# WG ECOSTAT Report on Common Understanding of Using Mitigation Measures for Reaching Good Ecological Potential for HMWBs (Part 3)

# Impacted by drainage schemes

#### **Publication**

Report

#### Citation

Rouillard J, Kampa E, (eds), WG ECOSTAT report on common understanding of using mitigation measures for reaching Good Ecological Potential for Heavily Modified Water Bodies, EUR 29132 EN, Publications Office of the European Union, Luxembourg, 2018.

Hydromorphological alterations for drainage are widespread pressures on water bodies in Europe. Because of the importance of the water uses relying on drainage schemes, such as agriculture and urban areas, not all necessary restoration measures can be taken without significant adverse effect on the water use. Therefore many of the affected water bodies have been designated as heavily modified (HMWB). Still, in a substantial number of these water bodies, some mitigation measures should be taken to reach Good Ecological Potential (GEP). The report, edited by Ecologic Institute's Dr. Eleftheria Kampa and Dr. Josselin Rouillard, is available for download.

This report presents responses of European countries on a detailed questionnaire distributed in 2015 on the impacts of land drainage on the water environment and the measures that can mitigate those impacts. A key objective of the questionnaire was to compare the understanding of impacts caused by drainage to continuity, hydrological regime, morphological alterations and aquatic biology. Information was requested on

- 1. national definitions of drainage and existing guidelines,
- 2. water uses and regulatory regimes linked to drainage,
- 3. hydromorphological alterations due to drainage and their assessment, and
- 4. mitigation measures.

A list of mitigation measures and their definition is presented. In total, 20 countries responded to the questions on land drainage.

#### Language

**English** 

#### **Authorship**

Dr. Josselin Rouillard Dr. Eleftheria Kampa

- K. Vartia
- J. Beekman
- M. Alves
- W. van de Bund
- M. Bussettini
- S. Döbbelt -Grüne
- J.H. Halleraker
- I. Karottki
- J. Kling
- J. Wallentin

# **Funding**

European Commission, <u>Directorate-General Environment</u> (DG Environment), International

#### **Published in**

JRC Technical Reports

# **Published by**

European Commission, <u>Joint Research Centre</u> (JRC), International <u>Publications Office of the European Union</u> (Publications Office), International

#### Year

2018

#### **Dimension**

60 pp.

#### **ISBN**

978-92-79-80306-2 (print), 978-92-79-80305-5 (pdf)

#### **ISSN**

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

#### DOI

10.2760/444293 (online)

# **Project**

<u>CIS Guidance on Article 4(7), Inter-comparison of Good Ecological Potential and Hydromorphological Assessment Methods</u>

# **Project ID**

2626-01

#### **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 Report structure and content
- 2 Drainage and impacts on water bodies
- 2.1 What is "drainage"?
- 2.2 What are drainage schemes?
- 2.3 Key terms used in this report
- 2.4 HMWB designation due to drainage
- 3 European questionnaire on drainage and GEP
- 3.1 Structure of the questionnaire
- 3.2 Issues covered through the questionnaire
- 3.3 Scope of the report and results presented
- 4 Drivers and pressures of land drainage
- 4.1 Definition of drainage
- 4.2 Sectors and operators leading to land drainage
- 4.3 Pressures from drainage
- 4.4 Legal requirements on drainage operation and maintenance
- 5 Hydromorphological alterations from land drainage
- 6 Ability of methods to detect hydromorphological alterations
- 7 Relevance of drainage alterations for reaching good ecological status
- 8 Value of drainage alterations to the water use
- 9 Maintenance operation
- 9.1 Typical maintenance operation
- 9.2 Impact on ecological status due to maintenance operation
- 10 Designation of heavily modified water bodies due to drainage

- 10.1 Water category
- 10.2 Significant adverse effect on water use
- 11 Key measures to mitigate impacts from land drainage
- 11.1 Overview of mitigation measures
- 11.2 Description of key mitigation measures
- 11.3 Mitigation measures related to drainage: presence in national libraries
- 11.4 Ecological effectiveness of mitigation measures
- 11.5 Effects of mitigation measures on land drainage
- 11.6 Reasons for ruling out measures
- 12 Conclusions and recommendations
- 12.1 Harmonized understanding of GEP
- 12.2 Common terminology
- 12.3 Harmonized hydromorphological classification methods
- 12.4 Minimum requirements for GEP
- 12.5 Clarify criteria for determining significant adverse effects on water use
- 12.6 Reason for ruling out measures
- 12.7 Applying national methods to a common set of HMWBs
- 13 References
- 14 Annexes
- 14.1 Example 1: Groote Molenbeek, The Netherlands
- 14.2 Example 2: Wagenfelder Aue, Germany (Lower Saxony)

List of abbreviations

List of figures

List of tables

# **Keywords**

Water

Source URL: https://www.ecologic.eu/15863