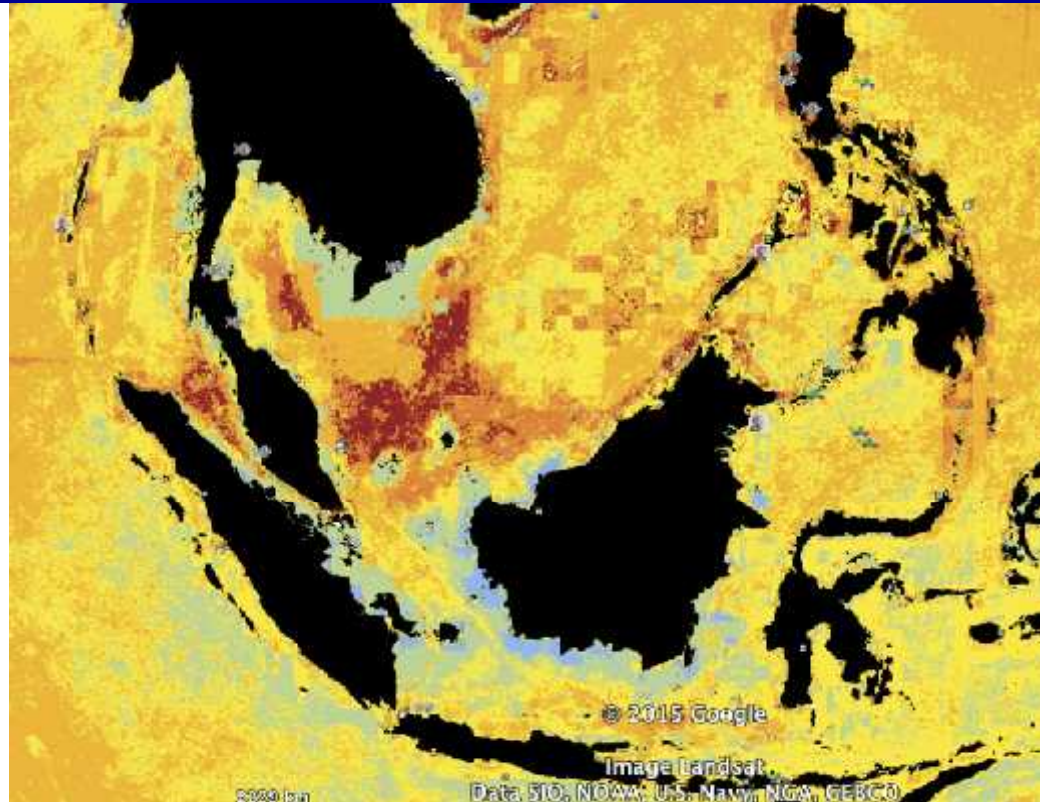


# Towards a comprehensive framework for the management of sensitive marine environments



## Forest and Marine Biodiversity

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# Outline

- I. UNCLOS framework and general international law**
  - II. Marine sensitive environments, vulnerable species and habitats in international conservation treaties**
  - III. Regulations of maritime uses taking into account the sensitivity of particular species/ecosystems/habitats**
  - IV. Implementing concurrent and often competing rules**
- Conclusion**

