

Management and Impact of Invasive Alien Species (IAS) in Lough Erne in Ireland

AQUACROSS Case Study 4 Report

Publication

[Case Study](#)

Citation

O'Higgins, Tim et al. 2018: Case Study 4 Report: Management and impact of Invasive Alien Species (IAS) in Lough Erne in Ireland. UCC, Ecologic Institute, IUCN, University of Liverpool: Cork, Berlin, Gland, Liverpool.

Lough Erne sustains multiple competing activities, each with different demands from the system in terms of ecosystem services and physical resources. It is a heavily modified water body, containing a range of non-native Invasive Alien Species (IAS) are considered a threat to Lough Erne biodiversity and also negatively affect the society that surrounds it. In this report, we apply the AQUACROSS Assessment Framework to understand this challenge and identify and assess ecosystem-based management solutions to the challenge of the IAS Nuttall's pond weed.

The overall goal of this study is to examine the implications of the regulation on invasive alien species for practical management in Lough Erne Co Fermanagh, Northern Ireland, within the context of existing environmental commitments under EU legislation.

To understand context, we assess European and local policies managing biodiversity and related sectoral policies, e.g. agriculture. To understand the complex socio-ecological system of the Lough and its surround society, which affects and is affected by the Lough, we apply the AQUACROSS Linkage Framework and also the semi-quantitative, stakeholder-based Fuzzy Cognitive Mapping (FCM) method.

The [case study](#) [pdf, 3.5 MB, English], as well as the [summary](#) [pdf, 402 KB, English], are available for download.

Language

English

Authorship

[Dr. Manuel Lago](#)

Tim O'Higgins (UCC)
Kate Reilly (IUCN)
Fiona Culhane (University of Liverpool)
Leonie Robinson (University of Liverpool)

Funding

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

Year

2018

Dimension

45 pp.

Project

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

Project ID

[2803](#)

Table of contents

- 1 Introduction and Background
 - 1.1 Summary
 - 1.2 The Science of Invasive Species
 - 1.3 Invasive Species Policy and Law
 - 1.4 Lough Erne - Ecological History
- 2 Establishing Objectives
 - 2.1 Policy Objectives
 - 2.2 Stakeholder Objectives
- 3 Assessing the current state of the Social Ecological System
 - 3.1 Social Ecological Systems
 - 3.2 Fuzzy Cognitive Mapping
- 4 The Baseline and Future Scenarios
 - 4.1 Modelling the Whole Social Ecological System with Fuzzy Cognitive Mapping
 - 4.2 Modelling Lake Levels
- 5 Evaluation
- 6 Discussion and conclusions
- References
- Annex

Keywords

[Biodiversity](#)
[Coastal + Marine](#)
[EU](#)
[Evaluation](#)
[Water](#)

freshwater, coastal, marine, ecosystems, resilience, EU 2020 Biodiversity Strategy, nature conservation aquatic biodiversity, ecosystem-based management, Europe, H2020, assessment framework, policy targets, sustainability

Europe, Ireland, Lough Erne
case studies

Source URL: <https://www.ecologic.eu/15998>