



Tailored Event Reports

Deliverable 4.5.1 (Sixth Progress Report)

Responsible Partner: CNR-STIIMA

Date: 31.03.2020



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| Project Acronym: | GREENOMED |
| Project full title: | Mediterranean Trans-Regional Cooperation for green manufacturing innovation |
| Priority Axis: | Promoting Mediterranean innovation capacities to develop smart and sustainable growth |
| Objectives: | 1.1 To increase transnational activity of innovative clusters and networks of key sectors of the MED area |
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| Deliverable: | <i>D4.5.1- Tailored event reports</i> |
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| Activity: | Transferring results to Regional Authorities |
| Summary: | The deliverable will be a report (in the format of a Word document in English language) describing the results of the transfer action to Regional Authorities that will be carried out in all regions. |
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List of abbreviations

WP: work package

LP: Project Leader

JS: Project Officer

CE: Circular Economy

ESM: efficient and Sustainable Manufacturing

MED: Mediterranean

RTO: Research Technology Organisation

S3: Smart Specialisation Strategy

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1. Executive summary

CNR-STIIMA is responsible for the preparation, coordination and management of the task 4.5 to transfer the action per Regional Authorities. In this task regional partners will be responsible to carry out at least one transfer action per Region to a Regional Authority. All regional authorities participating to the project as Associate partners will be reached. Clusters will have a major role in this task, with the intend of reinforcing their relationship with Regional Authorities. The final GREENOMED conference targeting Regional Authorities and policy makers from MED and other European regions in order to depict the designed and tested methodology within the GREENOMED framework. The meeting organized by 25 participants from partners in Italy, Slovenia, Croatia, France and Greek with their Regional Authority representatives. However, partners in Slovenia and France, organized separated transfer event to their Regional Authority than the final conference in Milan which it described on section 4.

The deliverable will be a report (in the format of a Word document in English language) describing the results of the transfer action to Regional Authorities that will be carried out in all regions.

2. Objective of the Tailored events

In the last progress reports of GREENOMED the main outcomes were to show, explain and transfer to the regional authorities the designed and tested methodology within the GREENOMED framework, by enabling Regions to cooperate efficiently for the collaborative design and implementation of pilot plants and innovation projects under the paradigm of Smart Specialization.

Indeed, the final conference aimed to make GREENOMED understandable for regional administrations, highlighting the benefits of the interregional collaboration the possibility to link with Vanguard Initiative if the political support was clear in the regions and the actions that the regional administrations should undertake to facilitate the interregional cooperation in Green Manufacturing. During the last political conference of GREENOMED we were able to explain that the Project cooperation methodology is designed to facilitate Regional manufacturing ecosystems to access relevant innovation initiatives such as the “Vanguard Initiative” and the innovation Partnerships promoted by the S3 Platform of the European Commission.

The “Final GREENOMED Conference” took place in Milano on 5 December 2019. It was the final event of the GREENOMED project, targeting Regional Authorities and policy makers from MED and other European regions. Regional authorities of the GREENOMED partnership from Lombardia, Catalonia, Rhône Alpes, Marche, Slovenia, Croatia and Central Macedonia, along with other interested regional authorities from MED and other regions, took part in the event. Also, the meeting had been announced through the social media channels of GREENOMED and MED programme website to invite policy makers and authorities along with the partners encouragements to involve regional authorities into this final meeting.

The meeting was held on two panels, which started in the morning and closed in the afternoon after having a networking lunch. In the next chapter, the main objective is to explain the methodology designed and the importance of the interregional integration within the framework

of the GREENOMED during the first panel; then the afternoon panel with discussing more the challenges and outputs for each region with related topics.

3. The Final GREENOMED Conference at political level

The first panel of the meeting starts with the warm welcome from Lombardy Region representative and then some introduction from LP regarding the agenda and timeline of the conference. Moreover, JS starts the session with describing the main MED Programme insights and covered project topics within the European countries and the GREENOMED position itself. Furthermore, the possibility to get benefit of the results of the projects has been discussed, in order to link all the stage of the programme to take advantage of the projects results. Another factor that was discussed was about new topic of the MED programme regarding Panoramad at the Governmental level with different layer of the innovation with focusing on bio-technology. MED project is known as a pool of co-create and Create Wear, Plastic Busters maps with precise aim and purpose. After all the aspects and new collaborative opportunities on MED Programme, JS lighted up that GREENOMED has capitalized the possibilities of the idea to use the results of the project in MED community and for the future contribution.



