INTERREG MED Programme

2014-2020

ESMARTCITY

Enabling Smarter City in the MED Area through Networking

(3MED17_1.1_M2_022)

Priority Axis 1. Promoting Mediterranean innovation capacities to develop smart and sustainable growth

Specific Objective 1.1 To increase transnational activity of innovative clusters and networks of key sectors of the MED area

WP2 – Project Communication Activity

2.10 – Synergies with the Green Growth Community

Deliverable 2.10.3 – "Information to Horizontal Project"

Contractual Delivery Date: **None**
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Dissemination Level		
PU	Public	
PP	Restricted to Programme Partners and MED Programme	
RE	Restricted to a Group defined by the Partnership and MED Programme	
CO	Confidential, only for members of the partnership and MED Programme	

Table of Contents

1   Introduction

1.1   Scope and objectives of the deliverable

This report has been developed within the ESMARTCITY project of the European program Interreg MED, and serves as a deliverable for the activity A2.10 "Synergies with the Green Growth Community". More specifically, it represents D2.10.3 "**Information to Horizontal Project**" and its aim is to develop a report on the working group on Resource Efficiency activities and main results within Green Growth community by means of the work coordinated by SYNGGI horizontal project.

SYNGGI (Synergies for Green Growth Initiative - Energising the Impact of Innovation in the Mediterranean) aims to support the modular approved projects under the objective Green Growth of the priority Axis 1. Innovation of the Interreg MED Programme. The activities of the project support the sub-objective 1.1 and especially the Green Growth sub-priority, in order to serve the targets and strategies of the Managing Authorities for the MED Area. The project has been designed as an agile tool that will unify project results, support MED stakeholders and create a fruitful and collaborative environment for all implicated bodies.

Due to the work coordinated by SYNGGI project and Green Growth MED community, during ESMARTCITY project different activities have been accomplished, such as attendance to coordination/sharing events, collaboration with third Interreg MED projects on topics that could create synergies, and specifically speaking about this deliverable, participation in the Working Group 1 on Resource Efficiency with other projects and institutions in which lessons learn by the project were shared to achieve mainly the following common deliverables:
- The white paper on Resource Efficiency "Make More with Less, Enhancing Resource Efficiency in the Mediterranean Agro-food Sector and Cities for a Circular Economy"
- Circular Economy Green Growth Policy Recommendations
- Circular Economy Green Growth Legal Recommendations
- Green Growth Book

The work done within this WG has been as well useful for the development at internal level within ESMARTCITY project of the deliverable 3.4.1 "Green paper for Innovation Policy Change", to develop necessary skills in policy makers at regional and local level of MED partner countries, and influence their attitude towards innovation enhancement through the Smart City paradigm.

1.2   Structure of the deliverable

This deliverable is structured in 4 chapters:
Chapter 1, "Introduction" provides the generalities of the deliverable identity.
Chapter 2, "Methodology" presents the methodology used to work on this WG1 of Resource Efficiency to achieve the results aimed at.
Chapter 3, "Main activities" presents main organizational details and activities in which ESMARTCITY project has been involved in this TWG1.
Chapter 4, "Results" presents the main recommendations of ESMARTCITY project within this TWG1, and the transferring activities associated with lesson learnt and the project itself.

2   Methodology

2.1   Creation of working groups:

According to the "Interreg MED Green Growth Community MEMORANDUM OF UNDERSTANDING", the Interreg MED Green Growth Community is a thematic community of 14 modular projects that has been established to address the challenges of creating effective, efficient and systematic change related to Green Growth, with a specific focus on innovation. The main objective of the Community is to promote sustainable development in the Mediterranean area, based on sound management of natural resources through enhancing cross-sectoral innovation practices and impacting on the labour market by promoting social inclusion and green jobs.

Its cooperative and transnational structure, allows the Community to exemplify the benefits of applying an interdisciplinary and horizontal structure to Green Growth initiatives, tackling environmental challenges that extend beyond national borders. As a result, the Community urges to be used as a model and a motivation for future cooperative efforts towards achieving Green Growth and implementing a Circular Economy in the Mediterranean.

This community has been endorsed by the 43 UfM (Union for the Mediterranean) Member States acknowledging its potential to deliver concrete benefits to the citizens of the Euro-Mediterranean region and contribute to sub-regional and regional integration. The labelling of the Interreg MED Green Growth Community is in line with the Union for the Mediterranean's mandate of advancing cooperation in the field of green, circular economy and sustainable development in the Mediterranean, with a view to transfer and capitalize to other countries of the region.

And thus, among other activities, the Interreg MED Green Growth community calls for action in different thematic areas, creating 4 working groups to present the contributions of the Interreg MED Green Growth community and their efforts in transitioning towards a circular economy, in the areas of:
1) Resource Efficiency,
2) Green and Smart Public Services,
3) Waste Prevention and Management,
4) Competitiveness and Innovation.

The synthesis and homogenisation of the results delivered by the modular projects was achieved through systematic technical cooperation, synergies and joint work among the modular projects, which was facilitated through the creation of Thematic Working Groups (TWGs). Given the strong relevance of our community thematic for the circular economy pillar and the dynamism of this topic at EU level, which implies the need for constant inputs to revise the supporting policy and legal framework, the themes of the TWGs were related to the EU Circular Economy Action Plan, and the indicator framework developed within this strategy.

