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Review of International Approaches to the Integrated Assessment of Aquatic Ecosystems

Project

Duration

Jan - May 2011

The goal of this project was to support the implementation of the European Marine Strategy Framework Directive (MSFD). Ecologic Institute has produced a study reviewing international practice examples of Integrated Ecosystem Assessments (IEAs). It analyzes their applicability to the MSFD along with the Directive's requirement for initial assessment. The study concludes by proposing a series of key requirements for IEAs. The final report is available for download.

The Marine Strategy Framework Directive (MSFD) establishes the regulatory framework for an ecosystem based approach to the management of human activities in the European marine waters, i.e. the Baltic Sea, North-East-Atlantic, Mediterranean Sea and Black Sea. Under the MSFD, EU Member States are required to achieve or maintain Good Environmental Status (GES) in their territorial marine waters by 2020.

To achieve GES, the EU has proposed criteria for which Member States must now develop associated indicators. These will feed into an initial assessment of the environmental status of marine ecosystems due by 15 July 2012. The ecosystem-based approach of the MSFD makes it necessary to take into account both the state of the natural environment as well as pressures resulting from human use.

Attention has been focused on developing tools for assessing physical-chemical or biological elements of ecosystems. However, very few assessment methodologies seem to integrate all the elements into a unique evaluation of status and performance of an aquatic system. Fewer still fully incorporate pressures from the human use of the marine environment. Integrated Ecosystem Assessments (IEAs) are therefore an excellent tool for synthesising information on both ecosystem status and human pressures.

The German Federal Environment Agency requires a comprehensive survey of the existing knowledge about integrated approaches to ecosystem assessment and their implementation. As a first step, this report provides information on IEAs from different parts of the world ranging from the Great Barrier Reef in Australia to Chesapeake Bay in the US. The study also examines crossovers with existing EU legislation, in particular the Water Framework Directive which has considerable spatial overlap with the MSFD. The report assesses the applicability of these approaches for the MSFD and concludes by proposing a series of key requirements for IEAs.

The final report [pdf, 2 MB, German] is available for download.

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