



LIFE17 CCM-GR-000087



## Innovative technologies for climate change mitigation by Mediterranean agricultural sector

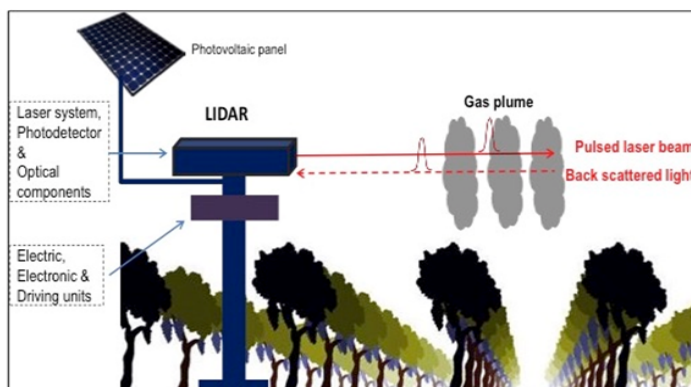


### The first Newsletter of LIFE ClimaMED project

This LIFE ClimaMED Newsletter wants to inform you about the aims, the progress, the results and the events carried out from the start day of the project. The aim is to up-to-date all relevant actors in the field of agriculture and the conformation with climate change mitigation strategies.

### ClimaMED main objective is

the development of innovative, reliable, rapid and cost-effective technologies of Tier 3 level for on-site measurement of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions and Soil Organic Carbon (SOC) stock changes from agricultural fields at real time, aiming to assist scientists, public authorities and policy makers in collecting, quantifying, evaluating, mapping and reporting spatial data for greenhouse gases (GHGs) emissions and SOC stock changes from the Mediterranean agricultural sector.



### ClimaMED aims also to

1. improve reporting of GHGs emissions and SOC changes by developing measurement protocols, based on real time spatial data collection, in comparison to the current accounting methodology of Tier 1 or Tier 2 level,
2. develop a draft legislative Act for the Greek Parliament concerning the measurement of GHGs by the farmers in the near future, as well as three proposals for respective Acts in Italy, Spain and Cyprus,
3. identify the relation between agricultural practices and GHGs emissions and SOC stock changes for the most important Mediterranean crops, i.e. olive trees, grapes, cereals, pistachios and vegetables
4. develop and establish a certification system for products with low footprint based on real time measurements to award "green farmers".

## ClimaMED will deliver

1. An innovative LIDAR device for on-site GHGs measurement at field level. The LIDAR devices will be stable and can be installed permanently at the fields of individual farmers or group of farmers.
  2. An innovative array of devices and the procedure for quantification of SOC stock changes.
  3. A GIS-based web platform as an Integrated Center for GHGs monitoring and management (namely CMM) to allow mapping and monitoring of GHGs emissions and SOC stock changes from agricultural areas at local, regional and national level.
  4. A telemetric system for data collection, transmission and management.
  5. Sustainable practices for GHGs reduction and carbon sequestration increase.
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## The Consortium and the kick off meeting of the project

Four Mediterranean countries and eight entities participate in the project:

### Greece

- Benaki Phytopathological Institute
- Foundation for Research and Technology
- Technical University of Crete
- Greek Ministry of Rural Development & Food
- Green Projects, S.A



### Cyprus

- ENVITECH, SME



Benaki  
Phytopathological  
Institute



TECHNICAL UNIVERSITY  
OF CRETE

### Spain

- University Miguel Hernández de Elche



HELLENIC REPUBLIC  
MINISTRY OF RURAL  
DEVELOPMENT & FOOD



### Italy

- Centro di Sperimentazione e Assistenza Agricola



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## The first LIDAR device was constructed and installed in Crete, Greece

The first LIDAR device was constructed and installed in Crete, at a pilot vineyard. A meteorological station, photovoltaic panels and a telemetric system for data transmission were installed, as well.

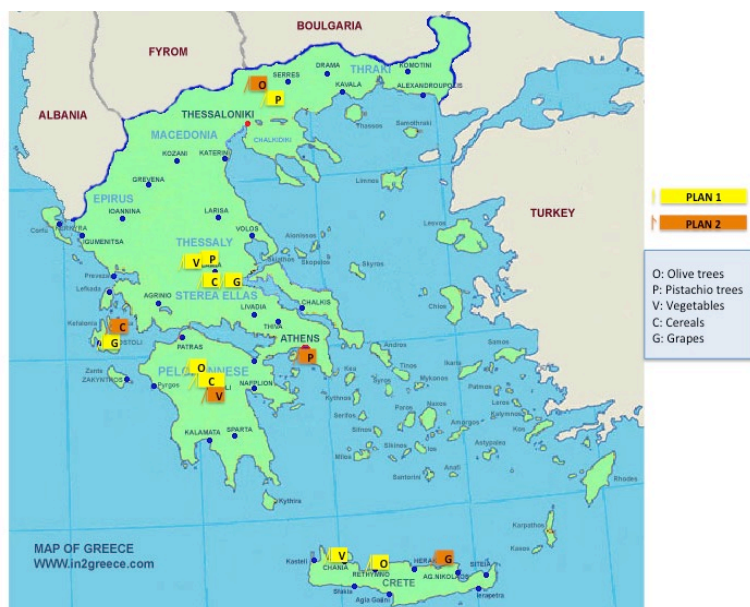
Ten more such devices will be constructed and installed during the coming months, thought Greece.



*Constriction and installation of the first LIDAR device along with a meteorological station, photovoltaic panels and a telemetry system for data transmission to the CMM*

## ClimaMED at 15 pilot fields throughout Greece

ClimaMED started the pilot actions towards its objectives. The experimental plan includes fifteen pilot fields in Greece.



