{rokbox title=|Occurrence of Isidella elongata in the study area after the environmental sub-sampling, with a a planar and b a three-dimensional view for better visualization of the bathymetry :: Image: Authors|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-habitat-suitability-models-puerta-2023-thumb-et-al.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-habitat-suitability-models-puerta-2023-et-al.jpg{/rokbox}

Ward Standaert, **Patricia Puerta**, Francesco Mastrototaro, Desirée Palomino, Ricardo Aguilar, Berta Ramiro-Sánchez, Juan-Tomás Vázquez, Olga Sánchez Guillamón, Pilar Marin, Jorge Blanco and Covadonga Orejas, 2023. **Habitat Suitability Models of a Critically Endangered Cold-water Coral, Isidella Elongata, in the Mallorca Channel.** Thalassas: An International Journal of Marine Sciences.Volume 39.Pages 587–600.2023. https://doi.org/10.1007/s41208-023-00531-y

Abstract:The bamboo coral *Isidella elongata* is often associated with a diverse community, including commercial fish species, playing an important role in the deep-sea Mediterranean as a biodiversity hotspot. There has been a drastic decrease of the populations of this species since the twentieth century, mainly related to impacts of fishing, leading to its inclusion in the Barcelona Convention and the list of Mediterranean vulnerable marine ecosystems. However, the knowledge on its local scale distribution is still very limited. In this study, habitat suitability models were performed based on a dense population of *I. elongata*, located in the Mallorca Channel (western Mediterranean), to contribute to fill this knowledge gap. Generalized additive models, Maximum entropy models and Random Forest were combined into an ensemble model. Models showed that habitat is most suitable on smooth plains surrounding the seamounts of Ses Olives and Ausiàs March present in the study area. Furthermore, two models out of three showed a preference of the coral for flat areas. The predictions of the habitat suitability models presented in this study can be useful to design protection measures for this critically endangered species to contribute to the species' and deep-sea fisheries management.

Keywords:*Isidella elongata*,Habitat suitability models,Cold-water corals,Endangered species,Vulnerable marine ecosystems,Soft bottoms,Western Mediterranean.