Conservation, restoration and durable management in Small Island of Braila, Romania

Year of issue

2025

Summary

On the Lower Danube between Silistra and Brăila, the LIFE project RESTOREWETLANDS (LIFE06 NAT/RO/000172) ran from 2006–2011 (eligible budget €1,017,396; EU contribution €489,209) to preserve, restore and sustainably manage the Small Islands of Brăila. Targets covered ~2,949 ha: planting alluvial forest on 449 ha, removing Amorpha fruticosa (planned 212 ha; achieved 237 ha), and restoring the natural hydrological regime on ~2,500 ha (incl. 1,366 ha of lakes). Forest and invasive-species actions met goals; however, prolonged floods limited lake works—Fundu Mare was only partial and the Navodari action failed.

The hydrological concept envisaged keeping permanent water via sluices in two zones (Egreta, Fundu Mare) and de-silting in a third (Navodari), with later expansion to other lakes; the plan also set out monitoring of siltation, banks and habitats.

Post-project reviews note that dredged channels re-closed where maintenance lapsed, reducing connectivity—an unexpected negative outcome.

Follow-up at Fundu Mare under EEA/SEE funding installed two sluices and channel works serving four lakes (~837 ha of open water); the park also maintains two educational water routes through light de-silting and removal of floating invasive vegetation.

Governance and planning have been updated with a Management Plan published by the park administration in 2024.

Photo Gallery



Location

44.9624, 28.0023

Project

NWRM

National ID

Romania_08

Sector

Hydromorphology

Installation Date

2011-03

Implementation status

Completed

Contact

Bogdan Barbu, REC ROImola Koszta, REC

Overview

Location of the project

On the Lower Danube floodplain of Brăila County, between the Giurgeni–Vadu Oii Bridge (river km ~237–238 on DN2A) and the city of Brăila (river km ~175).

Country

Romania

NUTS2 Code

Sud-Est

Sponge measures implemented in the case study

Wetland restoration and management

Forest riparian buffers

Objectives

Overall aim: ensure long-term conservation of priority habitats and species in the Small Island of Brăila Natural Park, with restoration actions across ~2,949 ha of key habitats. Restore former floodplain forest on 449 ha; restore the natural hydrological regime on almost 2,500 ha (including 1,366 ha of lakes) affected by siltation; remove the invasive Amorpha fruticosa from 212 ha; and manage the area as a pilot site to build management experience. A communication campaign with locals and visitors was also foreseen.

Involved partners

Authority name	Authority role	Comments
Romanian National Forest Administration - Romsilva (NFA Braila Forest Branch)	Implementation	Park Administration
Bucharest University/Department of Systems Ecology and Sustainable Development, Romania	Implementation	Partners

Site Information

Climate Zone

Warm temperate moist

Precipitation

523.00 mm

Temperature (°C)

12.50 °C

Elevation range

2

Slope range

Relief is very low: min–max elevation ~1–8.2 m; micro-relief amplitude on islands ~4–6 m

Vegetation class

Floodplain reedbeds and marshes (Phragmites, Typha) and softwood gallery forests dominated by willow and poplar; also wet meadows.

WFD Ecological status

Moderate

WFD Chemical status

Failing to achieve good

Water quality status

Long-term eutrophication symptoms in the Lower Danube Wetlands affecting the site (nutrient load increases in the 1980s; DIN:TRP ratio decline; frequent algal blooms; Secchi depth 15–30 cm; DO swings; occasional metal hotspots in the wider Lower Danube.

Design and Implementation

Project scale

Micro

Project scale specifications

This is a site-specific restoration within the Small Islands of Brăila (not a whole basin/country): the NWRM record itself tags the case as “Field scale” with a footprint ~2,949 ha; follow-up works concentrated on the Fundu Mare island complex with two sluices and channel reconnections restoring/opening ~837 ha of floodplain lakes; the park’s management plan also lists hydrological rehabilitation at Fundu Mare as an action i.e., localised hydromorphological interventions rather than regional river-basin management.

Project area

2949

Financing

Total cost

2717396.00 €

Total cost information

LIFE06 NAT/RO/000172 – “RESTOREWETLANDS.” : Total budget: €1,017,396 eligible

RE-F.MARE (Fundu Mare island; 2015–2017) — EEA/SEE GrantsTotal value: €1,700,000 (7,503,630 lei).

Financing authorities

Authority name	Type of funding	Comments	Financing share
European Union	EU-funds: LIFE+	LIFE06 NAT/RO/000172 – “RESTOREWETLANDS.” €489,209.	50 %
SOP Environment	National funds	—	47.5 %
Department of Systemic Ecology and Sustainable	Private funds	—	2.5 %
Development of University of Bucharest	Private funds	—	2.5 %

Compensations

Non

Policy and Governance

Land ownership

Inside Small Islands of Brăila protected area, parts of the terrestrial zone are state public property (national forest fund) and parts are privately owned parcels. RNP Romsilva manage most state forest and the protected area.

Policy targets

Improved Biodiversity

Part of a wider plan

Non

Public consultation

Non

Has contractual arrangements

Non

Impacts and Monitoring

Monitoring System

Monitoring requirements

Monitoring is ongoing for birds, habitats and pressures under the integrated plan, but full fish monitoring requires dedicated gear and permits that the admin currently lacks.