Figure 1. MED Programme insights by JS

After the MED programme insights, the Green Growth community interreges MED discussed by introducing the existing project topics and the further opportunities that could be achieved along this area. Mr. Joannis Mardikis presented possible synergies that could be established among Greenomed and other ongoing projects of the MED community dealing with sustainability and Circular Economy.



Figure 2. Interreg MED Green Growth Community roles

Vanguard Initiative was presented by EURECAT regarding the project approaches that aimed at facilitating the network in each region to set up innovative technologies. Inventing in facilities which are advance and make the regions more competitive. Jordi Romero from EURECAT presented the Vanguard Pilot projects around this topic: ESM (coordinated by EURECAT and CNR-STIIMA) which topic relates to GREENOMED; 3D-Printing, formally supported by multiple regional Governments inside Vanguard which is a large framework, ADMA Energy and Bio-economy that focused on strategic challenges for industries and New Nano enabled products. However, among all these proposed topics by initiative, they only focus on operative activities at demo cases like CE and digital and virtual manufacturing. Moreover, it was depicted that Vanguard ESM pilot focus on promoting the base line of manufacturing improvement in order to connect to the region to share the knowledge.



Figure 3. Vanguard ESM Pilot project presentation

The last part of the first panel was dedicated to the GREENOMED methodology presentation which it has been collaboratively presented by partners CNR and AFIL. Moreover, the difficulties of addressing the challenges with cooperation among the pilot plants and implementing the methodology to address the three main objectives of the project which are testing and trigger the

trans-regional the project and establish the institutional environment have been respectively covered.

In particular, the cooperation methodology among the regions with the main users of the methodology and tools and services to make the communication and awareness on Vanguard Initiative Pilot plants has been clearly presented. However, at Vanguard Initiative the methodology is not yet completely implemented by the pilot plants, in GREENOMED we are still in the primary phase of methodology which is concerning the lack of financial requirements and supports at regional level for adopting the methodology from business plant to the implementation.

The first session of the morning finished with the methodology description and the future potential for more investigation and collaboration at the Green Manufacturing topics at the MED level.



Figure 4. GREENOMED Methodology Presentation

The second session mainly focused on the achieved results based on the main GREENOMED project pillars at the regional level as following. During this panel each topic discussed by the collaborated partners per region and was a communicative form of the meeting.

3.1. Food Manufacturing

The topic of Food Manufacturing is contributing through the Advanced and sustainable manufacturing and packaging of food products applying sensors, automation, robotics, big data, Artificial Intelligence, machine learning and virtual reality techniques to guarantee the integrity and safety of the food product and of the food chain against involuntary and deliberate contaminations or accidents. The results and activities carried out around this topic presented by the coordinator of the project Giacomo Copani, in which the main involved region as Lombardy, Catalonia, Auvergne Rhone Alpes, Slovenia, Croatia with collaboration of Hungary and Portugal introduced as the involving stakeholders. The main achievements of activities around the Food Manufacturing topic we can indicate as follow:

- Involvement of 20 intermediaries and stakeholders into this topic
- A dedicated working group created in AFIL Cluster in order to mobilize the other region ecosystems

- New demo-case being proposed in the ESM Pilot of Vanguard Initiative and in the EU S3 platform coming from GREENOMED

Here is the figure illustrating the main activities and events that contributively organized and participated with partners regarding the Food Manufacturing topic during the project duration.



Figure 5. Food Manufacturing achievements

3.2. Plastronics

The main contribution around this topic has been discussed by Plastipolis during the meeting with explaining about the Multifunctional Products & Product Customization based upon Polymers and polymer composites (including textile fibers, fabrics, films, matrixes) through integration of Electronics by application of Advanced manufacturing technologies, Nanomaterials & Surface enhancements. Also, considering Sustainability and end-of-life of such products. The contribution to the Plastronics by the main regional actors caused achievements to Seamless Integration of Electronics and Plastics, and Production of high added-value plastics components and products with embedded electronics.

The main region that cooperate to Plastronics topics are Catalonia Auvergne Rhone Alpes, Lombardy and with the collaboration of Saxony, East Netherlands Upper Austria regions.