Therefore the 14 projects belonging to the Community, based on the respective main topic addressed, were grouped into four different TWGs and associated with a specific circular economy indicator (see table 1):

| Table 1 - Modular projects grouped by TWG and CE indicator		
Thematic Working Group	Modular projects involved	Relevant CE indicator
TWG1 – Sustainable Consumption and Production – Smart and Green Public Services – **RESOURCE EFFICIENCY**	CAMARG, ESMARTCITY, MADRE, MED GREENHOUSES, PEFMED, REINWASTE	EU self-sufficiency for raw materials (indirectly, e.g. resource efficiency)
TWG2 – Sustainable Consumption and Production – Smart and Green Public Services	ESMARTCITY, GRASPINNO, GREENMIND	Green Public Procurement (GPP)
TWG3 – Waste prevention and management	REINWASTE RE-LIVE WASTE	Waste generation, Overall recycling rates, Recycling rates for specific waste
TWG4 - Competitiveness and innovation	ARISTOIL, CREAINNOVATION, EMBRACE, FINMED, GRASPINO, GREENOMED, REINWASTE	Private investments, jobs and gross value added, Patents

Each TWG was composed by partners of the modular projects and was moderated by the SYNGGI partners and external experts having the most relevant experience for the respective theme. Each modular project participated in the TWG with at least two representatives designated within the respective consortium of partners. Where possible each modular project was asked to be represented by both a technical coordinator with an extensive overview on the technical work deployed in the respective project and a policy coordinator in charge of the capitalisation/ policy inputs working package(s) of the project.

The work within the TWGs was focused on exploring similarities, consistency and possible complementarities among findings of the different modular projects. It was carried out through communication by email and participation in online meetings, webinars and face-to-face meeting.

The GGC is composed by 14 modular projects[1], namely:
- **ARISTOIL** - aimed at optimising and cross validating the best available methods of chemical analysis of olive oil, offering new commonly accepted tools for quality monitoring;
- **CAMARG** - aimed at testing and validating an advanced e-Commerce solution suited to support small producers in MED regions;
- **CREAINNOVATION** - aimed at promoting real and feasible ideas for innovation in SMEs, public and academic institutions;

Project co-financed by the European Regional Development Fund
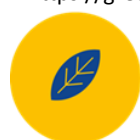
- **ESMARTCITY** - aimed at improving the innovation capacity of the cities in the MED region by creating innovative ecosystems, involving Quadruple Helix actors;
- **EMBRACE** - aimed at supporting innovation process in MED area according to the principle of CE;
- **finMED** - aimed at studying, testing and transferring concrete solutions to sustain the financing of innovation for green sectors;
- **GRASPINNO** - aimed at creating, testing and promoting a platform for supporting public administrations in the management of electronic Green Public Procurement (eGPP);
- **GREENMIND** - aimed at developing and strengthening SMEs' economic competitiveness and innovation capacities in the field of green and smart mobility in the Mediterranean area;
- **GREENOMED** - aimed at contributing to green manufacturing in MED regions, through the design and implementation of a European network of pilot plants on green manufacturing;
- **MED GREENHOUSES** - aimed at promoting, disseminating & transferring innovative Greenhouses in the MED area, minimizing water & energy demand;
- **MADRE** - aimed at promoting innovative practices and cooperation among actors dealing with urban and peri-urban agriculture in the Mediterranean;
- **PEFMED** - aimed at encouraging a pool of companies to green the own production according to the new EU Product Environmental Footprint method (PEF);
- **REINWASTE** - aimed at finding smart and innovative solutions to reduce waste of packaging and increase competitiveness in the food and agriculture sector.
- **RE-LIVE WASTE** – aimed at improving the innovation capacities of public and private actors involved in the management of waste from intensive livestock farming through stronger cooperation among academia, civil society, public authorities and the private sector.

2.2   Organization and tasks of working groups:

SYNGGI's main results have been defined though a participatory approach, thanks to the active involvement of modular projects' partners, SYNGGI Associated Partners and external experts.
The process that led to the definition of the all results have been the following one:

1. **As already stated in the previous subsection the creation of 4 Thematic Working Groups (TWGs)** was done in November 2018). TWGs were established, by involving modular projects' partners, SYNGGI Associated Partners and external experts. The four TWGs are:
   o *TWG1 - Production and Consumption: Resource efficiency*. TWG1 tackled issues related to resource efficiency mainly in the agro-food sector and in the urban context.
   o *TWG2 - Production and Consumption: Smart and Green Public Services*. TWG2 addressed issues linked to the inclusion of sustainability and circular economy criteria for public procurement and provision of public services.
   o *TWG3 - Waste Prevention and Management.* TWG3 addressed issues linked to waste collection system, waste to energy, food waste reduction, food donation and utilisation of former food for animals, recycling of construction and demolition waste, urban waste, recycling of overall packaging waste, plastic packaging, wood

packaging, waste electrical and electronic equipment, recycled biowaste, Innovation capacity and awareness-raising, prevention of waste generation.

- o *TWG4 - Competitiveness and Innovation*. TWG4 addressed issues linked to smart specialization, public-private partnerships, innovative funding, private investments, Innovation capacity and awareness-raising, SMEs and entrepreneurship, job creation, Clustering and economic cooperation, patents.

2. **TWGs Roadmap definition** (14th November 2018 – Durres, Albania[2]). Start of TWGs' activities, by defining objectives, expected outcomes and working methodology of each TWG.

3. **TWGs representatives' selection** (December 2018). Each modular project selected their representatives for the TWGs.

4. **Monthly on-line meetings of the TWGs** (January-March 2019). TWGs worked for the definition of policy inputs/recommendations under the coordination of SYNGGI partners.

5. **TWGs face-to-face meeting** (6th March 2019 – Thessaloniki, Greece). TWGs met in a face-to-face meeting in order to structure their insights, on their respective topics, and contribute to Green Growth policies recommendations and white papers. External experts participated in the meeting.

6. **On-line data collection tool** (April-May 2019). On the basis of the inputs gathered during the previous phases, a data collection tool was developed and disseminated on-line to TWGs' representatives (ref. Section 1.3.2).

