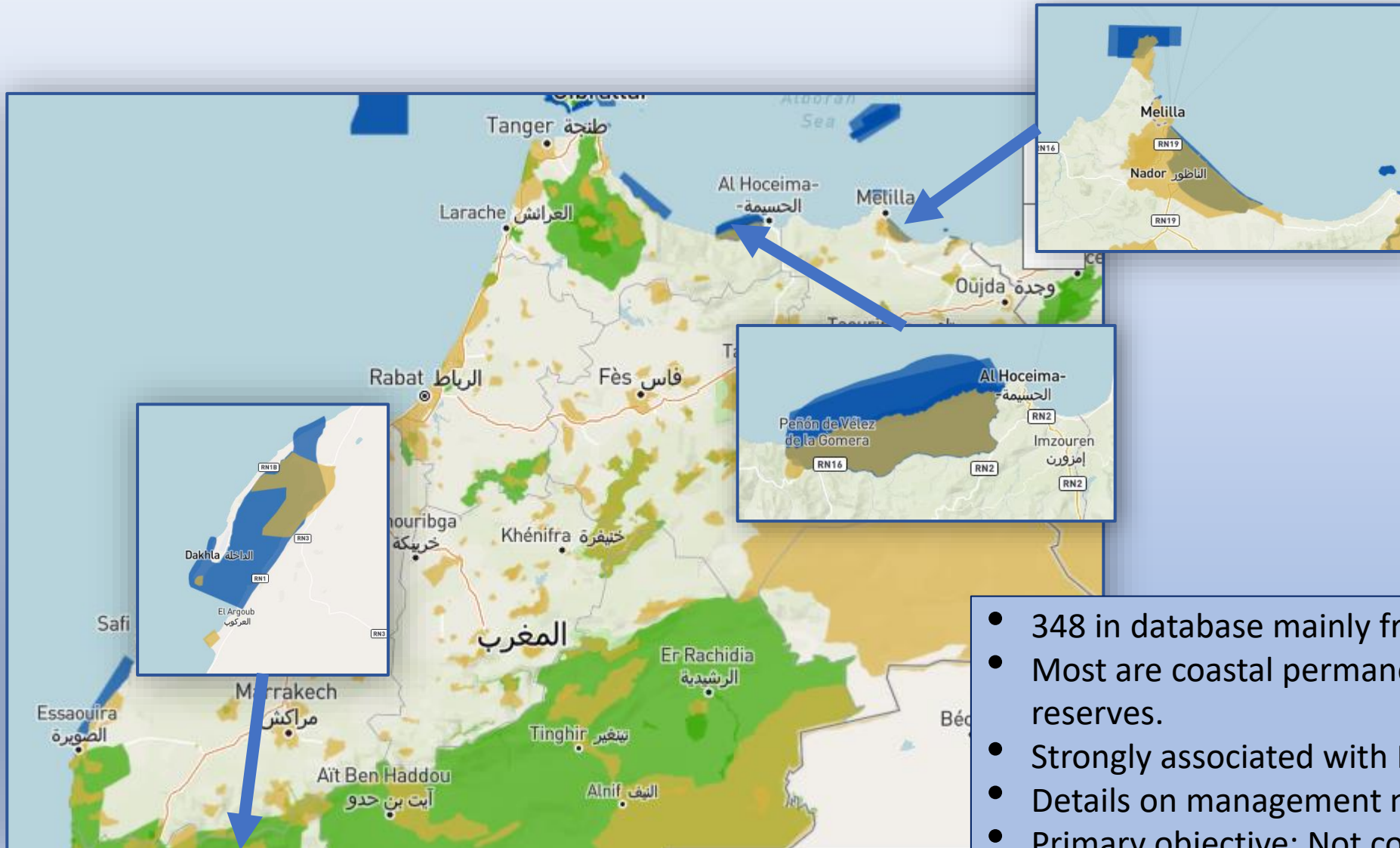
# OECMs in the Philippines



- 178 sites listed
- Previously referred to as MPA network
- All are coastal. Some are around MPAs
- Registered by BMB and DENR\*
- Primary objective: conservation
- No details on biodiversity values and management
- Around MPAs or independent.
- Most might MMAs or LMMAs
- Traditional fishing ?
- No additional information

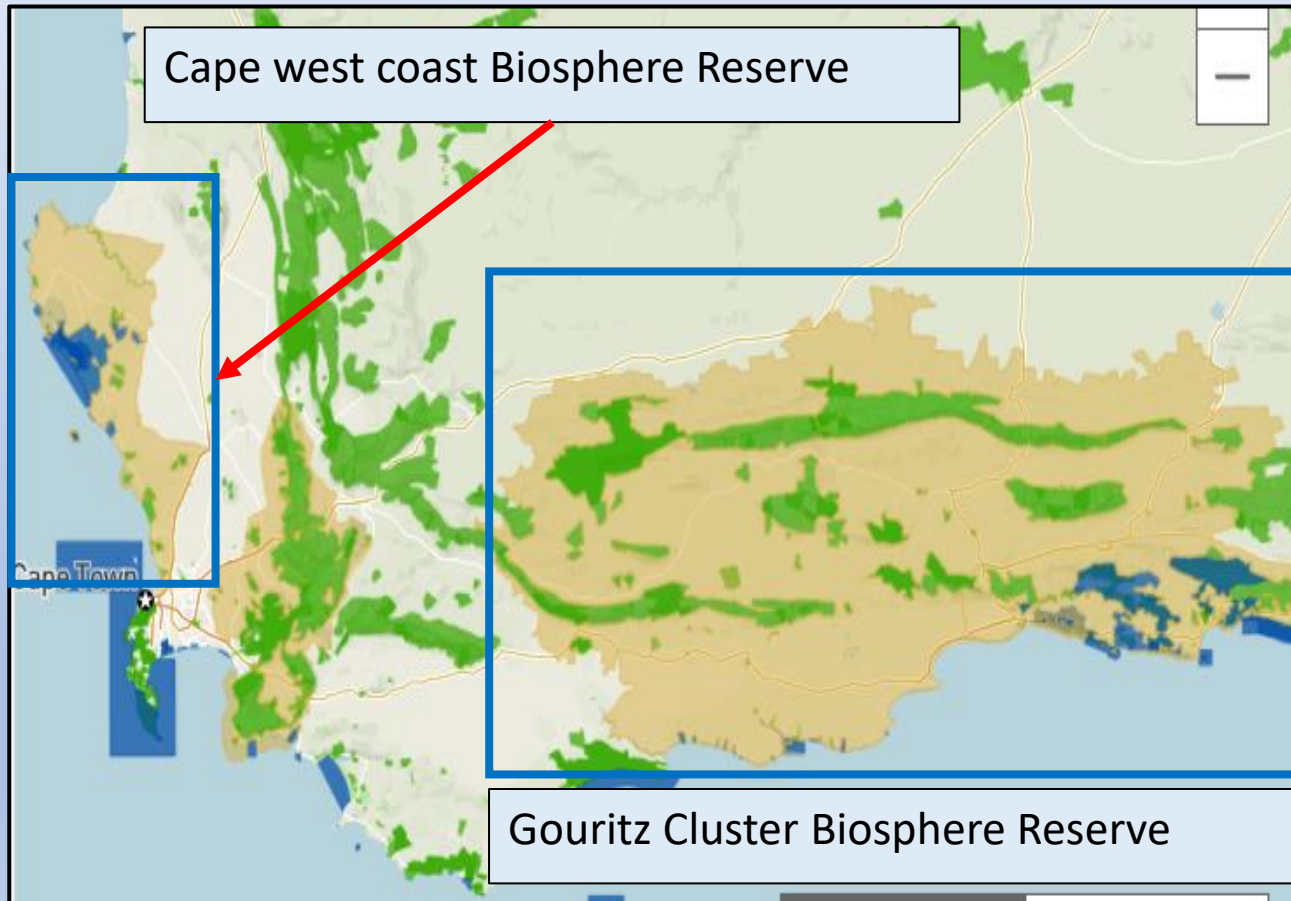
\* BNB = Biodiversity Management Bureau and DENR = Department of Environment and Natural Resources (DENR)