The main achieved results that obtained during the project duration within organizing and participating to different events and seminars with the aim of:

- Involving 15 intermediaries and stakeholders

- A dedicated Working Group supported by PLASTIPOLIS Cluster, and Working Group in Catalonia coordinated by Eurecat under Advanced Manufacturing Cluster in order to mobilizing other regional ecosystems
- New demo-case «Polymer-based functional products», an ESM Pilot of the Vanguard Initiative and in the EU S3 Platform coming from GREENOMED project

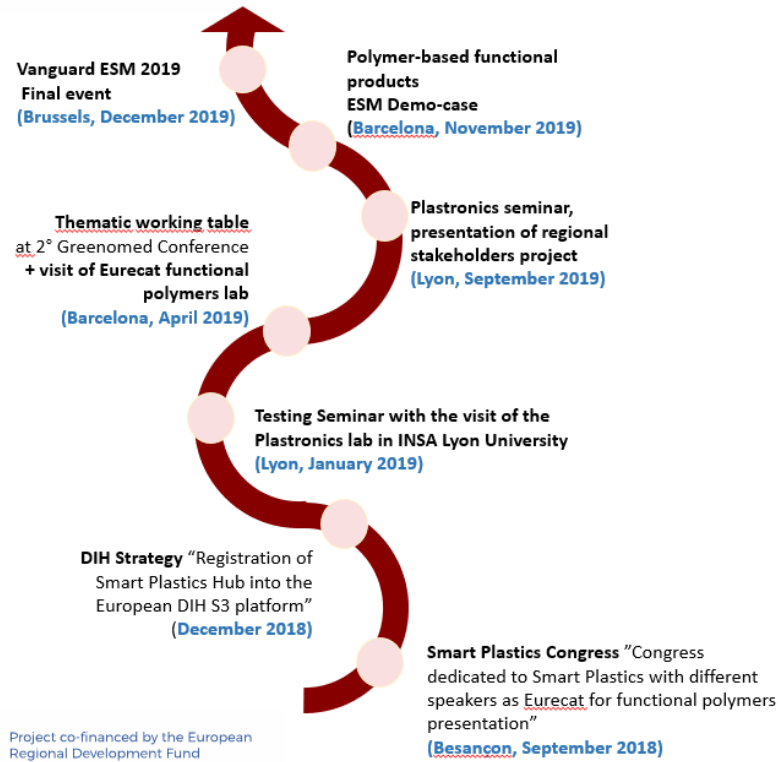


Figure 6. Plastronics achievement results

3.3. Circular Economy

The main contribution to the CE topic discussed by ACMM by explaining the investigation on Vanguard ESM demo case in Lombardy regarding de- and remanufacturing topic. Thus, the achievements obtained along the several events mainly to spread the vanguard regions, with the aim of CE regarding the stakeholder's engagement through setting up inter-regional cooperation. Then TPLJ explained their contribution also on secondary raw material and textile use and digital twin project for accelerating the digital communication through virtual construction to save the energy and reduce the CO2 emission. The regions that made collaborative contribution to this topic are based on Lombardy, Auvergne Rhone Alpes, Slovenia, Croatia, Marche regions.

The achievements obtained during the project duration emerged from different contributed events and conferences that organized or by partners participation in order to test and transfer the main tools of the methodology. These are the main received outcome of the project:

- 20 intermediaries and stakeholders were involved

- Marche, Slovenia and Croatia started involvement in the De-and Remanufacturing Vanguard Pilot and S3 Platform
- Inter-regional cooperation between AFIL and ACMM: synergies have been developed with the AFIL's working group focused on "De and re- manufacturing" topic.
- ETA Blades, one of the coordinators company of ACMM's working group, visited the Lombardy living lab which is dealing with the same topic. ETA Blades also sent composite materials to be analyzed from the Living Lab;
- Stakeholders from Lombardy and AURA had approved an H2020 project
- Identification of funding for Pilot Plants: AFIL, ACMM, Plastipolis, PTP and a Catalan Cluster applied to the Call Innosup 01- Call for Cluster facilitating new industrial value chains.

