



Project co-financed by the European Regional Development Fund

A project labelled by the UfM



MED Greenhouses

Green Growth through the capitalisation of innovative Greenhouses



Countries:

Albania, Cyprus, France, Greece, Italy, Spain

Target Groups:

SMEs, local public authorities, research and academia, policymakers

Theme:

Food Systems

Keywords:

Greenhouses, sustainable agriculture, geothermal energy

Starting and Ending Dates:

February 2018 - December 2019

About 120,000 hectares of land are covered by greenhouses in the Mediterranean. They are usually low cost, low tech, labour intensive and rudimentarily equipped. To gear this sector towards green growth and more sustainable practices, **MED GREENHOUSES** promoted, disseminated and transferred innovative approaches for the establishment of water- and energy-efficient greenhouses in the MED area. The project:

- Reinforced the eco-innovation capacities of public and private actors in the greenhouse/agriculture sector through stronger transnational cooperation, knowledge transfer & better networks between research bodies, businesses, public authorities and civil society.
- Improved the existing innovation framework conditions of the MED agricultural sector.
- Strengthened and empowered innovation clusters & networks in the field of agriculture/greenhouse production.

MED Greenhouse Pilot Projects



Challenges

The project addressed the following challenges:

- Promote green growth & sustainable agricultural development in MED countries
- Enhance the innovation and knowledge capacity of MED target groups involved in the agriculture/greenhouse sector
- Raise environmental awareness on issues related to energy & water efficiency and sustainable production while transferring and capitalising on innovative greenhouse technologies
- Improve existing frameworks to favour eco-innovative investments

Solutions

The **MED GREENHOUSES** project developed the following solutions among quadruple helix actors (civil society, industry & business, public authorities and academia):

1. Developed, promoted and integrated policy recommendations in local and regional planning to boost eco-innovative greenhouses at the transnational level.
2. Established an Agricultural Innovative Cluster in the MED area to create synergies and cooperation mechanisms in the agricultural/greenhouse sector.
3. Engaged with policymakers in the agricultural/greenhouse sector and obtained their commitment to green growth and sustainable agriculture.

Catalysed capacity building through knowledge transfer, training courses (seminars, webinars) and a training platform.

Recommendations

Engaging groups from different sectors is challenging: there is no specific recipe for success. However, leveraging the specific added value and complementarities of different sectors can be a valuable approach. The project's transnational bottom-up strategy allowed target stakeholders and policy makers to identify the gaps, barriers, needs, and issues to be addressed by the project.

Ongoing consultations with stakeholders and policy makers created a sense of commitment to enhance existing frameworks in order to favour eco-innovative investments.

The participation of other audiences such as farmers, SMEs and civil society associations in the project's activities put the necessary pressure on political actors to take action. The project achieved substantial political impact by obtaining commitments from regional and local authorities, sectoral associations and others through a Memorandum of Agreement and Understanding. It was officially signed and presented during **MED GREENHOUSES'** final conference, and enshrines the commitment of these organisations to Green Growth and the Circular Economy.

Green Growth and the EU Green Deal

The project contributed to Green Growth and the EU Green Deal (especially the Farm to Fork strategy) by developing more resource efficient methods for agricultural production in greenhouses and engaging with a broad scope of actors to share these innovative solutions.

The **MED Greenhouses** technology is based on geothermal heat pump systems that use shallow geothermal energy in the Earth's surface and low depth rock layers, as well as in groundwater with temperatures below 25°C. Compared to conventional greenhouses and open cultivation, these greenhouses can achieve up to 67% energy savings, 45-100% water savings, as well as 46-52% lower CO₂ emissions and a 30-60% reduction in fertilizer use.

Using low geothermal energy in greenhouses allows for year-round cultivation, higher yields and more protection against plant diseases, while substituting fossil fuels with renewable energy sources.

MED Greenhouses connected research institutions, businesses, public authorities and civil society, thereby encouraging transnational cooperation and knowledge transfer to develop more sustainable greenhouses. These kinds of efforts correspond to those that are required within the framework of the EU Green Deal: sharing innovations and building synergies through continental multisectoral clusters and networks is key to increasing resource efficiency along the entire agrifood value chain.

