genesis

Clustering Workshop

9-10 October, 2025
Funchal, Madeira

Click here to register

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

ABOUT GENESIS

GENESIS aims at demonstrating innovative, nature based intelligent solutions for enhancing the climate resilience of critical water infrastructure in 9 demonstrators in the Macaronesia (Canary Islands, Azores, Madeira and Cape Verde), with a big demonstrator in La Palma (Canary Islands) and 5 replicators extended to other European outermost regions (Azores, La Reunion, Guadeloupe and Martinique). The development and implementation of systemic nature-based solutions for improved water management in Macaronesia will drastically improve these islands' resilience to climate change impacts by minimising stormwater runoff and soil erosion while enhancing infiltration and underground water storage. On the long term, GENESIS seeks to providing climate-proof critical water infrastructure replicable to other islands and vulnerable zones of the EU mainland.

The Madeira demonstrator site will design and build infiltration ponds to minimise storm runoff peak discharge and maximise infiltration and aquifer recharge. The design and construction of the pounds, a nature-based solution (NbS), the full digitalisation of the NbS infrastructure and the definition of a monitoring programme, the construction and implementation of the NbS, and the definition of its cost-benefit.

Other pilots relate to the digitalisation of the water network (La Palma), 3D hydrogeological model (El Hierro), soil aquifer treatment system using treated wastewater to recharge the aquifer, improving both its quantity and quality (Gran Canaria), design and build an aquifer storage and recovery system, using excess potable water accumulated in existing earth dams/watering ponds (Faial) and design and build infiltration ponds to recharge an aquifer used for irrigation, affected by saline intrusions (Santiago).

PARTICIPATING PROJECTS

Greet CE is an Interregional Innovation Investments (I3) project aiming at developing innovation ecosystems among others in the blue economy field, with a focus on supporting relevant SMEs. It has engaged hundreds of innovative Central European SMEs. At this event, some of these SMEs will introduce the relevant proven technologies related to fresh water management, such as technologies to ensure higher and better yields with less consume of water for irrigation, alternative drinking water generation (from atmospheric air) with electricity grid balancing services, lower cost efficient and environmentally friendly water storage solutions (reservoirs), the utilisation of wastewater waste heat present in cities for heating and cooling, and alternative financing of impact investments engaging citizens.

greetce.eu

GreetGeo is an Interregional Innovation Investments (I3) project aiming at developing innovation ecosystems among others in the geothermal field, a highly relevant topic in volcanic islands, with a significant emphasis on environmental issues for instance the prevention of surface water contamination. Shallow geothermal can also assist in ensuring lowering the (indirect or direct) freshwater requirement of cooling.

greetgeo.eu

Interreg Euro-MED Co-funded by the European Union

EnerCmed

EnerCMed is an Interreg Euro-MED project aiming at transforming Mediterranean hinterlands energy-positive and climate-resilient communities. By leveraging innovative approaches centered on Renewable Energy Communities (RECs) and Self-Consumption Schemes with Nature-Based Solutions (NBS), EnerCmed project empowers marginalized neighborhoods, combats energy poverty and reduces urban heat islands in port areas...

enercmed.interreg-euro-med.eu

Sponge Boost

SpongBoost is a Horizon Europe project that brings together a team of 10 partners from 7 European countries, spanning research, policy, and management fields. The aim is to identify effective ways to enhance or restore landscapes' natural water retention capacity. By consolidating existing knowledge, utilising best practices, and testing innovative approaches, the project will create a roadmap for implementing transformative measures to improve resilience to extreme events. This involves synthesising information for policy-making, practical restoration, and land-use planning, as well as showcasing successful examples of sponge restoration and its multiple benefits.

spongeboost.eu

AGENDA

Thursday 9 October

14:00 – 17:00
Fieldtrip GENESIS' Madeira Demonstrator
Chão dos Balcões

Friday 10 October

9:00 – 18:00
Clustering workshop
Colégio dos Jesuitas do Funchal, Madeira University

Opening Speeches

- José de Sousa Câmara, Vice chancellor of Innovation, Internationalisation and research, University of Madeira.
- Alejandro García Gil, GENESIS project coordinator, IGME-CSIC.

The GENESIS project and demonstrator in Madeira

- Alejandro García Gil, GENESIS project coordinator, IGME-CSIC.
- Madeira demonstrator, University of Madeira.

Participating projects

- Niko Natek, Greet CE, KSSENA.
- Matija Vajdic, Greet GEO, Energy Institute Hrvoje Pozar.
- Pilar Jordà, EnerCMed, València Clima i Energia.
- EnerCMed, University of Ciprus.
- Paul Brotherton, SpongeBoost, Wetlands International Europe.
- Other projects to be confirmed.

Panel Discussion. Freshwater and wastewater management challenges in Madeira and the Macaronesia

- Alejandro García Gil, GENESIS project coordinator, IGME-CSIC.
- Juan Carlos Santamarta Cerezal, El Hierro demonstrator, University of La Laguna.
- Iván Hernández Ríos, La Palma demonstrator, Asociación para la Investigación de la Macaronesia.
- Gilberto Manuel Martel Rodríguez, Gran Canaria demonstrator, Instituto Tecnológico de Canarias.
- Ana Rita da Costa Paiva da Silva Hipólito, Faial demonstrator, Trisolaris Advanced Technologies.
- António Lobo de Pina, Santiago demonstrator, University of Cape Verde.
- Eduardo Manuel de Almeida Leite, Madeira demonstrator, University of Madeira.

Innovative solutions and tools for improved freshwater and wastewater management

- Gergely Törő, Creatiger Ltd., innovative water retention solutions.
- Marcell Szép, Dfarm Ltd., irrigation solutions - less water with more results.
- Tamás Mendi, Clasman Ltd., drinking water generation from atmospheric air.
- Pál Kiss, Sewergy, digital tools facilitating cooling with wastewater waste heat.
- Kristina Dely, Delfy, the (potential) role of crowdfunding in impact investments.

Open Discussion. Problems and solutions of freshwater and wastewater management in insular contexts

- Q&A with the speakers of the event

Concluding words and next steps

genesis

Thank you!

@genesisnbs

www.genesisnbs.eu