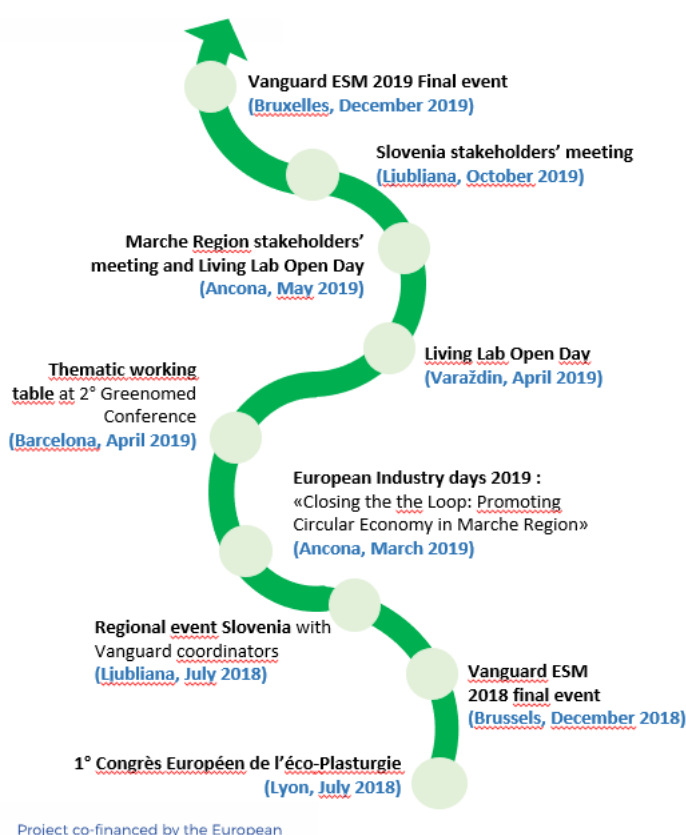


Figure 7. Circular Economy achievements

3.4. Bio-economy

The contribution to the Bio-economy mainly covered by CIE during the meeting with emphasizing the main cooperation around the topic with involved regions of Lombardy, Central Macedonia and Slovenia in order to exploit agro-based residuals a new demo-case in Vanguard Pilot plant. The main cooperation around the bio-economy topic that has been covered during the project investigation are as follow:

- Exploitation of agro-energy industries' residuals and by-products to produce feed and food ingredients through microalgae cultivation

- Algae treatment of biogas digestate
- Exploitation of wineries' biomass residuals to energy production
- Exploitation of ginning and spinning mills' solid waste to energy production

Considering the main contribution to this topic with GREENOMED methodology implementation, the achieved results and outcomes of the project obtained among different events, conferences and meetings for testing and exploiting the tools throughout the designed methodology. Here below are list of some of the achieved results:

- 18 intermediaries and stakeholders have involved during the project
- 3 regional working groups activated
- Connections established with LGCA (*Lombardy Green Chemistry Association*)
- Synergies identified on the topic of «Microalgae Production»
- Central Macedonia is discussing its involvement in the Bio-economy Vanguard Pilot

The map of all the related contribution meeting around the Bio-economy topic has been depict in figure 8 which showing all the activities that has been exploited toward the implementation of designed methodology in GREENOMED project.

