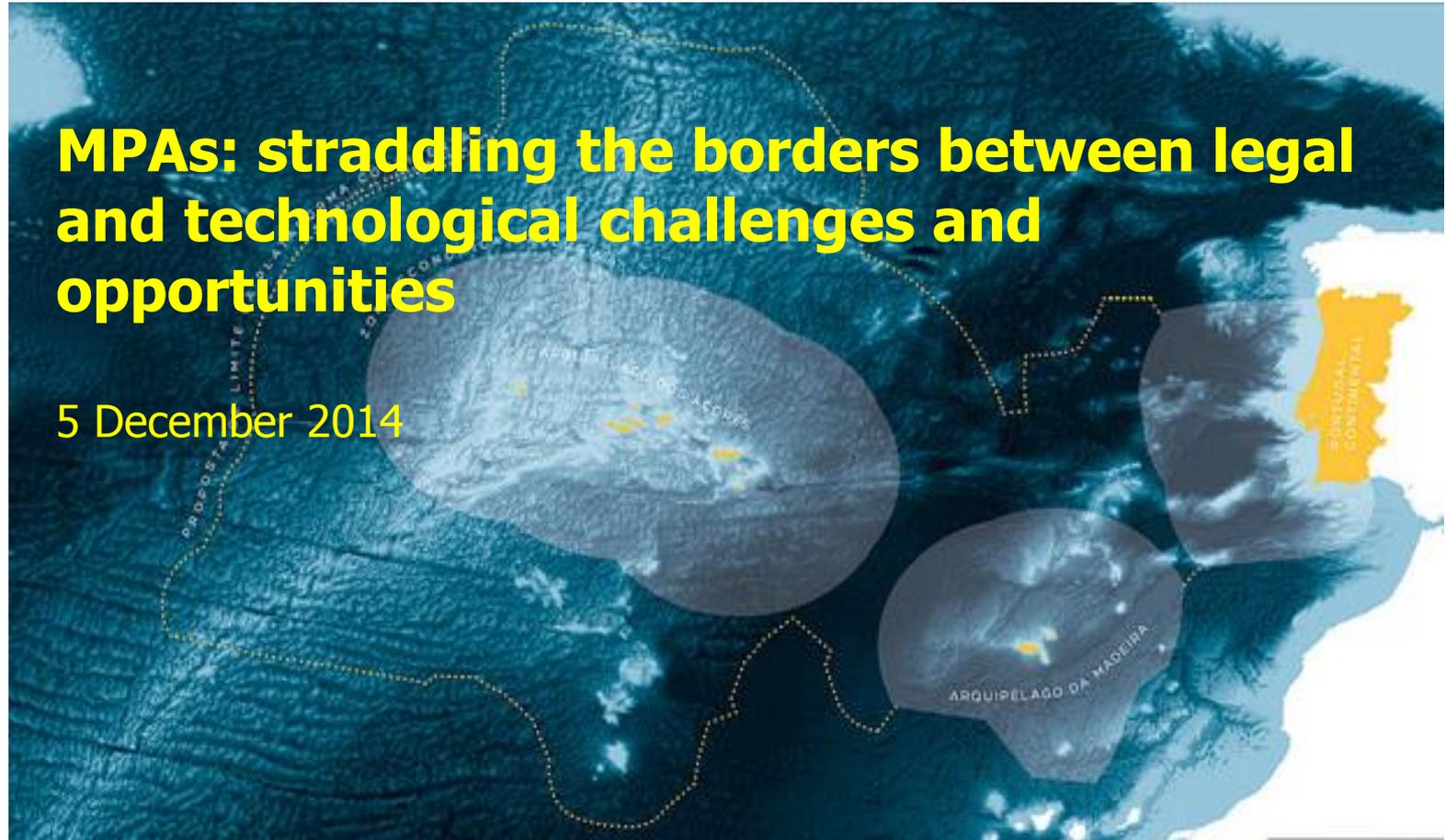


MPAs: straddling the borders between legal and technological challenges and opportunities