# I. UNCLOS framework and general international law

## General yet clear obligation to protect ...

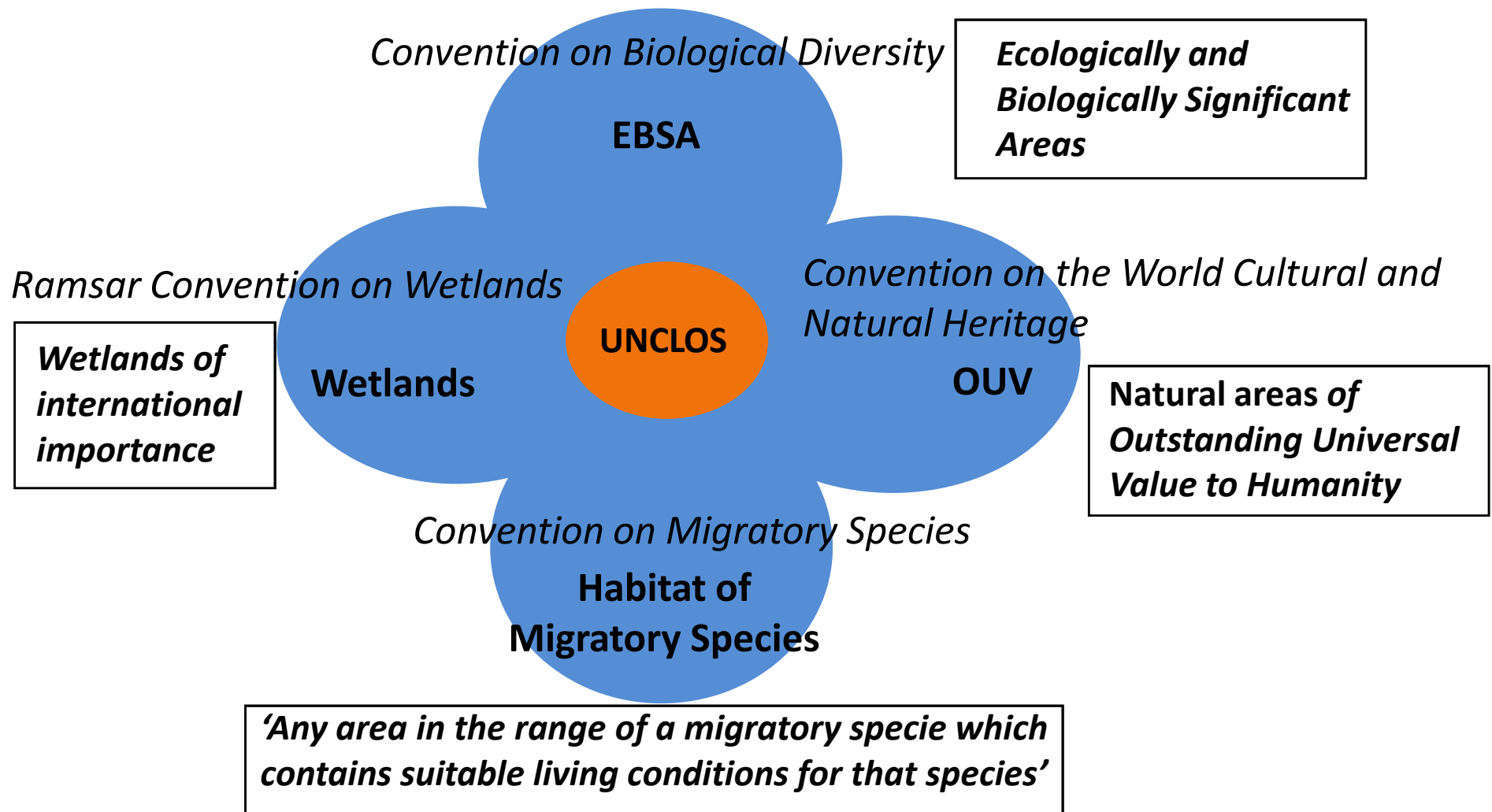
- Protect and preserve the marine environment [Art.192]
- Exploit their natural resources [living and non-living] in accordance with the duty to protect the marine environment [Art. 193]
- Take all measures that are necessary to prevent, reduce and control pollution of the marine environment *from any source* [Art.194(1)]
- 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)]

# I. UNCLOS framework and general international law

... further detailed by the ICJ and ITLOS

- ‘Obligation to ensure’ that activities are so conducted as to not cause damage to the marine environment is an obligation of due diligence according to the ICJ
- 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

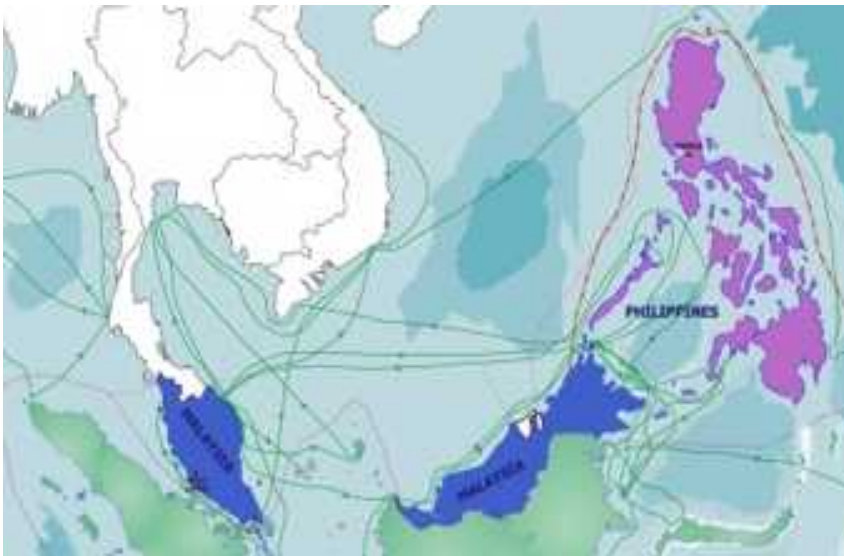
## II. Sensitive marine environments in conservation treaties and int'l law on the protection of the marine environment