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[2] Green Growth Community building event.

3   Main activities

3.1   Definition of ESMARTCITY technicians working on TWG1 and TWG2:

After the definition phase of the technicians that were going to work on TWG1 and TWG2 by ESMARTCITY project, as agreed, 2 workers from partners ISI and APEGR were endorsed to work on both WGs but being each one the main responsible of a different TWG as shown here:

ESMARTCITY main contact for TWG1:

<div align="center">

Gonzalo Esteban López
Agencia Provincial de la Energía de Granada
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Correo-e: areatecnica@apegr.org
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</div>

ESMARTCITY main contact for TWG2:

<div align="center">

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</div>

3.2   Meetings:

The main events organized by the Green Growth community are the following ones:

- **1st MED Green Growth transnational event** – "*New Challenges in the Agrofood sector*" – 28-30 June 2017, Girona (Spain) – The event gathered the whole Green Growth community, relevant stakeholders of the Mediterranean area and other European regions to jointly discuss about the new challenges that the agrofood sector is facing nowadays. *ESMARTCITY Project was still not operative*.
- **2nd MED Green Growth transnational event** – "*Roles and Opportunities for competitiveness in public and private sectors*" – 12-13 October 2017, Rome (Italy). The event was an opportunity to debate about the emerging opportunities for green competitiveness in the MED area and about the role of various public and private actors to exploit these opportunities. The event was hosted by the Forum Compraverde - Buygreen, at its 11th edition in 2017. *ESMARTCITY Project was still not operative*.
- **3rd MED Green Growth transnational event** – "*Role of regional and local policy makers in enhancing Green Innovation*" – 15-16 November 2018, Durres (Albania) – The event

analysed the role of policy makers in enhancing the Green Growth innovation and policies and at created contexts of exchanges on the impact of several key players in boosting Green Growth economies. *ESMARTCITY representatives attended this event*.

- **Interreg MED Green Growth Community Thematic Working Groups workshop** – 6 March 2019, Thessaloniki (Greece) – The workshop supported the modular projects in identifying both challenges and success factors related to the respective TWG themes. The results were used to feed the policy outcomes of the community. *ESMARTCITY representatives attended this event*.
- **MADE IN MED event**: Interreg MED mid-term event, April 2018 in Rome. The conference was dedicated to showcasing projects' results and thinking about the future of cooperation in the Mediterranean. The Interreg MED programme organised an interactive exhibition where participants could discover and experiment the projects' results in a concrete manner. *ESMARTCITY representatives attended this event*.
- **MED FOR YOU**: unfolding a strong narrative for policy change" that will take place on 24th October 2019 in Athens. This event will premiere the first evidence of the successful Interreg MED new architecture, how it has taken shape and produced concrete results thus demonstrating its added value. The results will be presented around questions directly linked to hot topics on the European Commission agenda but also to the objectives of the European cohesion policy. Moreover, it will be a chance to debate on post 2020 and the added value of European territorial cooperation in the Mediterranean. *ESMARTCITY representatives attended this event*.

3.3   Other activities in which ESMARTCITY project participated:

As stated in section 2.2 of this document, the work done in this groups on resource efficiency has not only been the one of the meetings previously mentioned but as well the continuous work of collaboration with other activities such as:

1. **Monthly on-line meetings of the TWGs** (January-March 2019). TWGs worked for the definition of policy inputs/recommendations under the coordination of SYNGGI partners.
2. **TWGs face-to-face meeting** (6th March 2019 – Thessaloniki, Greece). TWGs met in a face-to-face meeting in order to structure their insights, on their respective topics, and contribute to Green Growth policies recommendations and white papers. External experts participated in the meeting.
3. **On-line data collection tool** (April-May 2019). On the basis of the inputs gathered during the previous phases, a data collection tool was developed and disseminated on-line to TWGs' representatives (ref. Section 1.3.2).

As well, the ESMARTCITY project has taken advantage of the work done within this TWG1 to create further synergies with other 2 Interreg MED projects, as we participated in the following synergy events:

- Renewable Energy Community Policy Paper Process Regional Consultation - Barcelona (Spain) - 25th April 2019, organized by **GREENCAP** horizontal project representing the Interreg MED Renewable Energy Community configured by six modular projects focused on the promotion of renewable energies in the Mediterranean Area.

- 3rd Steering Committee and Project Meeting of **GREENMIND** project – Málaga (Spain) - 8th May 2019

Project co-financed by the European
Regional Development Fund

4 Results of thematic working group 1 by ESMARTCITY project.

4.1 Main inputs of ESMARTCITY project

During the implementation of ESMARTCITY project, pilot testing has been deployed in Portugal, Spain, France, Italy, Bosnia Herzegovina, and Greece on Public Lighting and Public Buildings.

In order to ensure conformity and a coordination pilot there were different preparatory activities. The preparatory activity was followed by the pilot testing comprising (i) pilot deployment following a common approach detailed in the preparatory phase, (ii) pilot capacity building offered towards SMEs and networked community to enable experimentation and co-creation over the deployed pilots. During the assessment phase a benchmarking of the pilot sites before and after the intervention, and lessons learned will be documented leading to a Green Paper for Innovation Policy Change, detailing the project proposals for policy improvements so that sustainability of project results is ascertained.

The ESMARTCITY project implements pilot tests that deal with utilizing existing infrastructure at city level for the development of further services and promoting innovation and entrepreneurship. The pilot tests demonstrate the Smart City concept's potential to increase energy efficiency in two domains: *Energy Efficient Public Buildings and Public Street Lighting*. In those pilot cases, certain preconditions have to be met, the most important of which is **openness of data and, possibly, existence of APIs that permit access to the data generated by the Smart City infrastructures**. In this context, the pilot testing and the infrastructure built by it, do not remain isolated as they are not proprietary solutions but rather open.

