





THE MED **GREEN GROWTH** COMMUNITY CATALOGUE OF PROJECT'S ACTIONABLE **KNOWLEDGE LEAFLETS APRIL** 2021

The **Green Growth Community** (GGC) promotes sustain-able development and the sound management of natural resources in the Mediterranean by enhanc-ing cross-sectoral innovation practices through an integrated and territorially-based cooperation approach. It gathers 14 projects funded by the Interreg MED Programme, working on agrofood, eco-innovation, smart cities, waste management and green growth financing, connecting 165 part-ners from 13 countries in the Mediterranean, with a total budget of around €30M. It supports pro-jects in their communication and capitalisation ef-forts in order to increase their impact at the policy level and ensure the potential transfer and replica-tion of their results to other territories. The Union for the Mediterranean labelled the **Green Growth Community** in October 2019, acknowledging its potential to advance coop-eration in transitioning to a green and circular economy and delivering concrete benefits to the citizens of the Mediterranean region. In November 2020, the GGC joined the Coordination Group of the EU Circular Economy Stakeholder Platform, a joint initiative by the EU Commission and the European Economic and Social Committee.

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A project labelled by the UfM





ARISTOIL

Promoting Mediterranean innovation capacities to develop smart and sustainable growth



Countries:

Greece, Italy, Cyprus Croatia, Spain

Target Groups:

Public Authorities (PAs) and Small and Medium Enterprises (SMEs)

Theme:

Food Systems

Keywords:

Olive oil, health, agriculture, regional development, rural development

Starting and Ending Dates:

November 2016 -January 2020 **ARISTOIL** aims to reinforce the competitiveness of the Mediterranean olive oil sector through the development and application of innovative production and quality control methodologies related to olive oil health-protecting properties. The core ob-

jectives of the project are to provide Mediterranean producers of olive oil the potential to increase the value of their product, to increase Knowledge capacity of olive oil producers and to Increase demand for high quality olive oil.

We are only as strong as our weakest link.

ARISTOIL Pilot Projects



Challenges

There is a lack of quality control and standardised procedures for measuring the health properties of olive oil, which can be aided by developing and adopting a transnational strategy for the production of olive oil with increased health-protecting

properties. Regional or local efforts don't gain the critical mass of producers needed to make a meaningful impact on consumers of olive oil.

Solutions

- Transferring of know-how by organising conferences
- Contributing to the Olive Oil Living Lab database by registering producers and olive groves
- Establishing the Mediterranear cluster of olive oil producers
- Analysing olive oil samples using the NMP method
- Offering a guide for the production of olive oil with increased healthprotecting properties
- Developing an open database with agronomic indicators
- Creating a feasibility study on certification centres and pilot certification centres

The goal is to create a cluster of well educated olive growers who are able to consistently produce high phenolic olive oil that conforms or surpasses the 432/2012 EU Health claim labeling regulation for polyphenols. EGTC Efxini Poli (Greek project partner) is continuing its awareness-raising activities with local olive oil producers in the Messenia area, and provides free access to olive oil mills for small-scale producers, so that producers can extract olive samples in periods that olive mills are not operating.

Lessons learnt and broader recommendations

The development of a standardisation and certification process is necessary for all stakeholders in the production, transportation and trading of olive oil. One of the challenges faced is to gain and maintain the interest of olive oil producers, sharing

ways for them to add the highest possible value to their products. The certification process will also increase visibility of the EU Regulation 432/2012 regarding the health-promoting properties of olive oil polyphenols

Partners:





















The InterregMED Green Growth Community

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Further Information:

ARISTOIL Website:

aristoil interred-medeu/

Links of interest:

· Aristoil Family Platform

Aristometro

· <u>Guide for production</u>

and quality control

Training material in e-form

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A project labelled by the UfM





CAMARG

Clusters of Innovative Zero-km Agrofood Marketplaces for Growth

GREEN GROWTH



Countries:

Croatia France Italy Spain

Target Groups:

Small food producers, consumers, SMEs, sectoral agencies, business support organisations, NGOs, education and research, local public authorities, regional public authorities

Theme:

Resource Efficiency and Green Economy

Keywords:

Clusters, e-commerce, zero-km agrifood, green and competitive economy, local food traditions, short supply chains, healthy and environmentally friendly food, replicable models, knowledge sharing and transfer, sustainable growth, skills & education for digitalisation

Starting and Ending Dates:

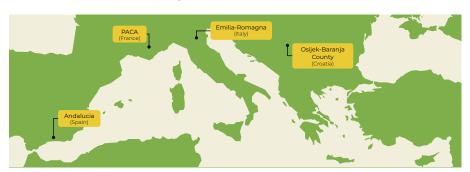
February 2017 -

CAMARG developed a replicable agrifood e-marketplace platform to support clusters of small local producers (farmers, food artisans, small retailers) in MED areas characterised by agrifood excellences. The platform allows their high-quality food products to be delivered at consumers' doorsteps all year round at an affordable cost. It increases their visibility and allows them to better compete with mass retailing.

CAMARG also designed a cluster establishment methodology that can be applied to similar MED areas, thus driving innovation in the "zero km" agrifood sector. Shortening the supply chain in the agrifood industry uses less resources for transport, packaging, storage and delivery. It establishes closer relationships between producers and consumers while promoting a healthy and environmentally-friendly food system model.

Bring your local community back to life, consume locally, think globally!

CAMARG Pilot Projects



Challenges

On the supply side, small food producers are exposed to a highly competitive market dominated by large retail chains. Key challenges are to ease their market entry, connect them with consumers and boost their competitiveness by strengthening their role in the food supply chain.

On the demand side, a further challenge consists in changing consumers' awareness and behaviour by encouraging them to support local producers, shop locally, consume high-quality healthy food, and participate in more resource-efficient and environmentally friendly supply chains.