# “Marine” OECMs in Morocco



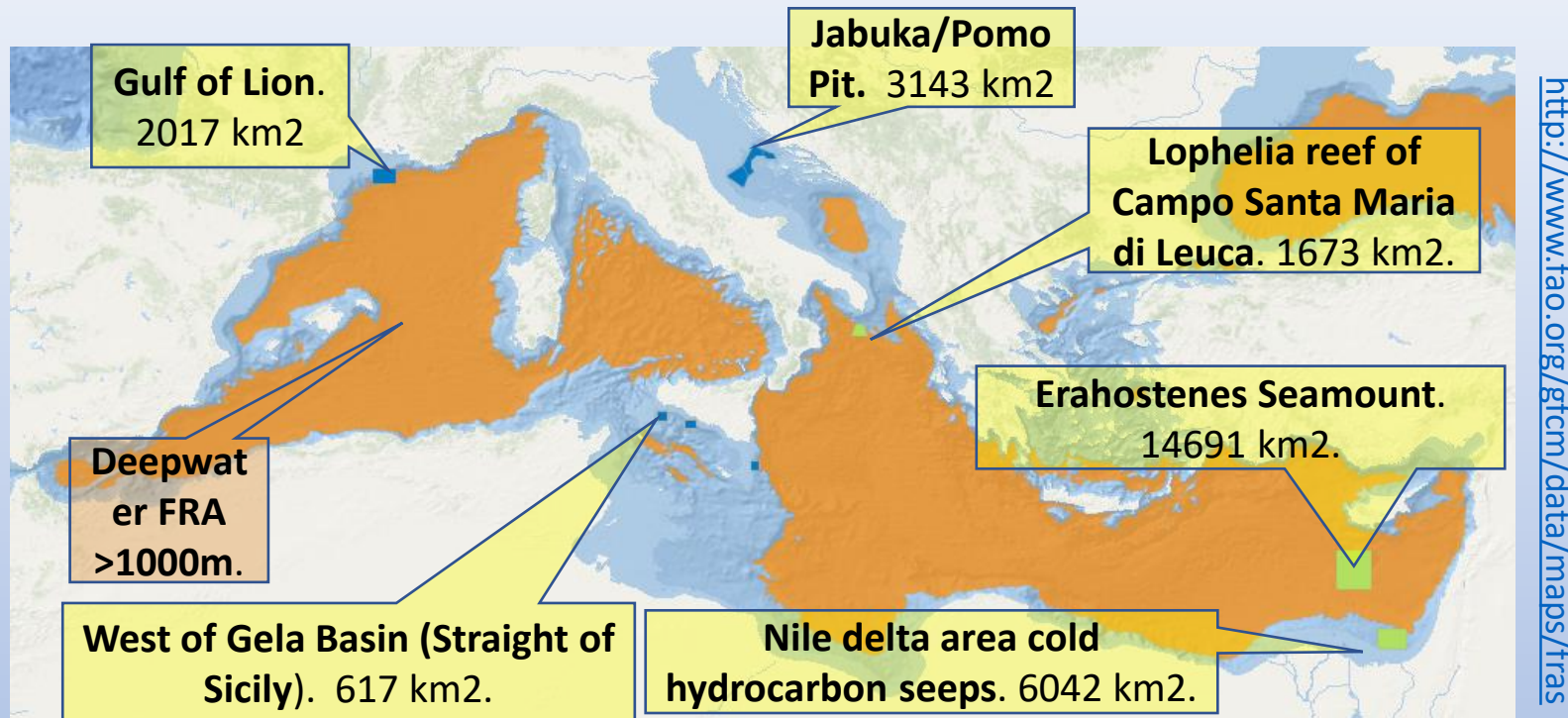
- 348 in database mainly from Morocco
- Most are coastal permanent hunting reserves.
- Strongly associated with MPAs.
- Details on management not available
- Primary objective: Not conservation

# OECMs in South Africa



- UNESCO-MAB Biosphere Reserves
- Governance: Non-profit NGOs
- No management plan
- No supplementary information
- Priority objectives: Not Reported

# GFCM Fisheries Restricted Areas (FRAs)



- FRAs protect marine resource and habitats from relevant fishing activities, in EEZs or the High Sea, following the FAO criteria established for VMEs.
- In 2005 GFCM closed the entire Mediterranean below 1000 meters depth to trawling and dredging.
- In 2012, GFCM prohibited trawling within 3 nm from the coast or the 50m isobath whatever is reached first to protect coastal sharks, rays and benthic communities, and Posidonia meadows.
- Extremely large closed areas probably not ideal as fishery-OECMs. Jabuka/Pomopit taken as first candidate

# ABMTs considered in the Wider Caribbean

## **USA-Puerto Rico**

- Seasonal Red Hind Grouper Closure
- Mutton Snapper Spawning Aggregation Area
- Habitats Areas of Particular Concern (HAPC)
- Queen Conch Seasonal and Area Closures

## **MEXICO**

- Fishery refuge (Golfo de Ulloa)

## **COSTA RICA**

- Marine Area for Responsible fishing (MARF).
- Seamounts Marine Management Area (MMA)

## **BRAZIL**

- Trawl Exclusion Areas
- Other gears exclusion areas

## **JAMAICA**

- Special Protected Fishery Conservation Area (SPFCA)

## **ANTIGUA & BARBUDA**

- Cades Bay Marine Reserve
- Northeast Marine Management Area

## **DOMINICA**

- Soufrière Scott's Head Marine Reserve (SSMR)

## **St LUCIA**

- Soufrière Marine Management Area (SMMA)

## **St KITTS & NEVIS**

- Marine Management Area (SKMMA)

## **St VIINCENT & GRENADINES**

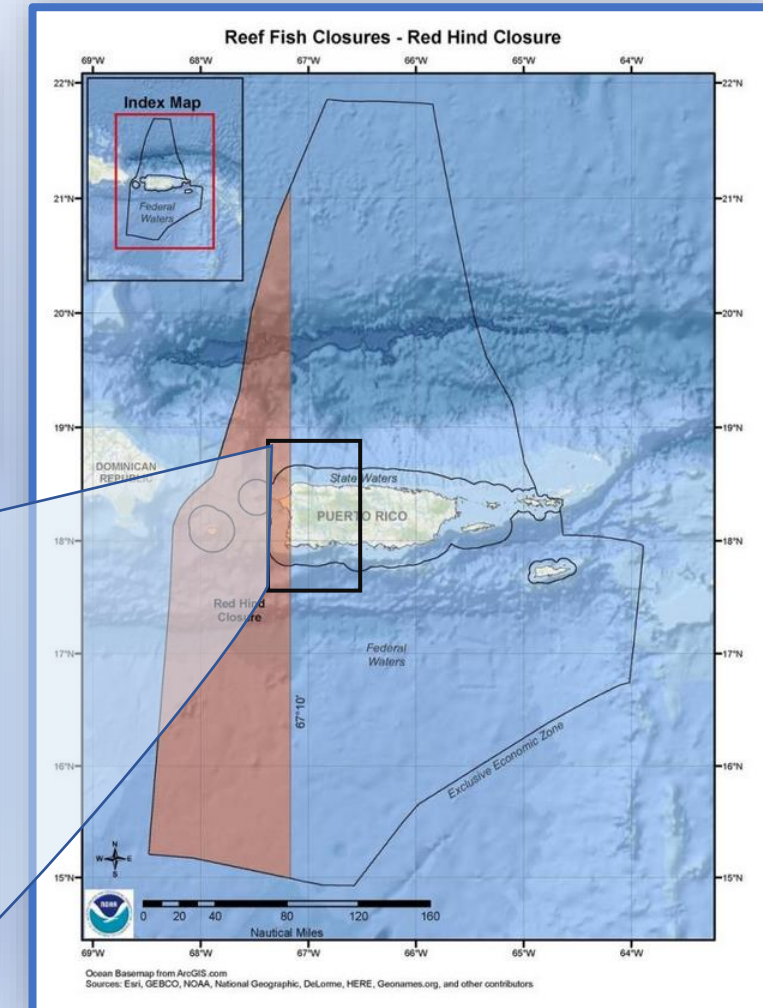
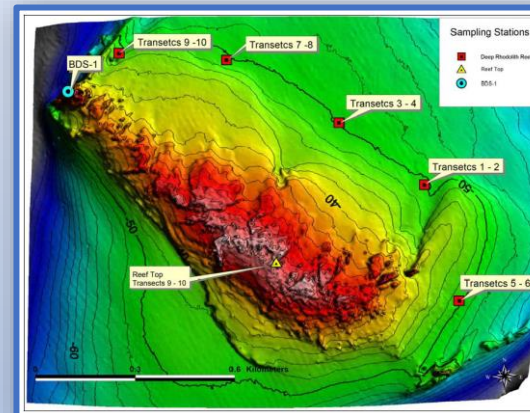
- South Coast Marine Managed Area (SCMMA)

