# LIFE 11 ENV/GR/942 – Olive Clima

# “Introduction of new oLIVE crop management practices focused on CLIMAte change mitigation and adaptation”

*ANATOLIKI S.A., 18/10/2016*

# Introduction

**Project title and acronym:**

«*Introduction of new **oLIVE** crop management practices focused on **CLIMA**te change mitigation and adaptation*»

**BUDGET INFO:**

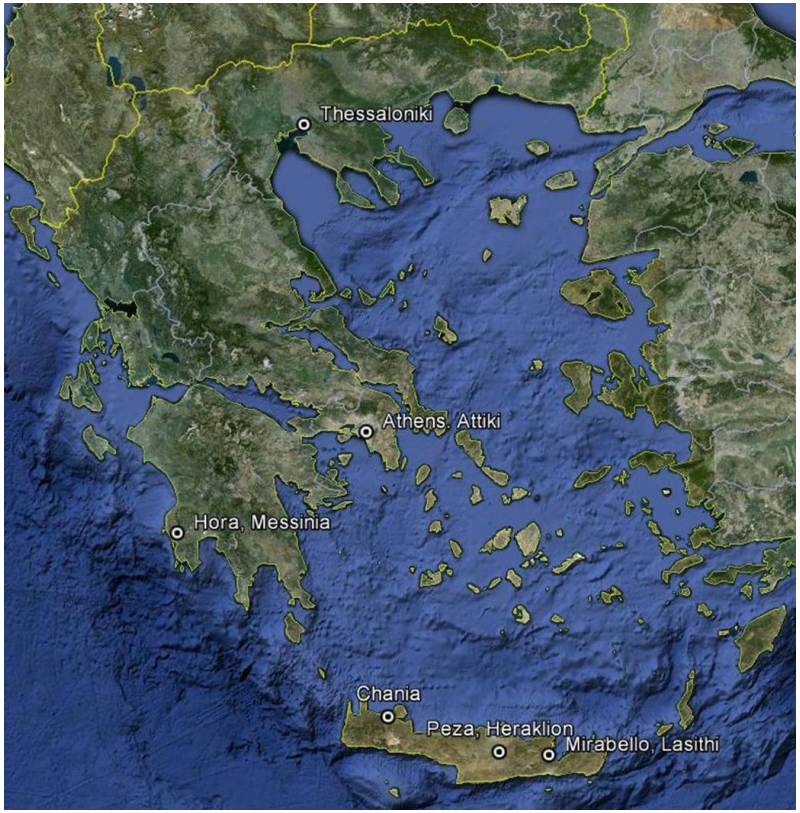
*Total amount: 3.649.373 €*

*% EC Co-funding: 50%*

**DURATION:**

*Start: 01/10/12 - End:30/09/17*

**PROJECT LOCATION**




**PROJECT'S IMPLEMENTORS:**

**Coordinating Beneficiary:** *ANATOLIKI, S.A.*

**Associated Beneficiaries:** *ELGO DIMITRA (IOTSP, SSIA, LRI), RodaxAgro ltd, University of Basilicata, Agrotypos s.a., A.C. of Peza & Merabello, F.U. Nileas*

# Background and aims

- Clear statement of the problem(s) targeted:
  - Climate change
  - Soil organic carbon loss
  - Biodiversity loss
  - Waste management
- Expected results:
  - Determination of farming practices that increase the carbon sequestration by cultivations from atmosphere
  - Reverse of carbon matter decline, erosion and desertification due to the proposed practices that can store carbon in the soil
  - Measures that reduce (fossil) GHG emissions and other environmental impacts during the production phase
  - Provision of growers with methods to enhance biodiversity/reduce CO2 emissions from soil, suitable for broadening the context of organic agriculture.
  - Demonstrate to farmers that environmentally benign agriculture is more efficient, it can lead to product differentiation and –in the case of olive oil production- it can also lead to self sustainable crop.
  - Development of measurable indicators that can be used to link farmers practices to quantifiable carbon storage in the soil.
  - Incorporation of project's results in the national environmental and agricultural policy and legislation, in anticipation of regulation on ETS and agriculture.

# Implementation Actions

# Applications

Adaptation of pruning

Pruned wood trimmed and returned to the olive grove *vs* burning it

Composting *vs* inorganic fertilizing

# Applications

No tillage

Weeds management

# Monitoring Actions

# Recording & monitoring

1. Data collection and recording – Quality control of EMS

   Primary recordings by farmers and implementers. Agronomists secure accurate transfer of information to ClimaRecords file, immediately after each implementation. Data control on a daily basis by RodaxAgro corresponding with agronomists.

2. Carbon return to the olive groves through organic material recycling

   Field measurements & laboratory analyses (soil, soil humidity, plant tissue, compost, olive mill waste).