5 December 2014



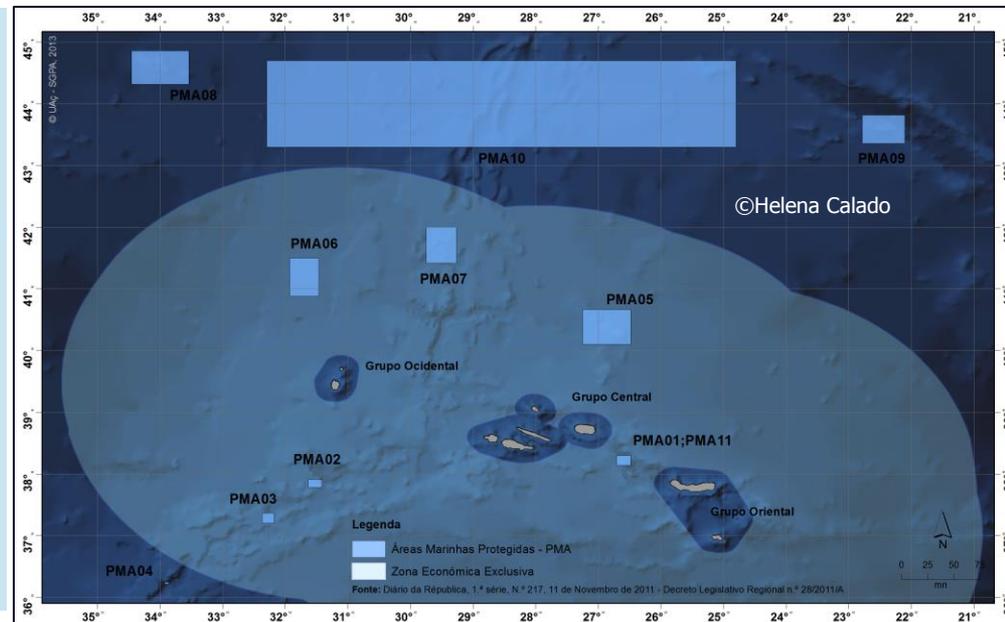
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WHAT DO WE UNDERSTAND BY MPA?