The InterregMED Green Growth Community

Green Growth is a thematic community that promotes sustainable development in the Mediterranean within the framework of the Interreg Med Programme. It supports the sound management of natural resources by enhancing cross-sectoral innovation practices through an integrated, territorially-based cooperation approach.

The community supports its projects in communicating and capitalising on their results to increase their impact at the policy level and ensure their potential transfer into other territories.

Visit our website:
green-growth.interreg-med.eu

Join the Green Growth Capitalisation Platform:
interregmedgreengrowth.eu

Further Information:

MED Greenhouses Website:
medgreenhouses.interreg-med.eu/

[MED Greenhouses Deliverable Database](#)

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Union for the Mediterranean
Union pour la Méditerranée
الإتحاد من أجل المتوسط



MED Greenhouses

Type of the result:

Policy recommendations

Language(s) in which the result is developed:

English

What is the most appropriate level for its use/ implementation?

International and interregional

DESCRIPTION OF THE RESULTS

[Establishment of the Agricultural Transnational Innovative Cluster \(ATI-Cluster\)](#)

The ATI-Cluster is an initiative established by the partners of the Interreg MED project MED Greenhouses, carried out in six countries across the Mediterranean (Albania, Greece, France, Italy, Spain and Cyprus), that share joint challenges in the agricultural sector. The ATI-Cluster operates as a bridge between researchers, enterprises, farmers and policymakers to improve the environmental, economic and social conditions of Mediterranean rural. The ATI-Cluster stimulates and promotes sustainable production techniques by disseminating and transferring information and innovative technologies among key actors of the agriculture sector, in particular those that rely on greenhouses. The ATI-Cluster contributes to sustainable agriculture and green growth, promoting eco-innovative solutions (consuming less energy, water and fertiliser), and increasing yield.

It aims to offer integrated services to its members such as:

- SMEs and farmers missions to end-users of the agriculture/greenhouse sector
- Networking events
- Pitching, coaching and mentoring services
- Info days and capacity building seminars

The ATI aims to:

- Enhance competitiveness within local and international markets promoting environmentally friendly and cutting-edge technologies
- Enhance the quality and quantity of agricultural production whilst minimising water and energy sources
- Create and encourage synergies between members and key actors in the sector
- Stimulate, assist, and promote eco-innovation, identifying financial mechanisms and opportunities such as potential investors
- Introduction innovative technologies in the greenhouse sector and knowledge transfer



PROJECT IMPLEMENTATION AND EVALUATION BY END-USERS

The members of the ATI -Cluster can be registered by signing the MoA/U. Until today, more than 111 members (Actors of 4-helix related with the agriculture sector) have been registered so far. The Cluster activities/objectives and the MoA/U were officially presented in the Final Conference that was held in Volos (4/12/2019). An online registration form is available [here](#).

The ATI-Cluster, besides the registration of the new members and the provision of tailored services, also aims to collaborate with existing clusters exchanging information and experiences and create synergies. Due to Covid-19, the operation of the ATI-Cluster could not be implemented as planned, however more efforts will be undertaken by the partners once the lock-down is over."

WHAT IS THE TRANSFER POTENTIAL?

The ATI-Cluster's main features and model have been designed and finalised. However, the COVID-19 lockdown and lack of financial resources made the implementation of the designed services difficult and uncertain.

Due to limited time, the ATI-Cluster was designed to operate without having any legal framework, at least for the first three years of its operation. It was agreed that the role of non-governmental organisations would be agreed further down the line.

WHAT IS THE PROJECT REPLICABILITY?

The ATI-Cluster could expand to other Mediterranean countries, beyond the current six countries involved.

Participants from each country involved members to form part of the Cluster's activities and collaborate with other members of the Cluster at the national and international levels. To join the Cluster, members sign a Memorandum of Understanding/Agreement, which is available online [here](#), and will be shared by email for the upcoming activities.

The Cluster's activities could be conducted every few of months (during the early years of its operation) and the frequency could be increased further down the line (depending on the financial resources available).

The Cluster also facilitates synergies and the collaboration between key actors in the agricultural sectors, and supports the implementation of eco-innovation investments.

WHAT CHALLENGES MAY ARISE?

The funding of the Cluster's activities remains the main obstacle to implementation. The partners are assessing possible funds that could be used for the continuation if its operation.