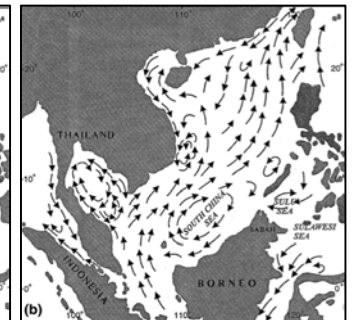
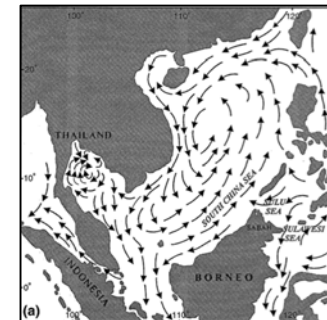
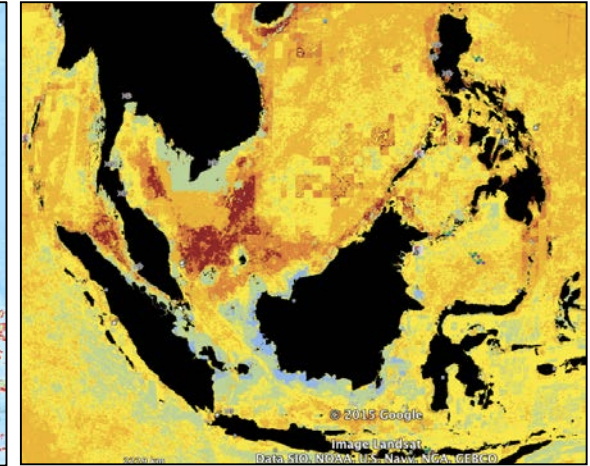
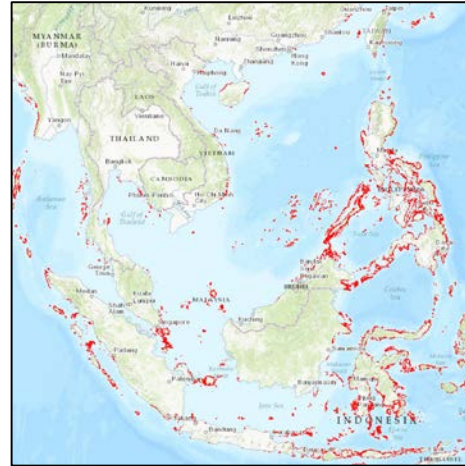
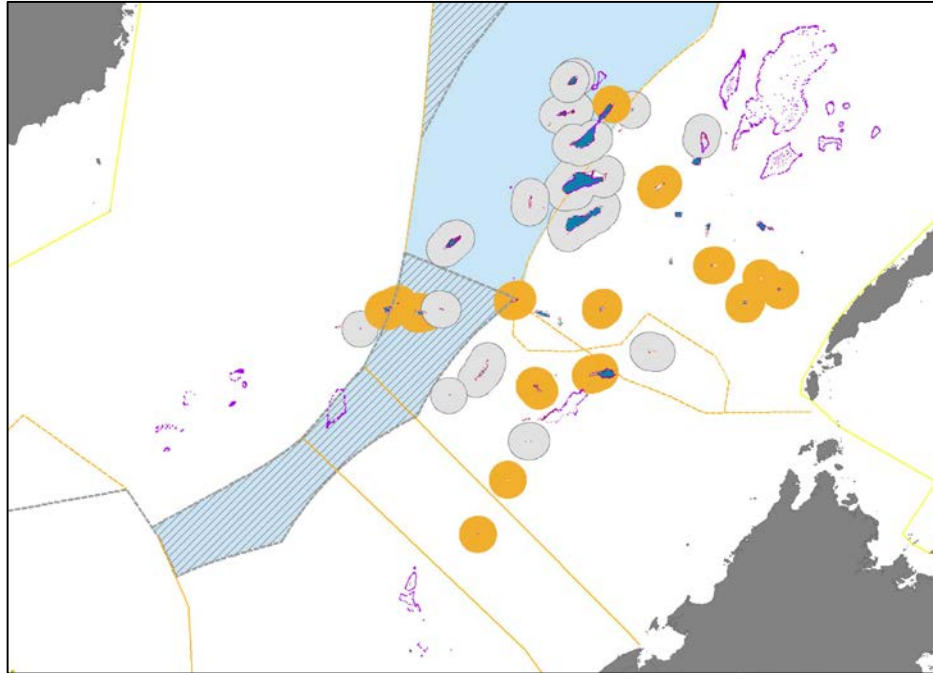


# A path towards MPAs in the South China Sea following the arbitral award of 12 July 2016



## ENVIRONMENTAL AND MARITIME SECURITY FOR A BLUE SOUTH CHINA SEA

Hai Phong city, 10-12 October 2016

Youna Lyons

*Senior Research Fellow, Centre for International Law*

**CIL**

CENTRE FOR INTERNATIONAL LAW  
National University of Singapore

# Outline

## **Introduction: Arbitral Award findings on the status of the SCS features**

- 1. Maritime zones**
- 2. Designing an MPA network**
- 3. Marine habitats**
- 4. International law on the protection of the marine environment (incl. Arbitral Award)**
- 5. Legal and institutional issues linked to the control of human activities**

**Conclusion**

**Proposal**

# Introduction: Award findings on the status of the SCS features

- No island entitled to a 200NM EEZ
- 7 'High Tide Features', i.e. islands with a Territorial Sea (no EEZ)
  - Cuarteron Reef (oceanic atoll)
  - Fiery Cross Reef (oceanic atoll)
  - Gaven Reef (Tizard Bank)
  - Itu Aba (Tizard Bank)
  - Johnson South Reef (Union Reefs)
  - Mc Kennan Reef (Union Reefs)
  - Scarborough Reef (Oceanic atoll)
- 4 'Low Tide Elevations' (i.e. not above water at high tide)
  - Hughes Reef
  - Mischief Reef
  - Second Thomas Shoal
  - Subi Reef
- Determinations made primarily on the basis of sailing directions