Capacity building for public authorities in relation to eco-innovative solutions increasing energy efficiency in urban infrastructure is essential in order for them to improve the implementation of regional policies with reference to their innovation perspective. According to municipal energy audits, measures fostering the use of **efficient street lighting systems** and **renovation of existing buildings** would provide the potential of significant energy savings as these two are the main energy consuming municipal services. As well, in the MED area in some regions **water pumping facilities are another important sector** in which energy savings can be achieved.

To improve the capacity of public authorities it's important not only to work on the technical level, **but as well on the legal level to improve the public procurement process**. To do so an important step would be political impulse to adopt a municipal (or other Public Authority) Smart City strategy.

As well it has been identified a need to strengthen SMEs and entrepreneurs capacities to enter the green market (energy, smart city, mobility) and use/exploit open data opportunities, as a good amount of these SMEs are still not ready.

In SMEs, as well, capacity building is necessary for the model change behind the Circular Economy and the Green Market. First of all, a mentality change is necessary for otherwise competing enterprises to identify themselves as collaborating partners of a wider more standardised and more open ecosystem. When it comes to offering new services and applications either in the energy or

smart city or mobility sectors, the pace of technological change makes it apparent that to cope with and enhance market shares, enterprises have to standardise their products so that they can offer their solutions to more end users at lower costs. Having proprietary solutions usually involves high customization and therefore maintenance costs that hurt overall competitiveness. Exploiting standardised technologies and building on top of open data can help boost innovation producing new products and services. Furthermore, not being constrained by the application domain, but rather breaking the silos between domains can create new innovative products and services and further enhance competitiveness.

Secondly, at a time of such disruptive technologies as Virtual Reality, Augmented Reality, Artificial Intelligence and Collaborative Platforms there is also a need for disruptive education to be offered to SMEs and entrepreneurs in order to understand and grasp the direction the market goes. In this context capacity building is essential.

Innovative ways of capacity building could be utilised comprising funding of **Hackathons**, **Datathons**, or **LABs** (Innovation hubs or Living LABs) in order to identify and attract new talent, find innovative solutions to specific challenges and problems and develop solutions that cross the boundaries between domains.

Resuming up this last point, changing business mentality towards a more collaborative innovation ecosystem. Offer disruptive education and training. Enhance innovative solutions and overall competitiveness.

4.2   Transferring activities

A resume up of the main strategic documents to be transferred after the implementation of the pilots, are the following ones:

"Green Paper for Innovation Policy Change" detailing the necessary strategies that need to be reinforced in partner territories to enable a sustainable Smart City paradigm	February 2020
A "Smart City Protocol" will be adopted by those policymakers willing to endorse the innovation policy change strategy developed within the project	July 2020
8 Workshops addressed to local and regional public authorities in the area of smart lightning and smart energy-efficient buildings. As well few online workshops addressed to SMEs and clusters in the same area as above	December 2019 – July 2020

In the last phase of the project, the deliverable "Green Paper for Innovation Policy Change" was finished, detailing the necessary strategies that need to be reinforced in partner territories in order to enable a sustainable Smart City paradigm. The Green Paper built upon the lessons learnt during

the pilot testing phase of the project comprising pilots in 6 partner countries associated with the Smart City theme and more specifically Smart Street Lighting and Smart Energy Efficient Buildings. The Green Paper focuses on policy recommendations and investment priorities for innovation enhancement in partner territories. Nevertheless it was finished after the end of SYNGGI project, and thus some recommendations had to be delivered in advance.

Nevertheless, the work done in the Green Growth community and lessons learn have influenced the finalization of this "Green Paper", and in the last part of ESMARTCITY project transfer of the project results is scheduled in the period December 2019 – July 2020. Transfer targets include policy makers in the area and innovative SMEs and clusters of SMEs. Capacity building interventions towards policy makers are scheduled in the period December 2019 – March 2020 and aim at transferring project outcomes towards local and regional public authority stakeholders.

As well, eight workshops are envisaged to this end. Transfer activities towards SMEs and clusters in the area is scheduled in the period December 2019 – May 2020, through capacity building interventions towards innovative SMEs that could result in enhancing entrepreneurship and innovation in the MED area. Furthermore, it is envisaged that the project participated in the Green Growth Cluster Training Seminar envisaging a coordination with the Green Growth community and other modular projects.

The capitalization efforts of the project will be concluded with the adoption of a Smart City Protocol by policy makers in the area on July 2020.

4.3 Influence on Green Growth Community main achievements

4.3.1 White Paper 1 on Resource Efficiency

The White Paper is part of a series of thematic Circular Economy White papers presenting the contribution of the community. The focus of the White Paper is on Resource Efficiency.

There is reference to Esmartcity as one of the Interreg MED Green Growth Community projects in page 4:
"ESMARTCITY (Enabling Smarter City in the MED Area through Networking) promotes and applies the Smart City concept through the implementation of pilot projects in different countries of the Mediterranean area, which enables cities to use energy more efficiently in buildings and public lightning."

In page 4 there is also reference to the association of Circular Economy and Smart Cities.

"A circular economy model for cities is closely related to the smart city paradigm, through which resource efficiency, sustainability, social inclusivity and the well-being of citizens are pursued through technological and social innovation."

In page 5 there is reference to Tackling Resource Efficiency in Cities:

"Tackling Resource Efficiency in cities

In the urban context, there is high potential for increasing energy efficiency in urban infrastructures, especially in terms of public lighting and public buildings. Concerning street lighting, approximately 35 TWh of electricity is used by over 56 million functioning streetlights across Europe. With outdated and inefficient street lighting systems, up to half of the municipal energy bills goes to street lighting alone. As public lighting is costly, measures for improving lighting infrastructure have not been widely undertaken. Public buildings account for the second main energy consuming sector in municipalities at European level, and are seen as a first step to start improving the building stock. Buildings are responsible for approximately 40% of energy consumption and 36% of CO_2 emissions in the EU.