# Seasonal Red Hind Grouper Closures



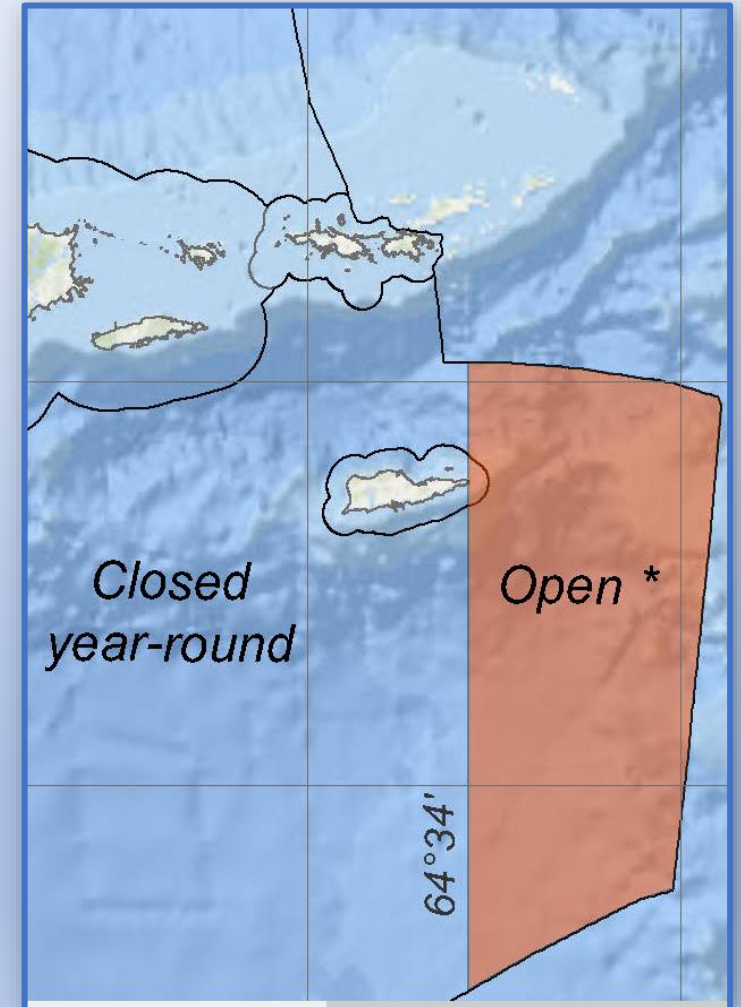
Red Red Hind (*Epinephelus guttatus*)

- Puerto Rico (USA). Tourmaline and Abrir la Sierra Banks closed by NOAA Fisheries in Puerto Rico federal waters west of 67° 10' W from **December 1 to February 28**.
- Bajo de Sico seamount has been proposed as a no fishing zone
- “single species “ site with broader potential
- Vulnerable long-life species with high commercial value
- State and Federal jurisdictions.



# Queen Conch Seasonal and Area Closure Puerto Rico (USA)

- A spatio-temporal measure (4 months)
- Delimited Puerto Rico (USA)
- Governed (NOAA)
- Managed (NMFS)
- Protects a portion of a stock to avoid overfishing. More a “seasonally open” than “seasonally closed” area” as all federal waters are closed all-year round. In the US Caribbean EEZ East of 64°34’ longitude.



# Special Fishery Conservation Areas (Jamaica)

- The 2012 Fishing Industry Regulations on **Special Fishery Conservation Areas** (SFCAs) established 14 **no-fishing zones** (SFCAs) referred to as “**sanctuaries**. Seven more proposed later (2014-2017)
- Each SFCA specifies (i) The delimitation; (ii) applicable measures; (iii) restrictions regarding gears, species,; (iv) fishing seasons; (v) destination of catch
- Intends to protect genetic diversity, target resources, mangroves, seagrass beds, coral reefs and ensure the conservation of indigenous populations.
- SFCAs status requires consensus and a management authority (States, preferably with NGOs).
- Financial support, capacity-building and enforcement by the State.
- In 2017, The Boscobel SFCA (created in 2013) becomes the first **rotating SFCA**, as part of the SFCA becomes exploitable every year to improve benefits to fishers.



It is not clear whether SFCAs are formally registered as MPAs or not



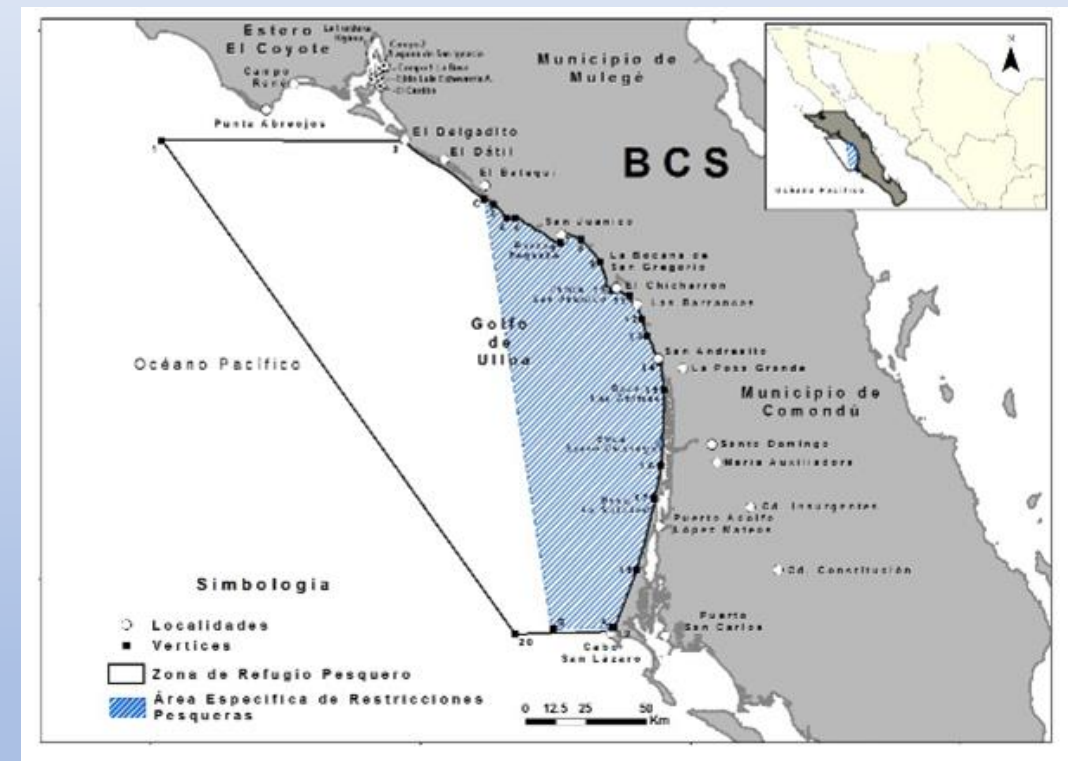
# Zonas de refugio pesquero (Mexico)

- Concept created in 2007
- Areas established in waters under federal jurisdiction, with the primary objective *to conserve and contribute, naturally or artificially, to the development of fisheries resources, their reproduction, growth or recruitment, and to preserve and protect the surrounding environment*
- Compared to MPAs, refugia are: (1) smaller and conceived as networks; (2) shorter term (to be extended); (3) less fishing restrictions; (4) lower costs of management and implementation; (5) Proposed by the sector who shares the responsibility; and (6) more adaptable to the fishery and aquaculture sectors' needs
- Apparently effective



# Refugio Pesquero Golfo de Ulloa (Mexico)

- 19,900 km<sup>2</sup>
- Legitimate authority: CONAPESCA
- Established in June 2018
- To protect yellow turtle *Caretta Caretta* from Tuna Fishing and to protect its habitat.
- Zoned: for controlled fishing. Also for Phosphorus mining (rejected)
- Fishing threat: drift gill nets in turtle nurseries (1500-3000 turtles killed /year, reduced to 90/year with this measure)
- Other threats: Low temperatures spikes kill 100s of turtles in 2-3 days



# Marine Areas for Responsible Fisheries (Costa Rica, Pacific coast)

- Delimited by geographical coordinates and other means
- Regulated to ensure long-term use and conservation of fishery resources
- With the support of coastal communities and/or other institutions”
- Managed by local communities through a management plan
- The FMP is approved by the central fishery authority
- Important biological and sociocultural characteristics
- Enforcement is jointly undertaken by the communities and coast guards.
- There is an Oversight Commission.

