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# Technical support for the creation of a marine reserve as a fisheries management tool in Cape Roche (Cadiz)

Jesica Sarmiento<sup>1</sup>, Jorge Sáez-Jiménez<sup>2</sup>, Francisco Sobrado-Llopart<sup>2</sup>  
and Remedios Cabrera<sup>3\*</sup>

1 Master Student ACUIPESCA. University of Cadiz, Spain.

2 Society for the Development of Coastal Communities – SOLDECOCOS, Spain

3 Biology Department. School of Oceans and Environmental Sciences. University of Cadiz.  
11510. Cadiz, Spain.

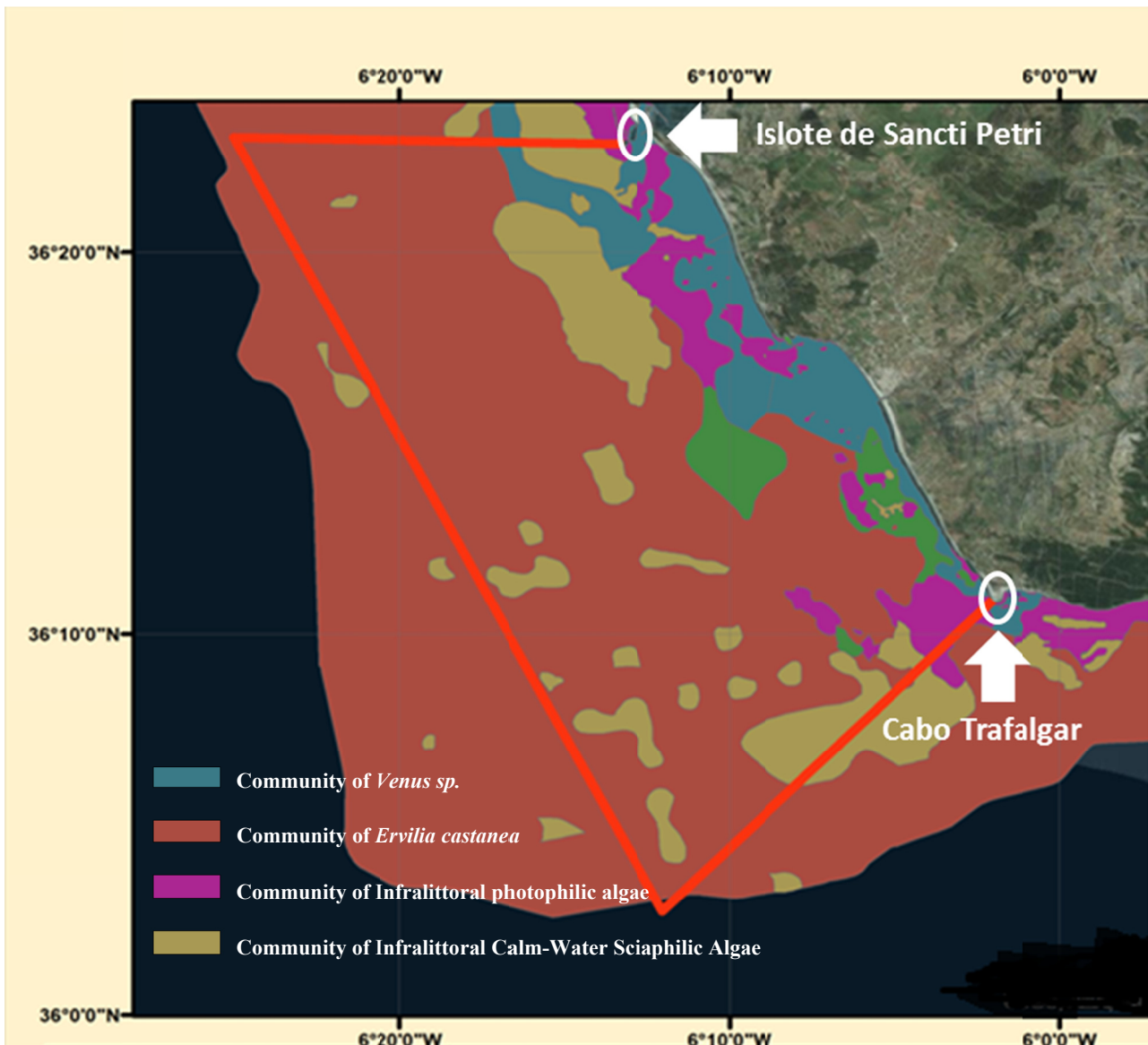
\* correspondence to [reme.cabrera@uca.es](mailto:reme.cabrera@uca.es)

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The ecosystem based approach is becoming the main approach to manage marine areas, specifically Marine Protected Areas (hereafter MPAs). The ecosystem based approach has been proposed in several cases as a management tool to preserve areas of special interest. The implementation of MPAs is included within the six priorities (regulation 508/2014, art. 6<sup>o</sup>) under the EMFF (European Maritime and Fisheries Fund) proposed by the EU to the period 2014-2020. The main objective of MPAs is to preserve areas for of conservation interest - that suffer daily from high fishing pressure, among other human pressures. In order to ensure the protection, regeneration and development of marine resources MPAs have specific objectives, such as: reducing the overall captures of exploited species, creation of no take zone(s), and implementation of fishing gear restrictions, protection of fish recruitment, contribute for the sustainable development of artisanal fisheries, among others.

