

Protecting Aquatic Biodiversity in Europe

How much do EU environmental policies support ecosystem-based management?

Publication

[Article](#)

Citation

Rouillard, J., Lago, M., Abhold, K. et al. 2018: Protecting aquatic biodiversity in Europe: How much do EU environmental policies support ecosystem-based management? *Ambio* (47)1. doi:10.1007/s13280-017-0928-4

As part of the Horizon 2020 project AQUACROSS, Ecologic Institute and consortium members have published an article in the peer-reviewed journal *Ambio* examining the potential of Ecosystem-Based Management as an integrative policy concept for improving the integration of freshwater, coastal and marine policies. The article further examines synergies, barriers and opportunities between key European environmental policies to protect aquatic biodiversity across the three water realms. The article is available for download.

Despite a broad and extensive policy landscape, the EU has been unable to halt and reverse declining biodiversity of aquatic ecosystems. Their sustainable management requires better coordination between different policy areas spanning freshwater, coastal and marine ecosystems. At the same time, ecosystem-based management (EBM) has been promoted as a holistic and integrative approach for the safekeeping and protection of aquatic biodiversity. The research thus evaluates the potential for EBM to support the coordinated implementation of the four key environmental policies aiming to protect aquatic biodiversity: the [Birds](#) and [Habitats Directives](#) (BHD), [Water Framework Directive](#) (WFD) and [Marine Strategy Framework Directive](#) (MSFD).

The paper first develops a set of key EBM policy-relevant principles for the protection of aquatic biodiversity, then assesses the degree to which the four directives individually support these EBM principles and can work synergistically to implement EBM. The analysis compares the legislative text of the four Directives against the six EBM principles, undertaking a cross-analysis to assess the extent to which each Directive reflected elements of these principles as well as how well-represented these principles were throughout all four Directives. The strength and weaknesses of each Directive were assessed against each principle.

The analysis concludes that EBM can, for the most part, be made operational by implementing these key environmental directives. The EU policy framework in the form of the Nature Directives, WFD and MSFD support several key dimensions of EBM (e.g., ecological integrity, acknowledgement of multiple scales, multi-disciplinary knowledge, stakeholder participation, transparency, policy coordination, adaptive management). The policy review presented in this paper also highlights gaps in the four

directives regarding several important dimensions of EBM, in particular with regards to: the implementation of the ecosystem services approach, the integration of planning processes and monitoring programmes, the integration of local knowledge in the decision-making process, coherent approaches to exemptions and derogations and the consideration of uncertainties in management and governance. It is likely that, while EU environmental policies provide a sound legislative basis for implementing EBM, as demonstrated in this research, further streamlining and coordination across the wider spectrum of European policies is warranted for enabling EBM in practice.

Language

English

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Funding

European Commission, [Directorate-General Research & Innovation](#) (DG Research & Innovation), International

Published in

[Ambio A Journal of the Human Environment](#)

Published by

[Springer-Verlag](#), Germany

[The Royal Swedish Academy of Sciences](#), Sweden

Year

2017

Dimension

10 pp.

ISSN

0044-7447 (Print) 1654-7209 (Online)

DOI

[10.1007/s13280-017-0928-4](#)

Project

[Knowledge, Assessment, and Management for Aquatic Biodiversity and Ecosystem Services Across EU Policies \(AQUACROSS\)](#)

Project ID

Table of contents

INTRODUCTION

MATERIALS AND METHODS

The EU policy framework for the protection of aquatic biodiversity

Assessing EBM in European environmental policies

RESULTS

The Nature Directives

The Water Framework Directive

The Marine Strategy Framework Directive

DISCUSSION

CONCLUSION

REFERENCES

AUTHOR BIOGRAPHIES

Keywords

[Biodiversity](#)

[Coastal + Marine](#)

[EU](#)

Aquatic ecosystems, Ecosystem-based management, EU policy, nature protection

Europe

evaluation

Source URL: <https://www.ecologic.eu/14902>