Solutions

The CAMARG project:

- provided high-quality zero-km food products through 4 pilot e-platforms in 4 MED countries at the same price as lower quality goods distributed by mass retailing
- supported clusters of small local producers in organising self-sustaining short supply networks capable of delivering food to consumers daily
- increased knowledge about producers ers and the authenticity and places of origin of local food products
- to drive the dissemination of zero-km food clusters, CAMARG designed a joint methodology and four regional portability plans to exploit and transfer the project's results, best practices and outputs to other MED areas and a wider audience within the quadruple helix (civil society, industry & business, public authorities and academia)

Recommendations

- · Farmers and consumers have a key role to play in the agrifood value chain to move towards a green economy. What is needed are new ways of producing and consuming, new technologies combined with increased public awareness and higher consumer demand for healthier food using sustainable agricultural methods.
- · New opportunities from digitalisation can encourage the ecological transition and tackle climate change, reduce food waste and the environmental impacts of the food

processing and retail sectors, notably in terms of transport, storage and packaging.

• CAMARG's experience supports the development of local agrifood regions and networks and promotes the dynamism and innovative value of the MED agrifood sector. The project's transnational value and successful knowledge transfer relied on how its results could be applied to the specificities of the MED territories involved. A SWOT Analysis helped to define the project's approach to the transfer phase.

Green Growth and the EU Green Deal

Agrifood is a key sector for transitioning to the circular economy, since 40% of the EU Common Agricultural Policy should contribute to climate action. CAMARG supports the EU Green Deal's Farm-to-Fork Strategy by fostering sustainable and inclusive growth and supporting healthy

and environmentally-friendly food policies. The project explores new ways to overcome current unsustainable production patterns and foster the zero-km concept to boost green growth, promote efficient and sustainable food processing and reduce its environmental impacts.

Partners:



























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Pilot Online Stores

Croatia: eceker.hr
France: gourmical.fr
Italy: foodelizia.it
Spain: cinngracamarg.es







A project labelled by the UfM





Crealnnovation

Create sustainable Innovation in SMEs using creative methods and processes



Countries:

Bosnia & Herzegovina, Croatia, France, Greece, Italy, Montenegro, Portugal, Slovenia, Spain

Target Groups:

SMEs, Business support organisations, Higher education and research institutions, Sectoral agencies, Loca and regional public authorities, National public authorities, Interest groups including NGOs

Theme:

Eco-Innovation

Keywords:

Creativity processes, creativity-driven innovation, Green SMEs, creativity labs

Starting and Ending Dates:

February 2018 -January 2022 **Crealnnovation** stands for Creativity-driven Innovation and it aims to create sustainable innovation in SMEs using creative methods and processes. By adopting a 'creative entrepreneurship' approach to innovation, SMEs can cost-effectively tackle many of the challenges they face in growing their business. Creativity and innovation are important indicators of process development, balanced growth and strengthening of a company's profile.

Crealnnovation aims to stimulate knowledge-driven growth and provide Mediterranean Green SMEs - that often lack innovation capabilities - with the necessary creativity tools and practices in their everyday activities. The goals are to extend and deepen the knowledge and practice of creative methodologies and processes using Creative Problem Solving (CPS) or Creative Solution Finding (CSF) approaches (Alex Osborn and Sydney Parnes) in MED Green SMEs.

Crealnnovation address green rural SMEs to encourage them to adopt and manage creativity to tap into hidden capacity for growth and improved competitiveness.

Challenges

Crealnnovation addresses the following challenges:

- MED SMEs have to compete in a globalised and highly competitive world where their unique skills and knowledge
- SMEs' ability to learn and share knowledge depends on their level of innovation and competitiveness,
- enabling them to respond to external pressures.
- SMEs have to implement innovation systems to become competitive, enabling them to improve their products, processes and services.

Solutions

Crealnnovation developed and tested business innovation capabilities through the practice of creativity methodologies, tools and processes through creativity workshops with the MED SMEs, involving creativity experts, external managers and young students. The project tested the creativity workshop model, which will be used for young

students and managers to contact SMEs for potential further employment and to define new policies to support the development of Green SMEs. Testing the power of creativity workshops will allow stakeholders to confidently adopt these policies to implement innovation capabilities in SMEs and thus contribute to the Europe 2020 strategy.

Crealnnovation Pilot Projects



Recommendations

- Encourage people to learn and apply creativity stimulation techniques and lateral thinking
- Raise awareness of the power of the creative process in generating new ideas and solutions to problems or new market opportunities
- Offer training courses on creative methods and processes in schools, universities, and through specialisation courses
- Share the pleasure, fun and satisfaction that participants experienced in creative workshops

Greater valorisation of creative processes and methods could be gained through:

- Subsidised financing programmes for innovative projects with social and environmental objectives
- Facilitation policies and economic support for SMEs to support participation in creativity for innovation
- Establishment of widespread territorial Permanent Creativity Laboraties where SMEs can learn innovation processes
- Specialisation courses to develop a "forma mentis" and provide transversal tools

Green Growth and the EU Green Deal

Crealnnovation contributes to generating green jobs and increases innovation in Green Med SMEs, supporting the

transition to a green economy within the framework of the EU Green Deal.

Partners:



















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Project of interest:

https://creainnovation rasip.fer.hr/





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EMBRACE

European Med-clusters Boosting Remunerative Agro-Wine Circular Economy

Countries:

Italy, Bosnia and Herzegovina, Spain, Portugal, France, Slovenia, Greece

Target Groups:

Agrofood and wine sector SMEs, Policy makers, sectoral gencies and BSOs, RTDs, intermediaries and experts

Theme:

Food Systems

Keywords:

Circular Economy, agrofood, wine sector, eco-innovation, ecocanvas

Starting and Ending Dates:

February 2018 -December 2020 The **EMBRACE** project aims at developing a model and implement one toolkit for the establishment of 2 transnational meta-clusters circular economy oriented in two leading sectors of the Med Economy: Wine and Agro-food. To strengthen the impact of

the model and in general, promote circular economy, business models for SMEs in the field of eco-innovation and related financing schemes have been developed and tested during the piloting phase and then disseminated during the transferring phase.

