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PhD project: The integration of social indicators in the process of evaluating strategies for the management of fishery resources.

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Summary: Fisheries, beyond an economic activity, constitute complex socio-ecological systems in which the natural and human dimensions interact on multiple levels. In this sense, it is essential that public administrations are able to understand how the different actors involved will be affected and what challenges and opportunities are presented to them in order to base their management decisions and establish cooperation and compliance practices in different contexts. However, the management of fishery resources is a complex process that requires a broad multidisciplinary analysis.

Projects developed by the Food and Agriculture Organization of the United Nations (FAO), by the European Commission, by the Working Group on Economics (WGECON) and by the Working Group on Social Indicators (WGSOCIAL), these last two groups of work linked to the International Council for the Exploration of the Sea (ICES), come to confirm all the potential that inclusion has from a social perspective in the management systems of fishery resources.

Socio-economic indicators are, therefore, part of both the information necessary for fishermen's decision-making, and the arguments that public administrations can use to support their management decisions. Therefore, as a general objective of this thesis, it is proposed to formalize a methodology of social and economic analysis through the development of new indicators to define the optimal state of exploitation of resources in mixed research and, empirically, for multispecies or mixed fisheries in the Bay of Biscay.

To achieve this objective, the work is structured in four main sections, each of which addresses fundamental aspects that provide final results in themselves, but which, once integrated, allow the development of a management analysis protocol for mixed fisheries for the case study.

The first chapter of this thesis summarizes in detail the state of the art on the evaluation of fishing resources in socio-economic terms. This chapter (chapter 1) lays the foundations to develop a methodology that includes indicators that cover the social and economic dimension in an evaluation process (chapter 2) whose practical application for mixed fisheries in the Bay of Biscay (chapter 3) allows obtain a series of results in order to make a comparative analysis (chapter 4) of the evaluation processes that only add biological parameters as opposed to those proposed in chapter 3 of this thesis, which take into account social indicators and economic whose purpose is to promote and develop fishing activity based on the principle of sustainability.