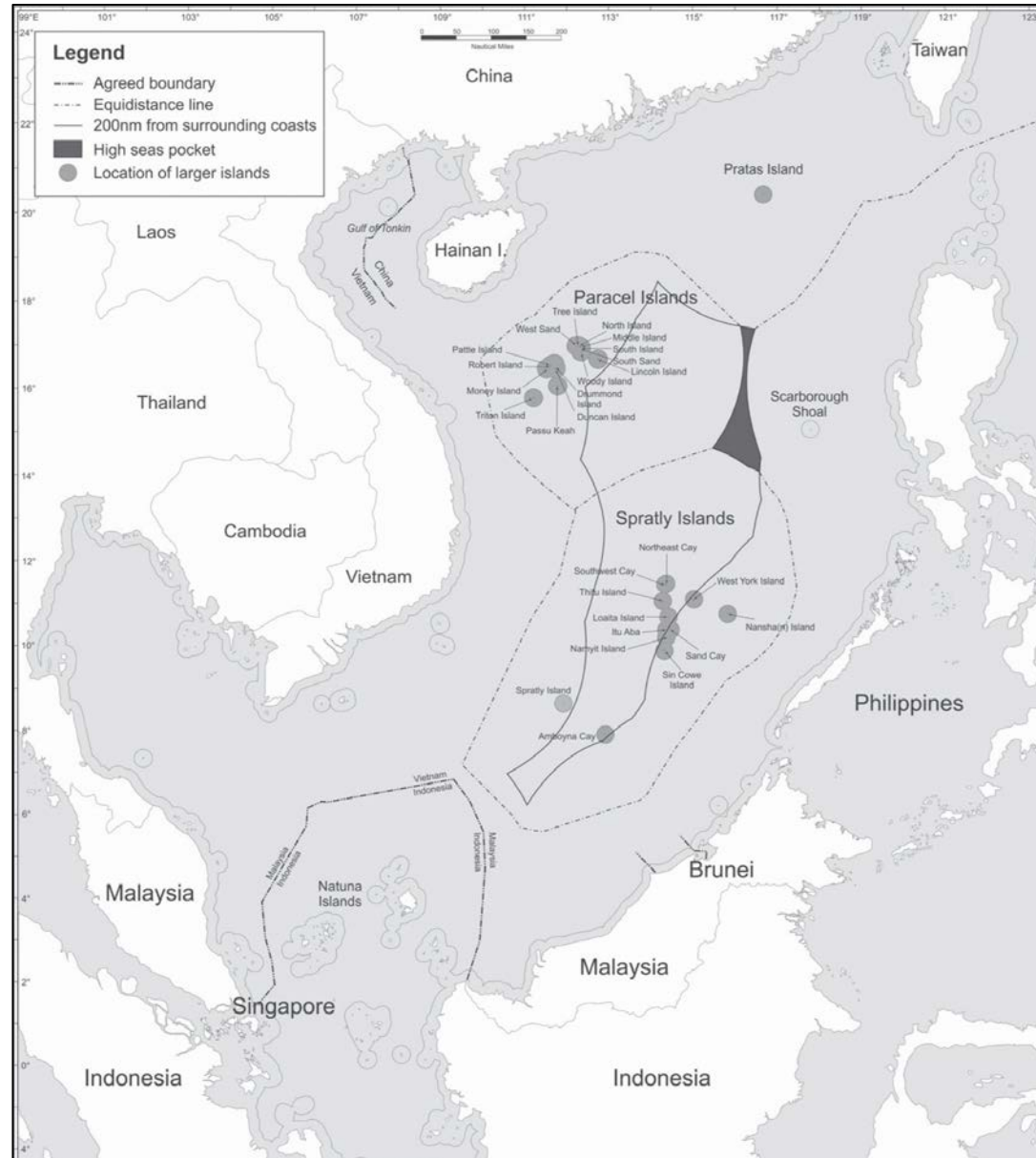
# I- Maritime Zones

*Text book claims*



# I- Maritime Zones

*Based on an equidistant line*

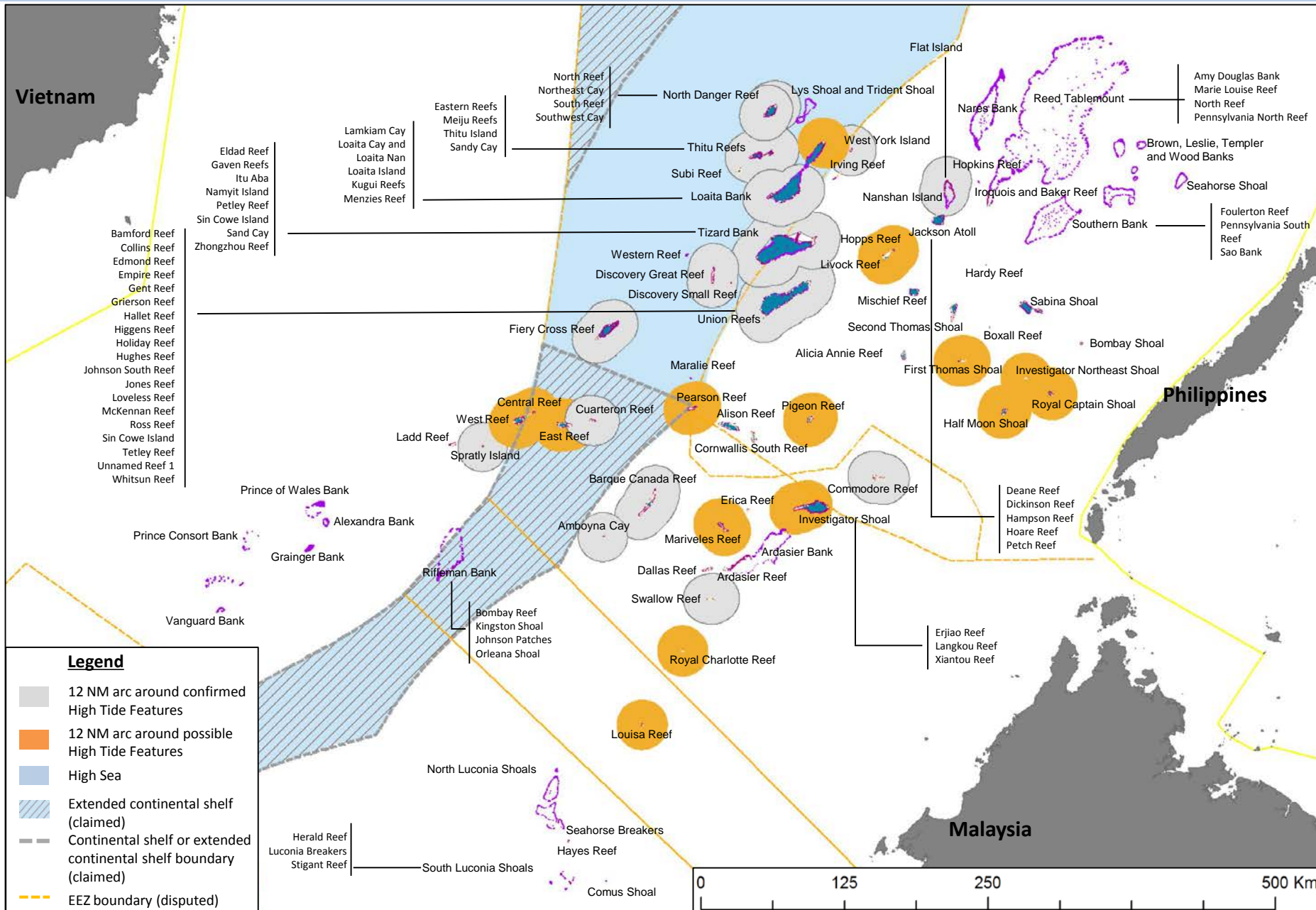


Extracted from Beckman and Schofield (2014) *Defining EEZ Claims from Islands: a Potential SCS change*, IJCLM 193-243