The specific challenges tackled by the projects are:

• Public authorities require enhanced awareness regarding solutions for increasing energy efficiency in city infrastructure, and efforts in all municipal departments are needed. While at technical level there is an increased level of knowledge, at public procurement and legal departments there is a requirement to further stress the possibilities.

• Realising efficiencies: Up to 70 % of the original energy consumption can be saved in street lighting by reinvesting in new technologies, and up to 50% by replacing the luminaires only. About 35% of the EU's buildings are over 50 years old and almost 75% of the building stock is energy inefficient, while only between 0.4-1.2% of the building stock is renovated each year. Therefore, more renovation of existing buildings has the potential to lead to significant energy savings – potentially reducing the EU's total energy consumption by 5-6% and lowering CO_2 emissions by about 5%."

In page 6 there is reference to solutions provided by the Interreg MED Green Growth community projects:

"SMART SOLUTIONS FOR ENERGYEFFICIENCY IN CITY INFRASTRUCTURE

The ESMARTCITY project implements pilot tests that deal with utilising existing infrastructure at city level for the development of further services that promotes innovation and entrepreneurship. The pilot tests demonstrate the Smart City concept's potential to increase energy efficiency in two domains: Energy Efficient Public Buildings and Public Street Lighting. In those pilot cases, certain pre-conditions have to be met, the most important of which is the openness of the data and, possibly, the existence of APIs (application programming interfaces) that permit access to the data generated by the Smart City infrastructures. In this context, the pilot testing and the infrastructure built by it, are not isolated solutions but rather open solutions as they are not privately-owned."

In page 10-11 there is reference to the pilot testing undertaken in the framework of Esmartcity:

"Pilot testing of the Esmartcity Project in Portugal, Spain, France, Italy, Bosnia Herzegovina, and Greece on public lighting and public buildings."

ONE PILOT PROJECT WITH SEVERAL DEPLOYMENTS
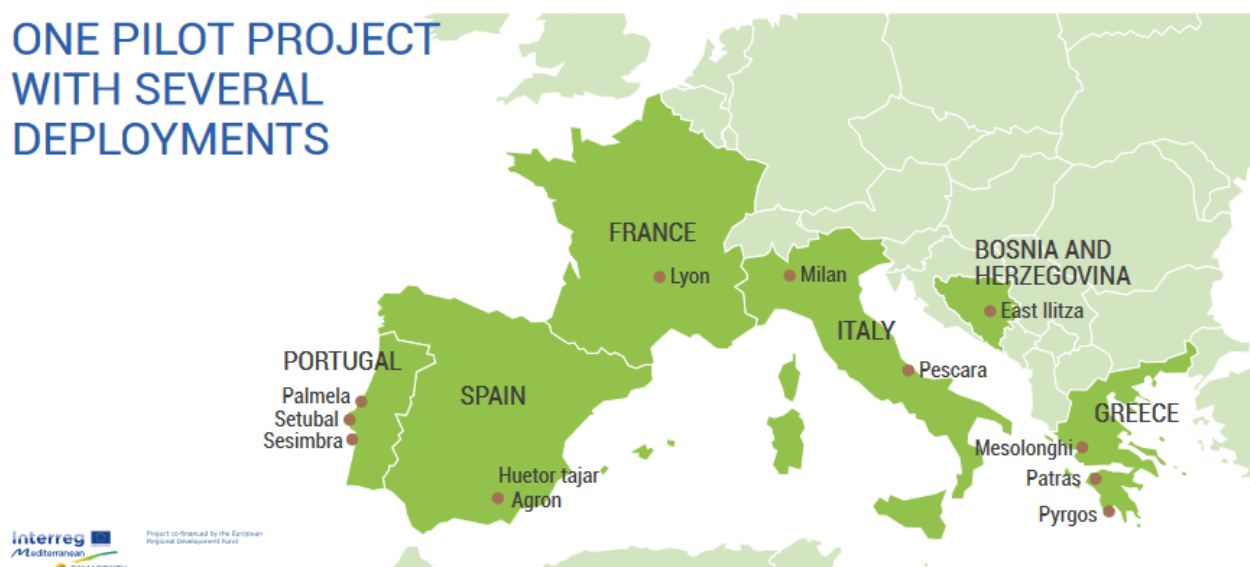
"The pilot testing comprises a number of different sites in 6 different partner countries. In order to ensure conformity and coordination within the pilot, there are different preparatory activities to take into account. The preparatory activity is followed by the pilot testing comprising of: (i) pilot deployment following a common approach detailed in the preparatory phase, (ii) pilot capacity building offered towards SMEs and networked community to enable experimentation and co-creation over the deployed pilots. During the assessment phase, a benchmarking of the pilot sites before and after the intervention, as well as lessons learned, will be documented leading to a Green Paper for Innovation Policy Change, detailing the project proposals for policy improvements so that sustainability of project results is ascertained."