# Carbon return to the olive groves through organic material recycling

Soil humidity

Soil sampling

OMW sampling

Analysis of pruning materials

Compost

# Recording & monitoring

***3.*** Cultivation practices impacts on carbon sequestration in olive groves

Field measurements & laboratory analyses (tree canopy, Leaf Area Index, GHG fluxes, plant tissue, soil cover).

Weed sampling

Measurements of soil CO2 emissions

Measurements of Leaf Area Index

# Recording & monitoring

***4.*** Determination of CO2 balance in olive ecosystems

Reporting on CO2 balance in olive ecosystem 2015.

***5.*** GHG emissions during the production phase - LCA

Processing of the primary recorded data to produce Life Cycle Inventory (LCI), which is used to carry out Life Cycle Assessment (initially RodaxAgro, now DICEM), to deduct Life Cycle Impact Assessment.

***6.*** Side effects of the implementation actions

Field visits and laboratory analyses to ensure no side-effects of the proposed practices on olive trees and the environment.

# Side effects of the implementation actions

Basic symptoms of Esca on olive trees


Pathogenicity test

# Recording & monitoring

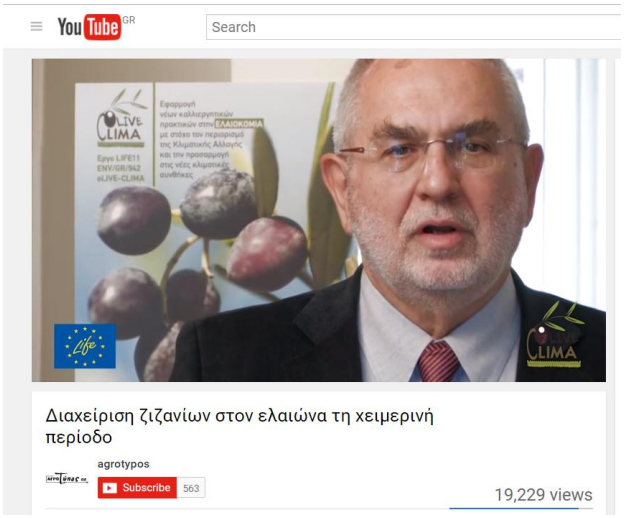
## *7.* Project's Socio-Economic impacts

Analysis of economic and time consumption data, to identify changes in production changes and labor intensity. Due to the amount and complexity of data to be analyzed, no preliminary conclusions are yet available.

# Dissemination Actions

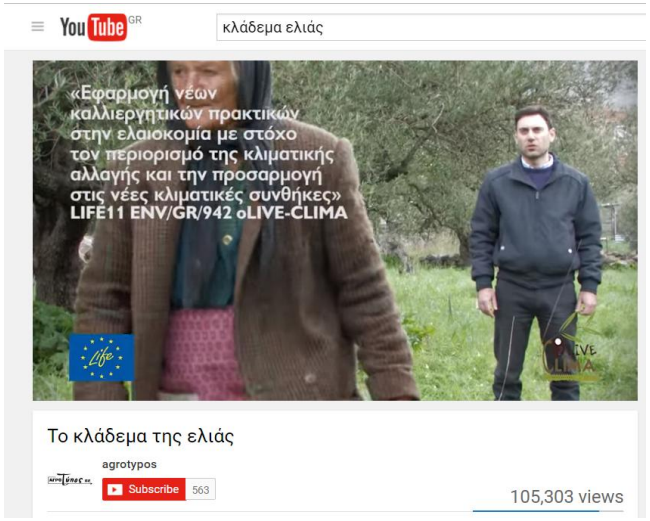
# Demonstration practical videos for farmers

## Weeds management




**~ 19.200 views**

## Adapted pruning




**~105.000 views**

## Fertilizing olive trees


**~55.500 views**

# Policy setting

**Single Market for Green Products Initiative**

Product Environmental Footprint (PEF) - Category Rules (CR) per product group

Contribution of oLIVECLIMA to the PEFCR for Olive Oil

- Methodology for primary data collection - data quality rules – Uncertainty
- Model for crop management practices – 'dedicated addition of carbon to soil'
- Arguments for the debate of olive oil sector with EU for carbon storage in soil*

**Rural Development Strategy**

**European Innovation Partnership 'Agricultural Productivity and Sustainability'**

oLIVE CLIMA practices can lead to improved product performance expressed by PEF, ideal for innovative approach available to EIP-AGRI's operational groups.




# Summarizing preliminary project results

→ Changed practices increased C pools (soil, biomass and litter)

→ It is a roughly slow process (>7 y)

→ Increased SOC was beneficial for several soil functions

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