# I- Maritime Zones

*Based on the Award*



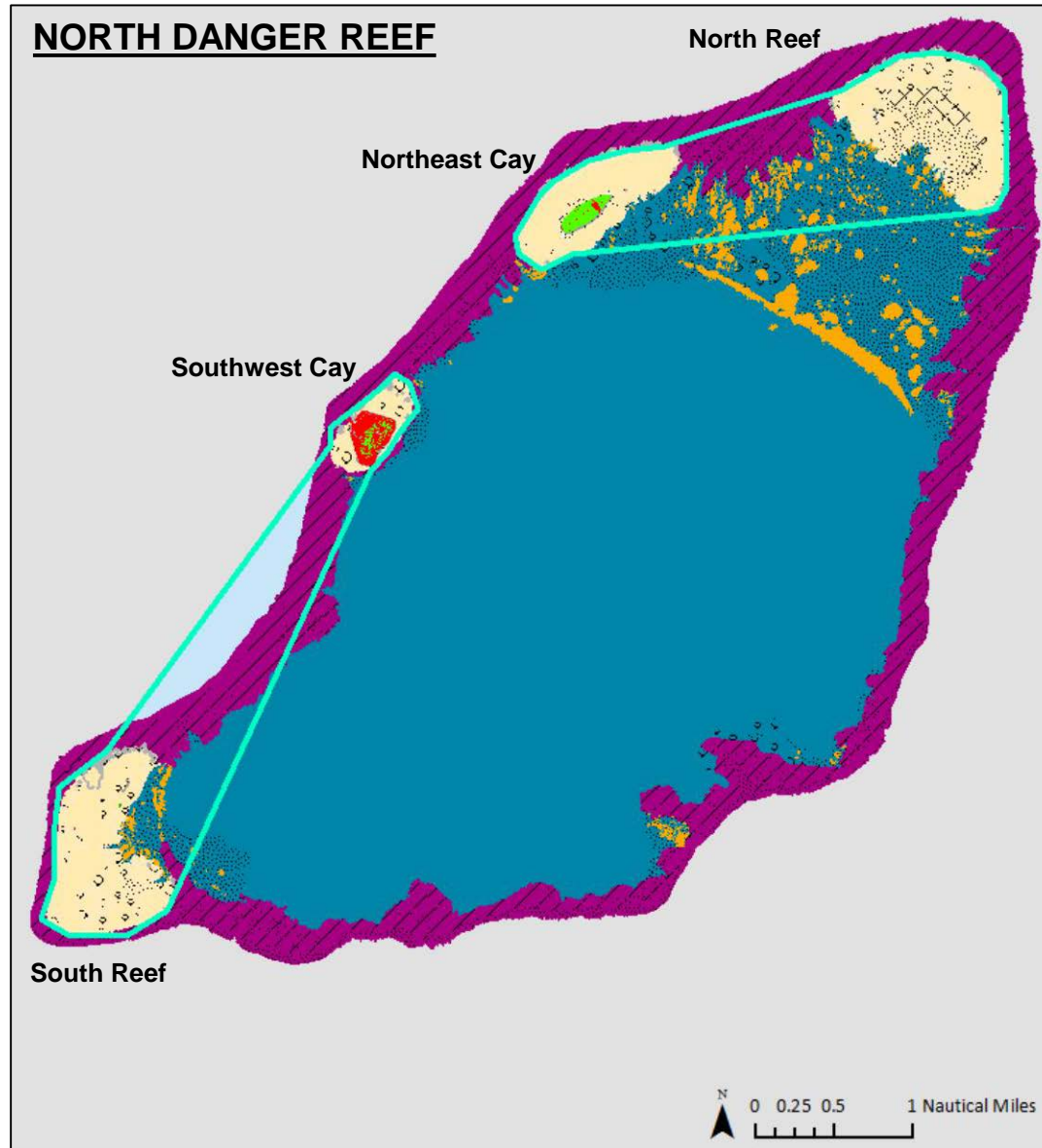
# I- Maritime Zones

*Based on the Award*

- Construction of baseline based on reef crest
- This generates several areas of ‘internal water’
- Projection of 12NM buffer on:
  - Features determined as being ‘High Tide Feature’/ Island that do not create an entitlement to a 200NM EEZ
  - Other shallow features for which sailing records consistently indicate that they have rocks or sand banks that remain above water at high tide
- This ‘new’ map of maritime zones reveals:
  - a substantial high sea pocket where pelagic fisheries should be managed by an Regional Fisheries Management Organization
  - an area of seabed (the Area) which is the common area of mankind