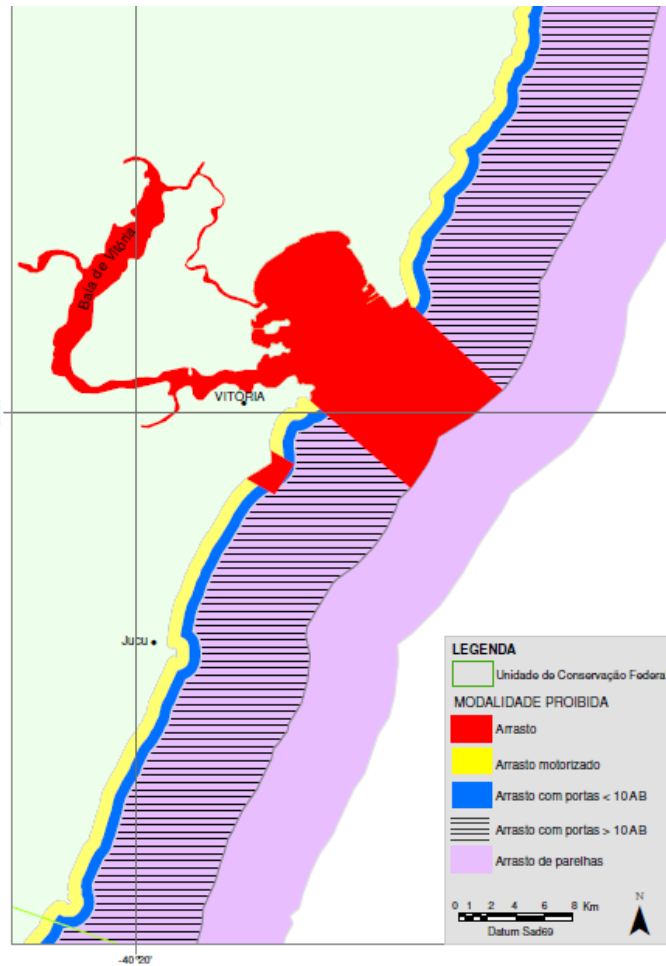
There is a need for local & central capacity building for self-organization and deliberation processes



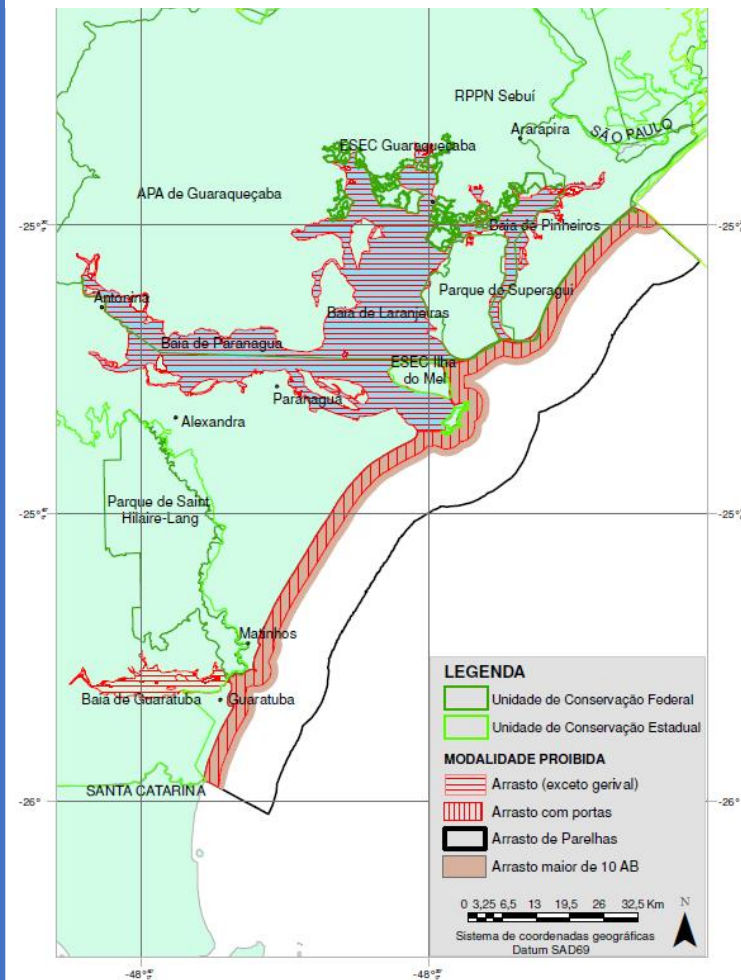
Translated from Decree N° 35502-MAG of 2008

# ABFMs in Brazil: extensive trawl exclusions

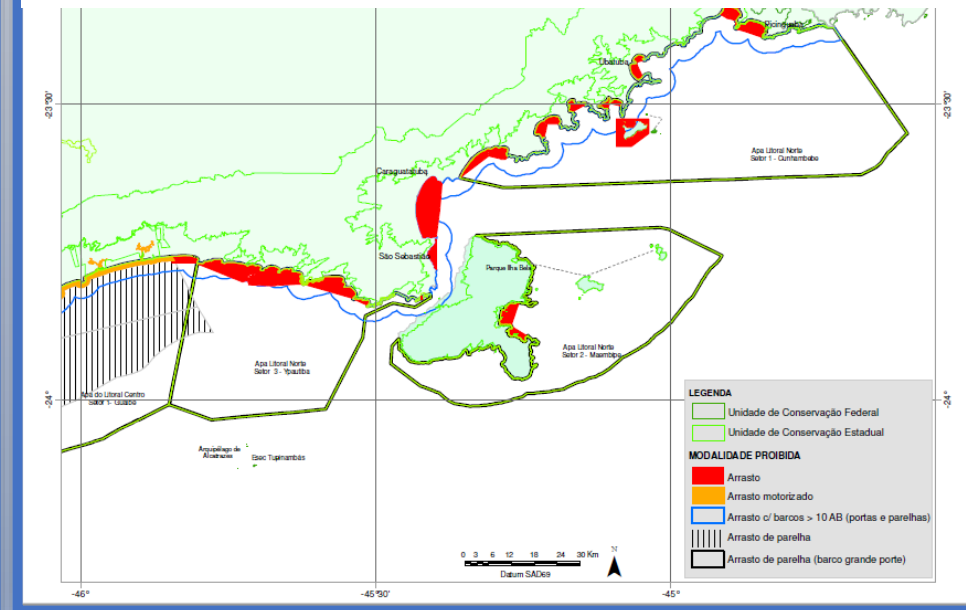
Coastal and inland (Santo Spirito)



Estuaries and lagoons (Parana)

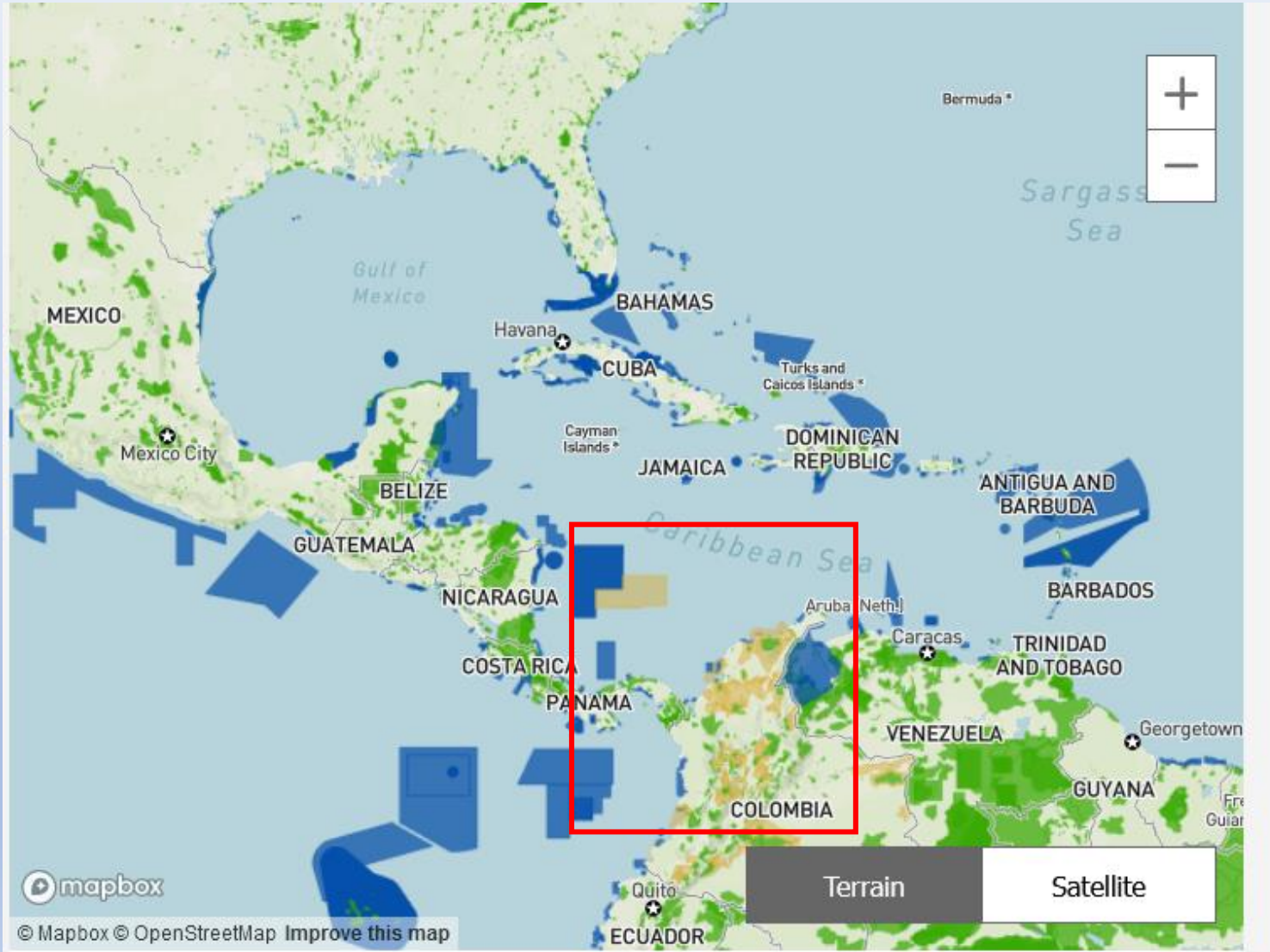


Coastal areas (Sao Paulo)



