{rokbox title=|Iberian Peninsula and the study area of the Gulf of Cadiz and northern Alboran Sea :: Image: Authors| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-cob-ieo-csicdemersal-species-gulf-cadiz-alboran-sea-garcia-ruiz-et-al-2022-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-cob-ieo-csicdemersal-species-gulf-cadiz-alboran-sea-garcia-ruiz-et-al-2022.jpg{/rokbox}

Cristina GARCÍA-RUIZ, Marina DELGADO and **Manuel HIDALGO**, 2022. **Patterns of spatial changes on demersal species in the Gulf of Cadiz and northern Alboran Sea**
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Mediterranean Marine Science, 23(1), 55–68. https://doi.org/10.12681/mms.27386

Abstract: The Gulf of Cadiz (GoC) in the Atlantic Ocean and the Alboran Sea (AS) in the Mediterranean Sea are part of an oceanographic complex system of extreme importance in the exchange of waters between the Atlantic and the Mediterranean through the Strait of Gibraltar. Besides its significant role as ecological transition system, it is unknown whether regional and local environmental drivers affect similarly species inhabiting these two adjacent and connected ecosystems. This study analyses the spatial shifts of representative demersal species and their response to the environmental and demographic drivers in these two regions using information from two trawl surveys carried out in the GoC and in the AS from 1994 to 2015. Species distribution trends were observed in both basins. However, they were more evident for GoC, where six out of eleven species presented temporal trends, than in AS, where only two species displayed significant distribution changes. These species showed geographic displacements in both basins towards Strait of Gibraltar. Also, a high percentage of species showed significant differences in mean depth distribution on both sides of Strait of Gibraltar. Our study shows a general heterogeneity and independence in the drivers influencing species distributions at both areas. GoC showed a high influence of both large and regional scale climate influence affecting several species, while in AS the diversity of drivers affecting was higher with species density being the most common driver. This study provides scientific basis to improve ecosystem-based management measures in these important transitional ecosystems.

Keywords: Demersal species, species distribution, centre of gravity, Gulf of Cadiz, Alboran Sea, climate effects