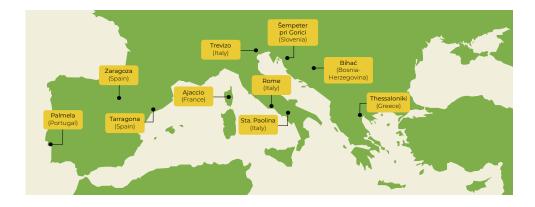
Objectives

The **Embrace** project was put forward with the following objectives:

- Promote resource efficiency and ecoinnovation for smart and sustainable growth, and support clusterisation of the EU economy.
- · Foster the transition to a green and competitive circular economy.

What the eyes see, the mind believes.

EMBRACE Pilot Projects



The main challenge that the EMBRACE project faces is to make visible the intangible value of economic activities, by using the concept of circular economy and persuading stakeholders to take action in favour of what they cannot (yet) see. Recognising the fact that applying the circular

economy model is both a challenge and an opportunity for the agrofood sector in the Med area, EMBRACE increases the capital and leverages the capacity of regional players to implement new practices (at all levels), facilitating the transition from a linear approach towards the circular economy.

Solutions

The EMBRACE project addresses common territorial solutions by:

- and management tool to re-design business models and value chains in
- Providing services based on the
- the circular economy and encourage
- Proposing viable financial schemes to be adopted within the OP ERDF selected SMEs.

Lessons learnt and recommendations

By capitalising on the expertise of Embrace partners, the project introduces and integrates the principles and practices of the circular economy in two leading sectors of the Mediterranean economy: agrofood and wine. Through the support of the innovation process and the introduction of a hybridisation between eco-design, resource efficiency and new spaces of value creation, EMBRACE aspires to provide advantages by shutting the exit points of value from regional value chains.

Engaging all players in the value chain is crucial. In order to increase the project's impact, EMBRACE adopts a multidimensional approach (from training stakeholders to introducing financial instruments and testing new business models), carried out by regional nodes and transnational clusters. This will accelerate the integration of the circular economy concept in the Med area, allowing the region's agrofood systems to increase their competitiveness.

Partners:







The InterregMED Green **Growth Community**

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Further Information:

EMBRACE Website:

























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ESMARTCITY

Enabling Smarter City in the MED Area through Networking



Countries:

Bosnia and Herzegovina, France, Greece, Italy, Portugal, Spain

Target Groups:

Local and Regional Authorities, Infrastructure, Public Service Providers and SMEs

Theme:

Smart Cities

Keywords:

Buildings, Smart Public Lighting, Digitalisation, Open Data, Green Procurement and Circular Economy

Starting and Ending Dates:

February 2018 -July 2020 **ESMARTCITY** is about enhancing innovation ecosystems and applying the Smart City concept in Mediterranean cities by making use of digital and energy-saving technologies.

The project targets the "Quadruple Helix" of stakeholders (citizens, companies, academia and public authorities) to improve service provision to citizens, boost energy efficiency and reduce urban environmental impacts. **ESMARTCITY**'s pilot tests involved 43 public buildings in 3 countries to enhance their energy efficiency and 4

public lighting networks in 4 countries to improve their smart public lighting. Results showed that the payback time for these energy efficient building pilots is 3,75 years, while satisfaction and acceptance of smart city lighting amounted to 80% of interviewed citizens.

The project produced a "Green Paper on Innovation Policy Change" with recommendations for policymakers, and supported capacity-building among SMEs and policy stakeholders to spurn open innovation in cities.

ESMARTCITY strives to have a significant and lasting impact on energy efficiency in cities, protecting the environment and fighting climate change, while enhancing citizens' quality of life through innovative new services.

ESMARTCITY Pilot Projects



Digitalisation is an ongoing socio-technical transition in our world. Digital innovations can contribute to making urban environments more liveable, but they can also be disruptive and bring new challenges, trade-offs and hidden costs. In order to reap their benefits, cities must be proactive and act together with public and private urban stakeholders. A key challenge for local governments is acquiring the digital skills and organisational capacities to cope with the rapid pace of change.

Solutions

The **ESMARTCITY** project:

- · informed more efficient MED territorial policies to support
- Smart City quadruple helix actors

ESMARTCITY also conducted pilot tests in intelligent urban districts to increase the energy efficiency of buildings, make public lighting smarter and match existing technologies with end users' needs.

Recommendations

Pilot testing is an efficient way to demonstrate the feasibility of the smart and circular city concepts. To this end, policymakers must receive training (especially on green public procurement and life cycle cost calculation) to further build their capacity on Smart City themes. In parallel, SMEs must also be increasingly involved in and receive training on open and urban innovation ecosystems in order to provide new urban infrastructure and open data services. In general, ESMARTCITY found that an open innovation platform would ease the transition to Smarter Cities in Europe. At the policy level, the project recommends that national strategies facilitate digitalisation and that green smart public buildings and smart public lighting be included in national and regional funding schemes. R&D has a crucial role to play in the development of new green products and services. Green public procurement is an important instrument to support the emergence of Smart Cities: such funding mechanisms must be implemented within public procurement to support innovation.

Green Growth and the EU Green Deal

ESMARTCITY's efforts to boost energy efficiency and develop smart energy systems support the transition to a green economy within the framework of the EU Green Deal. Its Green Paper on Innovation Policy Change's policy recommendations support the Green Deal's energy objectives: mandating a Regional Strategy for Green and Circular Economy, promoting Green Public Procurement and applying Life Cycle Cost calculation methods, and developing National Action Plans for Green Public Procurement and Life Cycle Cost tools.