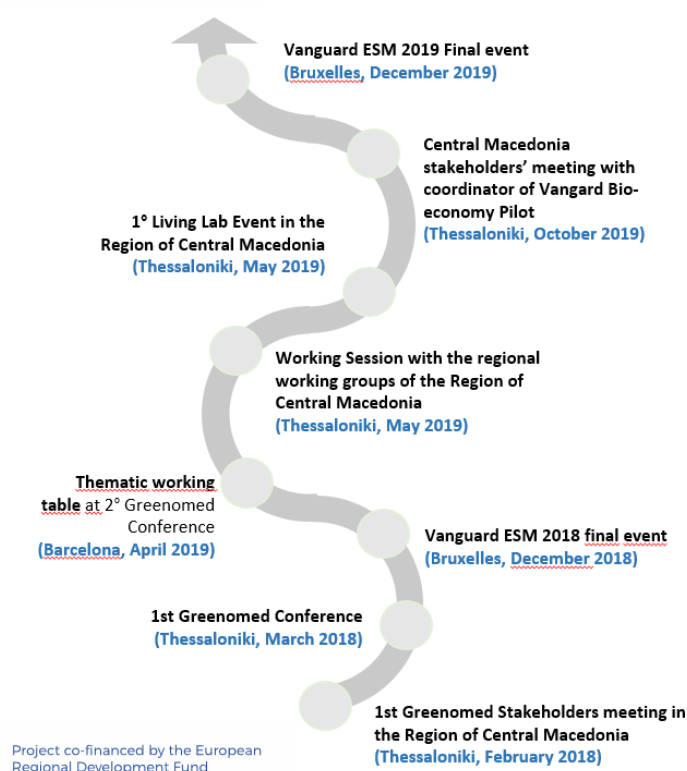


Figure 8. Bio-economy achievements

4. Experienced challenges by Testing Regions

After the discussion on the achieved results, in the second panel LP Giacomo Copani pointed out the challenges and experiences that each partner has faced during the GREENOMED identification and design and testing the methodology. These challenges are categorised and detailed based on Regional and Inter-regional level in order to emphasized the different level of activities and contribution that partners have been carried out. The experienced challenges at the Regional level are realized as follow:

- **Difficulty to identify strategic topics**
 - *Too many actors/strategic priorities in the Region*
 - *S3 strategy not mature yet*
 - *Long process which depends on commitment and stakeholders' participation*
- **Difficulty to engage companies** (both in advanced and emerging Regions)
 - *Unclear long-term benefit vs request of time*
 - *Lack of institutional "push"*
 - *Too many fragmented initiatives*
- **Lack of strategic thinking of the ecosystems**
 - *Not enough structured innovation governance system (Clusters)*
 - *Manufacturing community still existing*
 - *Difficult to identify and engage "pioneers"*
- **Low TRL level of existing facilities in the Regions**
 - *To test, demonstrate and consolidate living labs*

At Inter-regional level partners mainly faced challenges regarding the differences among Clusters to reach in case of size of the organization and the sectoral vs regional and policy level. Another difficulty of inter-regional level was related to the involving the stakeholders in international cooperation where the contribution of strong credible organization was needed even though all their expenses could have been covered. Matching complementarities for very well prepared clusters and intermediaries which considered a long process that is due to the lack of common inter-regional strategic approach at political level which brought difficulties at this level. However, there are some other difficulties during the GREENOMED project in order to provide short and long term results which this strategic process is long especially for the SMEs. Also, the discontinuity of the activities which with finishing the project the possible continuation will be stopped.

At the end of the meeting some recommendations are suggested for institutional support from regions at GREENOMED project that experienced the challenges. Thus, the recommendations presented by GC at strategical and political level to facilitate the actions and communication among the clusters and stakeholders and initiatives in order to elaborate strategic road mapping. It has also indicated that coordinating follow-up among other project partners in order to aggregate and broadening the level of integration. There are already some examples to be implemented which are needed funding to be operated in order to engage other companies.

Supporting the small clusters in order to better consolidate and internationally operate their communications were also one of the operative recommendations.

Here is the detailed list of recommendations at strategic level:

1. Consider GREENOMED emerging topics while shaping the Work Programmes
2. Actions form Regional Authorities to commit stakeholders and coordinate their participation to strategic initiatives (i.e. Vanguard, S3 Initiative, ...)
3. Institutional promotions of actions to increase cultural level of companies (through Clusters and intermediaries)
4. Start an inter-regional European strategic road mapping approach per value chains
5. Promote coordinated follow-up actions aggregating multiple regional projects/initiatives for capitalization

At the operative level:

6. Funds to «start building» and prove first results to motivate stakeholder in a clear inter-regional cooperation framework
7. Easily accessible instruments for inter-regional cooperation of companies coordinated by Clusters (funds for business missions, matchmaking events, meetings, ...) - in a clear inter-regional cooperation framework
8. Support Clusters to consolidate organization and operate internationally

The final conference of GREENOMED ended up with good achievements of results from partners contribution of adopting the methodology by testing and transferring it through their regions regarding the sustainable and Green Manufacturing.

5. Other contribution on Policy Transfer Event

Beside the final conference in Milan partners Plastipolis, TPLJ, PTP and i-BEC separately organized Policy Transfer Event in Auvergne-Rhône-Alpes, Slovenia and Central Macedonia region due to the fact that their Regional Authority did not attend to the Final GREENOMED Conference in Milan.

