{rokbox title=| Map of the study area (Balearic Islands; western Mediterranean) showing the MEDITS stations sampled during the period 2008-2022. :: Image: Authors|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-new-susceptibility-fishing-index-farriols-2027-thumb-et-al.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-new-susceptibility-fishing-index-farriols-2027-et-al.jpg{/rokbox}

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A new susceptibility to fishing index for a quick assessment of fishing management measures.
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Abstract:Stock assessments in the Mediterranean are currently based on models of the population dynamics of exploited species. Ecological and socio-economic variables influencing fisheries, such as the implementation of the ongoing European Multiannual Plan (MAP) for fisheries exploiting demersal stocks in the western Mediterranean, demand the quick assessment of management measures results. In such scenarios, an alternative assessment method, that estimates the effect of these measures on the susceptibility to fishing of target and by-catch species, can complement the current stock assessments. Susceptibility is affected immediately after the application of management measures, so there is no need to wait for the managed stock to recover. We have developed a Susceptibility to Fishing Index (SFI), based on the hypothesis that species' susceptibility depends on its spatial distribution (i.e. its habitat), the proportion of its habitat affected by fishing activities and the intensity of the fishing effort. The first application of SFI to nine demersal fish species off the Balearic Islands, including both target and by-catch species which have different habitat preferences, has proved the sensitivity of the index to changes in abundance distribution, the effort exerted by the trawling fleet and the level of overlap between species' habitats and fishing grounds. Together with the SFI's low data requirement, these factors make it suitable for predicting the short-term effects of management measures and capturing their effects on non-target species; making it highly applicable for tracing the effects of recent management measures, such as those implemented by the MAP in the western Mediterranean.

Keywords:susceptibility,fisheries,assessment,management,bottom trawling.