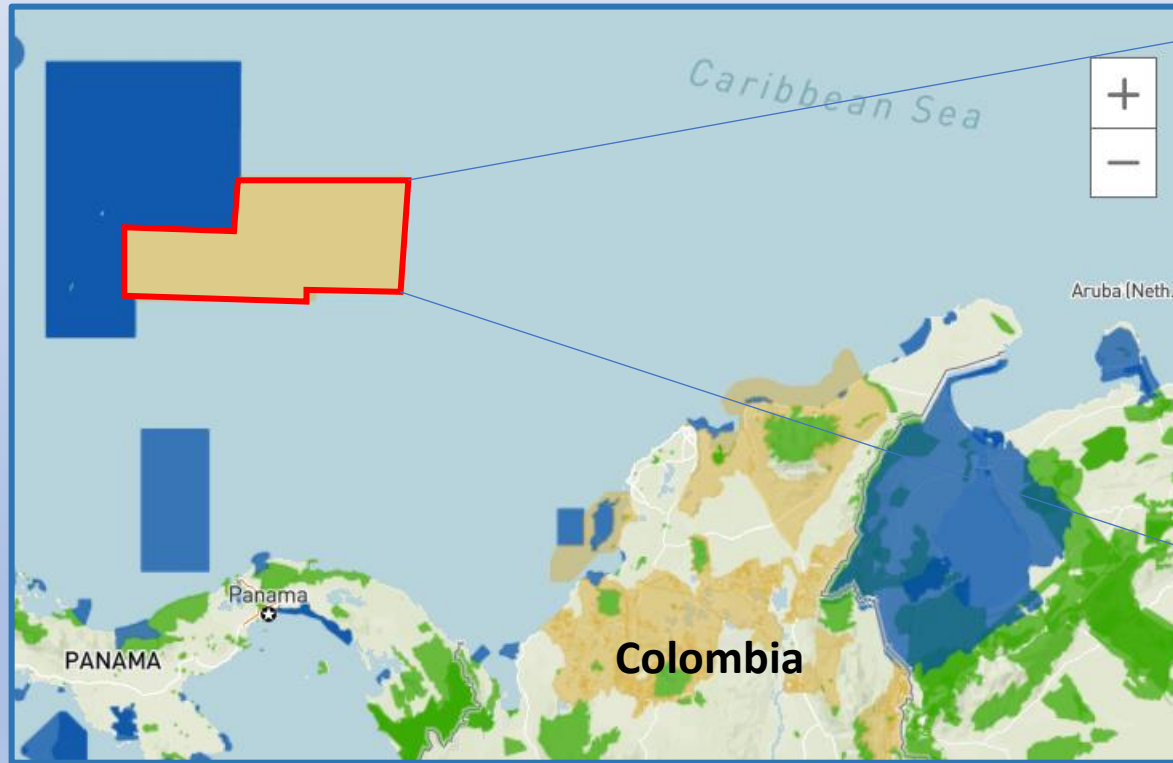
There may be also several TURFs (inside extractive reserves) which may be considered MPAs when coastal) but not systematically updated and listed publicly

# OECMs registered in Columbia



- In the Caribbean, only Colombia seems to have registered OECMs
- 55 registered. Few are marine or touch the marine domain

# Special Conservation Area, East, Southeast and Runcador Islands-Keys sector (Colombia)



- Located in the Archipelago of San Andres, Providencia and Santa Catalina.
- Part of the Sea Flower Biosphere Reserve. Small islands and coral reefs.
- Referred to as MPA (no category).
- Collaborative governance.
- Managed by the CORALINA Authority\*.
- Primary objective: conservation

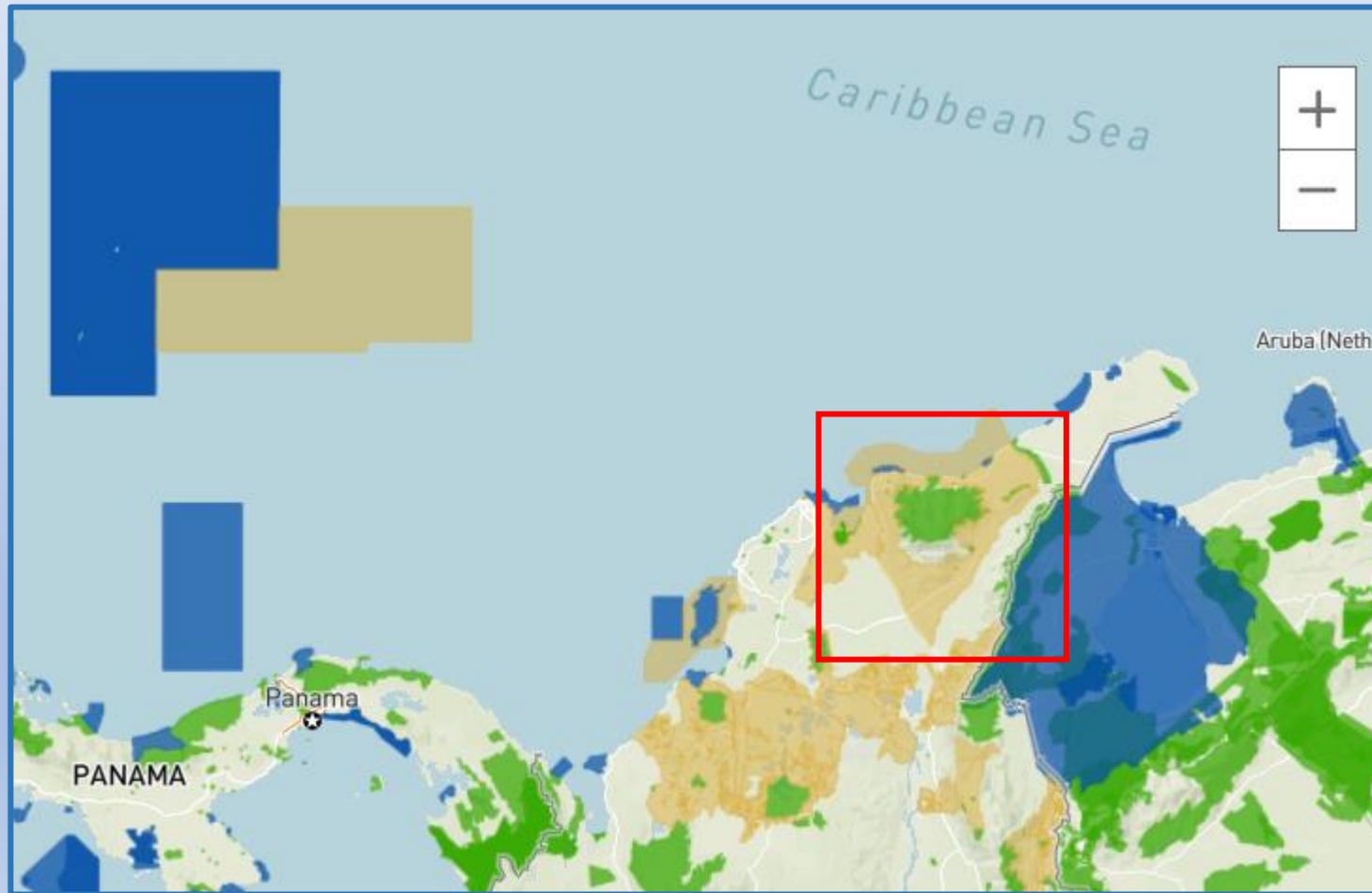
\*CORALINA is the nationally chartered corporation for the sustainable development of the Archipelago, given special rights and authorities by the Colombian constitution of 1991

# Archipelago of Corales del Rosario and San Bernardo (Colombia)



- Surrounds an MPA
- Coastal and marine
- Type of Designation: National
- Collaborative governance
- Min. Environment and SD
- No management plan
- Primary objective: conservation