## II. Sensitive marine environments in conservation treaties

### 1979 Convention on the Conservation of Migratory Species (CMS)

The Convention includes the protection of the habitat of migratory species, being *'any area in the range of a migratory specie which contains suitable living conditions for that species'* [Art.1 & 2]



Green Sea turtle movements

Hawksbill and Green turtles are in Appendices 1 and 2 of CMS and the subject of the Indian Ocean–South-East Asia Marine Turtle Memorandum of Understanding (IOSEA MOU)

Several sharks species have been added to the CMS convention: e.g. Whale shark (*Rhincodon typus*) and the Shortfin mako (*Isurus oxyrinchus*)



## II. Sensitive marine environments in conservation treaties

### 1972 Convention for the Protection of the World Cultural and Natural Heritage (UNESCO Convention)



The mission of UNESCO's World Heritage—to encourage the identification, protection and preservation of **cultural and natural heritage around the world considered to be of outstanding universal value (OUV)** from the aesthetic or scientific point of view.

***UNESCO Marine Parks include Tubbataha Reefs (also a Ramsar Site) in the Sulu Sea and the Great Barrier Reef of Australia***

## **II. Sensitive marine environments in conservation treaties**

### **1971 Ramsar Convention on the Protection of Wetlands of International Importance especially as Waterfowl Habitat**

- **Party States committed to designate at least one national wetland of int'l significance in terms of ecology, botany, limnology or hydrology (Art.2)**
- **Wise use of selected wetlands & monitoring of impacts of technological developments, pollution and other human impacts**
- **Active Conference of the Parties**
- **Criteria for the designation of such wetlands as at 2005 : 1. representative, rare or unique – 2. supports vulnerable, endangered species – 3. biological diversity – 4.refuge – 5. supports 20,000 or more waterbirds – 6.supports 1% of a population of waterbird – 7. indigenous fish representative of wetlands benefits – 8. fish spawning ground – 9. supports 1% of a specie of wetland dependent non-avian animal specie**



## II. Sensitive marine environments in conservation treaties

### 1992 Convention on Biological Diversity (CBD)

States must identify, monitor and report on components of biodiversity for conservation and sustainable use [Art.7]

#### Scientific criteria for Ecologically and Biologically Significant Areas (EBSAs)

Developed by COP IX/20 to guide States Parties in implementation:

- (1) Uniqueness and rarity
- (2) Special importance for life history stages of species
- (3) Threatened, endangered or declining species and/or habitats
- (4) Vulnerability, fragility, sensitivity, slow recovery
- (5) Biological productivity and (6) Biological diversity
- (7) Naturalness

### **III. Regulations of maritime uses taking into account the sensitivity of particular species/ecosystems/habitats**

<b>High Seas Fisheries</b>	<b>Vulnerable Marine Ecosystems (VMEs)</b>
<b>Deep Seabed Mining</b>	<b>Areas of Particular Environmental Interest (APEIs)</b>
<b>Shipping</b>	<b>Special Area under MARPOL Particularly Sensitive Sea Areas More stringent rules under Ballast Water Convention</b>
<b>International Trade of Wildlife</b>	<b>Stringent scrutiny and rules for import/export of species listed as potentially endangered in Appendices</b>
<b>Dumping</b>	<b>Avoiding sensitive areas when determining dumping sites</b>
<b>Offshore Oil &amp; Gas Activities</b>	<b>Sensitivity mapping under the Oil Spill Preparedness and Response Convention OPRC</b>

### **III. Regulations of maritime uses taking into account the sensitivity of particular species/ecosystems/habitats**

#### **Vulnerable Marine Ecosystems (VMEs) - High Seas Fisheries**

- **Developed following 2006 UNGA calling upon RFMOs to adopt conservation measures to protect VMEs from significant adverse impact from bottom fishing activities**
- **2008 FAO Guidelines for the management of deep-sea fisheries in the High Sea (esp. VMEs)**
- **UNGA 2009 and 2011 called for standardized impact assessments and strengthened measures to assess cumulative impacts, ensure that assessment are based on best available science and are shared + mechanism to ensure compliance with VMEs**