Partners:























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Further Information:

ESMARTCITY Website:

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finMED

Boosting the Financing of Innovation for Green Growth Sectors through Innovative Cluster Services



Countries:

Bosnia-Herzegovina, France, Greece, Italy, Cyprus, Malta, Portugal Slovenia, Spain

Target Groups:

local public authorities, clusters and business support organisations, sectoral agencies, green companies and SMEs, higher education institutions, research organisations, financiers (financial institutions, banks, investment funds and business angels)

Theme:

Eco-Innovation

Keywords:

Finance, policy, growth, development, economy, clusters, innovation, environment

Starting and Ending Dates:

February 2018 -January 2022 A pool of 15 partners, including regions, clusters and business support organisations, knowledge providers and development agencies, from 9 different countries, joined their forces in **finMED** to work towards three main objectives: to increase understanding, knowledge and capacities related to financing innovation

in green sectors by public and private actors in the MED area; to increase access to finance for innovation in green sectors in the MED area; and to reinforce, empower and coordinate clusters, business support organisations and public authorities in their effort of assuring access to finance in green sectors.

We build capacities, we integrate resources, we deliver green innovation financing opportunities.

finMED aims at fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which prosperity relies. At present, this is no longer a choice but an imperative for the

future socio-economic wellbeing of people. To this end, **finMED** seeks to boost the financing of innovation in green growth sectors by leveraging on improved policy delivery and strategies and the introduction of innovative cluster services.

Solutions

finMED offers strategic and operational advice for SME that want to obtain financing in their business path in the greer growth sector. Regional public authorities will increase availability accessibility and harmonisation of funds for innovation project.

in green sectors through the use of adaptive financial solutions. Cluster and business support organisations have the opportunity to be trained and skilled to provide a support service to their members for facilitating access to finance for innovation.

finMED addresses the following challenges:

- · to improve the understanding, knowledge and capacities among public and private actors related to financing innovation in green sectors in the MED area
- · to reinforce, empower and coordinate clusters, business
- · support organisations and public authorities in their efforts to ensure access to finance for green sectors
- · to increase access to finance for innovation in green sectors in the MED

finMED Pilot Projects



Green Growth and the EU Green Deal

finMED's mission to drive green innovation through finance is crucial to the objectives of the EU Green Deal, based on the active involvement of both public and private actors, ranging from the local to the transnational scales. Indeed, increasing access to green finance amongst these actors is an important vector for the emergence of a sustainable EU, since it supports the transition of green innovation from a niche, alternative practice to a mainstay of the EU economy.

Partners:

































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GRASPINNO

Transnational model, strategies and decision support for innovative clusters and business networks towards green growth, focusing on green e-procurement in EE/RES for energy refurbishment of public buildings



Countries:

Bosnia Herzegovina, Cyprus, France, Greece Italy, Spain, Slovenia

Target Groups:

Public Authorities (PAs) and Small and Medium Enterprises (SMEs)

Theme:

Eco-Innovation

Keywords:

Energy Efficiency, public building refurbishment, green technologies, e-procurement

Starting and Ending Dates:

November 2016 -October 2019 **GRASPINNO** provided innovative green e-procurement solutions supporting energy savings and the efficient refurbishment of public buildings to sustain the emergence of Mediterranean smart cities and communities. The project improved public PAs' capacity to manage the energy efficiency of public buildings and strengthened SMEs' capacity to enter the green energy market. It also aimed at ensuring the replicability, transferability and leverage effect of **GRASPINNO's** results to provide smart, low-cost and sustainable

solutions to public authorities and SMEs in the whole MED region by:

- Supporting green energy and eco-innovation networks and clusters to increase their business and research & innovation capacities and reinforce transnational cooperation.
- Supporting PA's in adopting green public procurement through knowledge bases, decision support tools, and validated state-of-the-art e-procurement systems.

GRASPINNO paved the way for wider electronic green public procurement implementation by public authorities in the MED area through common strategies and tools based on project results and collaborative innovative structures such as its Living Labs

GRASPINNO Pilot Projects



The MED area faces a transnational challenge due to the number of its older, energy inefficient public buildings. Public buildings are the second main energy consumer for European municipalities. Generally speaking, buildings consume around 40% of European

energy consumption and account for 36% of the EU's CO2 emissions. PAs and SMEs in the MED area need support in acquiring the know-how and tools necessary to design and participate in eGPP, thereby stimulating green growth and eco-innovation.

Solutions

GRASPINNO'S overall methodology is replicable to other types of buildings, not only public ones. It comprises the following solutions:

- Databases that strengthen PA's capacity to set quality green energy requirements, and SME's ability to propose solutions to implement
- eGPP support tool for PAs to with green products and services.
- Life Cycle Costing calculating tool (LCC) for PAs to use as decisionsupport tools for evaluating green
- (TMN) for both public and private parties, allowing them to interact

- · Integrated transpational innovative solutions with practical recommendations to EU decision makers for their effective policy mainstreaming across the MED.
- **GRASPINNO Living Labs (LLs)** collaborative methodology for transferring project results. The parties gained knowledge on GPP, funding and mentoring, energy consumption control, help desks, refurbishment obstacles and better energy efficiency and renewable energy sources governance.

Green Growth and the EU Green Deal

Mainstreaming solutions for energy efficiency in the built environment is key to achieving the targets of the **EU Green** Deal and the EU Circular Economy Action Plan. 80% of the EU's buildings in 2050 already exist now, which is why boosting their energy efficiency and supplying them through renewable energy sources is a key step towards achieving these EU targets. Including energy green criteria in the tendering process is essential for reducing life-cycle costs and using resources in an optimal and responsible way. By engaging both PAs and SMEs on the crucial topic of green public procurement, GRASPINNO further aligned public and private sector efforts to innovate for energy and resource efficiency. This is especially relevant for achieving the EU's climate neutrality goal by 2050.

