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Andrea Padilla, Laura Recasens, Marc Balcells, **Ulla Fernández de Arcaya**, Pere Abelló, 2022. [Effects on faunistic composition and population characteristics of decapod crustaceans after the implementation of a fisheries no-take area in the NW Mediterranean.](https://doi.org/10.3989/scimar.05245.035) Sci. mar.2022.Jun.15.Vol.86 No.2. <https://doi.org/10.3989/scimar.05245.035>

Abstract: The establishment of fisheries no-take areas is considered an effective method for the recovery of populations of exploited species and their habitats. Here we study the faunistic composition of decapod crustaceans after the implementation of a no-take area in the Gulf of Roses (NW Mediterranean) in 2014. We studied the occurrence (presence/absence) and density of all decapod crustaceans sampled by trawling inside and outside a no-take area from March 2015 to July 2018. Sizes were assessed for all common species. A total of 33 species of decapod crustaceans were recorded. Four species showed significantly higher occurrences in the no-take area and three in the open area, while significantly higher densities were found for four species in the no-take area and three in the open area. Multivariate analysis showed marked differences between the no-take area and the open area, while also showing that the two areas were undergoing a divergence. The comparison of sizes between the two zones showed species-specific patterns that in many cases showed that both the smallest and the largest individuals were present in the no-take area, suggesting that the closing of this area would be important for recruitment and juvenile development, as well as for protection of large-sized individuals. All evidence indicates that the establishment of the no-take area has led to an improvement in biodiversity and species population descriptors.

Keywords: no-take areas, decapod crustaceans, biodiversity, demersal fisheries.