# I- Maritime Zones

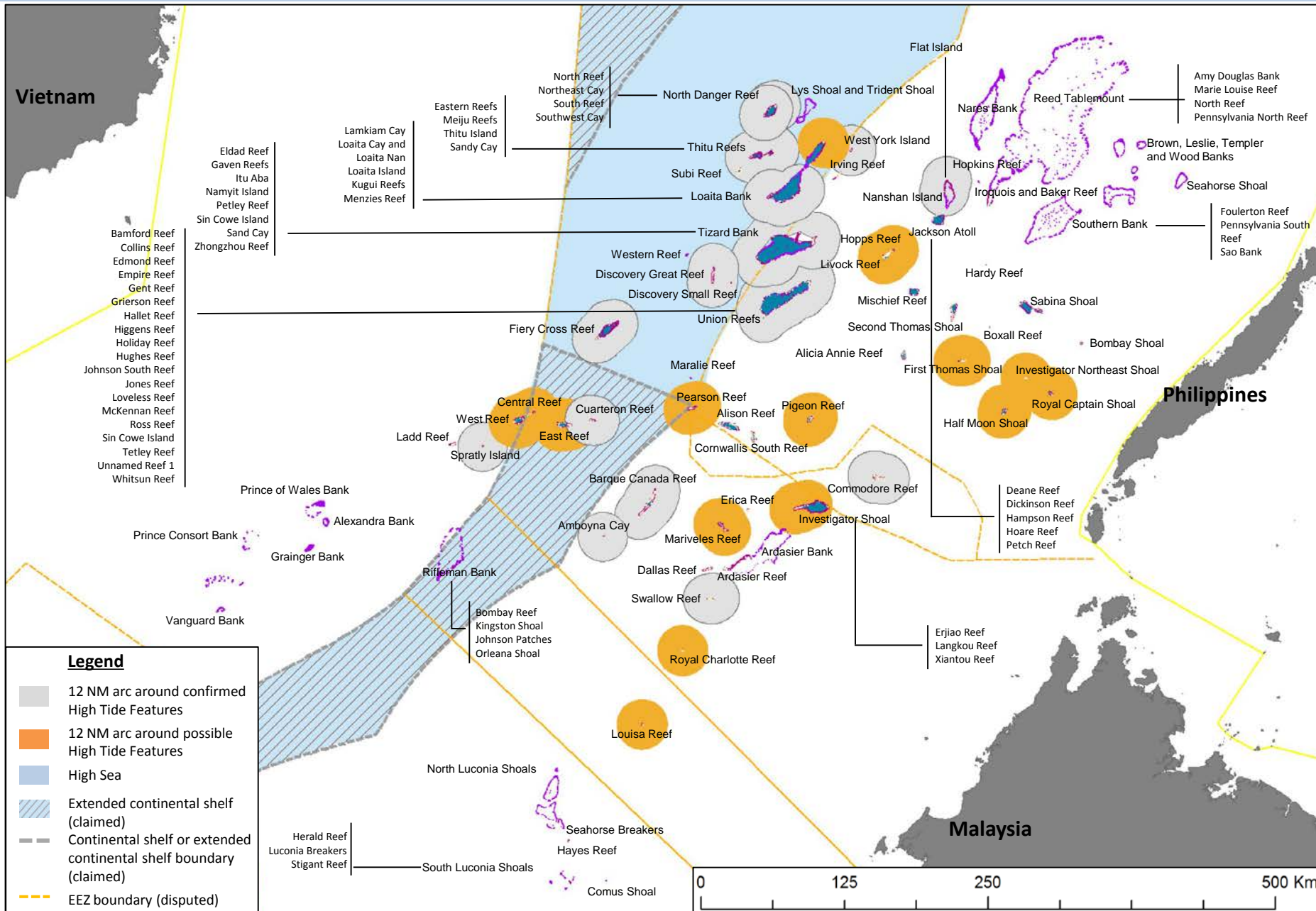
*Based on the Award*





# I- Maritime Zones

*Based on the Award*



# I- Maritime Zones

## *Consequences*

### Consequence of location of marine resources and habitats:

- **Areas *in dispute* are only those that can generate a 12NM territorial sea**
- **If in internal waters or Territorial Sea (within 12NM of baseline) of a high tide feature, they are theoretically under the full sovereignty of one State and *in dispute*, irrespective of whether this is a 12NM-radius enclave in another State's EEZ**
- **If on the seabed of the EEZ or ECS of a littoral State, not within 12NM of a high tide feature, and not an above water feature, marine resources and habitat are within the jurisdiction of littoral State and *NOT in dispute***
- **If in the Area (continental shelf beyond EEZs – and no ECS shelf claim): they are the common heritage of mankind and *NOT in dispute*: Western Reef, Maralie Reef, Lys Shoal and Trident Shoal, Irving Reef, possibly Menzies Reef**

# II- Designing an MPA network

## *Design effectiveness*

### Biophysical

Biological diversity, productivity, threatened and endangered species and ecosystems, critical habitats, historic value, etc. (CBD-EBSAs, UNESCO-OUV, Ramsar, CMS, FAO-VME, etc.)  
Environmental stresses

### Social and Economic

- Valuable species and their habitats for economic or cultural reasons
- Human activities (and impact) + Ecosystem services and IPBES
- Stakeholder consultation
- Monitoring and management

### legal/ Institutional

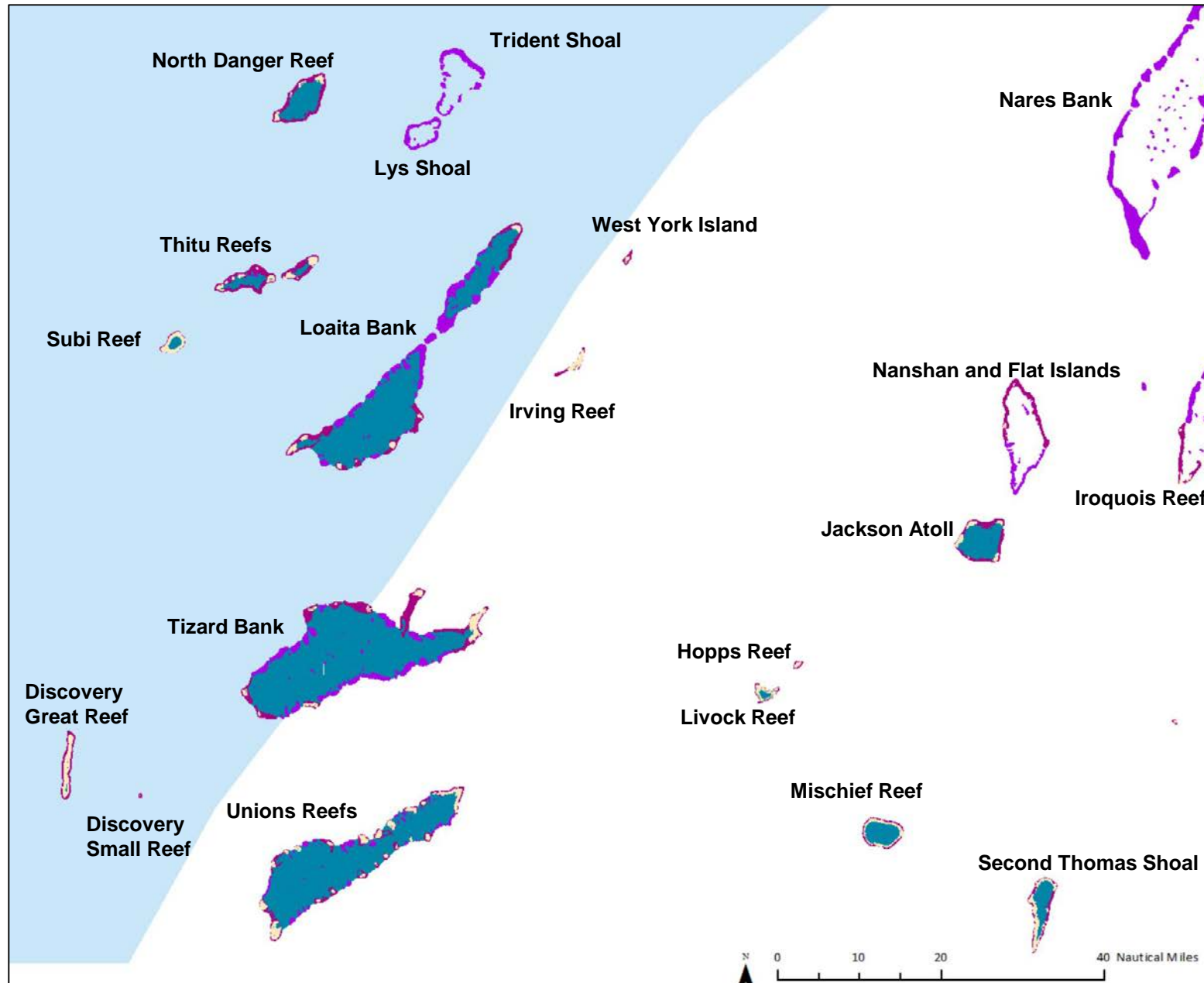
- Ensure institutional accountability/responsibility at national, regional and international level as needed
- Political regulatory framework in place
- Ensure compliance and enforcement

### Political feasibility

- Critical condition (e.g. opposite agendas of key stakeholders)
- May be facilitated if good performance of other parameters
- Limiting scope of endeavour to focus on areas of joint interest may help build confidence

