



**Regions
4Climate**

Sitia Greece



**Funded by
the European Union**

The Regions4Climate Project is funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the granting authority. Neither the European Union nor the granting authority can be held responsible for them.





- **Location:** the easternmost region of Crete, Greece
- **Population:** 21,000
- **Area:** 715 km²
- **Population density:** 42 inhabitants/km².

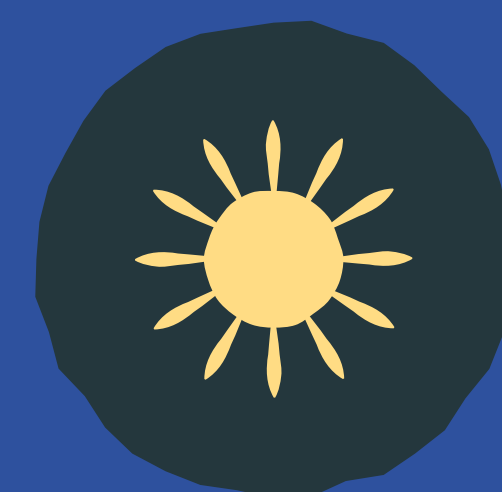




Region-important activities

- Tourism
- Olive oil production
- Coasts
- Local food culture
- Citizen protection from extreme events

Main climate challenges



Heat waves



Water scarcity



Rural depopulation



Pressure on agriculture

Stakeholder: Mapping, selection and engagement

Olive oil producers, cooperatives, packers, schools and teachers, civil protection volunteering groups, women entrepreneur, Geopark, tourism business. Organisation of regular meetings and workshops, outdoor field activities and civil protection exercises.

The region is committed to:



Engaging citizens in activities to prevent water shortages.



Offering climate-related services



Co-creating new ideas to encourage sustainable economic sustainable economic development in the face of a rapidly changing climate.



Maintaining the local traditions and lifestyle

Project activities

1. UNESCO Global Geopark of Sitia – Education & Climate Resilience (2023–2025)

The UNESCO Global Geopark of Sitia plays a key role in promoting environmental awareness and climate resilience through education and community engagement. Between 2023 and 2025, it developed educational materials and training programmes on climate change, crisis management, water resource protection, and preparedness for extreme weather events, targeting students, teachers, parents, first responders, and citizens. Educational workshops, field visits, and awareness activities strengthened knowledge on climate adaptation and sustainable resource management. In 2024, the Geopark expanded its outreach through university-level training on emergency preparedness. These efforts culminated in the 5th Summer School (2025), themed “Waterways,” which brought together educators, scientists, students, and local communities through scientific presentations, field activities, and experiential learning, highlighting the importance of sustainable water management in the face of climate change.



2. Smart Info Kiosks for Sustainable Tourism

To enhance sustainable tourism and reduce the environmental footprint of visitor information services, the Municipality of Sitia installed two energy-efficient digital info kiosks in key locations, including the central square and the Geopark Information House. These interactive kiosks provide visitors with real-time information on weather conditions, cultural events, tourist routes, monuments, trails, beaches, and natural attractions across the region. They also offer access to maps, Geopark materials, transportation schedules through QR codes, distance calculations, high-resolution visual content, and visitor support information. As part of Sitia's broader digital transformation strategy, the kiosks improve accessibility, promote smart and sustainable travel, and strengthen the visibility of the area's natural and cultural heritage.



3. International Women's Day: Empowerment, Equality and Inclusion

As part of the Horizon Europe Regions4Climate (R4C) Programme and the celebration of International Women's Day, the Municipality of Sitia organised a multi-thematic event promoting gender equality, women's empowerment, and social inclusion. Through keynote discussions, cultural performances, and film screenings addressing stereotypes, gender-based violence, and the challenges faced by migrant and refugee women, the event highlighted the diverse contributions of women to society and culture. By combining dialogue, art, and visual storytelling, the initiative fostered awareness, community engagement, and collective action, while strengthening local equality networks and supporting the broader objectives of sustainable and inclusive social development.



