



OLIVE4CLIMATE - LIFE - OLIVE4CLIMATE -
LIFE. CLIMATE CHANGE MITIGATION
THROUGH A SUSTAINABLE SUPPLY CHAIN
FOR THE OLIVE OIL SECTOR

LIFE15 CCM/IT/000141



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Project description:

Background

The olive tree is one of the most widespread agricultural tree species in the world. Some 70% of the world's olive harvest comes from the European Union, where almost 5 million ha of land is devoted to cultivating olives.. Agriculture is particularly vulnerable to the effects of extreme weather events and faces the combined challenge of mitigation and adaptation to the new climate scenario. However, olive trees are able to survive and produce under different and difficult agro-ecological conditions. They represent, therefore, an unusual case of a crop which could be used to emphasize carbon sequestration and mitigate the effects associated with climate change. This is in line with one of the main objectives of the Common Agricultural Policy 2014-2020 which seeks to fully exploit the potential of agriculture to mitigate climate change and adapt the whole sector to its consequences, thereby increasing its positive contribution to carbon sequestration. Nonetheless, little is known about the CO₂ fixation capacity of olive groves and about their mitigation effect on greenhouse gases.

Objectives

The OLIVE4CLIMATE - LIFE project proposes a holistic vision of the processes and products associated with the production of extra virgin olive oil, based on a quantitative assessment of the related carbon footprint. The proposed innovative cultivation approach will be tested in three Mediterranean countries with

heterogeneous environmental conditions and with significant olive production: Italy, Greece and Israel. By means of a series of demonstration actions, the project will test strategies for the sustainable production of olive oil and promote the uptake of secondary products derived from integrated cultivation systems. A life-cycle assessment (LCA) will be conducted, allowing the quantification of the carbon sequestration potential in the olive groves and providing the necessary information to define a technical protocol, which can be replicable in different production and environmental contexts. A handbook for the sustainable management of olive groves, covering aspects such as the olive oil value chain, soil and waste management, and carbon credits, will also be drafted.

Expected results: The implementation of the project actions is expected to lead to the following results:

- Demonstration of a series of replicable solutions and protocols for sustainable management of the olive oil value chain in different environmental and climatic conditions in the Mediterranean area;
- The creation of numerical models to define the carbon sequestration capacity of olive trees and optimise the planting of new olive trees;
- The drafting of a greenhouse gas emission monitoring plan for the olive oil value chain, with the involvement of producers;
- Definition of a labelling system and quality assurance schemes based on the LCA and the carbon footprint evaluation; and
- Support to the inclusion of olive groves in the voluntary market of carbon credit certification, by reducing emissions and enhancing carbon storage capacity.

Results

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Environmental issues addressed:

Themes

Climate change Mitigation - Carbon sequestration
Climate change Mitigation - GHG reduction in non EU ETS sectors

Keywords

agricultural method, Agriculture, carbon sequestration, land use

Target EU Legislation

- Waste
- COM(2015)614 - "Closing the loop - An EU action plan for the Circular Economy" (02.12.2015)

Natura 2000 sites

Not applicable

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Beneficiaries:

Coordinator	Università degli Studi di Perugia
Type of organisation	University
Description	The “Università degli studi di Perugia” is a public university located in Perugia (Umbria, central Italy). The project activities will be implemented by the Department of Agricultural, Food and Environmental Sciences (DSA3) and by the Department of Engineering.
Partners	SGS Italia S.p.A., Italy U.N.A.PR.OL. CONSORZIO OLIVICOLO ITALIANO SOC. CONS. P.A., Italy Università degli Studi della Tuscia, Italy Advanced Biomass Concepts GmbH, Germany Agricultural Research Organization (ARO) – The Volcani Center, Israel Università degli Studi di Palermo, Italy PANHELLENIC CONFEDERATION OF UNIONS AF AGRICULTURAL COOPERATIVES, Greece CNR(Consiglio Nazionale delle Ricerche (CNR), Istituto di Bioscienze e Biorisorse (IBBR)), Italy

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Administrative data:

Project reference	LIFE15 CCM/IT/000141
Duration	01-JUL-2016 to 30-DEC -2019
Total budget	2,397,748.00 €
EU contribution	1,259,499.00 €

	Schleswig-Holstein(Deutschland)
	Hamburg(Deutschland)
	Niedersachsen(Deutschland)
	Bremen(Deutschland)
	Nordrhein-Westfalen(Deutschland)
	Hessen(Deutschland)
	Rheinland-Pfalz(Deutschland)
	Baden-Württemberg(Deutschland)
	Bayern(Deutschland) Saarland(Deutschland)
	Berlin(Deutschland) Brandenburg(Deutschland)
	Mecklenburg-Vorpommern(Deutschland)
	Sachsen(Deutschland)
	Sachsen-Anhalt(Deutschland)
Project location	Thüringen(Deutschland) Anatoliki Makedonia, Thraki(Ellas) Kentriki Makedonia(Ellas) Dytiki Makedonia(Ellas) Thessalia(Ellas) Ipeiros(Ellas) Ionia Nisia(Ellas) Dytiki Ellada(Ellas) Sterea Ellada(Ellas) Peloponnisos(Ellas) Attiki(Ellas) Voreio Aigaio(Ellas) Notio Aigaio(Ellas) Kriti(Ellas) Piemonte(Italia) Valle d'Aosta(Italia) Liguria(Italia) Lombardia(Italia) Trentino-Alto Adige(Italia) Veneto(Italia) Friuli-Venezia Giulia(Italia) Emilia-Romagna(Italia) Toscana(Italia) Umbria(Italia) Marche(Italia) Lazio(Italia) Campania(Italia) Abruzzo(Italia) Molise(Italia) Puglia(Italia) Basilicata(Italia) Calabria(Italia) Sicilia(Italia) Sardegna(Italia)

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Read more:

Leaflet	Title: "Olive 4 climate [Project's leaflet]" (382 KB) Editor: Università degli Studi di Perugia No of pages: 2
Leaflet	Title: "Olive 4 Climate [Project's leaflet]" (401 KB) Editor: Università degli Studi di Perugia No of pages: 2
Leaflet	Title: "Olive 4 climate [Project's leaflet]" (322 KB) Editor: Università degli Studi di Perugia No of pages: 2
Poster	Title: Project's poster (230 KB) Editor: Università degli Studi di Perugia No of pages: 1
Project web site	Project's website
Project web site - 2	Project's Facebook page

- Publication: Guidelines-Manual Title: "Climate change mitigation trough a sustainable supply chain for the olive oil sector: List of sustainable practices to develop the certification standard & Their mitigation potential in terms of ton of CO2 equivalent" (633 KB) Editor: Olive 4 climate No of pages: 17
- Publication: Guidelines-Manual Title: "Climate change mitigation through a sustainable supply chain for the olive oil sector: List of sustainable practices for olive cultivation in arid areas" (386 KB) Editor: Olive 4 climate No of pages: 13

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