Partners:

























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

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GREENMIND

GREEN GROWTH

Green and smart mobility industry innovation



Countries:

Italy, Greece, Spain, France, Croatia, Bosnia and Herzegovina, Slovenia

Target Groups:

Local public authority, SME, Business support organization

Theme:

Eco-Innovation

Keywords:

innovation capacities of SME: targeted services for SMEs, market Intelligence, B2B matching, public funding screening, networking, transnational services model for sectoral agencies and business support organisations, smart cities

Starting and Ending Dates:

February 2018 -January 2021 **Green Mind** fosters economic competitiveness and innovation in the green and smart mobility industry. The project's added value is that it considers this industry as a sector, which is transversal and composed of other business activities such as transport and logistics, automotive industry, energy and information technology.

The core objective of the **Green Mind** project is to foster economic competitiveness and innovation in the green and smart mobility industry. **Green Mind**'s partners developed and tested three pilot services to strengthen small and medium-sized enterprises' (SMEs) market position by helping them identify business opportunities, supporting them in the search for (public) funding, and matching them with

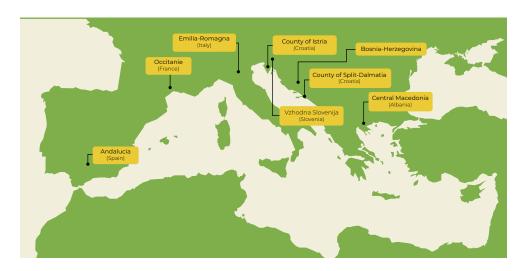
relevant partners to launch regional and transnational cooperation between businesses, research bodies and authorities.

A transferable model for clusters and agencies was built out of the tested services and will be shared through a transfer programme which will include transnational and local webinars.

A transnational innovation network will be set up to sustain **Green Mind**'s approach of joint learning, knowledge sharing and capacity building processes for innovation in the green and smart mobility industry.

Finally, a policy support programme will disseminate the project results based on the Smart Specialisation Strategies of the regions involved.

GREENMIND Pilot Projects



The **Green Mind** project operates in the context of fast technological developments and increasingly restrictive environmental policies, which increases demand for green and smart mobility products and services. This provides favourable conditions for SMEs to launch their activities, but they require support as they do not work in one homogenous

sector, but rather in a complex transversal industry, composed of several sub-sectors such as transport and logistics, automotive industry, energy, and information technology. **Green Mind** aims to strengthen the transnational activities of clusters and agencies to support SMEs in identifying and exploiting new market opportunities.

Solutions

 Transnational Innovation Network for SMEs

Green Mind's partners launched a transnational network of businesses, research institutions and public authorities to stimulate city- and region-led innovation in the green and smart mobility industry. The network aims to enhance SMEs' competitiveness and sustainability and to promote cooperation and partnerships at regional and European levels to facilitate dialogue and sharing of experiences focused on innovation in products and services in the mobility industry.

• Green Mind Transferable Service Model for SMEs

This methodology presents the three **Green Mind** services – Market intelligence, B2B matching, and public funding screening – which have been tested in the eight participating regions. This model addresses clusters, agencies and business support organisations, providing them with a transferable service model that they can use to enhance SMEs' competitiveness.

Lessons learnt and broader recommendations

The strategic objective of the **Green Mind** project is to promote the innovation capacities of public and private bodies in the green and smart mobility industry.

In particular, **Green Mind** strengthens transnational clusters' activities to support SMEs in exploiting market opportunities with the growing demand for green and smart mobility products and services in the Mediterranean region.

To reach this goal, **Green Mind** aims to introduce the following actions:

- Transferring transnational services to SMEs to support the green and smart mobility industry (including public funding screening and B2B matchmaking)
- Creating a new transnational innovation network
- Transferring the results of the tested services to non-partner clusters to promote knowledge sharing

Green Growth and the EU Green Deal

Transport is a major contributor to global greenhouse gas emissions, and therefore sustainable and smart mobility is at the core of the EU Green Deal. The Green Mind project's efforts to foster economic competitive-

ness and innovation in the mobility industry supports the transition to a green economy within the framework of the EU Green Deal as it promotes green growth, sustainability and circularity in the mobility sector.

Partners:

















The InterregMED Green Growth Community

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A project labelled by the UfM





GREENOMED



Countries:

Italy, France, Spain, Slovenia, Croatia and Greece

Target Groups:

Business Support
Organisations (Clusters)
RTOs, Public Regional
Authorities, Research
and Innovation
organisations,
Enterprises and SMEs

Theme:

Eco-Innovation

Keywords:

Demanufacturing, remanufacturing, bio-economy, circular economy, energy efficiency

Starting and Ending Dates:

February 2017 -March 2020 The goal of **GREENOMED** is to contribute to the conceptualisation and implementation of a European network of pilot plants practicing green manufacturing to remain competitive and contribute

towards Green Growth. In order for this to happen companies need to adopt innovative technologies and develop new business models that encourage clean and sustainable production.

What is GREENOMED about?

GREENOMED is about Mediterranean trans-regional cooperation for promoting green manufacturing innovation capacities to encourage smart and sustainable growth. The project improves the network of pilot plants based on the identified challenges and resource requirements of European green manufacturing. The project's founding prin-

ciple is that to promote green manufacturing, regions should cooperate on smart specialisation. **GREENOMED** tests and transfers a cluster-governed methodology based on the 'Vanguard Initiative' for the setup of trans-national pilot plants in the MED region, bearing in mind their differences and links to other EU manufacturing regions.

