

CLIMAREST: Coastal Climate Resilience and Marine Restoration Tools for the Arctic-Atlantic Basin

PROJECT SUMMARY

The CLIMAREST project integrates multiple expertise into a holistic approach, to develop a toolbox designed to establish guidelines for ecosystem restoration and to enhance climate resilience in coastal communities. The concept is to develop, test and optimise a modular toolbox that integrates expert knowledge, scientific information, multilevel stakeholder and community involvement, ecosystem service improvement analysis, cost-benefit analysis, priority of actions, and custom-designed protocols for restoring and monitoring multiple coastal habitats. The toolbox framework will have common and specific tools that will be tested, optimised and demonstrated in five different ecosystems, across a latitudinal gradient of the Arctic-Atlantic basin, ranging from the high-Arctic Svalbard (79° N) in the North to the Madeira archipelago (33° N) in the South. The variety of environmental conditions and restoration needs of the five demonstration sites will provide different restoration scenarios with particular specificities in terms of biodiversity, pressures and threats, ecosystem services and stakeholders. The diversity in restoration scenarios will create a unique opportunity to develop a modular toolbox, that integrates common tools with tools that are specific for each restoration scenario into a collective framework. Ecosystem-specific innovations in nature-based solutions for habitat restoration that improve local climate resilience will also be developed, tested, and integrated into a general toolbox framework, establishing guidelines and innovative workflows. The toolbox and tools developed in each demonstration site, for different restoration scenarios, will be made available and tested for replication and upscaling in comparable ecosystems and similar communities, with particular emphasis on promoting stakeholder involvement.

The project objectives are:

- Objective 1 (O1). Development of multi- and interdisciplinary tools for ecosystem restoration and climate resilience improvements.
- Objective 2 (O2). Evaluation of the effectiveness of the tools in five ecosystems in the Arctic-Atlantic basin ranging from high-Arctic Svalbard in the north to Madeira in the south.
- Objective 3 (O3). Examine the applicability of the tools for replication and upscaling on a basin scale.
- Objective 4 (O4). Ensure that the restoration and climate resilience tools are made available to users.

PROJECT CONSORTIUM

1. SINTEF Ocean, Norway
2. Norwegian institute for Nature Research, NINA, Norway
3. French Research Institute for Exploitation of the Sea, IFREMER, France
4. Regional Agency for the Development of Research Technology and Innovation, ARDITI, Portugal
5. WavEC Offshore Renewables, Portugal
6. National University of Ireland, Galway
7. University of Málaga, Spain
8. University of Alicante, Spain
9. University of Vigo, Spain
10. Norwegian University of Science and Technology, Norway
11. Norwegian Meteorological Institute, Norway
12. SINTEF AS, Norway
13. Polytechnic University of Marche, UNIVPM, Italy
(SER Europe is an Affiliated Entity to UNIVPM in the project)
14. The University of Naples Federico II, Italy
15. Seaboost, France
16. Technical University of Denmark
17. Aarhus University, Denmark

ROLE OF SERE

Most of SERE's work is in *Task 5.5 Long-term networking and replication strategy (towards a European Marine Restoration Network)*, including:

- Establish a permanent Marine Restoration WG within SERE to support the co-creation and co-innovation of models for speeding-up marine habitat restoration, with project stakeholders, CSA and the SERE network (2024-2025).
- Support the creation of a policy paper on the future development of a marine restoration governance framework in Europe (to be brought to the EUBP & EU Institutions + NRL implementation).

In addition, SERE supports the communication and dissemination activities related to the project (Task 6.2):

- Producing a five-episode podcast series showcasing the work of the project
- Hosting/organising three webinars together with CLIMAREST
- Organising the CLIMAREST Toolbox workshop at the 14th European Conference in Ecological Restoration, Tartu – Estonia (SERE2024).
- Organising a two-day in-person training course on CLIMAREST learnings (planned Summer 2025)

TIMELINE & FUNDING

- Project budget: 8,701,780 €
- SER Europe Budget: 200,000€
- Start date: 01/12/2022
- End date: 30/11/2025

PROJECT WEBSITE

<https://climarest.eu/>