Sustainable Planning at Sea: Assessing Conservation and Use Compatibility in Portugal

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Background

- Marine spatial planning (MSP) is essential to support sustainable ocean use and conservation.
- Balancing competing interests under ecosystem-based management principles requires inclusive and well-structured stakeholder engagement. Achieving broad social acceptance remains a major challenge in many MSP processes.
- Robust, spatially explicit information on human-ocean interactions is critical to guide decisions that are ecologically and socially viable.

Objectives

To evaluate how marine conservation is integrated with other maritime activities in Portugal, and to analyse the role of ecosystem services in guiding spatial planning decisions.

Methodology

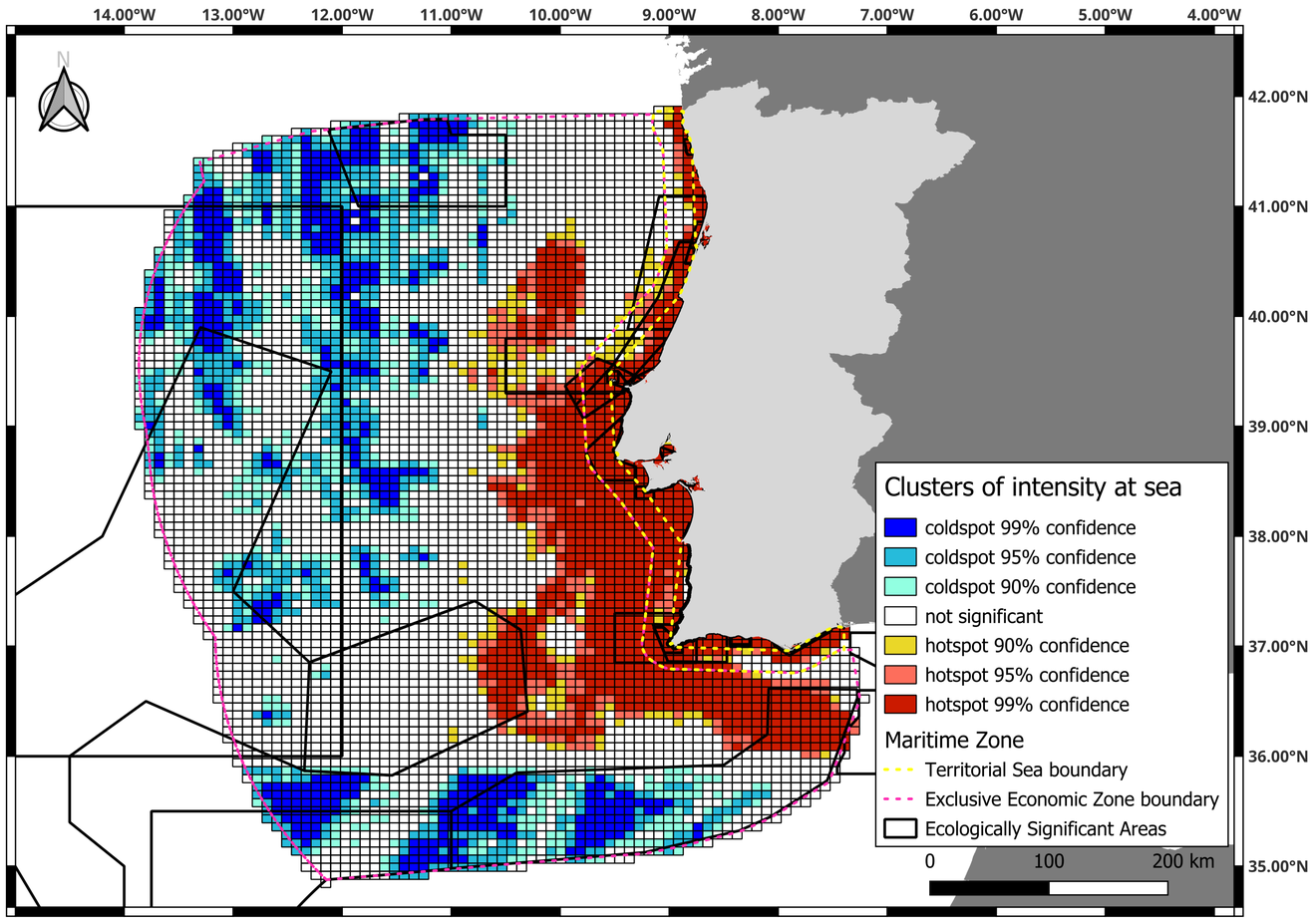
We mapped and categorized existing ocean uses across the Portuguese maritime space

Conducted stakeholder consultations to assess the role of natural resources in influencing ocean use planning priorities.

