Demonstrator and replicators map



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genesis

Geologically Enhanced NaturE-based Solutions for climate change resiliency of critical water InfraStructure

Join our community spaces for learning, testing and collaboration:

Citizens science hub

An inclusive, collaborative space that connects experts and citizens to exchange knowledge and collect environmental data. It acts as a multi-way learning and sharing platform linked to the project website and social media, engaging communities across all demonstrator and replicator sites in Macaronesia and encouraging active participation throughout the project and beyond.

La Palma living lab

A real-life participatory space where public authorities, researchers, companies and citizens work together to test and validate innovative solutions for sustainable water management. It covers the full water cycle (from catchment to treatment) and enables hands-on experimentation, dialogue and learning to strengthen climate adaptation and improve groundwater governance across the island.

La Palma Bootcamp

An intensive, hands-on training programme that brings geoscience students and early-career practitioners to the island to learn directly from its unique volcanic landscapes and water challenges. Through fieldwork, expert mentoring and real-world case studies linked to GENESIS, participants gain practical skills in groundwater management, climate adaptation and nature-based solutions, while contributing to ongoing research and local resilience efforts.

GENESIS WILL

Analyse, for each demonstrator site



Water demand for agricultural and urban use



Hydrogeological models and simulations



Effectiveness of the NbS in the quantity and quality of water

Citizen's engagement and active participation will be enabled through different channels

Implement and test different kinds of Macaronesian suited Nature-based Solutions to improve aquifer recharge and water quality

1. **Reclaimed water in dry gallery**
2. **Undergound dike-impounded dam systems**
3. **Soil aquifer treatment**
4. **Wetland restoration**
5. **Other ecosystem-based approaches (infiltration ponds)**

A digital twin of the hidrogeology of La Palma will test the synergetic effects of the four NbS implemented and the resilience of the water system towards climate change scenarios.