

OBJECTIVE:

RESTORE4Cs, a freshly started project led by the University of Aveiro, will address management and restoration actions to maintain and promote the mitigation and adaptation capacity of European wetlands to climate change.



MODELLING RESTORATION OF
WETLANDS FOR CARBON PATHWAYS,
CLIMATE CHANGE MITIGATION AND
ADAPTATION, ECOSYSTEM SERVICES,
AND BIODIVERSITY, CO-BENEFITS

It focuses on coastal wetlands, providing innovative tools and methodologies for decision making and restoration planning and actions, while using an integrative socio-ecological systems approach.



Gathering effectiveness data on restoration and land use management actions on climate services and other ecosystem and socio-economic services. Through six Case Pilot sites across European coastal areas (Valencian Wetlands, Camargue, Ria de Aveiro, South-West Dutch Delta, Curonian Lagoon, Danube Delta), including wetlands in different states of conservation, and through meta-analysis.

Co-designing a multi-actor approach for the project's stakeholder interaction at the EU and local level and increasing the impact of existing cooperation.

Upscaling models and integrative assessment tools to wider geographical and ecological contexts (other wetland types, including floodplains and peatlands), using remote sensing and machine learning methods to develop an integrated status assessment of European wetlands.

Structuring a European Community of Practice (ECoP) by connecting institutions, policymakers, scientists and the general public on wetlands restoration to support the implementation of the EU Biodiversity Stratety 2030 and to foster climate mitigation and adaptation solutions.



RESTORE4Cs has identified 6 Case Pilots for its activities. These comprise coastal wetlands ecosystems, in different preservation status (well-preserved vs. altered), with different alterations and offering a variety of restoration measures types already in place. The 6 Case Pilot sites provide a good geographical representation of Europe and its biogeographical regions.

Valencian Wetlands (ES)

The Marjal dels Moros (620,00 ha), as a prime example of a Valencian wetland, showcases remarkable biodiversity, along with notable hydrological and geomorphological characteristics.

Protection Status: Natura 2000, ZEPA: ES0000148, LIC: ES0000148

South-West Dutch Delta (NL)

Large area of intertidal waters with mudflats, islets, sand dunes and wet meadows. The marshland plays an important role in flood mitigation (50,731 ha). Protection status: Natura 2000 SPA and SIC; National Park (Oosterscheld, 36,978 ha); Ramsar (Grevlingen, 13,753 ha)

Camargue (FR)

Major wetland in the French Mediterranean coast, including the delta of the Rhône River (130,000 ha). Protection status: Regional Park, National Reserve, UNESCO Biosphere Reserve, Natura 2000 SPA, SIC and IBA, Ramsar site.

Curonian Lagoon (LT)

The largest European lagoon (total 158,400 ha; 37,895 ha on the Lithuanian side) located in the southern part of the Baltic Sea. Protection status: Natura 2000, Baltic Sea Protected area in HELCOM.

Ria de Aveiro (PT)

Coastal lagoon with large areas of continuous saltmarshes, including the Vouga River estuary, the freshwater wetland Pateira de Fermentelos (36,000 ha). Protection status: Natura 2000 SPA and SIC; Ramsar site (Pateira); S. Jacinto Dunes Natural Reserve. LTSER, ICOS (PT), LW ERIC (PT - PORBIOTA).

Danube Delta (RO)

The largest continuous marshland in Europe (625,000 ha) with rich diversity of wetland habitats, numerous lakes, ponds and marshes. Protection status: UNESCO Biosphere Reserve & World Heritage Site; Ramsar site; Natura 2000.

EXPECTED RESULTS:

Project results will be made available through a digital platform to serve as a **Decision Support System (DSS)** for stakeholders, that will steer project efforts as part of the newly created **Community of Practice** around wetland restoration for climate change mitigation, biodiversity, and other services.

This online platform will provide stakeholders and wetland practitioners at all levels with a more reliable estimation of costs and benefits to drive and prioritise wetlands restoration actions. Moreover, social acceptability of wetland restoration will be explored; this approach will be paramount to ensure a long-term transdisciplinary approach of wetland management, as restoration offers a positive opportunity to both secure wetlands' inherent ecological, environmental, and social values and increase the local communities' sustainability.



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PARTNERS:































KEY DATA:

FUNDING:

Horizon 2.5 - Climate, Energy and Mobility (main Programme)

Horizon 2.5.1 - Climate science and solutions

BUDGET: € 6 644 842,50 (EU contribution € 6 644 837)

PARTNERS: 15 partners from 9 EU countries

DURATION: 3 years, January 2023 - December 2025

LEADER: University of Aveiro, Portugal





Addressing climate change,

biodiversity loss and habitat degradation

towards the sustainable management

of European wetlands.