OPEN DATA IN SMART CITIES

DATA CAN CHANGE CITIES AND THEIR ECONOMIES

- Increasing City Efficiency
- Improving city planning and reaction to risks
- Involving and better connecting the citizens
- Creating innovation ecosystems

DATA ECOSYSTEM

- **Suppliers**: data creation
- **Aggregators**: data agregation
- **Developers**: data analysis/Products and services

BUILDING A CITY ECOSYSTEM BASED ON OPEN DATA

- Data governance: strategy, open data policy, overcoming barriers
- **Sustainability**: data consistency, existence os APIs
- Security and privacy
- **Share data**: collaboration and co-creation
- New services on top of data: innovation, new business endevours

WHERE TECHNOLOGY COMES IN

- **Data hubs**: gather all installed sensor data, bring data ecosystem together
- **APIs**: share data services, boost the development of services, applications and products
- **Marketplace**: Expose data services

Project co-financed by the European Regional Development Fund

In page 16 there is reference to the Smart City theme in the Call to Action:

"Reducing energy use in city infrastructure through smart lightning and smart building solutions."

In the same page 16 there is recommendation to Regional and local authorities in the Mediterranean

"To adopt and promote the Smart City paradigm shift."

In page 18 there is reference to the Esmartcity partners involved in the TWG:

"ESMARTCITY:
Website: https://esmartcity.interreg-med.eu
Contacts: Athanasios P. Kalogeras
(Communication partner)
Research Centre ATHENA
Industrial Systems Institute (Greece)
kalogeras@isi.gr
Gonzalo Esteban López (Project partner)
Agencia Provincial de la Energía de Granada (Spain)
Diputacion de Granada (Spain)
gestebanlopez@dipgra.es , oficinaenergia@dipgra.es , areatecnica@apegr.org

Related projects/initiatives:
• DIGITAL CITIES CHALLENGE: https://www.digita-llytransformyourregion.eu
• GREENCAP: https://renewable-energies.inte-rreg-med.eu/
• SET UP: https://www.interregeurope.eu/set-up/
• GREEN MIND: https://greenmind.interreg-med.eu/"

4.3.2   Policy Recommendations

The document presents Policy Recommendations of the Green Growth Community structured into six main areas and more specifically
- Investment and access to finance
- Technological infrastructure
- Legal Framework
- Labor market and employment
- Awareness & Knowledge
- Cooperation among stakeholders and technology transfer

In page 7 there is reference to Esmartcity as part of the TWG 1 activities:

"Production and Consumption: Resource Efficiency
Projects: CAMARG, ESMARTCITY, MADRE, MED GREENSHOUSES, PEFMED, REINWASTE
Relevant CE Indicator: EU self-sufficiency for raw materials, Waste generation

Main targets : energy efficiency, sustainable production & consumption, market uptake of eco-innovative patterns & zero-km products, greener supply chains, prevention of waste generation, food safety, smart city paradigm"

In page 15 there is reference to possible interventions related to Technological Infrastructure:

"Adoption of context-related rather than one-size-fits-all approaches and solutions

The costs and the availability of expertise are two of the main issues for technological infrastructure deployment (especially in smaller and more isolated areas, such as mountain and islands). Furthermore, issues related to the maintenance and upgrade of deployed infrastructures are relevant both in small and in larger areas. A possible solution could be the adoption of a context-related approach, followed by a standardization of solutions, allowing for a decrease in overall costs and the accomplishment of economies of scale. Moreover, widening the "context" by following a "breaking down the silos" approach could further contribute to this."

In page 18 there is reference to possible interventions related to the Legal framework:

"Promotion of energy efficiency measures in urban infrastructures

According to municipal energy audits, measures that promote the use of efficient street lighting systems and the renovation of existing buildings (the main energy consuming municipal services) would lead to significant energy savings. Moreover, in some regions of the MED area, water pumping facilities are another sector in which energy savings can be achieved. In order to improve the capacity of public authorities to achieve energy efficiency, it is fundamental to act not only at the technical level, but also at the legal level (i.e. public procurement process). In this sense, a fundamental step could be the adoption of a Smart City Strategy at the municipal level (or by other Public Authorities)."

In page 21 there is reference to possible interventions related to Labor Market and Employment:

"Reinforcement of SMEs' and entrepreneurs' capacities to access to the green market (energy, smart city, mobility) and use/exploit open data opportunities

Capacity building is necessary for a model shift, towards CE. First of all, companies now competing should perceive themselves as partners, cooperating in a wider, more standardised and more open ecosystem. For example, in the framework of technological innovation, exploiting standardised technologies and building on top of open data, could lead to overcome scale costs and define new products and services. Secondly, at a time of such disruptive technologies (e.g. Virtual Reality, Augmented Reality, Artificial Intelligence and Collaborative Platforms) there is also a need for a disruptive education, to be offered to SMEs and entrepreneurs, allowing them to understand and grasp the direction in which the market goes (e.g. through Hackathons, Datathons, or LABs - Innovation hubs or Living LABs, etc.)"
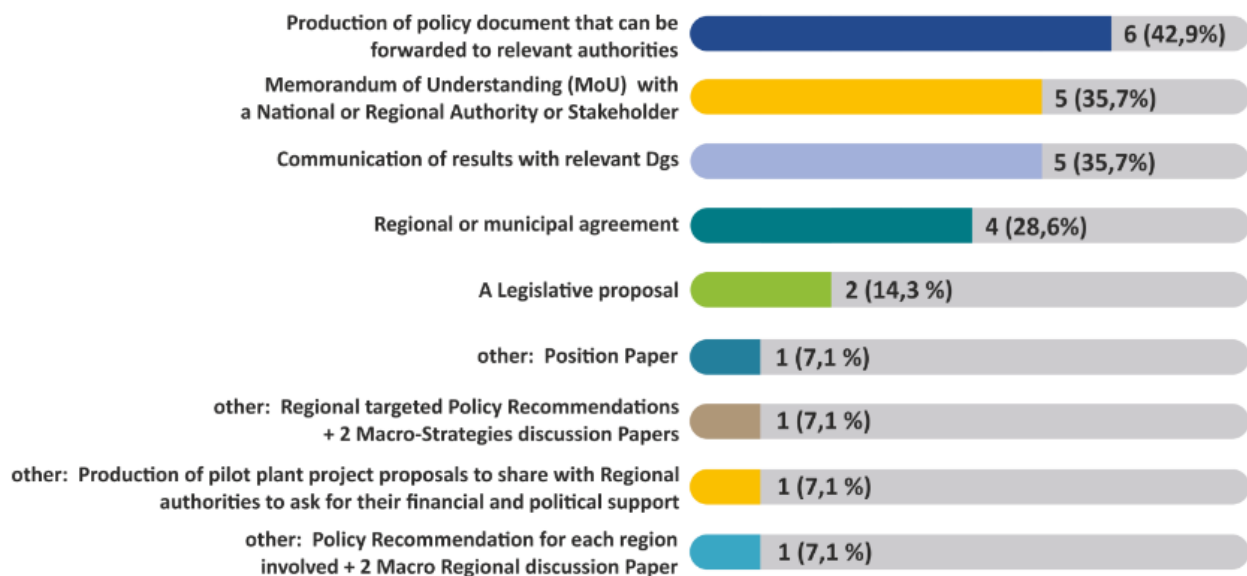
4.3.3 Legal Recommendations