# III- Marine Habitats

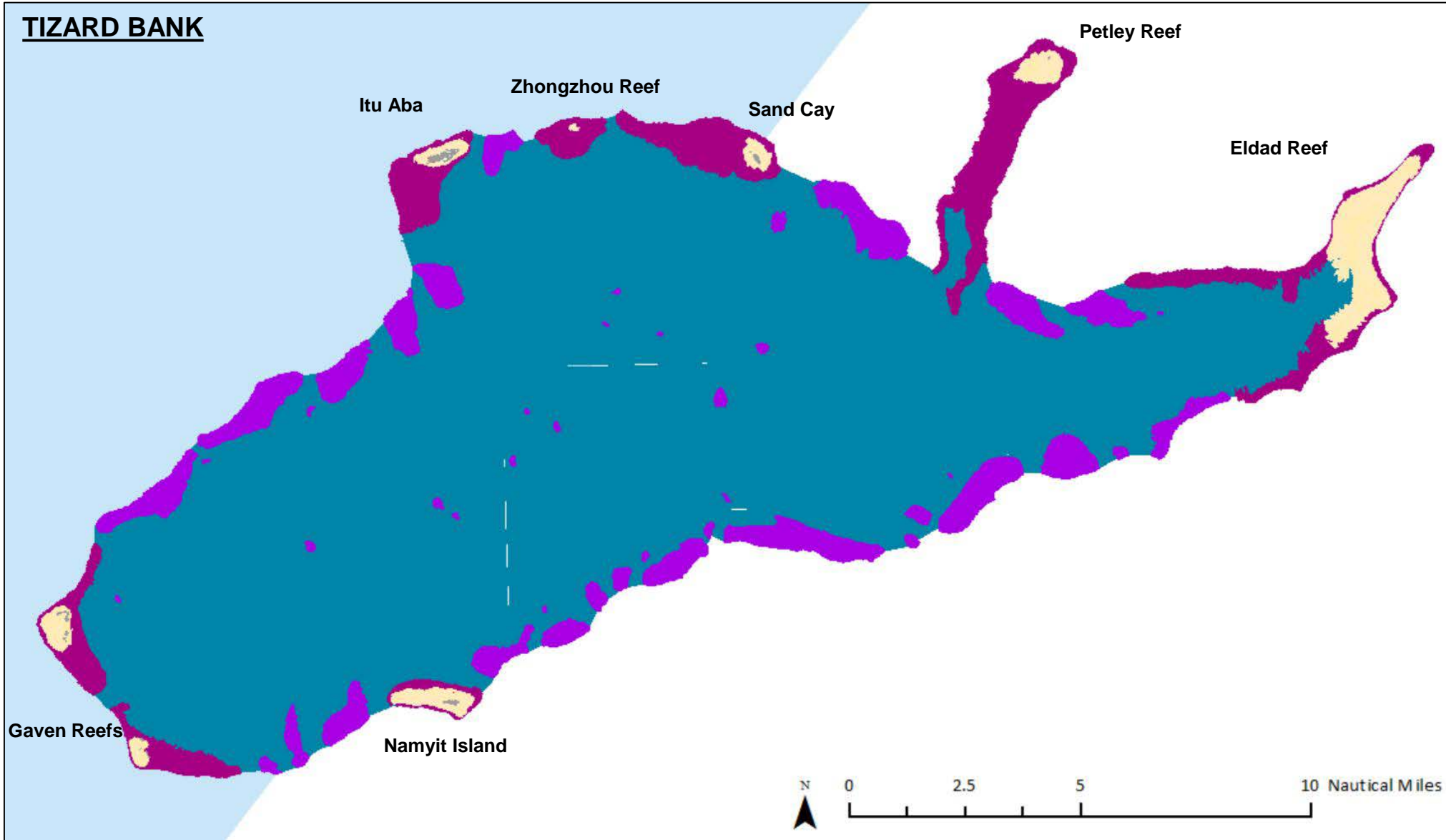
*Based on satellite mapping*



# III- Marine Habitats

*Based on satellite mapping*

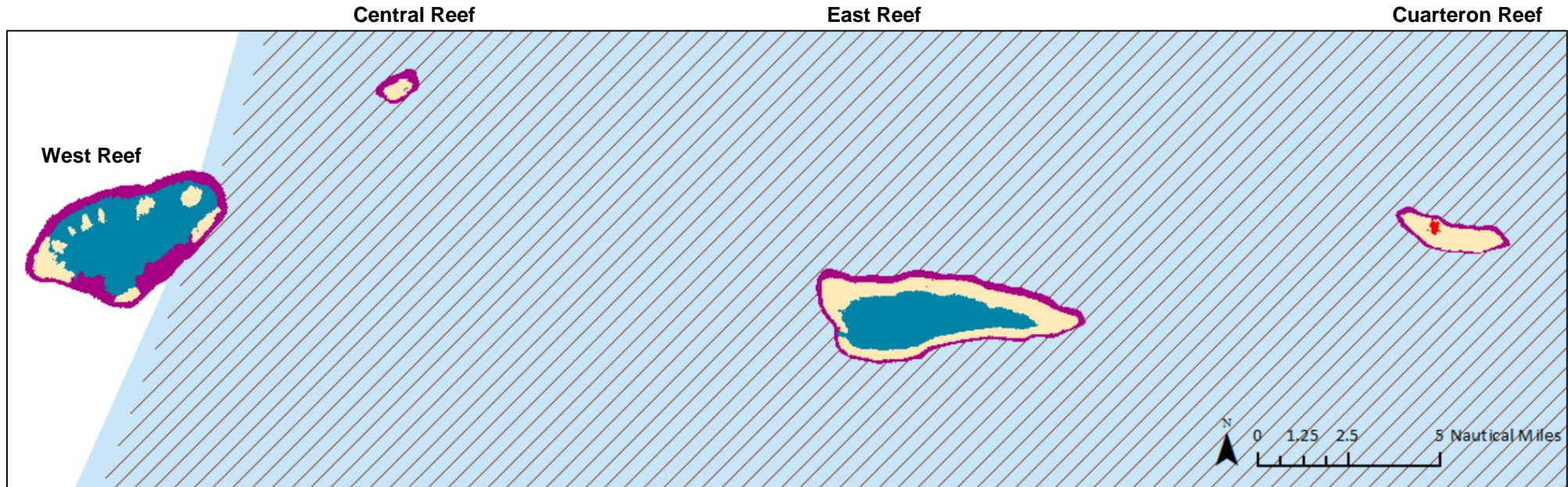
## TIZARD BANK





# III- Marine Habitats






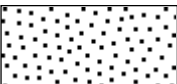

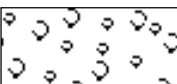

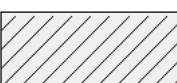





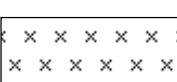

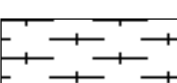




*Based on satellite mapping*

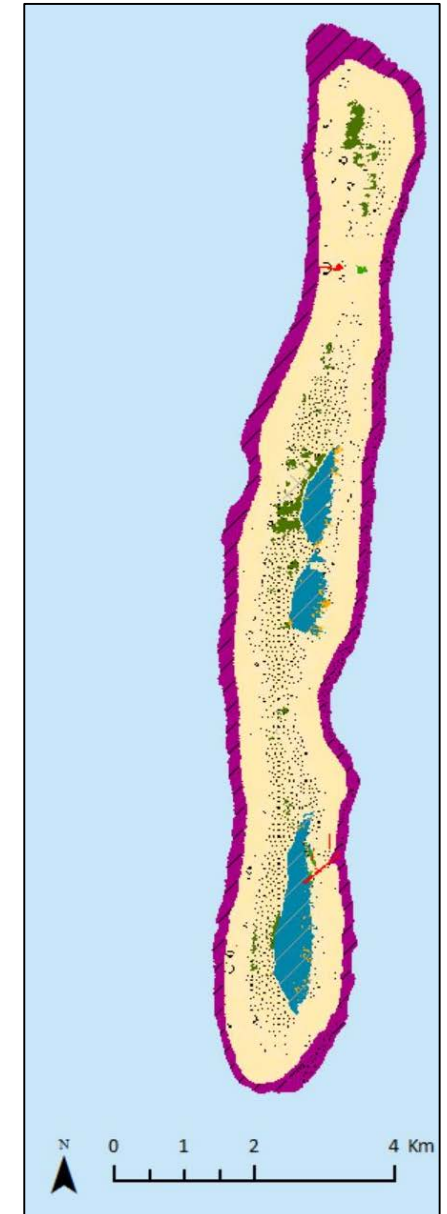


# III- Marine Habitats

*Based on satellite mapping*

## Marine Habitat Classification and Land Cover Maps

	Above water geographical feature		Seagrass/algae
	Human infrastructure and activity (roads, installations, harbours, runway, wrecks, fishing nets, buoy, man-made tracks etc.)		Cultivation
	Terrestrial vegetation		Sand dominant