The implementation of the co-management as a participatory process in this type of areas would mean a greater involvement from the fisheries sector, both in the decision making process and in respecting regulation inside the MPA. The fisheries association of Conil (Gulf of Cadiz; Andalusia; Spain) has always opted for the exploitation of their own fishing grounds,

advocating for its sustainability. This association is pioneer in incorporating legislation that were approved by its Assembly and composed by ship-owners and sailors. This legislation has been approved as a self-regulation measure (Muñoz and Cárdenas, 2006). The fisheries association of Conil has been a reference for other national fisheries associations. Since the constitution of the fisheries association of Conil in 1917, regulatory measures have been incorporated in their internal regulation, such as minimum landing sizes, fishing gear allowed and fisheries bans among others.



**FIGURE 1.** Proposed Marine Reserve Boundaries. Source: Society for the Development of Coastal Communities –SOLDECOCOS.

Over the last few years, the fisheries association of Conil, alongside the OPP-74 (Organization of Aquiculture Producers in the Open Sea of Conil) and the OPP-72 (Organization of Artisanal Fishermen of the Fish Market of Conil) have been interested in performing a Co-managed Marine Reserve as a Fisheries Management Tool that will be used as a measure to protect their fishing grounds. This MPA lies between the Sancti Petri islet (Hercules Castle) and

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Trafalgar cape, separated by 18 nautical miles inshore, and 12 nautical miles offshore (Figure 1). Therefore, these waters belong to the territorial sea and competence of the Provincial Government of Andalusia. MPA boundaries were proposed by the fisheries association of Conil based on data obtained by the SLSEPA (Locator system and monitoring of vessels fishing in Andalusia). This system records the fishing activity and allows the identification of the area used by the fishing fleet of Conil. The internal rules approved by the fisheries association of Conil are implemented to protect the fish recruitment, economic resources and the area about “illegal” activities from external fishing vessels. The approximate extension of the area proposed is 95,555 Ha.

The aim of this scientific work is to show the process for the creation of a co-managed Marine Reserve among all the involved private stakeholders and the administrations as a marine governance tool.

The fisheries sector got a proposal that was implemented through workshops organized by NGO and technicians and involving fishermen from the region (Conil de la Frontera, Sancti Petri, and Barbate). This improvement was focused on the reviewed and updated information such as: current legislation, eco-cartography, vulnerable species in the study area, stakeholders, fishing gears used in the fishing grounds, exploited species, underwater cables, situation of the fisheries traps (known as “almadrabas”) and the localization of the protection reefs placed by the fisheries association of Conil and the provincial government to protect the area about trawl fishery.

Exhaustive compilation of the information concerning the reserve has allowed us to lay the foundations for the marine reserve proposal. The first three workshops were carried out during 2009 where the different stakeholders were represented. These workshops helped us to extract information about the size of the proposed site and other possible locations for the “no take zones within the marine reserve. In these workshops, the fishermen expressed their concern about the illegal fishing and declining of the fish stocks. Then, it motivated the fishermen as the main promoters of marine reserve. At the end of 2016, two new workshops were conducted for the implementation of the reserve; and the discussion about the new steps to follow.

The involvement of the fishermen has been a success as the Co-managed reserve in Os Miñarzos (Galicia), and demonstrated that the inclusion of fishermen in the decision making includes a series of benefits in the management of the reserve. Counting on the fisheries sector resulted in their positive comply of the regulation within the reserve, reducing the number of illegal fishermen (López-Ornat et al., 2014) and even forming part of the control and surveillance of the reserve.

From the legislative point of view of MPAs at global level the legislation is scarce, being the Habitats Directive (92/43/EU) and the Birds Directive (Directive 79/409/EEC) legislative tools at European level. The MPAs can be subjected by the guidelines of different conventions and directives such as MSFD (Marine Strategy Framework Directive) and OSPAR (Oslo and Paris Conventions) and CBD (Convention on Biological Diversity). At national level (Spain) the Act 3/2001, of 26 of March, of Maritime Fisheries of the State, includes the priority objectives in the new Fisheries Common Policy (FCP) as the advances towards sustainability, understood in a broad sense (ecological, economical, socio-cultural, and politics-institutional), under the priorities of funding of the new operative program of the Fund European Maritime Fisheries (FEMF).

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