# Biosphere reserve of the Sierra Nevada de Santa Marta (Colombia)

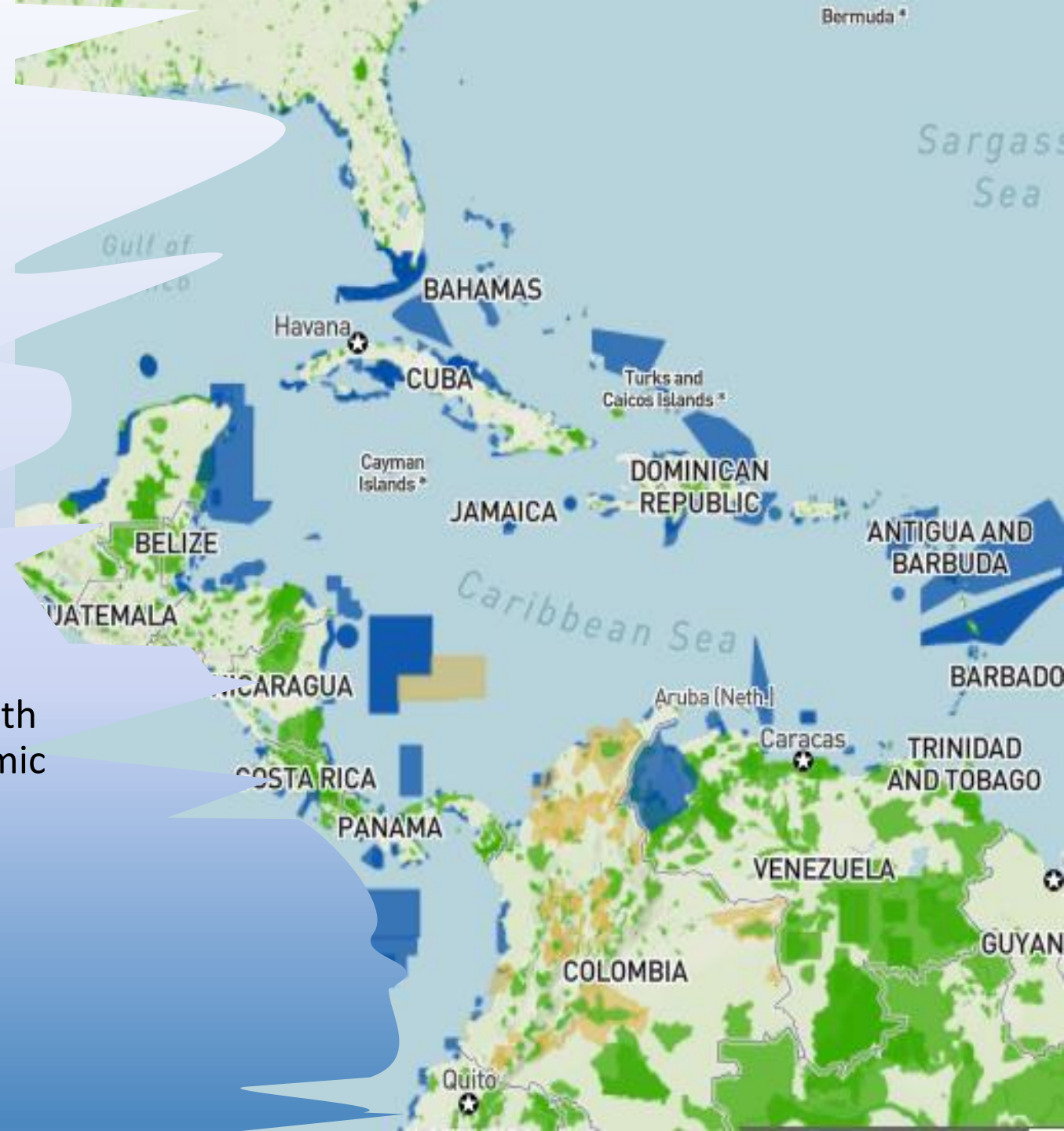


- UNESCO-MAB Reserve
- Surrounds a terrestrial/coastal PA
- No IUCN Management Category
- International designation (1979)
- Under Federal governance
- Min. Environment and SD
- No management plan
- Primary objective: conservation



# Preliminary conclusions On Caribbean OECEMs

- None from Island States
- Cover a range of ecological domains, inland, coastal and marine;
- They are close to, or surround MPAs (as buffer areas or neighboring sustainable use areas?);
- They are parts of existing conservation areas, with important human settlements and socio-economic stakes.
- Fisheries may be implicit but not specifically mentioned
- Primary objective is usually conservation



# Tentative conclusions on the global picture (based on the WDOECM database recordings)

- The OECM identification process is slowly taking off. Examples in the marine area are still relatively few.
- Countries seem to have chosen to identify OECMs across their entire territory and not a pilot project approach.
- Initiatives were led by authorities for fisheries and ocean biodiversity in Canada) and by agencies in charge of environment and development (in terrestrial/coastal OECMs in The Philippines, Morocco and Colombia).
- The way the identification criteria were applied will not be clear until such information and other additional information is uploaded in the WCMC database.
- The primary objective stated may be conservation or not.
- Other economic sectors, also invited by the CBD to contribute OECMs do not seem to have started the process.

Thank you for your attention!

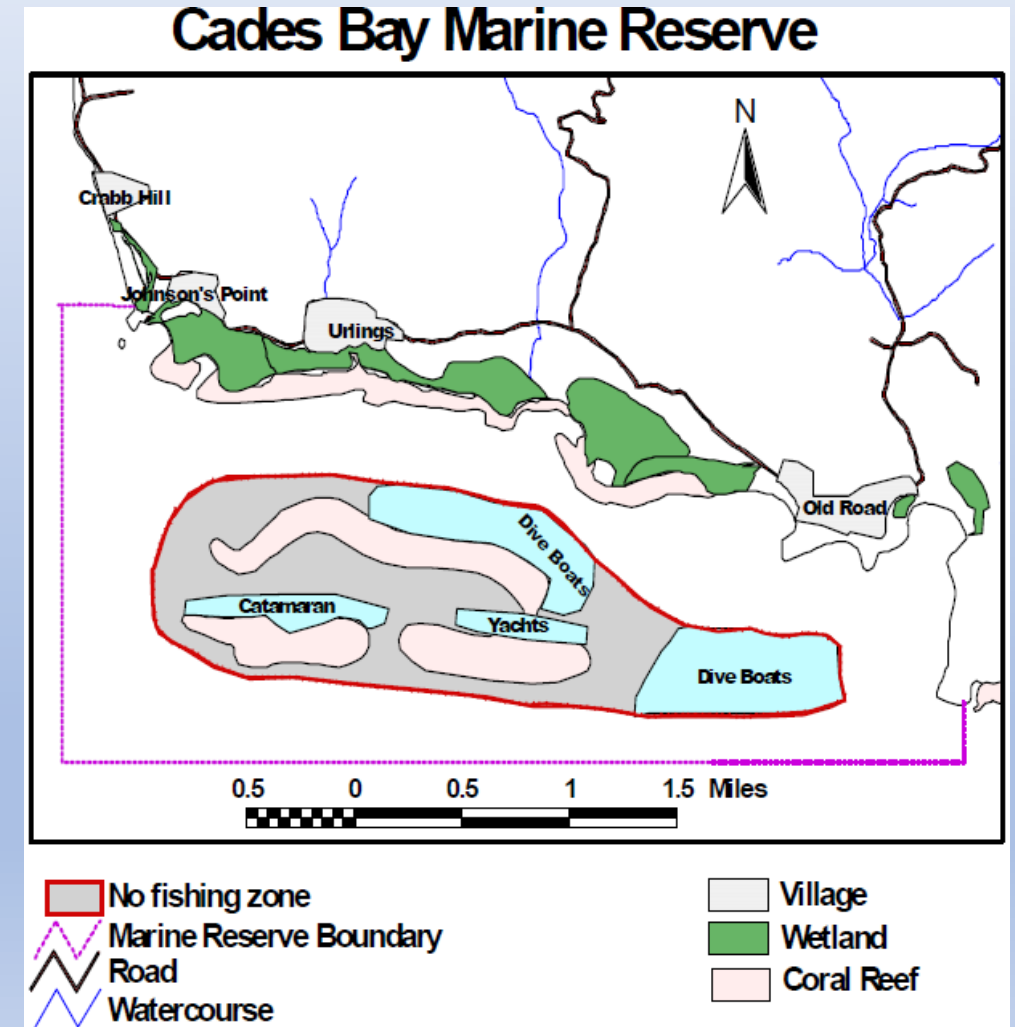
Any question?