*The fifteen pilot fields in Greece and the cultivations for which the GHGs emission are to be measured with the LIDAR devices*

The partners visited the fifteen pilot fields in Greece and collected data regarding cultivation practices, energy and fuel consumption, fertilizers and organic materials used on soil, and others.





*ClimaMED project at the pilot areas*

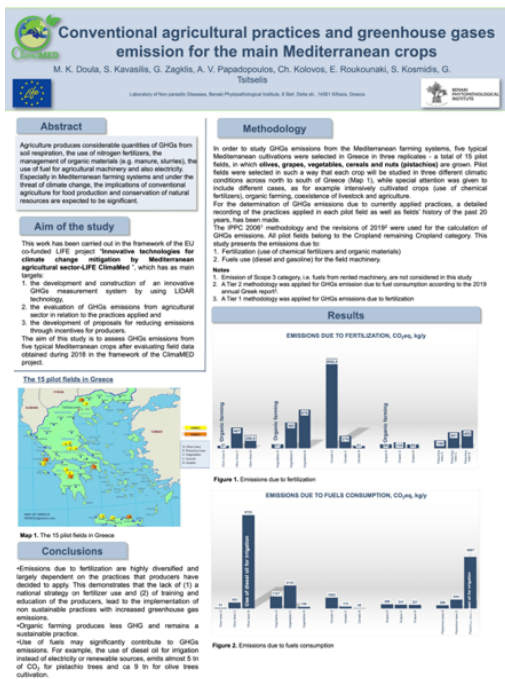
### Conferences, exhibitions, dissemination and networking

ClimaMED developed its dissemination and communication strategy from the first day. Some of the actions are:

- Development of web site, social media accounts and dissemination material
- Participation in three International Conferences, i.e. ADAPT2CLIMA 2019 in Crete, TERRAENVISION 2019 in Barcelona and IMA 2019 in Ioannina, Greece, to present its objectives and anticipated results; and the calculation of the current situation as regards GHGs emissions from the fifteen pilot fields, respectively
- Networking through participation in meetings organized by the Greek LIFE Task force; in the 12<sup>th</sup> Scientific Retreat of the Foundation for Research & Technology - Hellas (FORTH) in Patras to present the projects' objectives and anticipated results; and also through contacts with other LIFE projects.

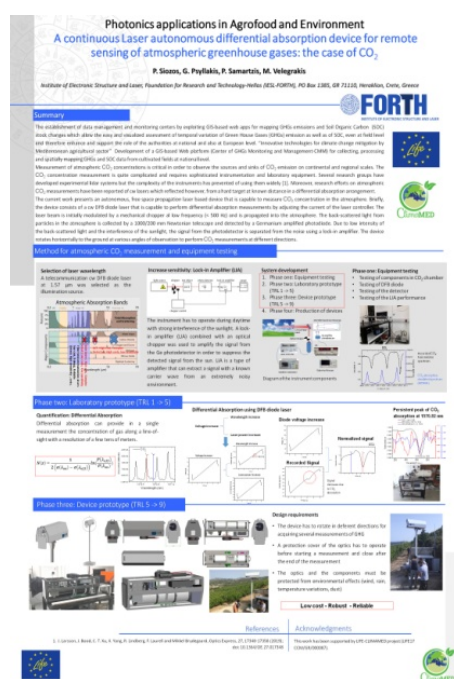


*Participation in ADAPT2CLIMA, TERRAENVISION and IMA international conferences and networking with LIFE AGROPUREWATER.*



## Conventional agricultural practices and greenhouse gases emissions for the main Mediterranean crops

### TERRAENVISION 2019

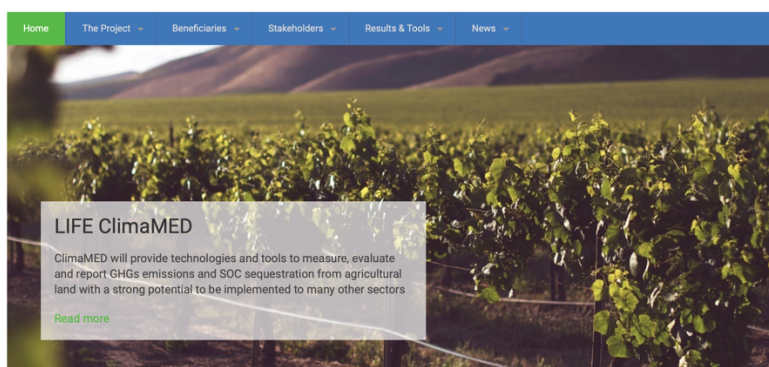


## Photonics applications in Agrofood and Environment: A continuous Laser autonomous differential absorption device for remote sensing of atmospheric greenhouse gases: the case of CO<sub>2</sub>

### IMA 2019

## For more information

Official project website: <https://life-climamed.eu>



Innovative technologies for climate change mitigation by Mediterranean agricultural sector with the acronym LIFE Climamed is a European project implemented with the contribution of the LIFE financial instrument of the European Union. The project began on 1st July 2018 and will last 4.5 years, until 31 December 2022. Project aims at developing and delivering innovative, reliable, rapid and cost effective technologies of Tier 3 level for the on-site measurement of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions and Soil Organic Matter (SOC) stock changes from agricultural fields at real time, in order to assist scientists, public authorities and policy makers in collecting, quantifying, evaluating, mapping and reporting spatial data for GHGs emissions and SOC stock changes from the Mediterranean agricultural sector. Devices can be installed permanently at individual fields or group of fields.



Project Facebook page  
<https://www.facebook.com/LIFE-Climamed-291895498422763/>

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LIFE ClimaMED is 60% co-funded by the European Union.