{rokbox title=|Map of the study area :: Image: Authors| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-efficiency-benthic-species-communities-trawl-farriols-et-al-2024-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-efficiency-benthic-species-communities-trawl-farriols-et-al-2024.jpg{/rokbox}

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Improving the sampling efficiency of benthic species and communities using complementary gears: beam trawl and bottom trawl.
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Abstract: Benthic species and habitats are receiving increasing attention in the framework of European regulations such as the Marine Strategy Framework Directive (MSFD) and the implementation of the Ecosystem Approach to Fisheries Management by the current EuropeanM Union Common Fishery Policy. As a consequence, scientific surveys initially designed to assess demersal resources, like MEDITS, have broadened over the years from demersal species and their communities to benthic ones. At the same time, in the framework of the MSFD, new specific surveys have also started to properly identify and characterize benthic communities. This work aims to compare the efficiency of Jennings beam trawl (BT) and the experimental bottom trawl GOC-73, to sample epibenthic and nectobenthic species and communities. Thus, data from MSFD surveys were compared to data from MEDITS surveys in the Levantine-Balearic demarcation (western Mediterranean Sea). The Jennings BT provides better estimations of density and species richness for small species closely associated with the seabed and the GOC-73 of the occurrence of some macroepibenthic species presenting low abundance. The GOC 73 allows for higher spatial coverage, but the Jennings BT gives more precise information on the location of benthic species and the patchy distribution of benthic habitats. Although sampling was performed in the same habitats, an important fraction of the species was collected exclusively using one or the other sampling gear. Both sampling methods provide complementary information that improves biodiversity estimations and the description of benthic habitats, allowing a better future assessment of the anthropogenic impact, hence improving the objectives of the MSFD.

Keywords: benthic habitats, epibenthic species, nectobenthic species, Jennings beam trawl, experimental bottom trawl GOC-73, sampling efficiency