



## Bioassessment of trace element contamination of Mediterranean coastal waters using the seagrass *Posidonia oceanica*



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### ABSTRACT

A large scale survey of the trace element (TE) contamination of Mediterranean coastal waters was performed from the analysis of Ag, As, Cd, Cu, Hg, Ni and Pb in the bioindicator *Posidonia oceanica*, sampled at 110 sites differing by their levels of exposure to contaminants. The holistic approach developed in this study, based on the combined utilization of several complementary monitoring tools, *i.e.* water quality scale, pollution index and spatial analysis, accurately assessed the TE contamination rate of Mediterranean coastal waters. In particular, the mapping of the TE contamination according to a new proposed 5-level water quality scale precisely outlined the contamination severity along Mediterranean coasts and facilitated interregional comparisons. Finally, the reliability of the use of *P. oceanica* as bioindicator species was again demonstrated through several global, regional and local detailed case studies.

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