

# Seagrass (*Posidonia oceanica*) monitoring in western Mediterranean: implications for management and conservation

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**Abstract** The seagrass *Posidonia oceanica* is extensively monitored in Mediterranean coastal waters and is an ideal candidate for an eco-regional assessment of the coastal ecosystem. The aim of this study is to evaluate the potential of *P. oceanica* as eco-regional indicator for its assessment at the scale of Mediterranean basin. For this purpose, regional and national *P. oceanica* monitoring programmes are identified, and their data and metadata are collected and compared in terms of objectives, strategies, sampling designs and sampling methods. The analysis identifies a number of issues concerning data quality, reliability and comparability. In particular, the adoption of different sampling designs and methods may introduce relevant errors when comparing data. The results of

this study stress the necessity of carefully planning monitoring programmes. Moreover, it highlights that the adoption of a number of common tools would facilitate all Mediterranean monitoring activities and allows an optimisation of management efforts at an eco-regional scale.

**Keywords** Monitoring · Bioindicator · Quality assurance · Data comparability · Seagrass · *Posidonia oceanica* · Mediterranean

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