



LIFE ADAPT2CLIMA - Adaptation to Climate
change Impacts on the Mediterranean islands'
Agriculture

LIFE14 CCA/GR/000928



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Project description:

Background

Climate change constitutes one of the main global threats we have to face this century, with significant impacts expected on many sectors of society. Agriculture is one of the economic sectors that will likely be hit hardest by climate change, since it directly depends on climatic factors such as temperature, sunlight, and precipitation. In southern and warmer latitudes such as the Mediterranean region where the project implementation areas are located, the potential negative impacts on crop yields are expected to significantly outweigh the potential positive impacts.

However, research regarding climate change impacts on the agricultural sectors in the project areas has so far been limited to general conclusions at national level, without focusing on the regional and local climate changes and their impacts on irrigation water availability, crop growth, and soil quality. Even less progress has been made in the field of adaptation, since no adaptation plans have been put in place yet to identify necessary measures to be integrated into national and regional policies. Thus, there is a need for a comprehensive enrichment of the knowledge base in the field of climate change impact and vulnerability assessment for the agricultural sectors in the project areas in order to enable well informed decision-making and to underpin the establishment and implementation of concrete adaptation plans.

Objectives

The LIFE ADAPT2CLIMA project aims to facilitate the development of adaptation strategies for agriculture by deploying and demonstrating an innovative decision support tool. The ADAPT2CLIMA tool will make it possible to simulate the impacts of climate change on crop production and the effectiveness of selected adaptation options in decreasing vulnerability to climate change of three Mediterranean islands, namely Crete (Greece), Sicily (Italy), and Cyprus.

The islands were selected for two reasons: firstly, they figure among the most important cultivation areas at national level. Secondly, they exhibit similarities in terms of location (climate), size, climate change threats faced (coastal agriculture, own water resources), agricultural practices, and policy relevance.

In particular, the tool will provide: i) climate change projections; ii) hydrological conditions related to agriculture; iii) a vulnerability assessment of selected crops; and iv) an evaluation of the adaptation options identified.

Expected results The project is expected to contribute significantly to increasing climate resilience of agriculture areas in Sicily, Cyprus and Crete as well as at EU and international level by:

- Developing, implementing and demonstrating an innovative and interactive decision support tool (ADAPT2CLIMA tool) for adaptation planning in agriculture that estimates future climate change impacts on local water resources, as well as the climate change vulnerability of the agricultural crop production in the project areas;
- Evaluating the technical and economic viability of the implementation of the ADAPT2CLIMA tool;
- Developing climate change adaptation strategies for agriculture (including a monitoring plan) for the three project areas and presenting them to the competent authorities for adoption;
- Simulating the effectiveness of the implementation of certain adaptation measures to address climate change impacts on agriculture;
- Developing a stakeholder engagement strategy;
- Increasing the knowledge of the impacts of climate change on the agricultural areas covered by the project, thus enabling well informed decision-making and enhancing readiness for early action in order to address the potential damages and minimise threats posed by climate change;
- Developing a framework for mainstreaming agricultural adaptation measures into relevant national and regional policies; and
- Promoting the replication and transferability of the proposed methodology in order to ensure proper coordination of national and regional policies and between authorities.

Results

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Environmental issues addressed:

Themes

Climate change Adaptation - Sectoral adaptation (industry-services)
Industry-Production - Agriculture - Fisheries

Keywords

water shortage, Agriculture, rural area, industrial area, environmental training, island, financial instrument, climate resilience

Natura 2000 sites

Not applicable

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Beneficiaries:

Coordinator	NATIONAL OBSERVATORY OF ATHENS
Type of organisation	Research institution
Description	Founded in 1842, the National Observatory of Athens (NOA) is the oldest research centre in Greece. The Institute for Environmental Research and Sustainable Development (IERSD) is one of three institutes of the NOA, experienced in all aspects of meteorology, climate change and climate change modelling, climate change impacts and adaptation, solar and wind energy, atmospheric pollution, etc. Working in the field of meteorology since 1858, it has the country's oldest meteorological database.
Partners	IBIMET(National Research Council, Institute of Biometeorology), Italy SICILY(Regione Siciliana - Assessorato Agricoltura, Sviluppo Rurale e Pesca Mediterranea), Italy CRETE(Region of Crete), Greece NTUA(National Technical University of Athens), Greece ARI(Agricultural Research Institute), Cyprus

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Administrative data:

Project reference	LIFE14 CCA/GR/000928
Duration	01-OCT-2015 to 30-APR -2019
Total budget	1,497,060.00 €
EU contribution	898,236.00 €
Project location	Kypros / Kibris,Extra-Regio,Mediterr. Cyprus (CY),Kriti,Sicilia

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