

{rokbox title=|Map of the marine ecosystems that were reviewed :: Image:

Authors|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-scientific-knowledge-gaps-ordines-2023-thumb-et-al.jpg|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-scientific-knowledge-gaps-ordines-2023-et-al.jpg{/rokbox}

Luisa R. Abucay, Patricia Sorongon-Yap, Kathleen Kesner-Reyes, Emily C. Capuli, Rodolfo B. Reyes Jr, Eva Daskalaki, Carmen Ferrà, Giuseppe Scarcella, Gianpaolo Coro, **Francesc Ordines**, **Paula**

Sánchez Zulueta

, Georgi Dakalov, Stefania Klayn, Liesa Celie, Marco Scotti, David Grémillet, Charlotte Lambert, Gideon Gal, Maria Lourdes D. Palomares, Donna Dimarchopoulou and Athanassios C. Tsikliras, 2023.

[Scientific knowledge gaps on the biology of non-fish marine species across European Seas.](https://doi.org/10.3389/fmars.2023.1198137)

Front. Mar. Sci. 03 October 2023. <https://doi.org/10.3389/fmars.2023.1198137>

Abstract: Available information and potential data gaps for non-fish marine organisms (cnidarians, crustaceans, echinoderms, molluscs, sponges, mammals, reptiles, and seabirds) covered by the global database SeaLifeBase were reviewed for eight marine ecosystems (Adriatic Sea, Aegean Sea, Baltic Sea, Bay of Biscay/Celtic Sea/Iberian Coast, Black Sea, North Sea, western Mediterranean Sea, Levantine Sea) across European Seas. The review of the SeaLifeBase dataset, which is based on published literature, analyzed information coverage for eight biological characteristics (diet, fecundity, maturity, length-weight relationships, spawning, growth, lifespan, and natural mortality). These characteristics are required for the development of ecosystem and ecological models to evaluate the status of marine resources and related fisheries. Our analyses revealed that information regarding these biological characteristics in the literature was far from complete across all studied areas. The level of available information was nonetheless reasonably good for sea turtles and moderate for marine mammals in some areas (Baltic Sea, Bay of Biscay/Celtic Sea/Iberian Coast, Black Sea, North Sea and western Mediterranean Sea). Further, seven of the areas have well-studied species in terms of information coverage for biological characteristics of some commercial species whereas threatened species are generally not well studied. Across areas, the most well-studied species are the cephalopod common cuttlefish (*Sepia officinalis*) and the crustacean Norway lobster (*Nephrops norvegicus*). Overall, the information gap is narrowest for length-weight relationships followed by growth and maturity, and widest for fecundity and natural mortality. Based on these insights, we provide recommendations to prioritize species with insufficient or missing biological data that are common across the studied marine ecosystems and to address data deficiencies.

Keywords: data gaps, marine biodiversity, marine mammals, seabirds, marine reptiles, marine invertebrates, seaLifeBase, european waters.