	Undetermined dark living matter		Coral/seagrass/algae dominant, Coral bottom
	Reef flat		Spur and groove
	Reef slope		Dredged area, Sand plume
	Coral reef platform		Degraded area
	Lagoon		Beachrock platform
	Coral head, Knolls/seagrass/algae		Seawater intrusion
	Inland waterway		Waves, clouds (masking image)
	Distinctive seagrass/algae/cyanobacteria		Reticulate reef system

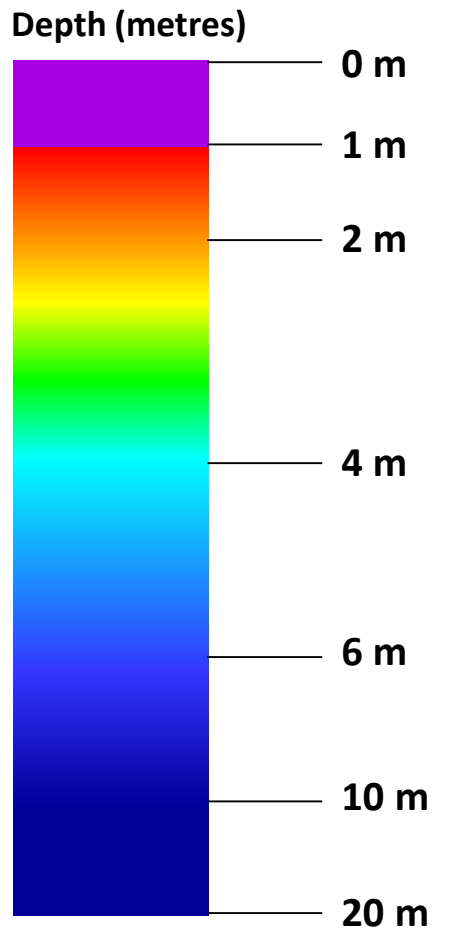


Extract of NUS multi-disciplinary project of satellite mapping of insular features in the SCS (CIL, CRISP, TMSI)


# III- Marine Habitats

*Based on satellite mapping*

## Bathymetry

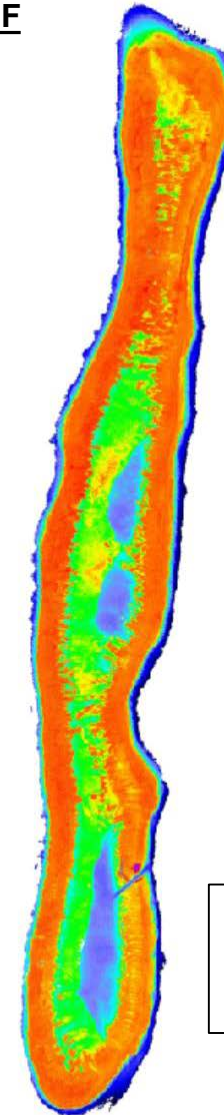


 Unsure about depth

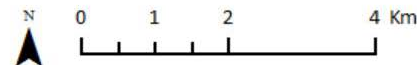
 Land above water  
No data

## DISCOVERY GREAT REEF

Based on WV2  
28 Apr. 2013  
Sea level: +83cm



Extract of NUS multi-disciplinary project of satellite mapping of insular features in the SCS (CIL, CRISP, TMSI)



