REPORT
Technical guide on the economic evaluation of environmental impacts on *Posidonia oceanica* meadows

ABSTRACT

The Guide for the economic evaluation of environmental impacts on *Posidonia oceanica* meadows aims at supporting the Environmental Impact Assessment (EIA) and the Appropriate Assessment (AA, sensu Habitat Directive) procedures.

The Guide proposes some approaches, based on the Ecosystem Services paradigm, to estimate the monetary impacts due to the environmental effects of works and human activities on *Posidonia oceanica* meadows.

To date, the legislation on environmental impact assessment does not take into consideration the economic impact of the impacts on Ecosystem Services provided by potentially damaged ecosystems. This guide therefore aims to provide support for the implementation of the current legislation on EIA relating to works affecting the priority habitat 1120* *Posidonia oceanica* meadows (*sensu* Habitat Directive), in the light of the knowledge concerning the natural capital and ecosystem services provided by this habitat. In this context, it is required that the necessary AA be integrated with the EIA procedure, for those works subjected to EIAs that are likely to determine direct or indirect interference with the priority habitat 1120*.

The document is the result of the comparison and collaboration between ISPRA, the company SETIN Servizi Tecnici Infrastructure srl and the Department of Earth, Environmental and Life Sciences of the University of Genoa (DiSTAV).

The Guide provides indications on how to integrate the aforementioned economic-environmental assessments into the AA and EIA procedures, starting from the Technical Standards for the preparation of Environmental Impact Statements, recently developed by the National System for the Protection of Environment (SNPA). Following the identification and description of the ecosystem services provided by *P. oceanica*, based on the classification of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), environmental indicators for the quantification of the Ecosystem Services and methods for their economic evaluation are proposed. For instance, the proposed approaches can be used to compare economic costs associated with the possible impacts of the design alternatives of a submarine cable; or to assess the consistency between mitigation and compensation costs envisaged in a port project and the economic value of the expected environmental impact; or, again, to compare the economic-environmental costs and benefits of different mitigation and/or compensation options such as replanting a *Posidonia oceanica* meadow rather than other possible conservation measures.