



Common Understanding of Using Mitigation Measures for Reaching Good Ecological Potential for Heavily Modified Water Bodies

Part 1: Impacted by water storage

Publication

[Report](#)

Citation

Halleraker et al. (authors). Kampa, Eleftheria and Sebastian Döbbelt-Grüne (eds.) 2016: Working Group ECOSTAT Report On Common Understanding Of Using Mitigation Measures For Reaching Good Ecological Potential For Heavily Modified Water Bodies. Luxembourg.

In the latest Work Programme 2016-2018 of the Common Implementation Strategy (CIS) of the Water Framework Directive (WFD), the Water Directors of European countries agreed to set up a specific Ad-hoc Task Group (ATG) on best practice and guidance to deal with hydromorphology. In this context, one of the core activities of the Working Group (WG) ECOSTAT of the WFD CIS has been to compare the ecological quality expected by different countries for water bodies impacted by water storage. The process involved the use of a number of workshops and questionnaires to collect relevant information from European water managers. This report is based on information collected via a template on mitigation measures for water bodies impacted by water storage, which was completed by 23 countries and edited by Eleftheria Kampa (Ecologic Institute) and Sebastian Döbbelt-Grüne (Planungsbüro Koenzen).

This report was written by the GEP water storage core group of the WG ECOSTAT.

Hydromorphological alterations for water storage are among the most widespread pressures on water bodies in Europe. Because of the importance of the water uses relying on water storage, such as hydroelectricity generation and public water supply, many of the affected water bodies have been designated as heavily modified. However, in a substantial number of these water bodies, the effects of the alterations are expected to require some mitigation if good ecological potential (GEP) is to be achieved.

The report is available for download.

Language

English

Authorship

Jo Halvard Halleraker (Norwegian Environment Agency)
Wouter van de Bund (European Commission DG Joint Research Centre)

Martina Bussettini (Institute for Environmental Protection and Research, Italy)
Richard Gosling (Scottish Environment Protection Agency, UK)
Sebastian Döbbelt-Grüne (Planungsbüro Koenzen in order of the German LAWA, Germany)
Janine Hensman (Scottish Environment Protection Agency, UK)
Johan Kling (Swedish Agency for Marine and Water Management, Sweden)
Veronika Koller-Kreimel (Federal Ministry for Agriculture, Forestry, Environment and Water Management, Austria)
Peter Pollard (Scottish Environment Protection Agency, UK)

Credits

edited by: Eleftheria Kampa (Ecologic Institute) and Sebastian Döbbelt-Grüne (Planungsbüro Koenzen)

Published in

JRC Technical Reports

Published by

[Publications Office of the European Union](#) (Publications Office), International

Year

2016

Dimension

103 pp.

ISBN

978-92-79-64993-6 (print), 978-92-79-64994-3 (pdf)

ISSN

1018-5593 (print), 1831-9424 (online)

DOI

10.2760/722208 (print), [10.2760/649695](#) (online)

Project

[Harmonisation of Good Ecological Potential for Heavily Modified Water Bodies \(HMWB\)](#)

Project ID

[2316-05](#)
[2123](#)

Table of contents

Acknowledgements
Abstract
1 Introduction
1.1 Scope of the report
1.2 Key principles – Heavily Modified Water Bodies and Ecological Potential

- 1.3 Intercalibration of ecological status and potential
- 1.4 Mandate and scope of the information exchange on GEP mitigation measures
- 1.5 Relevant water uses for HMWB designation
- 2 Water storage and impacts on water bodies
 - 2.1 Key principles – hydropower and water storage
 - 2.2 Large dams for water storage in Europe
 - 2.3 HMWB designation due to hydropower
 - 2.4 Key terms in this report
- 3 European questionnaires on Mitigation Measures for water bodies impacted by water storage
 - 3.1 Overview of mitigation measure template
 - 3.2 Specific questions in the mitigation measure template
 - 3.3 Responding countries
- 4 Report structure & content
- 5 Key measures to mitigate impacts from water storage in Europe
 - 5.1 Overview of key measure types
 - 5.2 Mitigation of impacts in national lists of mitigation measures
- 6 Mitigation for interrupted continuity for fish
 - 6.1 Description and applicability
 - 6.1.1 Mitigation measure options or combinations needs
- 7 Mitigation for flow alteration
 - 7.1 Description and applicability
 - 7.1.1 Mitigation measure options or combinations needs
- 8 Mitigation for sediment alteration
 - 8.1 Description and applicability
 - 8.1.1 Mitigation measure options or combinations needs
- 9 Mitigation of ponded rivers (impoundments)
 - 9.1 Description and applicability
 - 9.1.1 Mitigation measure options or combinations needs
- 10 Mitigation of lake level alteration
 - 10.1 Description and applicability
 - 10.1.1 Mitigation measure options or combinations needs
- 11 Mitigation for physico-chemical alteration
 - 11.1 Description and applicability
 - 11.2 Mitigation measure options or combinations needs
- 12 Sustainable vs. non-sustainable mitigation solutions
- 13 Scale of impacts typically mitigated
- 14 Significant adverse effect on water use and wider environment
 - 14.1 Significant adverse effect upon storage for hydropower
 - 14.2 Significant adverse effect upon storage for uses other than hydropower
 - 14.3 Significant adverse effects on wider environment
- 15 Reasons for “outruling” measures
- 16 Minimum requirements for GEP and objective setting
- 17 Key findings
 - 17.1 Understanding the impacts on ecological condition
 - 17.2 Minimum spatial scale of impacts requiring mitigation
 - 17.3 How comprehensive are the mitigation measures libraries of the responding countries?
 - 17.4 Assessing the degree of similarity between responding countries on impacts and mitigation measures
 - 17.5 Assessing the degree of similarity on ecological and practical effectiveness of measures
 - 17.6 Comparability of criteria to select/rule out mitigation measures
 - 17.7 Assessing similarity on adverse effect on water use
 - 17.8 Minimum ecological requirement for GEP
- 18 Conclusions and recommendations

18.1 GEP is possible to harmonise
18.2 Common terminology
18.3 Emerging good practice
18.4 Minimum requirements for GEP or use of exemptions in HMWB
18.5 Clarify criteria for determining significant adverse effects on water use
18.6 Spatial scale and relevance of impacts
18.7 Applying national methods to a common set of HMWBs
References
List of abbreviations and definitions
List of figures
List of tables

Keywords

[Water](#)

Water Framework Directive, heavily modified water bodies, good ecological potential, hydropower

Source URL: <https://www.ecologic.eu/14545>