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Is the Gulf of Cadiz ready for the ecosystem approach? A
perspective from the southernmost European Atlantic
regional sea

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ABSTRACT

This study considers the major milestones in history, current situation and prospects of developing an ecosystem approach to management in the Gulf of Cadiz ecosystem. This particular socio-ecosystem is characterised by a clear focal ecosystem component –the role of the estuary of the Guadalquivir River as a nursery area– that have an influence on the marine ecosystem and at the same time concentrates a great number of sectoral human activities. This nursery role particularly affects the anchovy fishery, which is the most economically and culturally important fishery in the region. As a transition zone between river and marine environments, estuaries are particularly sensitive to human activities, either developed directly at the aquatic environment and its surroundings or far upstream within its catchment area. The particularities of the Guadalquivir socio-ecosystem, with an area of influence that extend as far as the city of Seville, require the consideration of multiple sectors and corresponding conflicting interests. These comprise the shipping and touristic sectors, the agriculture and aquaculture industries, or the fisheries and conservation interests. Specifically, the aim of this work is to give an overview of the main components, actors, and challenges faced by this socio-ecological system. This includes: (1) describing the ecological characteristics and focal mechanisms, (2) the legislative framework and the responsible institutional bodies, (3) the involved sectors and their corresponding pressures, (4) identifying the institutional arrangements that could be potentially used to harmonize those conflicting interests and finally (5) a diagnose of the problems encountered when conflict has arisen that has so far blocked the development of an ecosystem approach in the region.

Keywords: Gulf of Cadiz, Guadalquivir estuary, ecosystem approach, nursery, anchovy, tradeoffs, stakeholders, fisheries, agriculture, aquaculture, hydropower, shipping, mining, irrigators, dredging, dam

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