# Cades Bay Marine Reserve (Antigua & Barbuda)

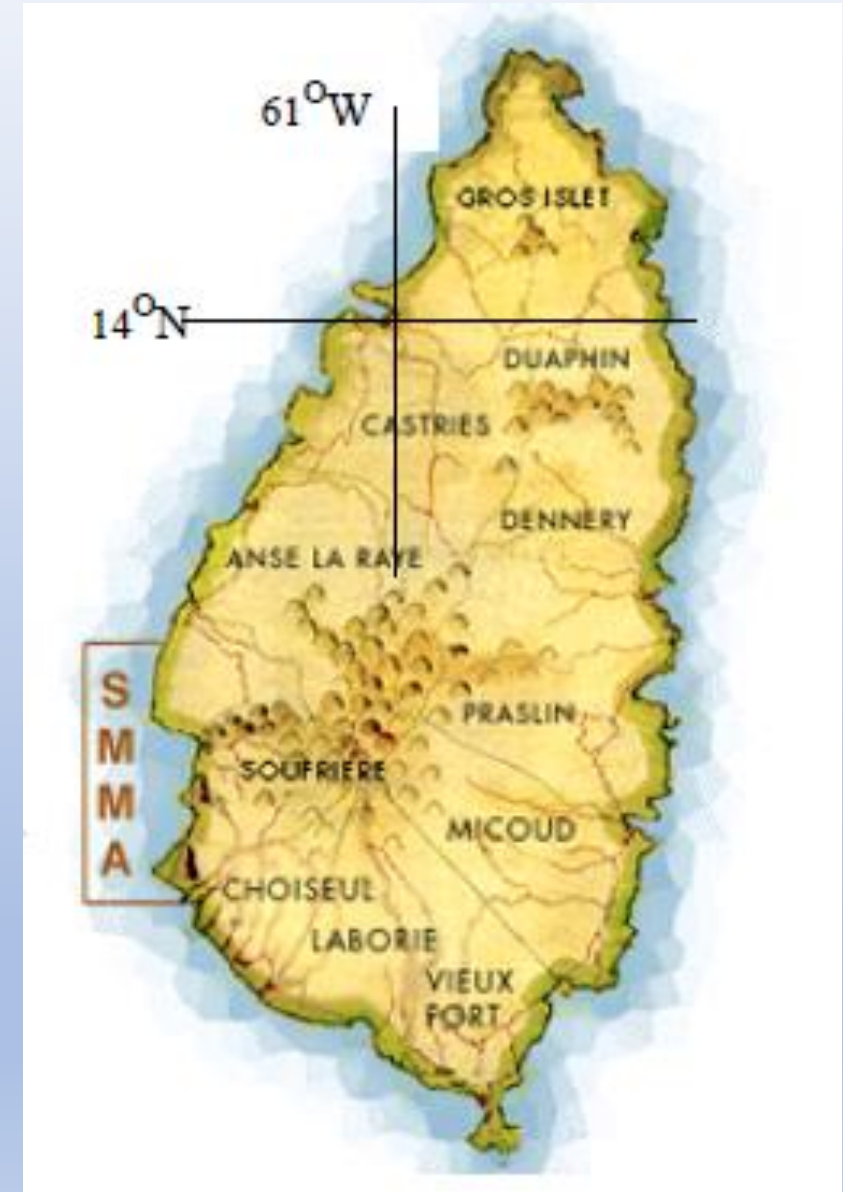
- Gazetted by 1983 Fisheries Act.
- To monitor biodiversity, sustain fisheries resources, and create an environment for local communities and tourism
- Demarcated.
- Values: beaches, essential habitats, nursery grounds.
- State-managed. Low participation and mixed results (until 2007). No management plan still in 2012?
- Doubts on enforcement? Formation of a community-based organization ? Fisheries allowed around a **no-fishing zone**, from settlements inside or close to the reserve.
- Many human-induced stresses.
- Listed as a PA (?)

Information probably not up-to-date



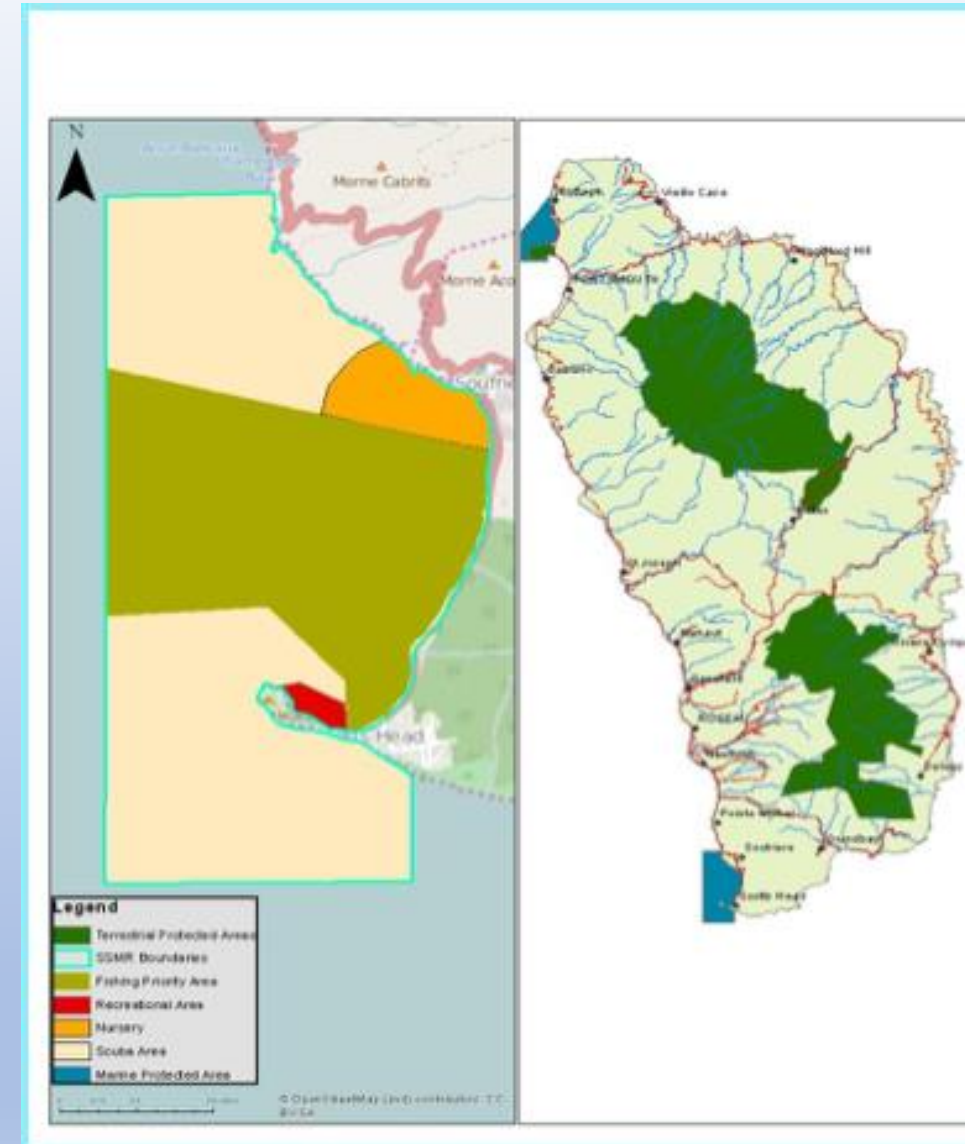
# The Soufrière Marine Management Area (SMMA). St Lucia

- Top-down initial establishment process
- Includes marine reserves (NTZs); fishing priority, recreational, multiple use and yacht mooring areas
- Fishing gears used include pots, lines and seines.
- Governance revised in the Mid 1990s
- An MPA since 1995
- Managed by The Soufriere Marine Management Association (SMMA), a no-profit NGO), since 1997, with support from the Fisheries Department.
- **Declared a Local Fisheries Management Area (LFMA) in 2001.**
- **But registered as MPA**