GREENOMED Pilot Projects



Challenges

One of the main challenges identified by the project partners is that the process is long and requires commitment on behalf of the stakeholders. Results are usually only visible in the long term, and it is not always easy to keep companies engaged while they wait for tangible results.

Solutions

- · Offering training courses for partners to help them implement the developed testing methodology through various clusters, providing them with the tools which enabled partners to implement the methods in each region
- · Transfer the project results to clusters and regional authorities through trainings and various regional events

What are the project's lessons learnt and broader recommendations?

- Carefully identify the main topic for the working group: It was fundamental to clearly define the working groups' topics to engage companies and gain their commitment
- Cooperate with regional living labs to avoid overlapping activities
- Involve regional authorities in the project from the beginning to raise awareness of the project's objectives across the territory

Green Growth and the EU Green Deal

Reaching the targets laid out in The EU Green Deal requires new technologies and approaches to business, putting innovation at the heart of the objectives of decoupling economic growth from resources, ensuring sustainable consumption and produc-

tion patterns (SDG 12), and making the European Union climate-neutral by 2050. GREENOMED uses its transnational cooperation methodology to promote achieving a clean and circular economy by pushing the efficient use of resources.

Partners:



















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A project labelled by the UfM





MADRE

Metropolitan Agriculture for Developing an innovative, sustainable and Responsible Economy

GREEN GROWTH



Countries:

Albania, France, Greece, Italy, Spain.

Target Groups:

consumers and consumer associations, citizen initiatives, researchers, metropolitan, regional and national policymakers.

Theme:

Food Systems

Key Words:

Agrifood, efficiency, clusters, metropolitan and periurban agriculture, urban sustainability, local food production.

Starting and Ending Dates:

February 2017 -July 2018 Metropolitan and periurban agriculture (MPA) still suffers from a "mainstreaming gap" within public policy.

To address this gap, **MADRE** produced a MPA assessment methodology based on good practices collected by local partners in 6 Mediterranean cities. The project mapped and connected key MPA stakeholders to encourage transnational cooperation in the MED area and foster change in urban food supply and land use mod-

els. MADRE capitalised on knowledge, networks and pilot actions and policies to empower MPA stakeholders and initiate a transnational clustering process based on a pluralistic and multilevel partnership from 5 MED countries. It identified best practices and consolidated the knowledge gained by evaluating the environmental and socio-economic performance factors of MPA to promote its most relevant and innovative practices and facilitate their replication in other territories.

Sharing is caring: knowledge exchange and community building have lasting impacts, which depend on the goodwill of all project participants!

MADRE Pilot Projects



MADRE's project targeted eight main challenges that can be addressed by MPA:

- Increasing social inclusion
- Green job creation in urban and periurban areas
- Improving food quality and supporting local value creation
- Offering organisational benefits to urban stakeholders
- Providing educational, health and nutrition-
- al benefits through local food production
- Improving territorial integrity and land management
- Adopting MPA to obtain environmental benefits in urban and periurban areas
- Fostering synergies and cooperation between public authorities, academia, the private sector and civil society

Solutions

The MADRE Catalogue presents best practices collected from the project's 6 cities within MPA's 6 key innovation areas (production, social, consumer, academic research, territorial and transnational innovation). MADRE's work illustrates the great variety of MPA solutions that have been developed in very diverse local contexts. It comprises:

- White Papers for Metropolitan and Peri-urban Agriculture
- <u>AGRI-MADRE</u> Metropolitan agriculture and food systems in the Mediterranean
- MADRE book

- <u>Policy Paper</u>: Towards sustainable food systems in the Mediterranean: the role of metropolitan agriculture
- Best practice Catalogue and Platform on Urban and Peri-urban Agriculture

Green Growth and the EU Green Deal

MADRE highlighted the pivotal role of EU metropolitan areas in catalysing green growth and creating a more sustainable and healthy EU food system, based on the objectives of the <u>EU Green Deal</u> and <u>Farm to Fork strategy</u>.

Urban farms, shared community gardens, green balconies and rooftop gardens can provide locally produced, healthier and more nutritious food products, while supporting local food production and consumption. Local production requires less packaging, refrigeration and fossil fuel inputs related to transport. At scale, MPA yields direct economic benefits by creating green jobs, forging short food value chains and supporting innovative local investment systems. It can also act as a lever for social inclusion by reinforcing the social

fabric, developing new urban-rural links and valorising local cultural heritage.

Depending on the farming practices involved and the short supply chains adopted, MPA has numerous positive environmental impacts, such as mitigating the urban heat island effect, lowering flood risks and reducing stormwater runoff. It can also improve air quality, increase carbon sequestration and support urban biodiversity through the green spaces that it provides for citizens.

Rainwater harvesting and treated wastewater can be reused for irrigation, rooftop gardens and vertical farms can benefit from waste heat, and the large amounts of organic waste generated by cities can be composted and used as fertile soils.

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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 -

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 green-house/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.
 Catalysed capacity building through knowledge transfer, training courses (seminars, webinars) and a training platform.
- **3.** Engaged with policymakers in the agricultural/greenhouse sector and obtained their commitment to green growth and sustainable agriculture.

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 FU 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.

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A project labelled by the UfM





PEFMED

Uptake of the Product Environmental Footprint across the MED agrifood regional productive systems to enhance innovation and market value



Countries:

France, Italy, Greece, Portugal, Slovenia, Spain

Target Groups:

Industrial product chains and clusters, SME, Agrifood companies, experts in environmental impacts, sectorial agencies, PEF experts, business analysts, Smart Specialization Strategies (S3) managers, agrifood sector experts and national agrifood

Theme:

Food Systems

Keywords:

Product Environmental Footprint, agrifood sector, eco-innovation. socio-economic impacts

Starting and Ending Dates:

November 2016 July 2019

PEFMED involved over 200 companies from nine Mediterranean regions to reduce the environmental footprint of six consumer goods: olive oil and bottled water (France), wine (Italy), livestock feed (Portugal), cured meats (Spain) and cheese (in Slovenia, Italy and Greece). Focusing on SMEs, **PEFMED** developed methods, tools and solutions and over 60 good practices for these sectors. **PEFMED**'s overall aim is to support agrifood companies in transitioning to models based on the Product Environmental Footprint (PEF), a EU methodology for assessing the environmental footprint of products in their life cycle, and to promote sustainable and competitive production.