### **III. Regulations of maritime uses taking into account the sensitivity of particular species/ecosystems/habitats**

#### **Areas of Particular Environmental Interest (APEIs) under ISA regulations**

- **The ISA is charged with taking the measures necessary to ensure effective protection of the marine environment from seabed mining in the Area**
- **APEIs designed to establish a network of 9 protected areas in the Clarion Clipperton Zone to protect:**
  - . **VMEs as defined by the FAO criteria for deep-sea bottom fisheries in the High Sea**
  - . **Areas representative of the full range of ecosystems. Habitats, communities and species of different biogeographic regions;**
  - . **Areas of sufficient size to protect and ensure the ecological viability and integrity of the features for which they were selected.**

# III. Regulations of maritime uses taking into account the sensitivity of particular species/ecosystems/habitats

## Restriction to the Freedom of Navigation

### PSSAs (1991, 1999, 2001 and 2005)

▪ 'An area that needs special protection through action by IMO because of its significance for recognized *ecological*, *socio-economic* or *scientific* attributes where they may be vulnerable to damage by international shipping activities'

▪ 3 elements:

- The area must meet one of 3 criteria: ecological; social, cultural or economic; or scientific and educational;
- It must be vulnerable to damage by international shipping activities
- Demanded measures can provide protection and be adopted by the IMO

### III. Regulations of maritime uses taking into account the sensitivity of particular species/ecosystems/habitats

#### Restriction to the Freedom of Navigation (PSSA – Cont'd)

##### Ecological

- Uniqueness or rarity
- Critical habitat
- Dependency
- Representativeness
- Diversity
- Productivity
- Spawning or breeding grounds
- Naturalness
- Integrity
- Fragility
- Bio-geographic importance

##### Social, Cultural and Economic

- Social or economic dependency
- Human dependency
- cultural heritage

##### Scientific and Educational

- Research
- Baseline for monitoring studies
- Education

**Note that these criteria use the same language as those developed within the Convention on Biological Diversity as criteria for Ecologically or Biologically Significant Areas**

### III. Regulations of maritime uses taking into account the sensitivity of particular species/ecosystems/habitats

#### 1973 Convention against the International Trade of Endangered Species (CITES)



Poached Green sea turtle (SCS)

CITES lists species that are ‘threatened with extinction’, such as

-Giant clams (*Tridacnidae spp*)

-Scleractinian (hard) coral (*Scleractinia spp*)

[CITES Appendix II]

-Green sea turtle (*Chelonia mydas*)

-Hawksbill sea turtles (*Eretmochelys imbricata*)

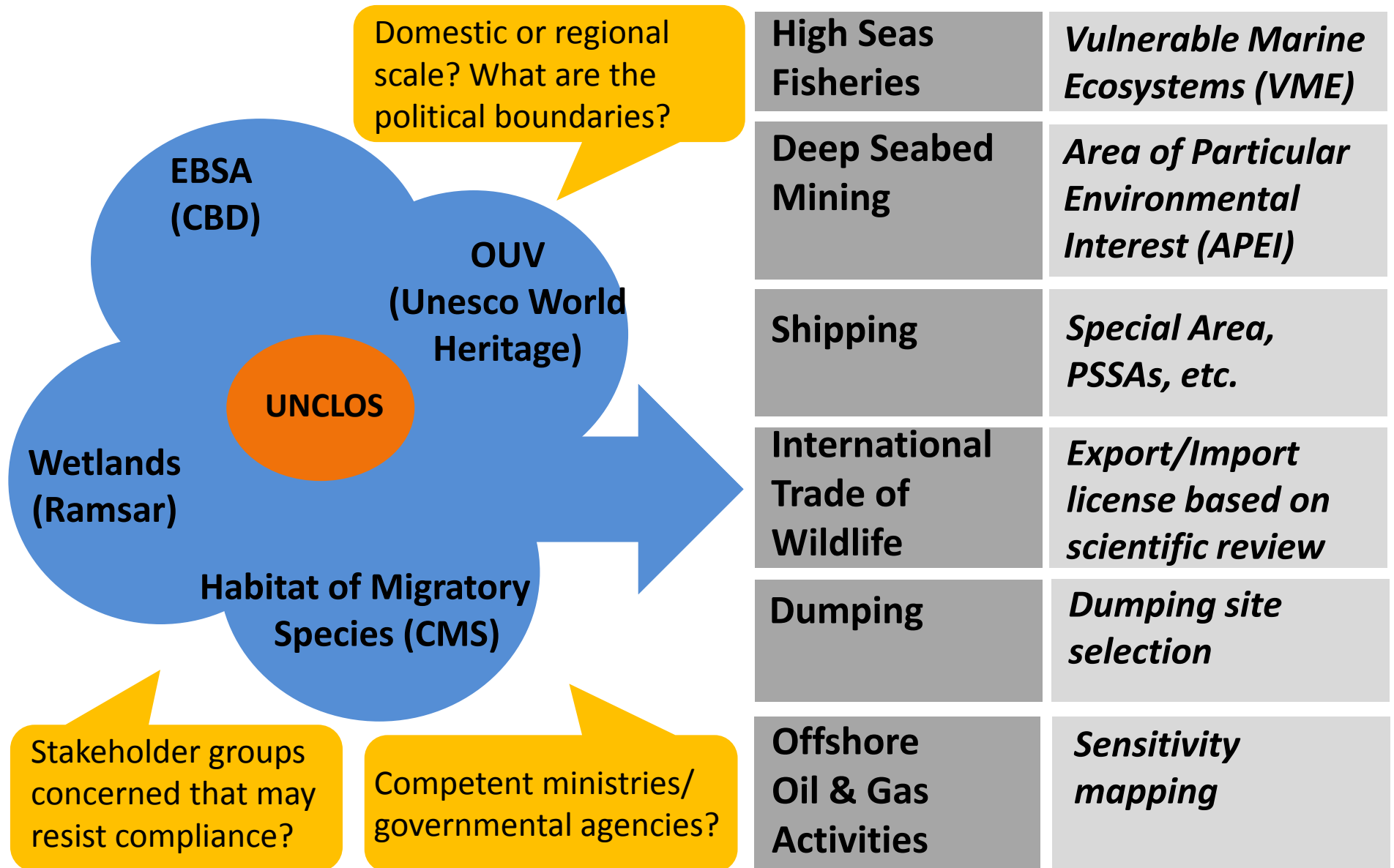
-Dugong (*Dugong dugon*)

