

Is *Posidonia oceanica* regression a general feature in the Mediterranean Sea?

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Abstract

Over the last few years, a widespread regression of *Posidonia oceanica* meadows has been noticed in the Mediterranean Sea. However, the magnitude of this decline is still debated. The objectives of this study are (i) to assess the spatio-temporal evolution of *Posidonia oceanica* around Cap Corse (Corsica) over time comparing available ancient maps (from 1960) with a new (2011) detailed map realized combining different techniques (aerial photographs, SSS, ROV, scuba diving); (ii) evaluate the reliability of ancient maps; (iii) discuss observed regression of the meadows in relation to human pressure along the 110 km of coast. Thus, comparison with previous data shows that, apart from sites clearly identified with the actual evolution, surfaces occupied by the seagrass *Posidonia oceanica* are relatively stable. The recorded differences seem more related to changes in mapping techniques. These results confirm that in areas characterized by moderate anthropogenic impact, *Posidonia oceanica* meadows are not subject to significant regression and that the changes due to the evolution of mapping techniques are not negligible. However, others facts should be taken into account before extrapolating to the Mediterranean Sea (e.g. currently mapped surfaces) and assessing the amplitude of actual regression.

Keywords: Anthropogenic pressure, Corsica, mapping techniques, Mediterranean Sea, *Posidonia oceanica*, regression.