The PEF method was tested together with a set of socio-economic and key performance indicators: **PEFMED**'s SE-KPIs tool.

These indicators include human rights, working conditions, health and safety, cultural heritage, governance and socio-economic territorial impacts. After assessing the environmental and socio-economic performances of the products, the most effective technological and management solutions were identified by a team of researchers, entrepreneurs and experts to improve the environmental and socio-economic footprint of the selected agrifood sectors throughout their supply chains. Thanks to the support of the project's territorial clusters and Smart Specialisation Strategies (S3) regional referents, solutions were analysed in relation to available economic policy tools. This led to the development of "sustainable business plans", including eco-innovation and marketing strategies for the companies involved.

PEFMED Pilot Studies



Challenges

The main challenges addressed by **PEFMED** are:

- · Greening agrifood supply chains
- · Reducing their socio-economic impacts
- · Promoting the uptake of eco-innovative practices in these supply chains
- · Enhancing the competitiveness of Mediterranean agrifood products

Zooming In

- "Feta is the main representative of Greek cheeses all over the world. It is a traditional protected destination of origin (PDO) product with a long history. Made from sheep and goat milk, it is a prominent staple of the Greek diet. During the pilot phase of the PEFMED project, we tested the PEF methodology for dairy products in Feta cheese production and developed recommendations for its improvement. We proposed that more qualitative environmental factors be taken under consideration for the calculation of the PEF and integrated to the methodology such as:
- Support for social cohesion support in rural areas
- · Biodiversity
- Indigenous breed conservation
- Extensive and semi-extensive livestock farming

During the pilot phase of the **PEFMED** project, we tested the PEF methodology for dairy products in Feta cheese production and developed recommendations for its improvement."

Ioannis Vastardis

DELTA FOODS S.A. (Greek pilot company)

Recommendations

PEFMED transferred its outputs, method and tools to nine new industrial associations, clusters and companies through training activities and "PEFDAY" dissemination events and workshops in different MED locations. These processes yielded three main recommendations to encourage a wider application of the PEF method in the EU by:

- · Increasing the availability of final PEF Category Rules and of specific datasets for the Mediterranean region
- Supporting measures for the application of PEF: i.e. "consultancy vouchers", training for consultants and companies involved in agrifood supply chains and local helpdesks
- Developing simplified tools for applying PEF to SMEs

Moreover, the application of PEF could be expanded through a certification or labelling scheme (e.g. similar to the "Made Green in Italy" scheme), and if its use became mandatory or at least more regulated by EU member states.

Green Growth and the FU Green Deal

With the necessary support from agrifood federations and regional policymakers, **PEFMED**'s approach was able to lower the environmental and socio-economic impacts of 9 agrifood supply chains, improve companies' capacity to respond to consumers' needs and expand the market for green products. **PEFMED** thus contributed to the <u>EU Green Deal</u> and its <u>Farm to Fork Strategy</u> in several ways: By

helping agrifood companies and national agrifood associations to take stock of their environmental footprint throughout their supply chains, by clearing the way for the introduction of more eco-innovative and sustainable practices within the target sectors. The inclusion of socio-economic criteria using **PEFMED**'s SE-KPI method allowed the project to develop a holistic approach to greening the agrifood system.

Partners:





















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A project labelled by the UfM





REINWASTE

REmanufacture the food supply chain by testing INnovative solutions for zero inorganic WASTE



Countries:

France, Italy, Spain, Bosnia-Herzegovina

Target Groups:

Agrifood companies agriculture clusters, research, regional governments and innovative institutes

Themes:

Waste management

Key Words:

Waste prevention, innovative solutions, agrifood supply chain

Starting and Ending Dates:

February 2018 -January 2021 Inorganic materials (plastic film, nylon, greenhouse coverings, agrochemical packaging, food packaging, amongst others) are poorly recycled and occasionally abandoned in natural areas, damaging local ecosystems. To face this prob-

lem, **REINWASTE** brought together a group of SMEs from the agrifood sector (farms and industries), public agencies, and technology and innovation centres to identify solutions for the management of inorganic waste in the agrifood sector.

Objectives

The project has the following objectives:

- Contribute to inorgaric waste reduction at source, favouring the adoption of greener innovative concepts by agriculture and food industry.
- · Run a feasible testing and experimentation on site.

Innovating to prevent waste disposal in the agrifood chain: a responsible investment for a more sustainable future

Solutions

- Redesigning products and processes based on preventive solutions: promoting the reuse of materials, rethinking unnecessary packaging and logistics optimisation, enhancing the use of recycled & recyclable materials such as mono-material instead of multilayer
- Using biomaterials (i.g. biodegradable or compostable)
- in the production process (e.g. to substitute plastics used in greenhouse horticultural production) or that can be used in eco-design by developing innovative packaging.
- Managing waste through separation appropriate conditioning, waste traceability systems and associative waste management models, amongst others.

