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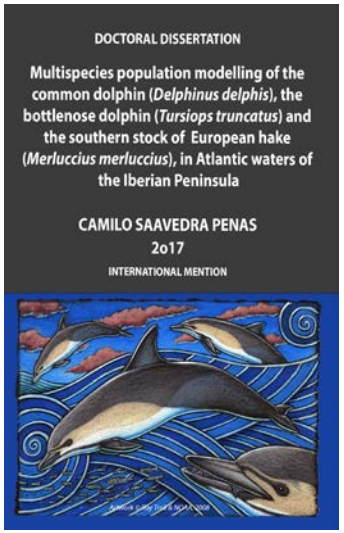
Nationality: Spanish
Date doctoral degree: 20/12/2017

Orientation: Sustainable Use of Marine Resources
Specialization Area: Management and Use of Resources
Research Area: 2.1 Research into resources based on knowledge of ecosystems



PhD project: **Multispecies population modelling of the common dolphin (*Delphinus delphis*), the bottlenose dolphin (*Tursiops truncatus*) and the southern stock of European hake (*Merluccius merluccius*), in Atlantic waters of the Iberian Peninsula**

Supervisors: Dr. Begoña Santos Vázquez (Spanish Oceanographic Institute - IEO)
Dr. Santiago Cerviño López (Spanish Oceanographic Institute - IEO)
Dr. Graham Pierce (Spanish National Research Council - CSIC)

Summary: In this thesis, a multi-species model were constructed, including the southern stock of European hake (*Merluccius merluccius*), the fisheries targeting hake, the common dolphin (*Delphinus delphis*) and the bottlenose dolphin (*Tursiops truncatus*). The aim of this model was to assess the status of the hake stock and estimate the impact of cetaceans on the hake population and the impact of the fisheries targeting hake on the cetacean populations. The composition of the diet and the prey consumption of the most abundant cetaceans of the Atlantic coast of the Iberian Peninsula were also evaluated. Trends in the abundance of common dolphins using the data collected from dedicated and multidisciplinary research surveys carried out in northern and north-western Iberian Peninsula waters were studied. The possibility of using strandings to infer trends in cetacean abundance were also investigated. The mortality at age of the common dolphin were determined using the information obtained from stranded animals, separating the various components of mortality (total, natural and bycatch mortality). A R library were created to perform these analyses. Species-specific reference points for bycatch were calculated to determine safe bycatch limits for common and bottlenose dolphin populations. The parameters obtained from these analyses, in addition to providing the data needed to build the multi-species model, made possible the assessment of the environmental status of the hake, common and bottlenose dolphin populations under the criteria established in the framework of the European Marine Strategy Framework Directive.