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### Identifying ecosystem services research hotspots to illustrate the importance of site-specific research: an Atlantic coastal region case study

Claudia Caro<sup>1,2</sup>, Pedro P. Cunha<sup>1</sup>, João Carlos Marques<sup>1</sup>, Zara Teixeira<sup>3</sup>

<sup>1</sup>University of Coimbra, Portugal. <sup>2</sup>Universidad Nacional Agraria La Molina, Peru. <sup>3</sup>MARE - Marine and Environmental Sciences Centre, C/o Department of Life Sciences, Faculty of Sciences and Technology, University of Coimbra, 3004-517, Coimbra, Portugal, Portugal

#### Abstract

The mismatch between the conceptual understanding of the Ecosystem Services (ES) in science, and their practical application, remains. Among the many issues under discussion is the link between knowledge and implementation. Base knowledge built over cases studies exist, but their usefulness for site-specific management purposes is limited. The goal of this work is to illustrate how gap analysis at the local level may contribute to the development of ES research and knowledge transfer. A review of coastal ES was performed, based on peer-reviewed journals, grey literature and other sources, allocating the information per European Nature Information System aquatic habitat coupled with the Common International Classification of Ecosystem Services. Then, a multicriteria decision-making approach was applied to find ES research hotspots, i.e., habitats for which ES research should be prioritized. Three criteria were used: abundance of ES, evidence for the supply of ES, and strength of evidence. The criteria were considered suitable for coastal areas where profound gaps in ES research exist. The Atlantic coastal region adjacent to the Mondego River was used as case study. 231 current and potential ES were listed and mapped for 21 coastal habitats. Cultural services arose as the dominant category. Saltworks emerged as the most recommended habitat for ES research. Results are in accordance with local decision-makers trends of management; we consider the approach to be appropriate as a first step towards the operationalization of the ES concept and flexible enough to be readapted to focus on critical questions that characterize ES research.

#### Keywords

Analytic Hierarchy Process, Mondego River, CICES, Decision-making