

{rokbox title=| Percentage variation in fishing effort in the GSA5 (Balearic Islands) between the reference period (2015-2017) and 2023 :: Image:

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[Assessing the effects of the implementation of a multiannual plan on the fishing effort of the bottom trawl fleet in the western Mediterranean.](#)

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Abstract: Whilst trawling is an important activity of the Spanish fishing fleet in the Western Mediterranean, it is well known that bottom trawlers have been exerting intense fishing pressure on their fishing targets. This high fishing effort has led to changes in the population dynamics of the marine resources, resulting in the overexploitation of many fishery resources. To tackle this, the European Union established a series of management measures since 2020 under the multiannual plan for the fisheries exploiting demersal stocks in the western Mediterranean (WestMedMAP). Among them, a reduction of fishing effort, as fishing days, of the bottom trawl fleet up to 40% in the first five years of the plan, as well as setting up a number of closure areas to fishing, together with some other technical measures to minimise trawling effects on the marine environment. These measures are aimed to contribute to the achievement of the objectives of the Common Fisheries Policy to ensure that fishing activities are socially, economically and environmentally sustainable in the long term. In this study we assess the fishing effort trends of the Spanish bottom trawl fleet and its spatial and temporal dynamics before and during the first years of the implementation of the WestMedMAP in five geographical subareas of the western Mediterranean. We analysed the spatio-temporal dynamics of fishing effort, identified bottom trawling fishing grounds, and both inter- and intra-annual variation of effort at vessel level. All areas experienced a decrease of fishing effort even before the implementation of WestMedMAP (prior to 2020). The first year of the implementation coincided with the COVID-19 lockdown, which may have caused an additional reduction in fishing effort during 2020, and would explain the small increase on the followed year in some areas. In most cases, fishing effort showed a continuous slight decreasing trend in the number of fishing days. The effect of season showed some differences between areas, although in general summer was the period with higher activity, due to both higher seafood demand due to higher tourist

activity and good weather conditions. Ultimately, if this downward trend continues, the social and economic sustainability of the fishing sector could be jeopardised in some GSAs operated by the Spanish trawl fleet.

Keywords: WestMedMAP (EU multiannual plan), Spatio-temporal analysis, Vessel monitoring system, Demersal fishing grounds, Fishing strategies.