4. ITB Berlin: Promoting Regions4Climate and International Collaboration

At ITB Berlin, the Sitia Geopark pavilion showcased the Regions4Climate programme, promoting its objectives and engaging potential scientific partners interested in future European initiatives. The pavilion served as a hub for networking, knowledge exchange, and partnership building, bringing together researchers, professionals, and institutions committed to sustainability and climate resilience. It also strengthened collaboration within the Geopark network by facilitating the exchange of ideas and best practices on environmental protection, sustainable tourism, and natural heritage management. Through these activities, the pavilion enhanced the international visibility of local climate actions and reinforced the shared commitment of Geoparks to sustainable development and environmental awareness.



5. Women's Entrepreneurship Conference: Promoting Equality and Sustainable Development

The Municipality of Sitia participated in the 1st Pan-Cretan Conference on Women's Entrepreneurship with International Participation, held in Rethymno in April 2025. The event brought together entrepreneurs, professionals, policymakers, and international experts to discuss innovation, leadership, inclusion, and gender equality in the business sector. During the conference, the Municipality presented its initiatives and the Regions4Climate (R4C) programme as examples of local actions supporting women's empowerment and sustainable development. The participation provided valuable opportunities for networking, knowledge exchange, and the creation of new partnerships, while reinforcing the importance of women's entrepreneurship as a driver of social cohesion, economic growth, and sustainability.



6. Tourism Day: Linking Local Production, Sustainability and Climate Action

As part of Tourism Day in Makry Gialos, the Municipality of Sitia brought together local producers participating in the Geopark Quality Agreement to strengthen the connection between tourism, local production, and sustainable development. Discussions focused on reducing energy costs, improving resource efficiency, and promoting renewable energy solutions to enhance the sustainability and competitiveness of local businesses. The event also showcased the objectives and actions of the Regions4Climate programme, highlighting climate adaptation and community resilience. By promoting high-quality local products and sustainable practices, the initiative reinforced the region's cultural identity while encouraging closer links between tourism, local entrepreneurship, and environmental protection.



7. Voluntary Beach Cleaning in Koufonissi: Protecting Marine Ecosystems

As part of the Horizon Europe Regions4Climate (R4C) Programme, a voluntary beach and underwater cleaning action was carried out on the island of Koufonissi in collaboration with the environmental organization Isea, the Municipality of Sitia, and the Atherinolakkos Steam Power Plant. The initiative aimed to protect the island's unique natural environment by removing and recording waste while raising awareness about marine pollution, climate change, and the importance of responsible environmental stewardship. Through the active participation of volunteers and the cooperation of public, private, and civil society partners, the action strengthened environmental awareness, community engagement, and the sustainable management of valuable marine ecosystems.



8. Chamezi Workshop: Connecting Youth with Cultural and Natural Heritage

As part of a high school environmental and cultural education programme, students participated in an educational workshop and field visit to Chamezi, exploring the village's rich cultural heritage and unique natural environment. The visit focused on the life and work of Irini Papadaki, a distinguished philologist, writer, and cultural pioneer, while also introducing students to the history of the village and its distinctive mountain ecosystem. Through hands-on activities, participants learned about local plant species, experienced the area's biodiversity, and discovered how climate and geography influence vegetation. The workshop combined cultural learning with environmental awareness, fostering a stronger connection between young people and their local heritage while encouraging active community engagement and volunteer participation in local cultural initiatives.



9. Endemic Plant Species: Site Selection for Conservation and Cultivation

During the reporting period, significant efforts were dedicated to identifying a suitable site for the cultivation of endemic plant species within the Municipality of Sitia. This process proved challenging due to limited land availability, as several concurrent municipal projects restricted access to appropriate plots. The selection required careful evaluation based on key criteria, including water availability, suitable soil composition, accessibility, and the ecological value of the surrounding environment. Through site visits, technical assessments, and collaboration with local authorities, two potential locations were identified between Chandras and Armenoi. Both sites offer favourable conditions such as irrigation potential, easy access, and low human impact, making them suitable for supporting biodiversity conservation objectives. In the next phase, final evaluations, stakeholder consultations, and site preparation activities will be carried out to enable the successful establishment of endemic plant cultivation.