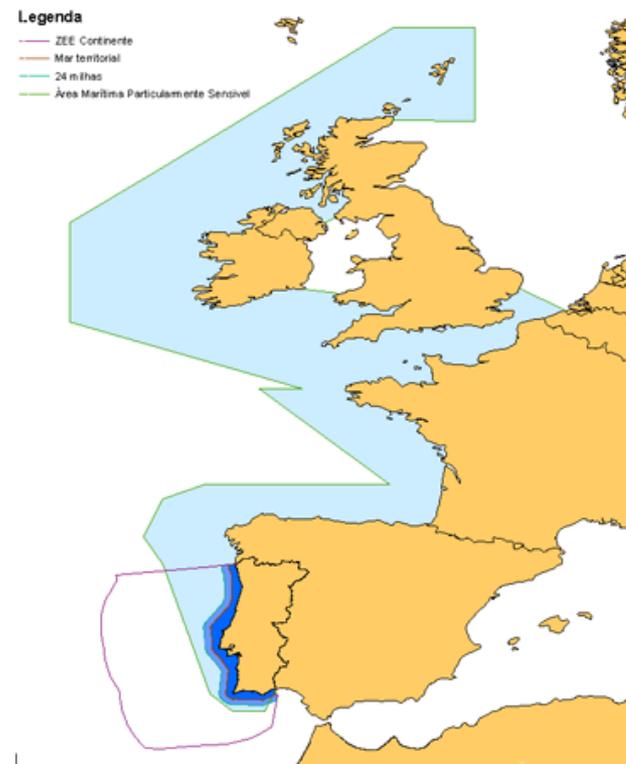
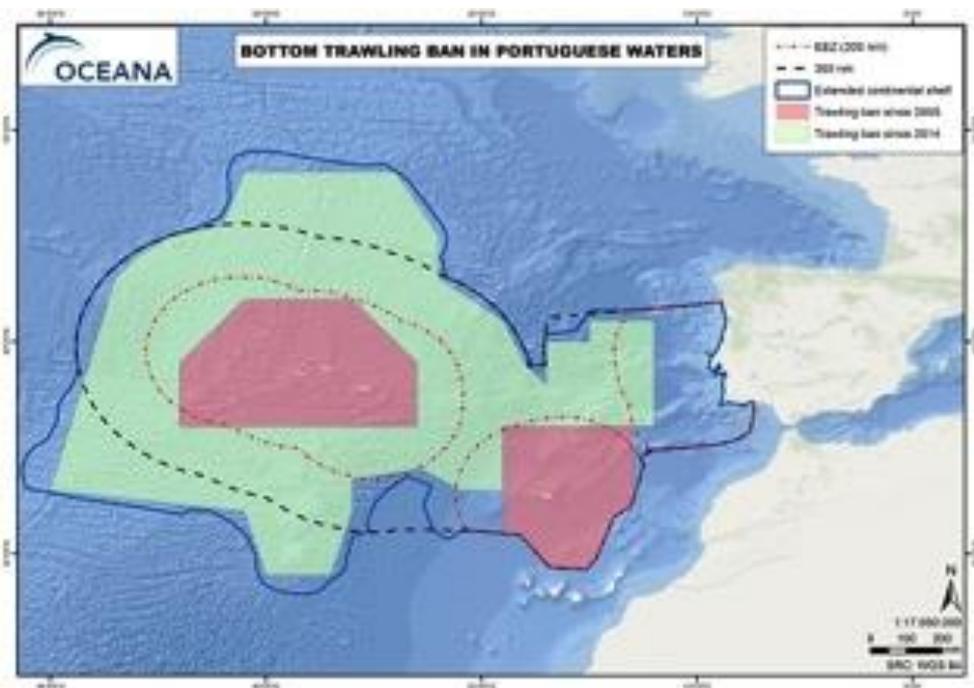
Across the literature, policy documents or legal instruments the meaning of MPA can be very diverse with no clear borders:

- **Holystic or all-embracing MPAs:** the management plan envisages all the human activities with negative impact in the ecosystems and biodiversity



WHAT DO WE UNDERSTAND BY MPA?

- **Sectoral MPAs:** only one human activity is envisaged by the protective measures
- **Fishing:** fishing reserves; marine mammals' sanctuaries (IWC)
- **Shipping:** PSSA; MARPOL Special Areas (IMO)
- **Mining:** Areas of Particular Environmental Interest (ISA)



WHAT DO WE UNDERSTAND BY MPA?

➤ **In any case, MPA is just a concept. As a matter of fact, for the designation of MPAs there is wide terminology related with the classification and categories of MPAs:**

- National level: marine reserves, marine parks, areas for the management of habitats and species, for instance
- EU level: sites of community importance, special areas of conservation (Habitats directive), special protection areas (Birds directive)
- International level: OSPAR MPAs, Biosphere Reserves, Ramsar sites, etc...

Associated with the designation of offshore MPAs, fishing closures or other area-based conservation measures, we should also consider the Ecologically or Biologically Significant Marine Areas (EBSAs) and the Vulnerable Marine Ecosystems (VME)

AFTER THE NAMES WHAT ARE THE NUMBERS?

MPAs: the global target

The effects of the encouragement and pressure to create MPAs are visible in the areas under national jurisdiction:

- **CBD, 2010, Nagoya:** target '2020: **10 per cent**' (MPAs and other effective area-based conservation measures).

Promise of Sydney, 19 Nov 2014, IUCN: *strictly protected areas that amount to at least 30% of each marine habitat and address both biodiversity and ecosystem services*

- **2011: 7.2 %** of coastal waters (0-12 n.m.) were protected and the total marine area within the limits of the EEZ amounts to **4 %** protection (World Database on Protected Areas dataset)

No info about Portuguese total coverage (%)... but PT is working hard on this

DESPITE THESE NUMBERS:

- **Among 190 States with maritime borders, in 2011 only 12 have reached the 10% goal**

- **The majority of MPAs are coastal...**

REMARK: the recent rush for the largest MPA (Cook Islands, Gabon, Fiji, Portugal, South Africa, USA... who else?)