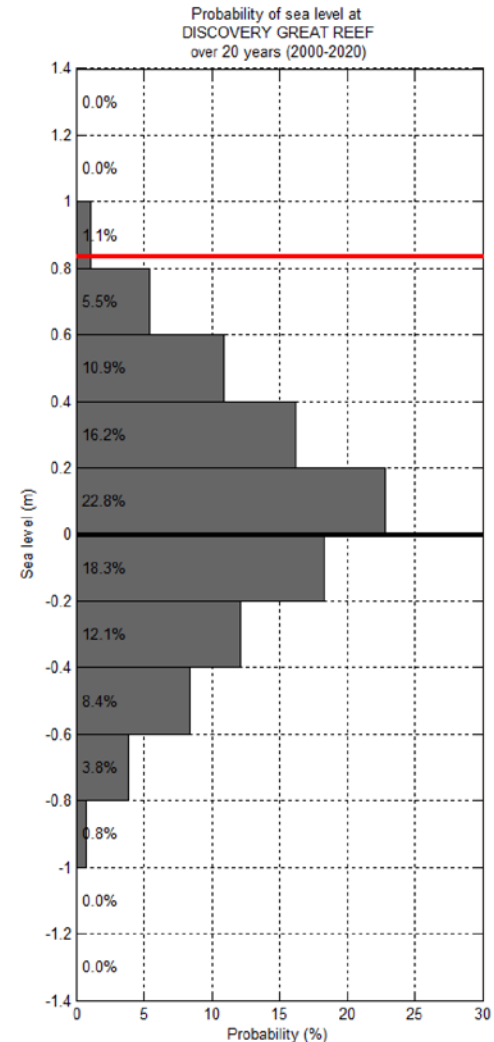
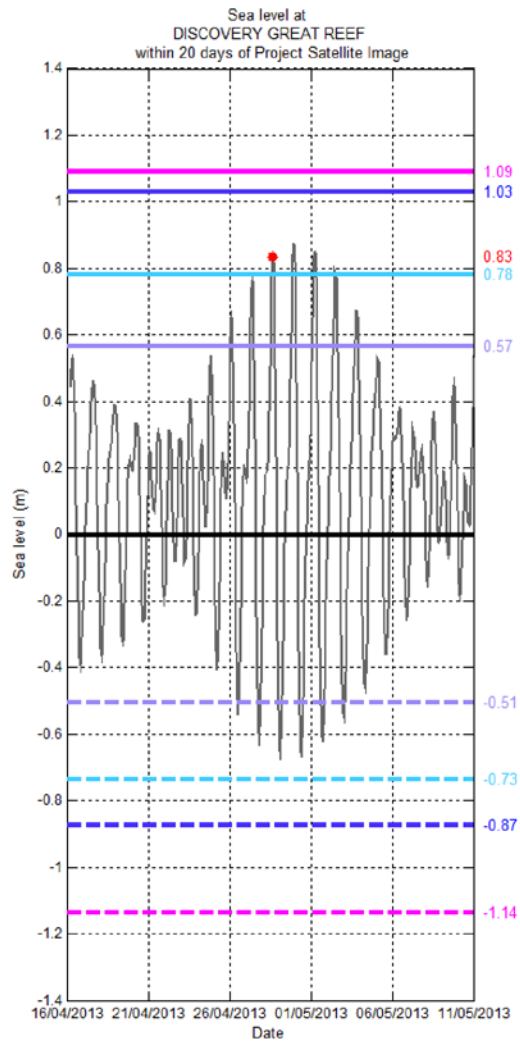
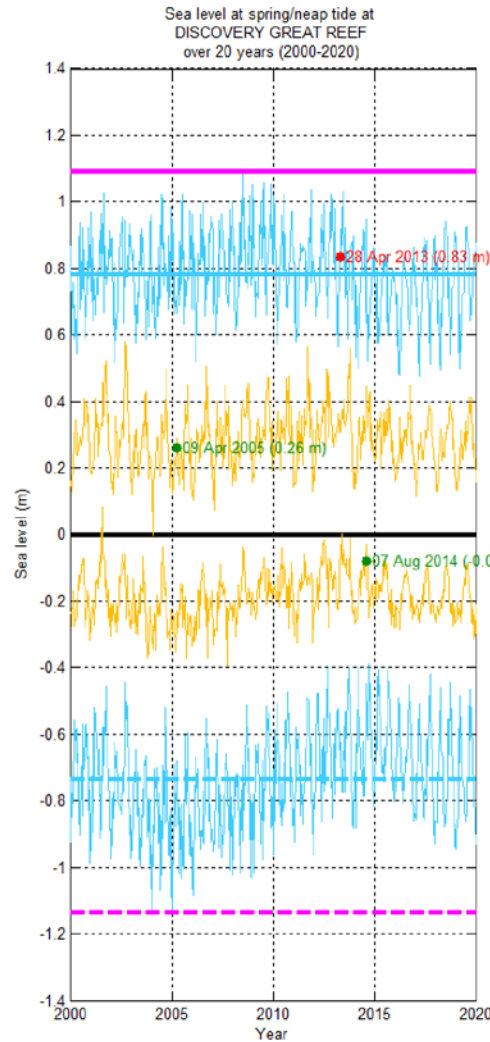
Data available at : <https://ormt-crisp.nus.edu.sg/ormt>

# III- Marine Habitats

# Sea level variations

## Sea level (SL) at DISCOVERY GREAT REEF

[10°03'28.50"N, 113°51'15.63"E]



— Hourly sea level   
 — SL at spring tide   
 — SL at Mean High Water Spring   
 — SL at highest tide of the year   
 — SL at Mean Higher High Water   
 — SL at Highest Astronomical Tide   
 ● Project Satellite Image  
— Mean Sea Level   
 — SL at neap tide   
 — SL at Mean Low Water Spring   
 — SL at lowest tide of the year   
 — SL at Mean Lower Low Water   
 — SL at Lowest Astronomical Tide   
 ● Google Earth and Landsat satellite images

Extract of NUS multi-disciplinary project of satellite mapping of insular features in the SCS (CIL, CRISP, TMSI)



# IV- International law on the protection of the marine environment

*UNCLOS*

- No regional agreement on the management of the marine environment but many international treaties that are applicable
- Most important one is the United Nations Convention on the Law of the Sea (UNCLOS) – All littoral States of the SCS are a party
- Obligation to protect and preserve the marine environment [Art.192] / Right to exploit their natural resources [living and non-living] in accordance with the duty to protect the marine environment [Art. 193]
- Protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life [Art. 194(6)]
- Also, a General duty to cooperate on activities that may cause transboundary pollution (Malaysia-Singapore Land Reclamation case)
- And an obligation to monitor the risks or effects of pollution [Art.204-206] and publish the results [Art. 205]



# IV- International law on the protection of the marine environment

*Case Law*

- ‘Obligation to ensure’ that activities are so conducted as to not cause damage to the marine environment is an obligation of due diligence
- An obligation ‘to deploy adequate means to exercise best possible efforts, to do the utmost to obtain this result’
- ‘Due diligence’ is a ‘variable concept’ that ‘may change over time as measures considered sufficiently diligent at a certain moment may become not diligent enough in light, for instance, of new scientific or technological knowledge’
- Due diligence also includes the Obligation to apply a precautionary approach and best environmental practices
- Obligation to preserve and protect thus includes an obligation of due diligence

