



CLUSTERING WORKSHOP

Water nature-based solutions
for islands' resilience

7-8th October, 2026

Salão Nobre dos Paços do Concelho da Horta,
Câmara Municipal da Horta, Horta, Azores

Register here

<https://tinyurl.com/GENESISWS>



**Funded by
the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement N° 101157447.

www.genesisnbs.eu
[@genesisnbs](https://twitter.com/genesisnbs)

ABOUT GENESIS

GENESIS aims to demonstrate innovative, nature-based solutions to enhance the climate resilience of critical water infrastructure across nine demonstrators in **Macaronesia** (Azores, Canary Islands, Cape Verde and Madeira), including a big demonstrator in La Palma (Canary Islands) and five replicators located in other European outermost regions (Azores, La Réunion, Guadeloupe and Martinique). Through the development and implementation of systemic nature-based solutions for improved water management, **GENESIS** will strengthen the resilience of these islands to climate change impacts by reducing stormwater runoff and soil erosion while enhancing water infiltration and groundwater storage. In the long term, **GENESIS** seeks to deliver climate-resilient critical water infrastructure solutions that can be replicated across other islands and vulnerable zones of the European Union.

In Faial, **GENESIS** will design and construct an aquifer storage and recovery system to counter saltwater intrusion and restore the freshwater supply capacity of **Furo das Cancelas**. The solution will use excess potable water stored in existing earth dams and watering ponds for aquifer recharge through two injection wells. The design and implementation of this nature-based solution will include the full digitalisation of the ponds and wells, the engagement of local citizens and stakeholders, the development of a monitoring programme to assess saltwater intrusion and aquifer recovery, and a cost-benefit analysis of the proposed solution.

Other demonstrators include digitalisation of the water network in La Palma; the development of a 3D hydrogeological model in El Hierro; the implementation of a soil aquifer treatment system using treated wastewater to recharge the aquifer and improve both water quantity and quality in Gran Canaria; the design and construction of an infiltration pond to reduce peak stormwater runoff and maximise infiltration and aquifer recharge in Madeira; and the design and construction of infiltration ponds in Santiago to recharge an aquifer used for irrigation that is currently affected by saline intrusion.

PARTICIPATING PROJECTS



LIFE IP CLIMAZ started in January 2021 and has an expected duration of 10 years. The project aims at contributing to the implementation of the **Azores Regional Climate Change Programme** (PRAC) and includes a set of actions designed to support the planning and development of continuous climate adaptation and mitigation policies, as well as institutional capacity-building and the strengthening of the resources required for monitoring, reporting, and enhancing resilience.

Through the implementation of an integrated set of measures and demonstration actions, the project includes adaptation interventions in the sectors of agriculture, forestry, land use, water resources, coastal areas, and marine ecosystems, based on ecosystem-based approaches. It also encompasses adaptation and mitigation actions in the energy and transport sectors, promoting the transition towards a low-carbon economy while raising public awareness of climate change-related challenges.



Med-IREN (Mediterranean Critical Infrastructure Resilience Engineering with Nature-based solutions) is a **Horizon Europe** project that aims to protect local communities and businesses from extreme climate events across the Mediterranean region. By combining nature-inspired solutions with engineering practices, the project seeks to safeguard critical infrastructures such as transport, energy, and water supply from flooding, wildfires, and other climate hazards that threaten European societies.

The project will be showcased in five regions across the Mediterranean (Granollers, Provence-Alpes-Côte d'Azur, Tuscany, Ischia and Egaleo), and the solutions and interventions will be replicated in four regions across the European Union (Larnaca, Sitia, Burgas and Helsinki). Med-IREN will also demonstrate key factors for upscaling and replicating these mechanisms within Mediterranean regions and beyond.



