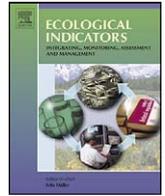


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A biotic index using the seagrass *Posidonia oceanica* (BiPo), to evaluate ecological status of coastal waters

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ABSTRACT

The development of ecologically based indices that respond to disturbances in a predictable manner has been stressed by the EU Water Framework Directive. The seagrass *Posidonia oceanica*, given its ecological indicator characteristics, has been identified as one of the elements to determine ecological status under the EU Water Framework Directive. The purpose of this study is therefore to develop a biotic index based on *P. oceanica* (BiPo), focussing on: (i) the necessity of an index that may be applied over the largest geographical extent possible, (ii) the necessity of a tool for a baseline evaluation of *P. oceanica* status in the Mediterranean, (iii) the compliance with WFD requirements, (iv) the efficiency of the method in terms of reliability and cost. The BiPo index is developed on the basis of all *P. oceanica* monitoring data available in the western Mediterranean and on a standard assessment of anthropogenic pressures. The index metrics are selected and evaluated on the basis of this pressures assessment, and are subsequently integrated for the evaluation of ecological status. The index is then tested on 15 sites around Corsica (France). The results show that the BiPo well reflects meadow health status and ecological status. Furthermore it is reliable, standard and cost-effective, and can be applied to a wide array of management and conservation purposes.

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