The document describes the methodology and roadmap for the formulation of Legal Recommendations on the Green Growth Community.

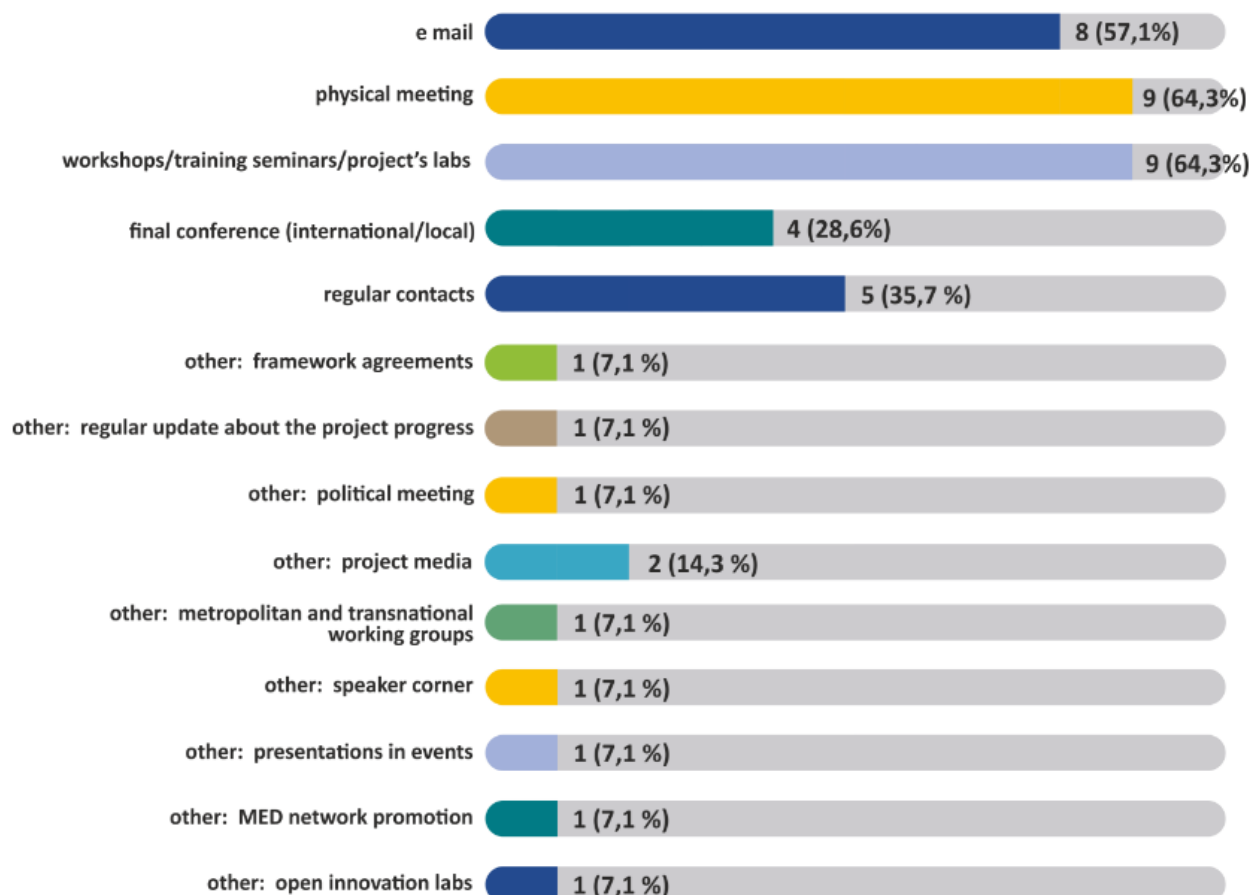In page 5 there is reference to Esmartcity as part of the Green Growth Community:

"ESMARTCITY (Enabling Smarter City in the MED Area through Networking) promoting the Smart City concept enabling cities touse energy more efficiently in buildings."

Esmartcity has participated in the process of survey / interview conducted by the Green Growth Community and its responses are part of the aggregated results presented in the document:

At which level does your project aspire to achieve its policy objectives?

Production of policy document that can be forwarded to relevant authorities	6 (42,9%)
Memorandum of Understanding (MoU) with a National or Regional Authority or Stakeholder	5 (35,7%)
Communication of results with relevant Dgs	5 (35,7%)
Regional or municipal agreement	4 (28,6%)
A Legislative proposal	2 (14,3 %)
other: Position Paper	1 (7,1 %)
other: Regional targeted Policy Recommendations + 2 Macro-Strategies discussion Papers	1 (7,1 %)
other: Production of pilot plant project proposals to share with Regional authorities to ask for their financial and political support	1 (7,1 %)
other: Policy Recommendation for each region involved + 2 Macro Regional discussion Paper	1 (7,1 %)

What type of communication have you established so far?