10. IPM Field Studies: Sustainable Olive Cultivation and Pest Management

In Greece, despite being the third-largest olive oil producer globally, olive cultivation declined in 2023, with climate conditions significantly affecting yield. Within the experimental plot in Sitia, only a portion of the trees produced olives, under conditions of prolonged drought and high temperatures. Integrated Pest Management (IPM) practices were implemented to improve sustainability and reduce chemical inputs, including the use of biological attractants and yeast-based solutions in insect traps targeting olive pests. These methods were supported by scientific coordination and field monitoring throughout the season, with adjustments made as needed. Despite environmental challenges, olive oil production remained high, yielding extra virgin oil of excellent quality and low acidity. The study highlights the importance of transitioning toward sustainable agricultural practices that reduce chemical pesticide use, protect biodiversity, and strengthen the resilience and quality of olive production under climate change pressures.



11. Olive Mills Transition to Carbon Neutral Production

The project has made significant progress in identifying olive mills suitable for pilot actions aimed at transitioning to carbon-neutral production. Following a detailed evaluation process, the Papagiannades and Chrysopigi olive mills were selected based on criteria such as production capacity, accessibility, willingness to adopt sustainable practices, and potential for environmental improvement. These facilities represent typical local agri-food enterprises and serve as ideal pilot cases for developing sustainable olive oil production models. The project team is currently collecting operational data, including energy use, emissions, and waste management practices, to establish baseline conditions and design targeted interventions. A comprehensive roadmap for achieving net-zero emissions is under development and will guide future implementation. This initiative supports the broader goals of reducing the environmental footprint of the olive oil sector, promoting circular economy principles, and enhancing long-term sustainability in local production systems.



12. International Women's Entrepreneurship Day: Inspiration, Empowerment and Networking

Within the framework of the Horizon Europe Regions4Climate (R4C) Programme, the Municipality of Sitia organised a successful event at the Sitia Polycenter to mark International Women's Entrepreneurship Day. The event aimed to strengthen female entrepreneurship and highlight the importance of women's leadership, innovation, and creativity in local and regional development. It brought together entrepreneurs, professionals, organisations, and citizens in an interactive environment focused on inspiration, empowerment, and networking. A series of speeches from women across diverse sectors—including social entrepreneurship, journalism, agri-food, technology, business consulting, and local government—shared experiences, challenges, and success strategies, offering practical insights into sustainable development and equality. With over 120 participants, the event fostered collaboration, knowledge exchange, and new partnerships, reinforcing the role of gender equality as a key driver of sustainable economic and social progress.

13. Strengthening Women's Cooperative "Melion" in Zakros

Within the Horizon Europe Regions4Climate (R4C) Programme, the Municipality of Sitia supports the Zakros Women's Cooperative "Melion," established in 2007 to promote local traditions and sustainable development through authentic local products. R4C support included technological equipment to improve production capacity and quality, as well as the development of a professional website and enhanced social media presence to increase visibility and market outreach. The results of this support were presented by the Cooperative's President during the International Women's Entrepreneurship Day event organised by the Municipality of Sitia, showcasing the contribution of women-led initiatives to local resilience, social cohesion, and sustainable development.



Nektaria Kounelaki, President of the women's cooperative of Zakros

14. Civil Protection Workshop and Flood Simulation Exercise

Within the framework of the Horizon Europe Regions4Climate (R4C) Programme, the Municipality of Sitia organised a Civil Protection workshop and operational flood simulation exercise to strengthen local preparedness and resilience against extreme weather events. The workshop focused on planning and coordinating response procedures, improving inter-agency communication, and enhancing the operational capacity of authorities and volunteer groups. Participants included civil protection officials, the Deputy Mayor, the R4C team, volunteer rescue teams, and local citizens, working together to reinforce crisis coordination and emergency readiness. This preparation was followed by a real-time flood simulation exercise involving all relevant services, such as the Fire Department, Police, Port Authority, Emergency Medical Services, utility providers, and volunteer organisations. The exercise demonstrated strong cooperation and effective coordination, confirming the municipality's high level of readiness and commitment to climate-related disaster response and community resilience.