RFINWASTF Pilot Studies



Solutions tested

Dairy sector (farm+industry)

- Replacement of silage film and plastic ballast bags
- Replacement of plastic baling nets and
- Light-weighting of plastic films to wrap cheeses
- Replacement of conventional packaging (cheese trays and yogourt pots) with compostable/biodegradable materials
- Replacement of composite materials with new nanomaterials to improve packaging recycling
- Adoption of non-destructive infra-red technology to prevent disruptive controls on packaging in the processing line

Meat sector (farm+industry)

- Single packaging for whole ham ensuring both functions (cooking and final packaging, instead of two different packages)
- Replace complex packaging of precooked meals by recyclable materials (e.g. mono PP)
- Trays for sliced product packaging made of single-material or separable materials, made up entirely or partly of recycled
- Use of no sckeleton technology for sliced product packaging (reducing the quantity of material)
- Replacement of plastic films for livestock fodder
- Replacement of plastic bale netting and wires

Horticulture sector (farm+industry)

- The use of biodegradable and compostable staking elements in horticultural greenhouses allow a better management of waste as no separation from organic crop waste is needed
- Compostable and biodegradable mulching films are technically feasible for short and long cycle crops offering a more environmentally friendly alterna-
- Energy recovery of difficult-to-manage waste (thin plastics such as mulching, solarisation or thermal blankets) through gasification is technically feasible needing 15,000 and 20,000 t/year to guarantee the feasibility of the installation of a gasification plant
- Traceability systems from exploitation area to waste treatment facilities
- Establishment of a waste management system model at a cooperative level
- Implementation of the use of trays made from recycled and recyclable material (R-PET)
- Logistics optimisation (secondary pack-
- Identification of biodegradable primary packaging options
- Eco-design of cardboard packaging for stop cups from falling
- Using of tie-type grouping elements instead of plastic trays and flowpack.

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Lessons learnt and recommendations

There is a lack of knowledge about affordable alternatives to inorganic waste acros the agrifood sector, which is an important barrier to address. In this sense, **REINWASTE** project contributes to raising awareness among stakeholders and

transferring knowledge about the best innovative solutions. At a legal and political level, the project recommends creating incentives for adopting innovative solutions to reduce inorganic waste and improve waste management.

Partners:

























A project labelled by the UfM





RE-LIVE WASTE

Production of organic high-value commercial bio-fertiliser, struvite



Countries:

Spain, Cyprus, Italy and Bosnia and Herzegovina

Target Groups:

Sectoral agencies, business suppor organisations, enterprises except SMEs, interest groups, European Economic Interest Grouping, farmers, Higher education and research, research institutions and universities, training centres and schools, infrastructure and (public) service providers, international organisations, local public authorities, regional public authorities, the general public

Theme:

Waste management

Key Words:

Livestock waste management, struvite, struvite enriched precipitate (SEP), abatement of recovery of nitrogen and phosphorus, smallscale pilot Struvite Precipitation (SP) plants

Starting and Ending Dates:

February 2018 -January 2021

Agriculture and livestock breeding are key sectors in the Mediterranean region. Regions involved in the project are characterised by intensive cattle and pig farming, thus producing large amounts of waste that have become a major source of pollution, creating both environmental and economic challenges. There is an untapped potential for farmers in the Mediterranean to use innovative technologies to convert livestock waste into a resource. RE-LIVE WASTE tests innovative solutions for livestock waste management in selected Mediterranean regions, exploring the technical, environmental, economic, and legal aspects of fertiliser production. Pilot projects

transform livestock waste into organic high-value commercial fertilisers (struvite and SEP), contributing to smart and sustainable growth and to the creation of new business and market opportunities. Project outputs include 4 Struvite Precipitation (SP) plants, policy guidelines to stimulate innovative approaches to policy making, and establishment of a common legal framework. This transnational network aims to share innovative technologies that reduce the environmental footprint of livestock farming. A quadruple-helix and beneficiary oriented approach will ensure a tangible impact on the territories involved and the transferability of results to other European countries.

Improving innovation capacities of private and public actors for sustainable and profitable Recycling of LIVEstock WASTE.

RE-LIVE WASTE Pilot Projects



RE-LIVE WASTE contributes to the Europe 2020 strategy, addressing challenges in research and development, innovation, energy management, and climate change. This project supports the region's transition to a

greener economy, because the organic fertilisers produced from livestock waste are more efficient than energy-intensive mineral fertilisers, and release less GHG emissions during the production cycle.

Solutions

RE-LIVE WASTE also contributes

Lessons learnt and broader recommendations

The lessons learned and the recommendations will be part of a specific deliverable of Activity 3.7. It is important to note that one facility (CY) was able to produce high purity struvite (~90%), which was free of pathogens and carcinogens. This particular struvite was compared with commercially available fertilisers and the results appear to be very promising. Additional methodologies to address different needs (i.e. farmers

vs. companies) are currently being tested. This has made it clear that a flexible approach to livestock waste transformation is essential for developing an effective strategy. This stems from the diversity of livestock breeding and feed that results in a variety of waste materials which require fine-tuning of pilot plants according to the quality of the materials to be treated.

Green Growth and the EU Green Deal

RE-LIVE WASTE contributes to Interreg MED Green Growth's priorities by creating tangible options for sustainable development in the Mediterranean region. In particular, RE-LIVE WASTE will contribute to the 'Farm to Fork Strategy' for designing a fair, healthy, and environmentally-friendly food system1. By processing waste, the pilot plants will reduce the leaching of nitrates into groundwater and the accumulation of excess nutrients and heavy metals in the soil. Furthermore, the liquid effluent produced at the end of the production process might be used for fertigation, reducing the amount of freshwater used on these farms. From an industrial point of view, livestock waste reutilisation will reduce the use of raw materials. Industrial phosphorus fertilisers are manufactured from non-renewable phosphate rocks which are near depletion. Phosphorus recovery (along with nitrogen) from organic waste has the potential to become common practice, which is what the **RE-LIVE WASTE** project seeks to achieve.

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Learn more about our Community's contributions to these key challenges in its White Papers on Circular Economy and its Policy Recommendations

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Join the Green Growth Capitalisation Platform to connect with our network, to learn and to contribute to the Green Growth Community!

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in

Partners













