

## Challenges in the definition of transboundary indicators for Maritime Spatial Planning in Europe: the Portuguese example

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### ABSTRACT

Maritime spatial planning (MSP) has a number of specificities that differentiate it from traditional planning efforts/products on land, i.a., the fluid/dynamic nature of the marine environment, the degree of interconnectedness of its components, and the complicated logistics of its monitoring, coupled to a still limited knowledge about its components and processes. Also, in order to increase its practical interest and chances of success, MSP initiatives should be articulated within neighbouring spaces/territories and with planning efforts that apply to such spaces. This includes crossing political borders (intra and international), and physical interfaces, namely the coastal zone, where sea/land/air come in contact, or different ocean zones or layers.

Particularly relevant in planning/management processes is their evaluation, including the definition of a good system of indicators pertaining to its implementation, namely indicators of efficiency (governance) and of efficacy (environmental and socio-economic effects of the process' implementation). Appropriate indicators should fulfill a number of important requisites, i.a. being scientifically credible, easily measurable and understandable and sensitive to changes.

Development of evaluation mechanisms (including indicators) of transboundary effects of MSP needs to focus on common governance objectives of neighbouring/overlapping initiatives and poses a number of other particular challenges, still relatively untapped: 1) focusing on aspects generated by maritime activities; 2) establishing a clear link between a given activity and its impacts; 3) pinpointing those aspects which may have an impact across the borders of a given plan, and 4) ensuring cross-border comparability of results (establishment of standardized methodological procedures). Different pressures (maritime and coastal activities) and differences in governance among coastal and maritime nations, complicate the definition and selection of transboundary indicators for MSP. However, an exercise of transboundary coordination is imperative from a cost and resource effectiveness standpoint (within and between countries), promoting greater efficacy of the monitoring/evaluation systems to be implemented.

We discuss the challenges and approaches to tackle transboundary indicators for MSP (including CZM) initiatives, using Portugal as a particularly interesting case-study: Portugal's maritime area, comprehending the Exclusive Economic Zones of mainland Portugal and of the Archipelagos of Madeira and Azores, and the area of extended continental platform, covers approximately 4 000 000 km<sup>2</sup>, being one of the largest maritime areas in Europe. Portugal's maritime space has a number of (intra)national frontiers, and international borders with countries from inside and outside the EU (respectively, Spain and Morocco).

Among the various international and national instruments relevant for MSP that Portugal has to implement, broad transversal/common objectives are related to environmental protection and maintenance of ecosystem health. Relevant indicators proposed in such instruments can be broadly grouped in three themes: biodiversity, fisheries, and water quality and pollution. Each theme is discussed in terms of its adequacy to evaluate crossboundary MSP initiatives and of its relation to specific sectors, including those more pertinent to the Portuguese maritime space, namely, fisheries/aquaculture, nature protection, shipping, and off-shore renewable energy production. We propose a set of recommendations for the development and implementation of indicator sets for transboundary MSP initiatives, which includes: starting with a reduced set of indicators that will set the stage for the construction on a common denominator across boundaries, and; building upon transboundary participation – both institutional, covering both sides of the "border" at stake, and public, opened to relevant stakeholders across the boundary.