

{rokbox title=|Map of the study region including in-situ observations of shoot density of *P. oceanica* :: Image: Authors|
thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-mediterranean-seagrasses-essential-coastal-protection-climate-change-agulles-et-al-2024-thumb.jpg|}
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M. Agulles, N. Marbà, C. M. Duarte and **G. Jordà**, 2024. [Mediterranean seagrasses provide essential coastal protection under climate change.](#)

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Abstract: Seagrasses are vital in coastal areas, offering crucial ecosystem services and playing a relevant role in coastal protection. The decrease in the density of Mediterranean seagrasses over recent decades, due to warming and anthropogenic stressors, may imply a serious environmental threat. Here we quantify the role of coastal impact reduction induced by seagrass presence under present and future climate. We focus in the Balearic Islands, a representative and well monitored region in the Mediterranean. Our results quantify how important the presence of seagrasses is for coastal protection. The complete loss of seagrasses would lead to an extreme water level (eTWL) increase comparable to the projected sea level rise (SLR) at the end of the century under the high end scenario of greenhouse gases emissions. Under that scenario, the eTWL could increase up to ~1.4 m, with 54% of that increase attributed to seagrass loss. These findings underscore the importance of seagrass conservation for coastal protection.

Keywords: Seagrasses, coastal areas, Mediterranean seagrasses, ecosystem services, coastal protection, *Posidonia oceanica*