- **There is a long way between designation and effective protection (management plans in force)**

- **The tools for monitoring and surveillance are frequently very poor or insufficient, with a clear opening for technological support**

but... this implies capacity building, new legal provisions and financial sustainability along the years

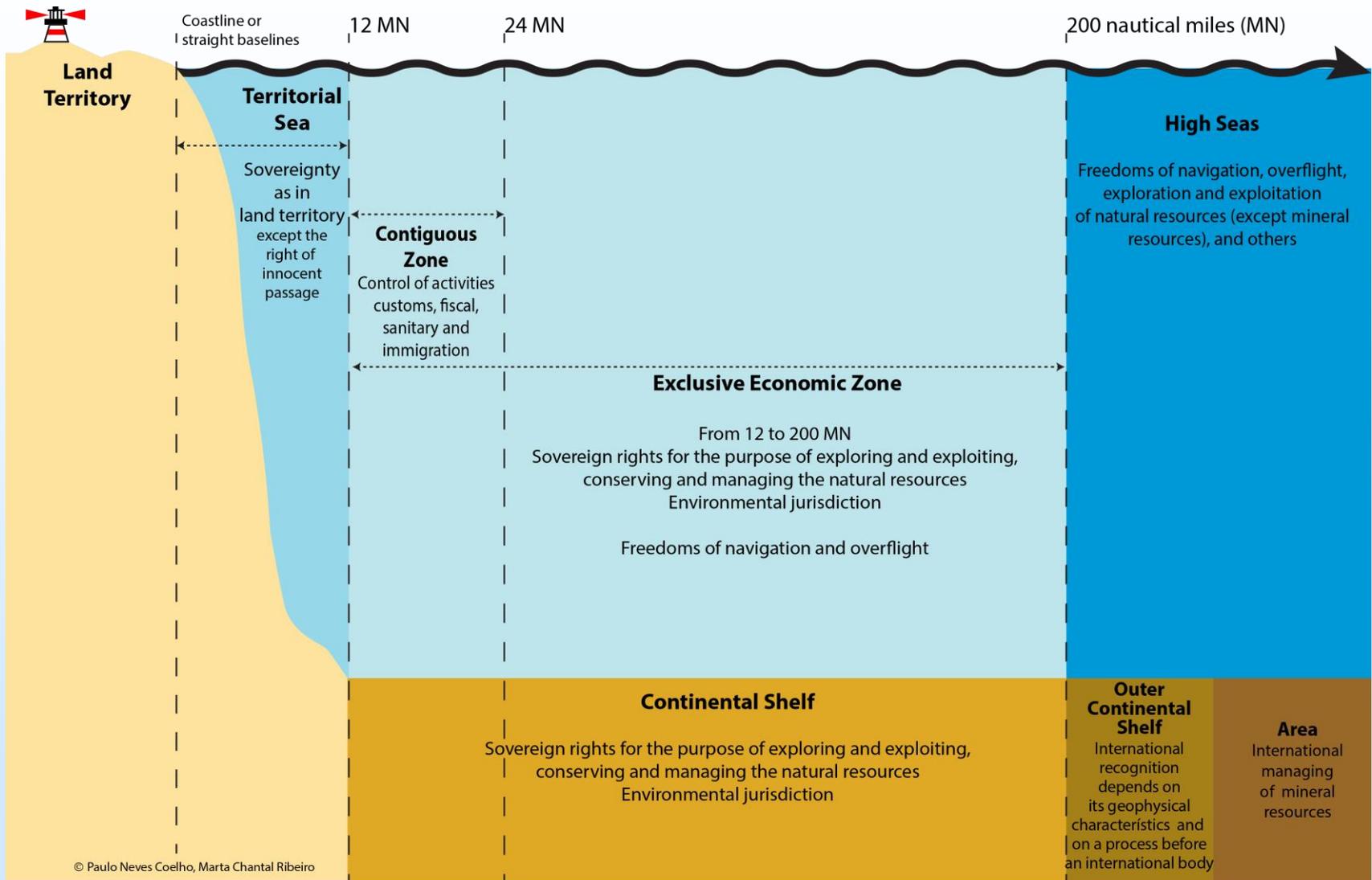
WHY ARE MPAs LESS IMPLEMENTED IN THE MARINE ENVIRONMENT?

