

Ecosystem-based management planning across aquatic realms at the Ria de Aveiro Natura 2000 territory

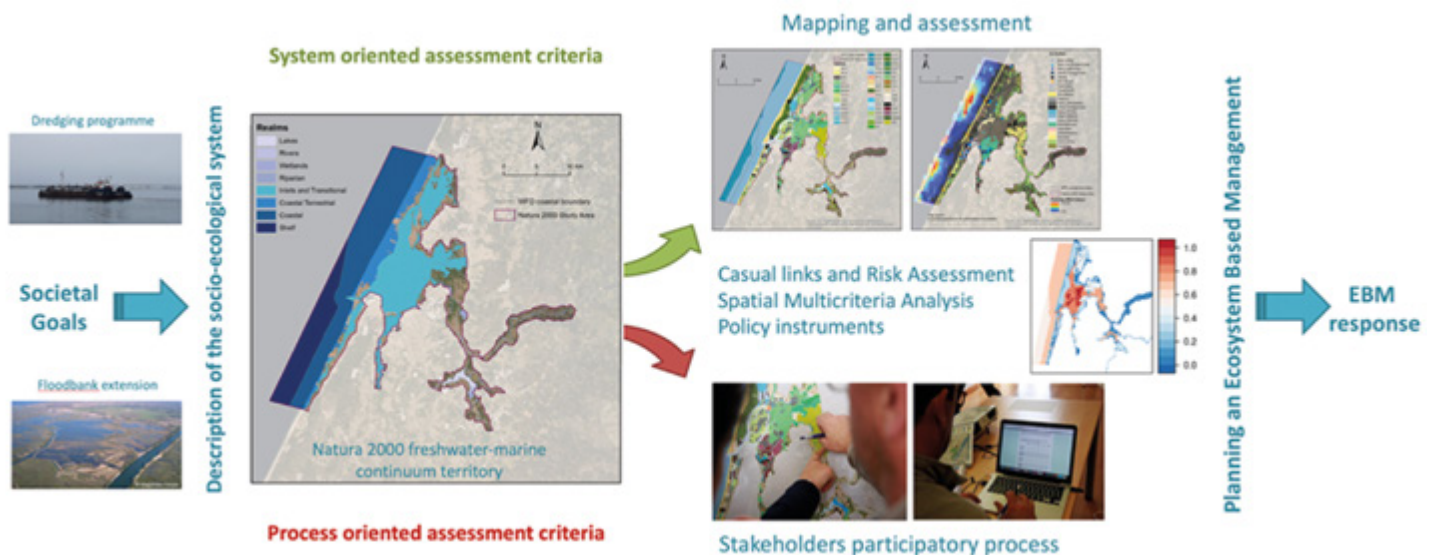
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FIGURE 1
Schematic representation of the Ecosystem-based management planning processes across aquatic realms at the Ria de Aveiro Natura 2000 territory.

Ria de Aveiro represents a coastal territory, in which its natural capital, mostly classified under a Natura 2000 network of protected areas, is of paramount importance for the regional and national economy. Current and foreseen changes connected to human activities, namely land and water uses and potential conflicts, in frame of environmental policies, sustainable economic development and human well-being, require the implementation of Ecosystem-based management (EBM) planning processes. The main objective was to elaborate on the co-development of the EBM planning process across three water domains (inland, transitional and marine waters) for the mitigation of unintended impacts from the management plan under implementation. The management options considered in the prospective scenarios were the dredging programme, named “Sediment Transposition for Optimization of Hydrodynamic Equilibrium in the Ria de Aveiro” and the extension of the floodbank to prevent surface saltwater intrusion into agricultural areas, at the confluence of

the Vouga River and the coastal lagoon. The approach used followed a stepwise procedure in frame of resilience principles, considering the analysis of the relationship between the social and ecological components and on how these can be connected through risk assessment and a spatial multi-criteria analysis (SMCA) based on the delivery of ecosystem services. Stakeholders' perception matched the ES provisioning risk assessment and supported planning the EBM response that consists in saltmarshes and seagrasses meadows restoration programs. Compliance of the proposed measures is achievable regarding policies (policy targets and policy instruments) and feasibility (scientific and technological knowledge and financial resources). The EBM response can support the Vouga estuary management plan and regional smart specialization (RIS3 Centro).



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