Monitoring parameters

he park records species presence and population sizes for priority waterbirds via transects and fixed points (with colony counts at known rookeries), evaluates habitat extent and structure/functions for key lake habitat types, and notes hydrological functioning (e.g., adequate lake levels linked to Danube stages and working sluices). Fish are assessed indirectly from catch size/health data until scientific sampling is possible; ranger patrols document pressures (navigation, poaching, etc.) and compliance with conservation measures.

Maintenance

Maintenance requirements

Light but regular maintenance is performed by the park—de-silting channels, removing invasive vegetation, and operating sluices to keep Fundu Mare routes and lakes functional

Socio-economic Impacts

Direct benefits

The LIFE project developed an eco-tourism strategy, marked 15 tourist trails, built visitor infrastructure, and promoted agro-tourism. Later projects added observation towers, floating hides, and maintained two water routes to support visitor access. In 2023, around 2,150 visitors were recorded, including ecotourists, sport fishers, and students. The park runs regular education programmes, events, and community outreach, and its regulations link biodiversity protection with the sustainable development of surrounding communities.

Biophysical impacts: Hydrology

Information on retained water

Long-lasting floods hampered works; some measures were completed, Fundu Mare actions were only partial, and Navodari failed.
Without upkeep, dredged channels closed again (loss of connectivity) - an unexpected negative outcome noted post-project.

Biophysical impacts: Biodiversity

Improved biodiversity

Oui

Information on improved biodiversity

Alluvial forest restored: 449 ha planted with native species (target met).
Invasive removal: Amorpha fruticosa cleared from 237 ha (exceeding the 212 ha target).

Lessons Learned

Key lessons

Hydrological gains in a dynamic Danube floodplain are fragile without continuous maintenance. Where dredged channels were not kept open and sluices not actively managed, connectivity and water-level control declined.
Ambitious hydraulic targets need realistic phasing and access windows. Prolonged high waters during 2006–2011 curtailed works, with Fundu Mare only partially delivered and Navodari not achieved—contingencies for extreme hydrology are essential.
Ecological actions that are technically straightforward scale well. Alluvial forest planting (~449 ha) and Amorpha fruticosa removal (>212 ha) were completed as planned, in contrast to basin-wide hydrologic restoration.
Model-guided pilots help de-risk restoration. The Fundu Mare follow-up used hydrodynamic modelling and targeted sluices to stabilise open-water habitats, showing the value of adaptive, evidence-based design.
Governance continuity underpins outcomes. Updating the management plan and maintaining education/tourism use supports stewardship, but monitoring capacity (e.g., fish) still depends on equipment, permits, and staffing.

Barriers

Barrier type	Barrier role	Comments
Other	Main barrier	Prolonged floods disrupting construction and access.
Expected maintenance needs	Secondary barrier	Re-siltation and vegetation regrowth when maintenance lapses.
Other	Main barrier	Gaps in monitoring capacity (e.g., fish sampling gear/permits).
Limited staff and consultant knowledge	Secondary barrier	Operational complexity across water/forestry/protected-area authorities.
Lacking financing sources	Secondary barrier	Hydrological benefits requiring long-term O&M funding and staff.

Success factors

Success factor type	Success factor role	Comments
Attitude of decision makers	Main factor	Continuous governance and a current management plan.
Financing possibilities	Main factor	Sequential funding (LIFE → EEA/Norway Grants → POPAM/POIM).
Conducted assessments (incl. economic)	Main factor	Hydrodynamic modelling guiding targeted hydraulic works.
Conducted assessments (incl. economic)	Secondary factor	Technically tractable habitat measures (forest planting, invasive control).
Public participation	Secondary factor	Active outreach and ecotourism that build local support.

Transferability

Highly transferable to large lowland floodplains with embanked islands: invasive control and floodplain forest planting scale well; hydrological reconnection via sluices/channels is site-specific. Key cautions: extreme water-level variability, sedimentation rates, long-term O&M needs, permits across water/forestry/PA authorities, monitoring capacity (esp. fish), and community access/tourism trade-offs.

Sources

Sources

RESTOREWETLANDS - Conservation, restoration and durable management in Small Island of Braila, Romania

ROSPA0005 (Balta Mică a Brăilei) – pagină ANANP

Restoration of the aquatic and terrestrial ecosystems complex, from Fundu Mare Island, part of the Small Wetland of Brăila

Proiect de Ordin al ministrului… privind aprobarea Planului de management al Parcului Natural Balta Mică a Brăilei…

Monitoring Site 5 – Braila island, Romania

Proiect „Dezvoltarea potențialului turistic… prin amenajarea a două trasee turistice pe apă”

Raport de Activitate pentru anul 2023… PN Balta Mică a Brăilei (ROSCI0006/ROSPA0005)

Information Sheet on Ramsar Wetlands – Small Island of Brăila (Insula Mică a Brăilei)

Wetland Algal Communities from Balta Mică a Brăilei Nature Park (Romania)

Biodiversity of Balta Mică Natural Park of Braila