The ocean makes up 71% of our 'blue planet,' yet less than 1% is fully protected, Promise of Sydney, 19 Nov 2014, IUCN

The most quoted reasons are the inaccessibility, vastness, tri-dimensional nature and, therefore, lack of knowledge of the marine environment.

To this complexity we should add the legal framework applicable to the oceans: the Law of the Sea Convention **PLUS** a patchwork of global and regional legal instruments **PLUS** the principle according to which, in principle, treaties are binding only for the Contracting Parties

UNCLOS FRAMEWORK (1982)



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Graphical representation of the maritime zones

350 MN or isobath of 2.500 meters + 100 MN

UNCLOS FRAMEWORK (1982)

- **Ecosystems, delimitation and governance**
 - **The opportunity for conflicts between the protection objectives, on the one hand, and the economic activities in the ocean, on the other hand, are immense**
 - **Multiple actors** (States, IMO, ISA, RFMO, EU) **and competences** (regulatory; surveillance; enforcement)
 - **Coastal States powers decrease progressively as we move away from the coast, benefiting the other States and its nationals**
- ... in sum, the protection of the environment, the regulation of activities, and the monitoring and surveillance are much more challenging in the ocean**

IN THIS SCENARIO WHAT ARE THE SCIENTIFIC AND TECHNOLOGICAL CHALLENGES AND OPPORTUNITIES?

- **MPAs require more scientific knowledge about the oceans, about the functioning and mapping of the ecosystems, and the behavior of the species**
- **MPAs are designated following the scientific data and advice and require permanent monitoring (e.g., for adaptive management)**
- **We don't need MPAs *'in the paper'*, we need effective and efficient MPAs, that is, we need human resources and technology for monitoring the ecosystems and for surveillance of the human activities taking place in the protected areas**
- **The management plan (spatial planning) of a MPA can be very challenging from the point of view of the surveillance duties**

TOPICS FOR REFLECTION

➤ **Technology may improve the implementation of the current legal instruments, for instance:**

- verification and supervision of human activities (e.g., oil discharges, waste discharges, noise, illegal fishing, sediments/toxicity/temperature in the context of mining)
- mapping and monitoring in the course of human activities (e.g., devices for scientific research, fishing nets, mining and shipping... BUT, requires the collaboration of the stakeholders!)
- help the achievement of sound environmental impact assessments
- help the achievement of a good environmental status (Marine Strategy Framework Directive – environmental parameters monitoring)
- help the designation, delimitation (maps and zoning), monitoring and surveillance of MPAs
- help to understand the causes and effects of climate change

MPAs are crucial but its success is highly dependent on an integrated approach that ensures sustainable activities also outside the MPAs and includes the issue of climate change

TOPICS FOR REFLECTION

➤ **Technology may challenge the evolution of the legal system (national and/or international)**

- technology in itself must be eco-friendly
- permits (e.g., marine scientific research)
- compensation for damages caused by unmanned vehicles (liability) and insurances
- removal and dismantling of devices/unmanned vehicles
- protection of devices/unmanned vehicles and protection of data
- involvement of stakeholders and tools for compliance (e.g., reporting systems; sanctions in the case of illegal removal or destruction)
- validity of evidence in the context of litigation (quality, reliability, use and interpretation of data)
- codes of conduct (best practices)

What else?

We are driven by the target ' *by 2020 we want, at least, that 10 per cent of the Portuguese marine area is effectively protected* '

This is a big jump... Can we all work together for it?



Source:

http://www.huffingtonpost.com/2013/12/27/count-whales-hawaii_n_4510001.html

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