-Whale shark (*Rhincodon typus*)

[CITES Appendix I, i.e. species under greater threat than those in Appendix II )



# IV. Joint implementation of competing rules



## IV. Joint implementation of competing rules

### Weaknesses in the current system

- **Varied sets of selection criteria for the identification of marine sensitive area (which is right? How to prioritize?)**
- **Varied and inconsistent mapping efforts w. different categories**
- **Existing selection criteria tend to:**
  - **Be primarily concerned with ecological considerations rather than development (sustainably)**
  - **Disregard legal and political feasibility at national and regional scale**
  - **Disregard users' (whether commercial players or local stakeholders) views and likely/wishful compliance**

# Conclusion

- 1. Identification of sensitive species and habitats is required under international law must include human uses of the sea**
- 2. Note that they should include valuable resources such as fish breeding grounds**
- 3. Promote the development of standardize classification categories and methodology that can integrate local particularities**
- 4. Distinguish between the recognition of areas of particular interest/ sensitivity/concern and restriction to specific activities**
- 5. Build in processes for national prioritization**

# Sensitive marine environments in international law

	Territorial Sea	Exclusive Economic Zone	High Sea
Intertidal area and internal waters	<b>Ramsar</b> <i>Wetlands of importance</i>	<b>Continental Shelf</b>	<b>Extended Continental Shelf</b>
	<b>World Heritage Conv.</b> <i>Outstanding Universal Value (OUV)</i>		<b>Area</b>
	<b>Conv. on Biodiversity</b> <i>Ecologically and Biologically Significant Areas</i>		<b>Seabed only</b>
	<b>London Convention</b> <i>Dumping sites selection</i>		<b>Seabed only</b>
	<b>Shipping Regs: MARPOL, IMO Res. And OPRC</b> <i>Special Areas under MARPOL, PSSAs and the Sensitivity index all have different criteria</i>		<b>Seabed only</b>
	<b>CITES + UNCLOS</b> <i>Endangered Species Rare or fragile ecosystems &amp; habitat of depleted, threatened and endangered species</i>		
	<b>Convention on Migratory Species</b>		
			<b>International Seabed Authority Regs</b> <i>Area of Particular Env't'l Interest (APEI)</i>
			<b>FAO Guidelines (seabed and water column)</b> <i>Vulnerable Marine Ecosystems (VMEs)</i> <i>Also on the High Sea through the Flag State</i>
		<b>ALSO, IUCN Red List, MPA and Habitat classifications and other Guidelines proposed by Int'l Organisations &amp; NGOs</b>	



**Thank you!**

**Questions?**

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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)