

{rokbox title=|Neutral particles (a) and sinking particles (b) hazard distribution :: Image: Authors|thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-impact-marine-litter-pollution-mediterranean-biodiversity-soto-navarro-et-al-2021-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-impact-marine-litter-pollution-mediterranean-biodiversity-soto-navarro-et-al-2021.jpg{/rokbox}

J. Soto-Navarro, **G. Jordá**, **M. Compa**, **C. Alomar**, M.C. Fossi, **S. Deudero**, 2021. [Impact of the marine litter pollution on the Mediterranean biodiversity: A risk assessment study with focus on the marine protected areas.](https://doi.org/10.1016/j.marpolbul.2021.112169)

Marine Pollution Bulletin. Volume 165, April 2021, 112169.

<https://doi.org/10.1016/j.marpolbul.2021.112169>

Abstract: In this paper a novel methodology to assess the risk of marine litter (ML) pollution in the Mediterranean Sea is implemented. In this approach, the hazard component is estimated using a state-of-the-art 3D modeling system, which allows the simulation of floating and sinking ML particles; the exposure component is defined from biodiversity estimates; and the vulnerability is related to ML ingestion rates of each species. The results show that the hot-spots for the ML risk concentrate in the coastal regions, and are mainly conditioned by the biodiversity in the region. A dedicated analysis on the marine protected areas shows that the risk therein is controlled by the proximity to ML sources and that their present-day protection levels are not effective in the case of ML pollution. Only a reduction of ML at the sources could reduce the impact of ML pollution in protected areas.

Keywords: Marine litter, Mediterranean Sea, Risk assessment, Mediterranean biodiversity, Marine Protected Areas (MPA)