

{rokbox title=|Map of the study area :: Image: Authors|
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images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-spatial-temporal-analysis-trachurus-mediterraneus-mediterranean-rodríguez-et-al-2022.jpg{/rokbox}

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[Spatial and temporal analysis \(2009–2020\) of the biological parameters, abundance and distribution of *Trachurus mediterraneus*](#)

[\(Steindachner, 1868\) in the Western Mediterranean.](#)

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Abstract: *Trachurus mediterraneus* is captured as by catch by the fishing fleet in the Spanish Mediterranean and usually landed as the global category of *Trachurus spp.*

, consequently there is a prominent lack of biological data on this species. The knowledge of the spatial and temporal evolution of its distribution, abundance and main biological parameters is essential to achieve a proper management and sustainable exploitation. Data collected in the MEDiterranean International Acoustic Survey (MEDIAS) 2009–2020 time series, carried out in July, has been analyzed to determine the evolution of the main ecological aspects of *T. mediterraneus*

in two GFCM management units: Northern Spain (GSA06) and Northern Alboran Sea (GSA01). The results suggest a possible neritic distribution of

T. mediterraneus

, mainly concentrated at depths less than 60 m in GSA01 and up to 105 m in GSA06, as well as the existence of significant differences in abundance and length frequency distributions among GSAs. Furthermore, preliminary results regarding *T. mediterraneus* age and growth seemed to indicate a faster growth during the first two years in GSA01 than in GSA06. In both areas, potential changes in the life history traits of this species were evidenced, with a decreasing trend in the size at first maturity and condition factor over the years. Finally, five persistent distribution areas were located along the study area, highlighting Málaga Bay as a possible recruitment ground. The relevance of this study lies in the growing need for robust and current biological data of intermediate species in the marine food web and it contributes to the global purpose of achieving an integrated management of fishery resources.

Keywords: Life history traits, Temporal and spatial variability, *Trachurus mediterraneus*, Mediterranean Sea, Abundance and distribution, Acoustic survey