RURACTIVE OPEN CALL - CHALLENGE 14

Title of the challenge	**Water-saving solutions for rural communities**
Dynamo (pilot location)	Zagori, Greece
RDD (Rural Development Driver) *addressed by the challenge*	Sustainable agri-food systems and ecosystem management
Overall context description and specific context to be addressed by the challenge	As climate change accelerates, rural areas, including Zagori in Greece, face increasing pressure from hotter summers and severe water scarcity. This environmental shift threatens the availability of water for local residents and visitors, significantly impacting agriculture, tourism, and daily life. The traditional practices of water management, including the use of old mills and traditional irrigation systems can positively impact biodiversity and enhance local natural ecosystems by maintaining water flow and supporting various plant and animal species. There is an urgent need for innovative water-saving technologies that can enhance sustainable water management in these communities, particularly during peak tourism seasons and drought periods. By integrating modern solutions with historical methods, this challenge aims to develop strategies that ensure reliable access to water resources, supporting both local livelihoods and the influx of tourists while promoting resilience against climate change. The goal is to secure enough water for the community, preserving the region's agricultural productivity and tourism potential, while also honoring and revitalizing traditional practices that reflect the area's cultural heritage and contribute to the health of its ecosystems.
Scope of the Challenge	The scope of the challenge is to develop innovative water-saving technologies tailored to the Zagori region, which faces increasing water scarcity due to climate change and rising temperatures. The solutions should effectively utilize both modern technology and traditional practices, such as the repurposing of old mills, and ensure sufficient water resources for local residents and visitors, particularly during peak tourism seasons and periods of drought.
Solution requirements	• Innovative approaches that leverage traditional water management practices, such as the repurposing of old mills and traditional irrigation systems for water storage

	or distribution, alongside modern techniques to promote sustainable practices. • Biodiversity-friendly practices and solutions that incorporate traditional practices to maintain water flow and support local biodiversity, ultimately enhancing the natural ecosystem. • Proposed solutions must be sustainable and easy to maintain, ensuring their continued operation for many years after implementation. The solution should be easy to use and intuitive, low-cost, ensure open access, and utilize open data sources.
Specific objectives and expected outcomes	• Improve local ecosystems by maintaining water flow and supporting diverse plant and animal species. • Ensure adequate water supply to sustain agricultural productivity and enhance the tourism experience, benefiting the local economy. • Enhanced knowledge and engagement among residents regarding sustainable water practices and their importance. • Establish a functioning, integrated water management system that effectively balances the needs of residents, agriculture, and tourism. • Support the long-term viability of local agriculture and tourism through reliable water access, thereby contributing to the region's economic resilience.
Available resources	• Access to existing water management systems and traditional waterworks, such as old mills, that can be retrofitted or integrated with new technologies • Availability of designated areas within the Zagori region for testing and implementing innovative water-saving technologies in real-world conditions. • Data and research on local water and irrigation systems and biodiversity metrics to inform solution development.