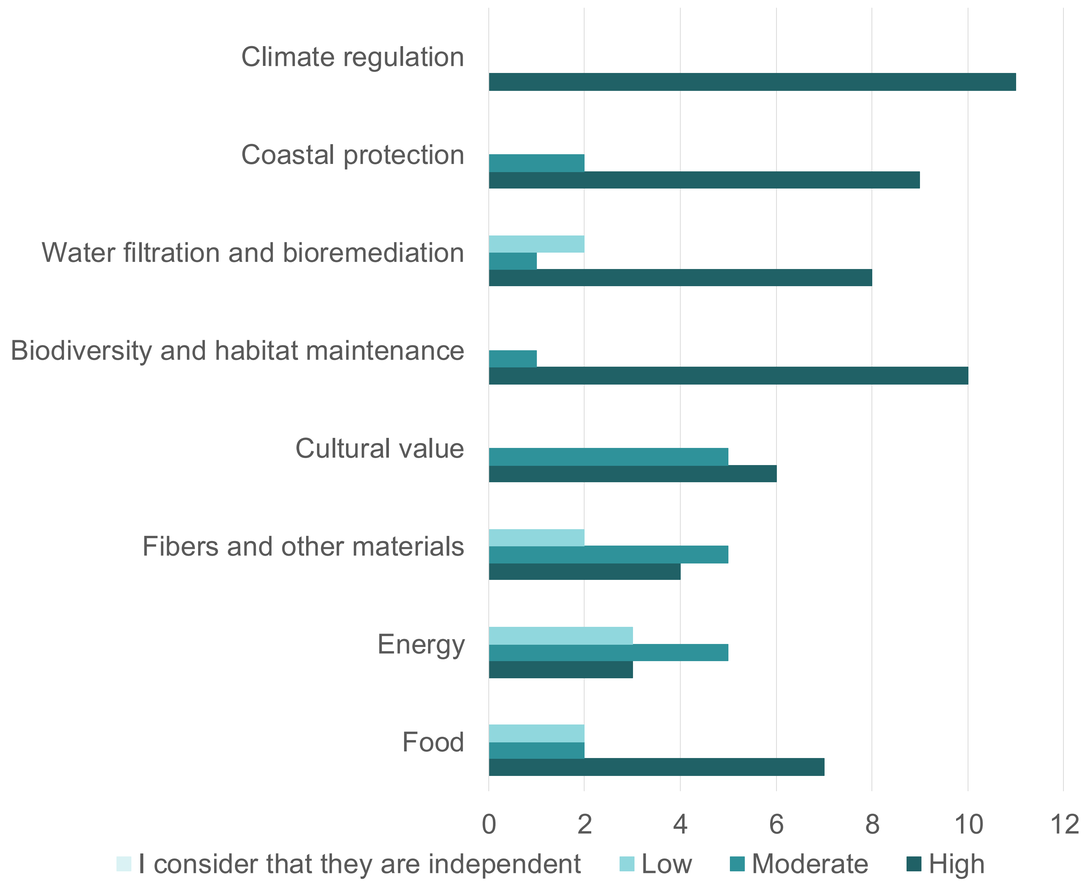
Identified spatial hotspots of marine intensity, highlighting areas of high competition and potential conflict.

Preliminary Results

Activity intensity hotspots in the Portuguese maritime space overlapping with areas of significant importance for marine conservation



Stakeholders' perception on the importance of marine ecosystem services in marine conservation. (n=11)



Overview of main recorded interactions between marine conservation and other ocean activities in the Portuguese maritime space.

Ocean Use	Marine cultures	Marine renewable energy	Submarine cables, ducts and outfalls	Disposal of dredging spoils	Scientific research	Recreation, sport, and tourism	Ship sinking and artificial reefs	Marine cultural heritage	Marine biotechnology	Metallic mineral marine resources	Non-metallic mineral marine resources	Fossil resources	Multi-use platforms	Carbon geological storage	Fisheries	Navigation and ports	National defence	Civil protection
Marine Conservation																		

Compatible uses | *Compatible uses under certain conditions* | *Conflicting uses*

Main Findings

- Coastal areas with high marine conservation importance are under significant pressure from overlapping human activities, posing serious risks to critical ecosystem services.
- Stakeholder insights suggest that the spatial distribution of marine resources and activities plays a more critical role in driving conflicts than their temporal scale or operational characteristics.

What's coming next?

- As climate change intensifies the pressure on marine resources and reshapes human–ocean interactions, the next step is to develop a climate risk assessment tailored to the Portuguese MSP.

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