15. Sitia Speleology Group: Exploring Underground Water Systems and Karst Landscapes

Within the framework of the Horizon Europe Regions4Climate (R4C) Programme, the Sitia Speleology Group organised workshops in collaboration with local partners to study underground water systems and the region's extensive cave network. The Sitia area, which includes more than 600 caves, is characterized by a unique karst landscape formed by limestone geology, where most surface water infiltrates the ground and flows through complex underground channels. Two workshops were held in 2025 with 12 participants, focusing on observing changes in underground water flow and understanding the hydrological connections that feed major coastal springs such as Zakros and Chochlakia. These activities enhanced scientific knowledge of the region's subterranean ecosystems and supported efforts toward the creation of a future Speleological Park, contributing to the sustainable management and protection of Sitia's unique geological heritage.



16. Digital Civil Protection Software for Real-Time Emergency Management

As part of the Civil Protection operational exercise under the Horizon Europe Regions4Climate (R4C) Programme, an innovative mobile software application was introduced to support real-time monitoring and management of emergency incidents. The application enables live mapping of hazards such as fires, floods, earthquakes, and landslides, while providing location-based alerts, self-protection guidance, and direct communication with Civil Protection services. During the pilot phase of the exercise, the software was successfully tested, demonstrating its effectiveness in improving information flow, coordination, and response among participating agencies. Following the exercise, the tool will remain in use by the Municipality of Sitia for monitoring real emergencies, training personnel and volunteers, and supporting civil protection operations, contributing to enhanced preparedness, prevention, and digital innovation in disaster management.

17. TOEB: Water Management and Climate-Resilient Agriculture

The Local Land Improvement Organization (TOEB) plays a central role in managing water resources and agricultural infrastructure, supporting sustainable development in the primary sector and environmental protection. Its responsibilities include the efficient management of irrigation water, maintenance of irrigation networks, and support for farmers in the rational use of natural resources. Closely aligned with the objectives of the Regions4Climate programme, TOEB contributes to climate change adaptation through modern irrigation practices, energy-efficient systems, renewable energy integration, and smart water management technologies. By reducing water losses and promoting sustainable agricultural practices, it strengthens the resilience of rural communities and supports environmental protection. Through collaboration with local stakeholders and European initiatives, TOEB serves as a key partner in advancing a greener, more sustainable, and climate-resilient agricultural model.

18. Meteorological Stations and Early Warning Mobile Application for Climate Resilience

The project has advanced significantly in establishing a local meteorological monitoring network and developing a mobile application for early warning and climate resilience in the Municipality of Sitia. Following extensive studies and site assessments, fifteen strategic locations were selected for the installation of autonomous weather stations equipped with continuous power supply and internet connectivity to ensure real-time data transmission. These stations will feed a central data management system, providing comprehensive spatial coverage and valuable information for environmental, agricultural, and urban planning purposes. In parallel, a mobile application is being developed to deliver real-time weather data, risk alerts, and actionable guidance to both authorities and citizens, particularly supporting the agricultural sector. The system will enable dynamic data management and early warning capabilities for extreme weather events. With design approval completed and technical preparations finalized, the project is now moving toward installation and testing phases, contributing significantly to digital innovation and enhanced climate resilience at the local level.



Advances on regional innovations

- Integrated Pest Management
- Women Entrepreneurship Support
- Civil Protection Exercises with community participation

Achievements and value

1. Strengthening education and environmental awareness
2. Digital and touristic modernisation
3. Empowerment of the local economy and women’s entrepreneushiop
4. Increased resilience to climate risks
5. Promotion and recognition at European and international level

Regional contact points

National Centre For Scientific Research – Demokritos

Thanasis Sfetsos

ts@ipta.demokritos.gr

Municipality of Sitia

Pavlos-Alexandros Kapetanakis

eu-projects@sitia.gr

Partners



DEMOKRITOS



Δήμος Σιτείας
Municipality of Sitia