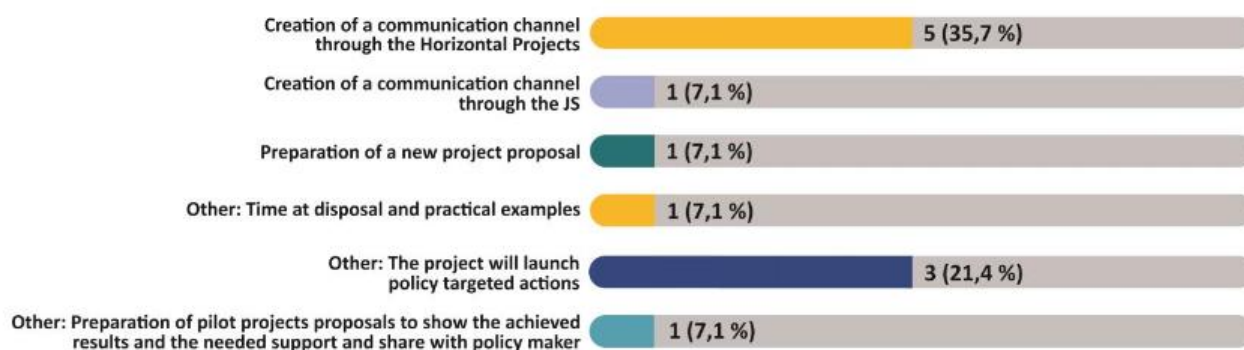| Type	Count
e mail	8 (57,1%)
physical meeting	9 (64,3%)
workshops/training seminars/project's labs	9 (64,3%)
final conference (international/local)	4 (28,6%)
regular contacts	5 (35,7 %)
other: framework agreements	1 (7,1 %)
other: regular update about the project progress	1 (7,1 %)
other: political meeting	1 (7,1 %)
other: project media	2 (14,3 %)
other: metropolitan and transnational working groups	1 (7,1 %)
other: speaker corner	1 (7,1 %)
other: presentations in events	1 (7,1 %)
other: MED network promotion	1 (7,1 %)
other: open innovation labs	1 (7,1 %)

Have you or are you planning to communicate your project to any relevant National or EU Authorities in terms of policy recommendations?

Level	Count
Yes, at MED region level	9 (64,3%)
Yes, at local (regional or municipal) level	8 (57,1%)
Yes at EU level	6 (42,9%)
Yes, at national level	2 (14,3 %)
No	0 (0 %)

Project co-financed by the European
Regional Development Fund
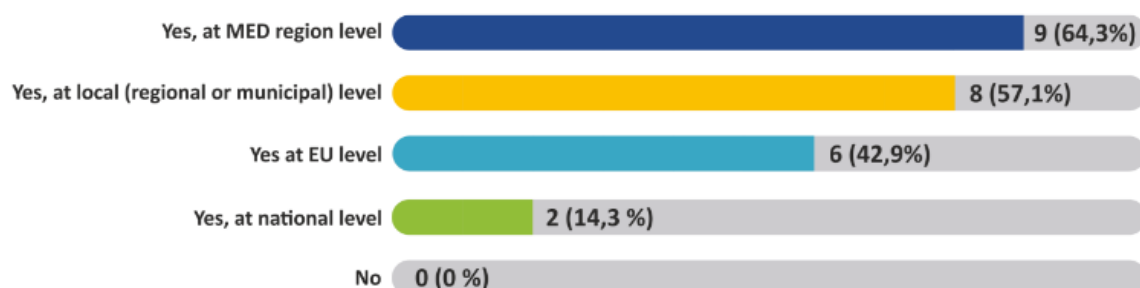
Which have been the main barriers in achieving your policy objectives in terms of translating them into legal recommendations?

Barrier	Value
Not being able to identify relevant legal frameworks	1 (7,1 %)
Lack of consolidated results	5 (35,7 %)
Lack of synergies and deficient communication channels	1 (7,1 %)
Difficulty in reaching the relevant officers and stakeholders	3 (21,4%)
Impediments in national legislation	2 (14,3 %)
Lack of resources	0 (0,0 %)
None	1 (7,1 %)
Other: too early to reply to this question	6 (42,9 %)
Other: no political comittment from the regions to the initiative	1 (7,1 %)

How do you plan to overcome them?

Option	Value
Creation of a communication channel through the Horizontal Projects	5 (35,7 %)
Creation of a communication channel through the JS	1 (7,1 %)
Preparation of a new project proposal	1 (7,1 %)
Other: Time at disposal and practical examples	1 (7,1 %)
Other: The project will launch policy targeted actions	3 (21,4 %)
Other: Preparation of pilot projects proposals to show the achieved results and the needed support and share with policy maker	1 (7,1 %)

4.3.4 Green Growth Book

The purpose of the Green Growth Book is to facilitate capitalization and transferring activities of the Green Growth Community.

In page 17-18 there is reference to the envisaged Esmartcity capitalization activities:

"Development of Strategic Documents

Green Paper for Innovation Policy Change detailing the necessary strategies that need to be reinforced in partner territories to enable a sustainable Smart City paradigm

A Smart City Protocol will be adopted by those policy makers willing to endorse the innovation policy change strategy developed within the project

Dissemination (Public Events and Training Activities)

8 Workshops addressed to local and regional public authorities in the area of smart lighting and smart energy-efficient buildings
8 Workshops addressed to SMEs and clusters in the same area as above"