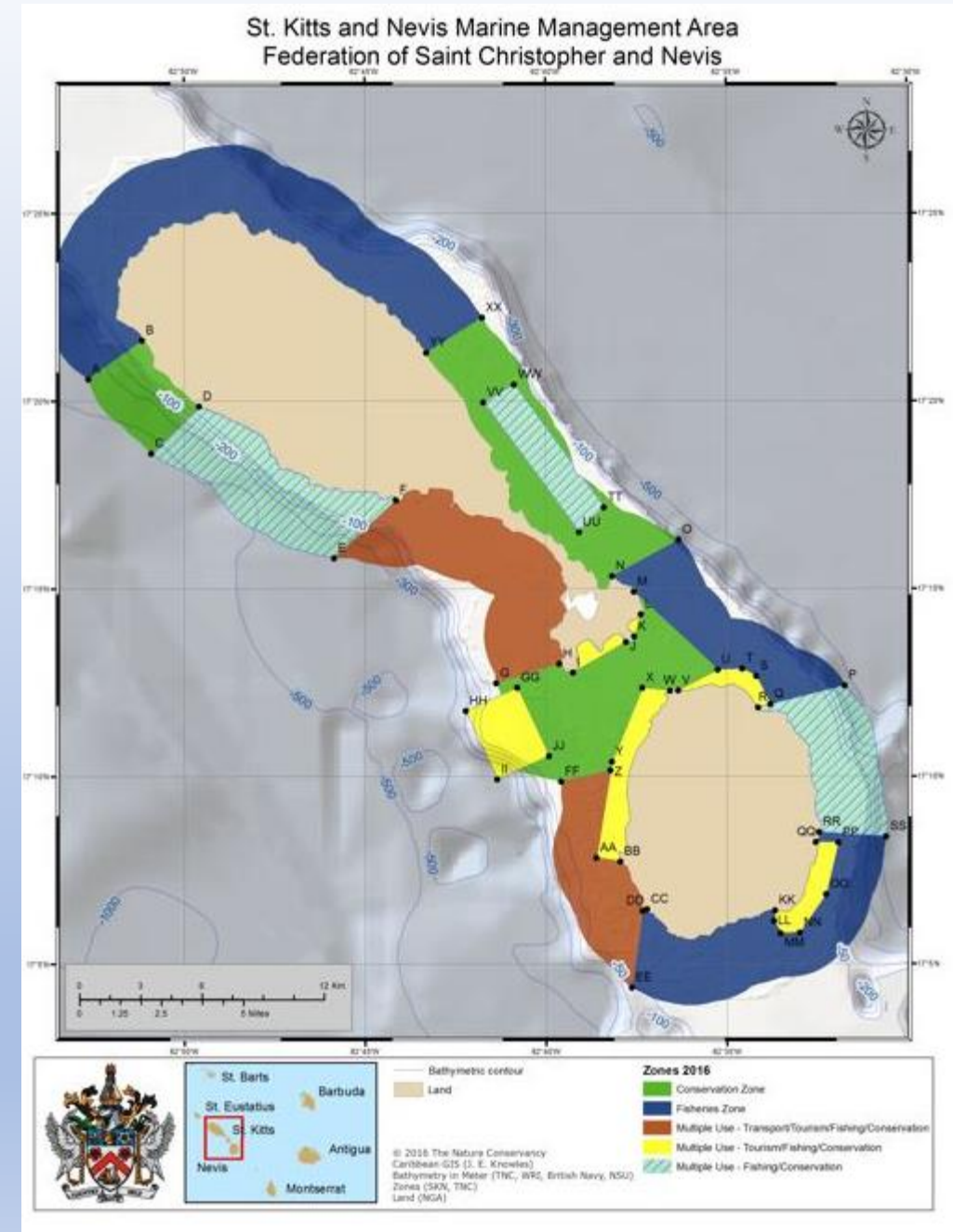
# Soufriere-Scott's Head Marine Reserve (SSMR), Dominica

- Established under the Fisheries Act #11 of 1987 and by the Statutory Rules and Orders (SRO) #18 of 1998 (MPA)
- A Local Area Management Authority (LAMA) was established under SRO #17 of 1998- wardens of the LAMA are designated as authorized officers
- Values: Beaches, essential habitats, nursery areas
- Within the SSMR there are four zones.
  - Fish nursery area: Valuable spawning ground for many pelagic and reef fish; there is no fishing allowed in this region.
  - Recreation area: The beach called "Tout sable" is set aside as a recreational area for swimming and snorkelling from shore.
  - Fishing priority area: This is set aside for the local fishery and there are strict guidelines governing this area.
  - Scuba Diving: Several areas are set aside for scuba diving activities.



# Marine Managed Area St. Kitts and Nevis (SKNMMA),

- Declaration of the St. Kitts and Nevis Marine Management Area as defined by the two (2) miles radius of sea water around the St. Kitts and Nevis' coastline including the Monkey Shoals area in 2016 (MPA)
- Managed by the Department of Marine Resources as the entity with jurisdiction of the Federal Waters of St. Kitts and Nevis as indicated in the Fisheries, Aquaculture and Marine Resources Act
- Values: Beaches, essential habitats, nursery areas
- Includes multiple use zones
  - Conservation
  - Fishing Priority
  - Transport with caution
  - Recreation zones



# South Coast Marine Managed Area (SCMMA), St. Vincent and the Grenadines

- Initially designated in 1987 as a Marine Conservation Area
- In 2015, declared as an Marine Management Area or Marine Park (MPA)
- Saint Vincent National Parks, Rivers and Beaches Authority is the designated management entity of SCMMA
- Values: Beaches, essential habitats, nursery areas
- SCMMA includes:
  - Recreational beaches
  - Coral reefs and sea grass beds
  - High density residential population
  - High density of hotels
  - Important fish landing site and landing facility
  - Historical and cultural sites
  - Yachting and boating centres; and
  - Restaurants and entertainment centres

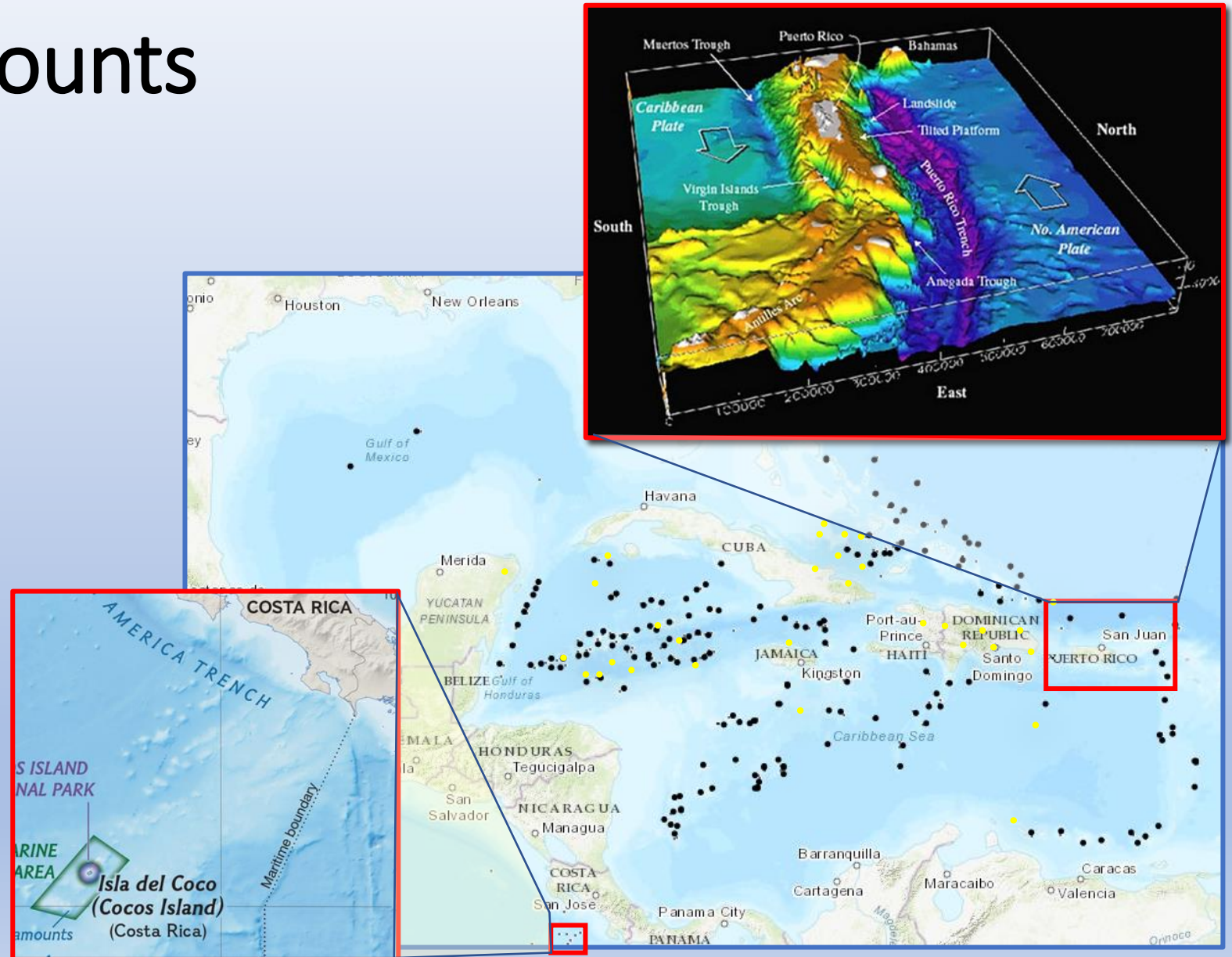




# Caribbean seamounts

- Many seamounts exist in the area, within and beyond EEZs.
- No protection yet (?)
- No deep-sea (below 200 m.) reported in the area (No fishing threats on seamounts)
- Example of protection in the Pacific: The Cocos Islands Seamout Management Area (Costa Rica)

<https://grid-arendal.maps.arcgis.com/apps/MapJournal/index.html?appid=ae4156bb0bec48aa82594eae453e453d>



<https://oceanexplorer.noaa.gov/oceanos/explorations/ex1502/background/edu/purpose.html>