Plastipolis organised a transfer session to Auvergne-Rhône-Alpes region on 4th of September 2019, this meeting also occurred by phone to make the regional representative in Brussels participate in the meeting. Its participants were:

- Elisabetta SCHENA, Project manager - Industry of the future and clusters' internationalisation and Economic Development Department
- Florence CHARNAY – Project Manager - Research and Innovation Department
- Julien BALSEN – Project Manager - Environment, Climate, Research and Innovation Department – Brussels Delegation

The meeting objective was to explain the methodology and how Plastipolis used it in Auvergne-Rhône-Alpes Region to build a demo case in smart plastics, in relation with the living lab of Ampere Lab (University of Lyon/INSA).

After achieving significant results at the end of the project, on 19th November 2010, a formal Transfer to policymakers meeting took place at the Government office for development and European cohesion policy. The results of the TPLJs work on two business cases in Slovenia were

presented and the possibility of the placement of the cases in an international setting was presented.

The first Slovenian demo case consists in the deployment of depolymerization techniques to re-use sportswear polyester in the production process. Process is based on secondary raw material inclusion in the production process (no virgin material) and non-wearable textile waste (wool-cotton-polyester textile waste blends) as a valuable source for new chemical feedstock.

The second identified demo case is a project that will focus on the cross-regional demonstration of digital twins to enable flexible robotic cells in plastic injection moulding value chains across automotive and white goods sectors.

On 19th of December 2019, PTP organized their Policy Transfer event in Slovenia with 25 participants mainly from members of chamber of regional economic development. PTP as a member of this board used this event to present the project, more precisely its methodology; the purpose was to intrigue companies to use this internationalization potential to find appropriate partners abroad as well as to provide information of potential solutions they apply in their manufacturing production processes, that are either tailor made or represent unique technology, that is not yet widely commercialized and could be a good practice which could represent “use case” potential for Vanguard Initiative. The meeting was located in a good environment to meet pillars and industry representatives who influence regional ecosystem and yet are interested with private capital to present serious interest for green-tech solution.

The meeting had positive achievement for PTP in case of building new connection and relationship with the companies for further collaboration. The mayor Muska Sobota however, said “we need more of such projects where regional companies could gain from KTT”.



Figure 9. PTP Political Transfer event in Slovenia

On 14th of October 2019 a GREENOMED Political Informative-Training Course took place in Thessaloniki Greece. It was hosted at the IBEC premises and was organized by an external contractor. The event itself was attended by 4 representatives of the Region of Central Macedonia and 1 representative of the Region of Western Macedonia. The session was to present the project’s achievements, the outcome descriptions throughout its lifecycle and the ideas generated along with the implementation of ideas and possibilities that were spawned during the project’s

life and applicable well beyond the project's lifespan. A further discussion about the capability of the Region of Central Macedonia to promote and support the development of pilot plants also took place. Pr. Zalidis, Scientific Director of i-BEC stated that common ground with other Vanguard regions has been detected and that i-BEC could act as a moderator in order to establish synergies with them in the near future. All the participants argued that the proposed pilot plants created throughout the GREENOMED Project are innovative and capable to bring several economic and environmental benefits for the Region of Central Macedonia. Moreover, Dr Abas, alderman of the Region of Western Macedonia in the division of Rural Development, expressed its willingness to transfer the GREENOMED methodology to relevant stakeholders of its region since he believes that the tools and services produced through GREENOMED project are applicable and of great value for its region as well.

6. ANNEX 1

Agenda

- 10:00 – Registration
- 10:30 – Welcome from Lombardy Region
- 10:45 – Introduction and meeting agenda
- 10:50 – Insights from Programme MED
- 11:00 – Interreg MED Green Growth community and the role of green manufacturing
- 11:15 – Greenomed background: the Vanguard Initiative
- 11:35 – Greenomed project presentation and achievements
- 12:00 – Q&A session
- 12:30 – Networking lunch
- 14:00 – Presentation of the Greenomed cooperation methodology
- 14:15 – GREENOMED results: pilot projects, opportunities and challenges
- 15:00 – Q&A session
- 15:30 – Exploring opportunities for capitalization and inter-regional cooperation
- 16:30 – Wrap-up and conclusions
- 17:00 – End of meeting