NATURE-DEMO works to transition decision management from reactive approaches to the proactive design of holistic, inherently resilient systems. This is achieved through four key actions: Create, Validate, Scale, and Sustain. First, **NATURE-DEMO** Creates an advanced digital decision support platform that integrates climate projections, asset exposure, NbS catalogue portfolios, and advanced simulations. This platform optimises the efficiency of selected NbS implementations to enhance resilience and deliver additional benefits. Next, **NATURE-DEMO** Validates its methodology through real-world demonstrations of optimised NbS at five sites within the Alpine Biogeographic region. Successful NbS solutions will then be Scaled by replicating them in more than four additional sites in the Alpine region and other biogeographic regions. Finally, **NATURE-DEMO** will sustain its solutions beyond the project's timeframe by focusing on exploitation pathways. This includes developing tailored guidelines to disseminate knowledge of NbS among infrastructure professionals, creating a Task Force to provide technical expertise, and establishing a financial observatory to monitor NbS funding.



S+T+ARTS Aqua Motion is an European project that brings together artists, scientists, and technologists to develop creative, technology-driven solutions for European water management, with a strong focus on nature-based solutions, freshwater management, and blue economy challenges. In the frame of S+T+ARTS Aqua Motion Residency Program 2025/26, the artist Małgorzata Suś developed the project “Acts of Belonging” in a dialogue with the local community of Esposende, local scientists and stakeholders, responding to the challenge “Engaging the Unengaged - Water Literacy in the Litoral Norte Natural Park”. Inspired by the dynamics of the ocean, the transformations of the coastal landscape, and the biodiversity of endemic and migratory species, a dance performance and a digital installation reflected on how embodied relationships with territory can foster care, connection, and well-being for both human and more-than-human life, critically exploring the duality between anthropogenic impact on the environment and the human sense of belonging to nature.

Agenda

Wednesday 7th October

Time	Session	Place
14:00 - 17:00	Fieldtrip GENESIS' Faial Demonstrator	Cancellas Well

Thursday 8th October

Time	Session	Speaker
09:00 UTC -1 10:00 WEST 11:00 CEST	Welcome	Alejandro García Gil GENESIS project coordinator - Instituto Geológico y Minero de España (IGME-CSIC) Hugo Pacheco - Câmara Municipal da Horta Laia d'Armengol - La Palma Research Centre
9:20 UTC-1 10:20 WEST 11:20 CEST	Faial's critical water infrastructure, interdependencies and climate change impacts	Hugo Pacheco - Câmara Municipal da Horta Megan Expósito Brazier Department of Agricultural and Natural Environment Engineering University of La Laguna Jelena Koritnik Department of Agricultural and Natural Environment Engineering University of La Laguna Rafel Nebot Medina Instituto Tecnológico de Canarias
10:10 UTC-1 11:10 WEST 12:10 CEST	Coffee Break	



10:40 UTC-1 11:40 WEST 12:40 CEST	Faial's nature-based solutions GENESIS Solution	GENESIS Solution Hugo Pacheco - Câmara Municipal da Horta Elsa Cristina Ramalho Labotarório Nacional de Energia e Geologia ORLA'S Solutions Jose Barbedo Observatório das Ribeiras e Lagoas LIFE IP CLIMAZ Solutions Pedro Machado Regional Secretariat for the Environment and Climate Action, Azores Government
11:40 UTC-1 12:40 WEST 13:40 CEST	Expanding the nature-based solutions toolbox	GENESIS Solutions Vitor Correia European Federation of Geologists Pavlos Tyrologou European Federation of Geologists Med-IREN Solutions Eftychia Mengou National Centre for Scientific Research "Demokritos" (NCSR), C-EREL Thanasis Sftos National Centre for Scientific Research "Demokritos" (NCSR), C-EREL NATURE-DEMO Solutions Mohamed Eldessouki Digital Innovation Centre (DIC) S+T+ARTS AQUA MOTION Małgorzata Suś Associação Rio Neiva
12:40 UTC-1 12:40 WEST 13:40 CEST	Lunch Break	



13:40 UTC-1 14:40 WEST 15:40 CEST	NbS Cost-benefit Canvas exercise introduction, and individual and group work	Megan Expósito Brazier Department of Agricultural and Natural Environment Engineering University of La Laguna Jelena Koritnik Department of Agricultural and Natural Environment Engineering University of La Laguna
15:30 UTC -1 16:30 WEST 17:30 CEST	Coffee Break	
16:00 UTC-1 17:00 WEST 18:00 CEST	NbS Cost-benefit Canvas exercise final discussion	