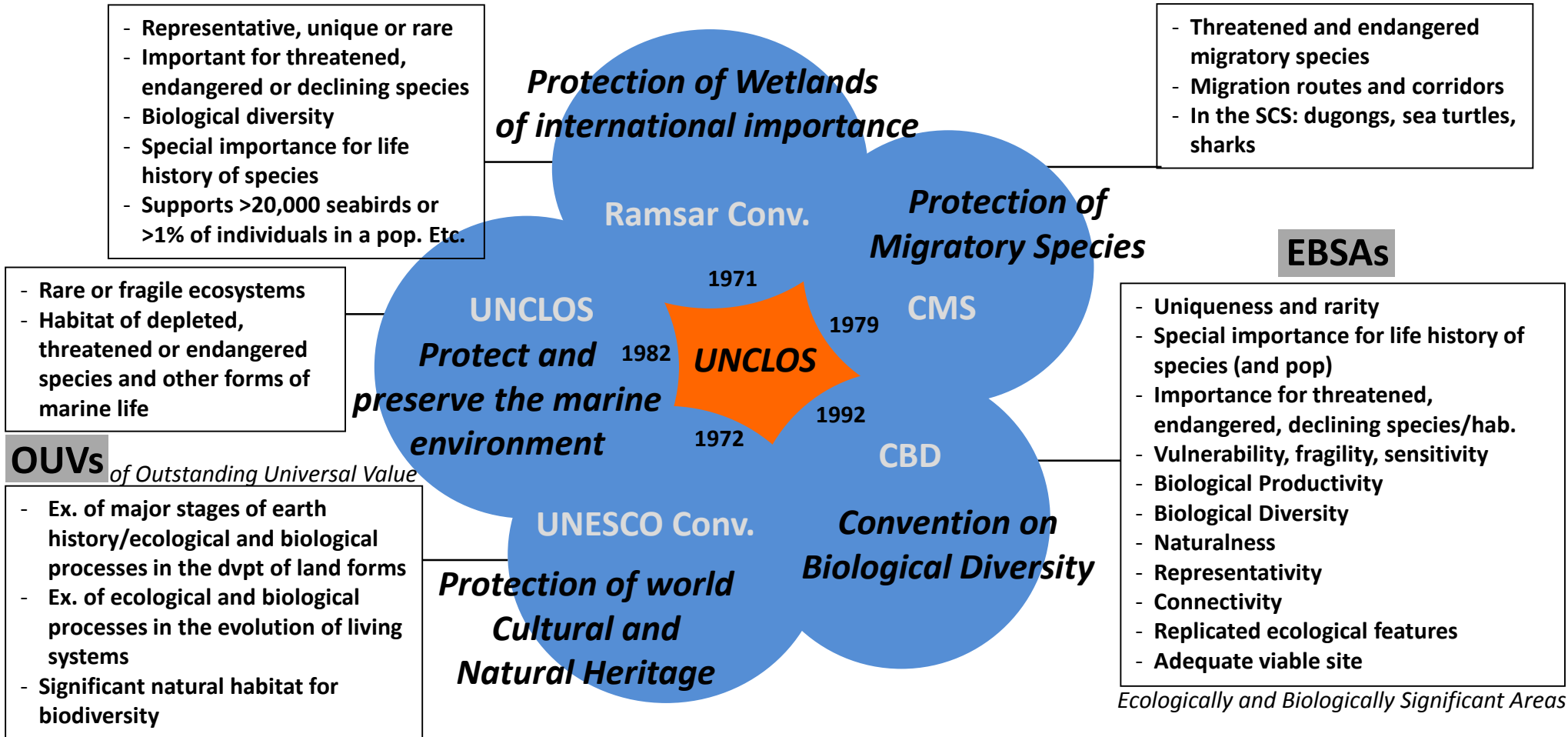
# IV- International law on the protection of the marine environment

*Award*

- the due diligence obligation under UNCLOS Article 192 read in the context of article 194(5) is an obligation to take those measures “necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life”
- It includes:
  - (1) an obligation to prevent harvesting of species that are recognised internationally as being at risk of extinction and requiring international protection and,
  - (2) an obligation to prevent the destruction of the habitat of depleted, threatened or endangered species
- This ruling sanctions the harvesting of giant clams and sea turtles in the SCS (can be extended to protected dugongs, rays and sharks, napoleon wrasse, hard and soft corals, dolphins, etc.). It also extends to fisheries practices that destroy their marine habitats
- Species/ habitat status based on CITES Appendices as well as expert evidence and IUCN Red List

# IV- International law on the protection of the marine environment

*Identify marine sensitive env.*



**Maritime States must engage in the identification of sensitive marine environments under UNCLOS and conservation treaties in order to manage them adequately**

# **IV- International law on the protection**

## **of the marine environment**

*Identify marine sensitive env.*

- **Identification of sensitive marine environments is only a scientific exercise and the first step of a long process**
- **Does not determine whether an MPA might be designated and whether activities might be restricted if any**
- **No successful investigation for Ecologically and Biologically Significant Areas (EBSAs) under the Convention on Biological Diversity**
- **2002 UNESCO reports that 62 experts identified the Spratlys to be of Outstanding Universal Value (OUV) in terms of their tropical coastal, marine and small island biodiversity attributes (+ Raja Ampat (Ind.), Tubbataha-Cagayan Ridge (Ph.), N.Borneo/Balabac Strait/Turtle Island Cluster (Ph.-Mal.), Semporana/Tawi-tawi chain (Mal.), Berau Islands (Ind.) and Banda/Lucipara Cluster (Ind.)**
- **Such nomination is generally unpopular with proponents of development**

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- Such nomination is generally unpopular with proponents of development



# V- Legal and institutional issues linked to the control of human activities

*Avoiding paper parks*

Not one but many regional bodies with a limited mandate & authority, fora and programmes with a limited scope:

- ASEAN: WGCME (Social & Cultural Dir.) or Maritime Security Forum (Political & Security Dir.)
- DOC implementation process
- PEMSEA
- Asia-Pacific Forum
- IOC-WESTPAC, UNEP Regional Seas Programme, Global Int'l Water Assessment (GIWA), COBSEA, etc.
- SEAFDEC, ASEAN Centre for Biodiversity, ICRI
- 2015 Sustainable Development Strategy for the Seas of East Asia / SDS-SEA
- Coral Triangle Initiative and the Sulu-Sulawesi Action Plan, etc.

Designation as an MPA has no impact unless each human activity within is also regulated according to its own specific sectoral regime:

<b>Fisheries</b>	Min. of Agr./ Forest/Fisheries	FAO / RFMO
<b>Illegal trade of wildlife</b>	Custom???	CITIES COP
<b>Offshore mining</b>	Min. of Energy	-
<b>Nuclear activities</b>	Min. of Energy? Trade & Ind/ Dev?	IAEA
<b>Dumping at sea</b>	Min. of Environment Coordinating Min.?	LC/LP COP
<b>Shipping</b>	Min. of Transport?	IMO
<b>Coastal development and marine tourism</b>	Min. of Tourism/ local authorities	-

# Summary of points on maritime zones

- **Debatable that the Spratlys should be treated as a whole given differences in status**
- **Rules on management and conservation depend on**
  - **Whether it concerns a High Tide Feature, Low Tide Elevation or submerged feature; and**
  - **Where the activity/resource/habitat is located, i.e. in the Area, in the High Sea, Exclusive Economic Zone, Extended Continental Shelf, Territorial sea or Internal waters**
  - **Which activity is concerned: fishing, illegal trade of wildlife, shipping, nuclear activity, offshore oil and gas/mining, etc.**

# Proposal towards the development of management measures in the SCS

- Improve regional knowledge sharing on scientific data and existing national policies
- Prioritize habitats & resources to be protected (to start with ‘low hanging fruits’: some endangered species and specific fisheries?)
- Leverage international law and existing tools and institutions
- Engage in scientific identification of habitats & resources to be protected in consultation with international marine law and policy experts:
  - Map social, economic, political/legal parameters, as well as ecological parameter
  - Best if mapping exercises done holistically to avoid dis-jointed results that cannot be operationalized
- Improve communication to relevant policy makers, i.e. all relevant ministries

A map of Southeast Asia, including the Malay Peninsula and the Indonesian archipelago. The map is overlaid with a semi-transparent grey rectangle. Numerous red dots are scattered across the landmasses, and several blue circles are clustered in the Indonesian archipelago. A black line is drawn along the western coast of Sumatra.

**Thank you!**

**Questions?**

***Younalyons@nus.edu.sg***

Source: Census of Marine Life:  
[http://www.comlmaps.org/extra/ngs/Ocean\\_Life\\_Diversity\\_Distribution-300dpi.pdf](http://www.comlmaps.org/extra/ngs/Ocean_Life_Diversity_Distribution-300dpi.pdf)

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