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thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-identifying-macrofloating-debris-hotspots-mediterranean-sanchez-et-al-2024-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-identifying-macrofloating-debris-hotspots-mediterranean-sanchez-et-al-2024.jpg{/rokbox}

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[Identifying macrofloating debris hotspots in the Mediterranean Sea applying multiplatform methodologies.](#)

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Abstract: The Mediterranean Sea is considered the world's sixth greatest hotspot for marine litter; however, quantifying the extent of marine debris in the oceans is a challenge, especially due to variations in survey methodologies. This study aims to assess the spatial abundance and distribution of macrofloating debris (> 2.5 cm) in the Mediterranean basin through visual surveys carried out by methods (research vessel, sailing vessel, and aerial) and approaches (science and citizen science). Aerial and research vessel surveys estimated litter at 1.88 ± 2.3 items·km⁻² and 0.89 ± 1.61 items·km⁻² respectively for the whole Mediterranean; moreover both methods agreed that the main macrofloating debris hotspots were in the east of Algeria, Tyrrhenian, Adriatic and Alboran Seas. Likewise, for the common blocks analysed aerial surveys estimated greater amounts of macrofloating debris than research vessels (mean 1.92 ± 2.61 items·km⁻² vs. 0.94 ± 1.69 items·km⁻²) highlighting the different detection capacities of the two methods. In the Spanish Mediterranean continental shelf, results obtained from research vessels showed mean values of 8.6 ± 7.8 items·km⁻² for 2021 and 3.86 ± 3.96 items·km⁻² for 2022. Sailing vessels along the Spanish coastline registered up to 70.87 ± 257.23 items·km⁻² in waters of the Cabrera Island, which is a Marine Protected Area. No significant differences between citizen science and scientific methods were found, which suggests that the implementation of this tool could be very useful in obtaining greater datasets. Results on the abundance of macrofloating debris could be attributed to various factors,

including the influence of mighty rivers, a dense population in these areas, especially during some seasons like summer, and the effect of some currents and eddies, such as the Algerian and the northern currents, which also influence the transboundary plastics.

Keywords: Mediterranean Sea, Macrofloating debris, Aerial survey, Vessel survey