

### Water and Environment Support

in the ENI Southern Neighbourhood region



# Regional Study Visit & Workshop on decentralized management of organic waste in the Mediterranean

**Activity number: RE-6-REG/ST** 

### **STUDY VISIT & WORKSHOP REPORT**

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	Study visit and Workshop Report (RE-6-REG/ST)		





## WATER AND ENVIRONMENT SUPPORT IN THE ENI SOUTHERN NEIGHBOURHOOD REGION

The "Water and Environment Support (WES) in the ENI Neighbourhood South Region" project is a regional technical support project funded by the European Neighbourhood Instrument (ENI South). WES aims to protect the natural resources in the Mediterranean context and to improve the management of scarce water resources in the region. WES mainly aims to solve the problems linked to pollution prevention and the rational use of water.

WES builds on previous similar regional projects funded by the European Union (Horizon 2020 CB/MEP, SWIM SM, SWIM-H2020 SM) and strives to create a supportive environment and increase capacity all stakeholders in the partner countries (PCs).

The WES Project Countries are Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Libya, Palestine, Syria and Tunisia. However, in order to ensure the coherence and effectiveness of EU funding or to promote regional cooperation, the eligibility of specific actions can be extended to neighbouring countries in the Southern Neighbourhood region.

#### DISCLAIMER:

This publication was produced with the financial support of the European Union. Its contents are the sole responsibility of the WES Project and do not necessarily reflect the views of the European Union.





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#### **ABBREVIATIONS**

MENA	Middle Eastern and North Africa	
EU	European Union	
ENI	European Neighbourhood Instrument	
NGOs	Non-governmental organizations	
PCs	Partner Countries	
P2P	Peer-to-Peer	
LAS	League of Arab States	
UNEP/MAP	United Nations Environment Program/Mediterranean Action Plan	
UfM	Union for the Mediterranean	
WES	Water and Environment Support	

#### 1 GENERAL INTRODUCTION

The waste management field in Middle Eastern and North African (MENA) countries suffers from multiple drawbacks and chronic problems that require strategic solutions and collaboration among various institutions. Due to a lack of data, a financial deficit, limited economic resources for the municipalities, and singular treatment processes, until recently, waste has been dealt with as garbage that needs to be disposed of, whereas, in an increasing number of countries in the Mediterranean, waste now represents a substantial economic resource and an important source of materials that can be reinserted into the industrial sector. The rapid population growth and severe water scarcity in the region amplify the need to set up efficient waste management systems.

Organic waste is a major environmental issue in the MENA region, with a significant impact on the environment, public health, and the economy. Composting, biogas generation, recycling, and education and awareness campaigns are just a few examples of decentralized actions that can be used to manage organic waste effectively. By adopting these strategies, individuals, communities, and businesses can contribute to a cleaner and healthier environment for all.

The EU and all regional frameworks (UfM, UNEP/MAP and LAS) recognize the importance of addressing organic and food waste in the Mediterranean region and the countries of the region have committed to taking action to promote sustainable waste management practices. The WES regional activity on Decentralized management of organic waste in the Mediterranean (combining the Peer-to-Peer process and a Study Visit with workshop sessions) therefore, comes to strengthen and complement these regional efforts in the Mediterranean and support the WES Partner Countries via technical support and capacity-building to implement and adopt effective measures at national and local level to strengthen and develop decentralized management of organic waste.

#### 2 OBJECTIVES OF THE STUDY VISIT & WORKSHOP

This WES regional activity is dedicated to supporting regional efforts towards improving the organic waste management through identification and presentation of technologies and schemes already tested on the ground in the EU and Mediterranean region and suitable to be transferred in the MENA region. It is intended to inform about how to maximize the sustainability of organic waste management, to demonstrate design/processes/operations leading to reductions in the environmental impact of organic waste and to demonstrate good/best practice in the environmental performance of site activities. It combines a Peer-to-Peer process and a Study Visit.

The first virtual P2P meeting was organized on the 2nd of October 2023 and aimed at introducing all the participants (Peers, Experts, etc.) and consolidating the workplan, roles and expectations. Following this virtual meeting, a survey was sent to all Peers in order to better understand how organic waste are managed in their respective country and what they were expecting from the study visit. Based on the answers received by the Peers, the structure of the study visit was adapted accordingly.

The 3-day regional activity held in Cagliari, Italy on the 24<sup>th</sup> ,25<sup>th</sup> and 26<sup>th</sup> of October 2023 was embedded within a regional Peer-to-peer activity, which involves direct exchange of experiences between and among Peers from relevant institutions in the beneficiary countries and beyond in order







to share knowledge, expertise and solutions in the organic waste sector, as well as to boost South-South cooperation and to build lasting relations and exchanges.

In order to increase the efficiency and impact of EU funded projects, WES partnered and capitalised on the work achieved under other relevant EU funded projects and particularly the ENI CBC MED Med4Waste project<sup>1</sup>, and brought together policymakers (ministry officials), local authorities, the private sector, NGOs, researchers and other stakeholders. The first two days were also hybrid to facilitate remote participation and in fact some 130 people from 23 countries participated.

Sardinia was chosen as a host region that has a lot to show for itself in terms of its progress on the topic of municipal waste management in the last years.

#### Why in Sardinia?

The Sardinia region is an Italian island with typical Mediterranean food habits and weather conditions, very similar to those of the MENA countries. It is also an important tourist destination. In 2000, Sardinia was Italy's worst-performing region in waste management with a separate collection rate of 3.8%. Since then, the situation radically changed, thanks to the decision of setting up a Regional Programme for organic waste within its Waste Management Plan in 2004. Ten years later, Sardinia was the best performing island in the Mediterranean and at the forefront of Italian and European regions with separate collection rate reaching 60% and waste generation per capita decreasing consistently (moving from 520 kg to 443 kg and residual waste moving from 500 kg to 176 kg per inhabitant). Nowadays, its waste management performances are still improving.

The present document reports on the 3-day regional study visit and workshop, focusing on the experience of the WES sponsored participants who were also the Peers following the related WES P2P process.

#### 3 EXPECTED RESULTS OF THE STUDY VISIT

By participating in the study visit and workshop, the participants:

- Were introduced to an integrated approach to sustainable management of organic waste at local level (decentralized) based on EU standards and applicable best practices.
- Were informed of the successful and efficient waste management practices identified by Med4Waste and developed by 5 other ENI CBC MED projects.
- Visited organic waste management facilities using technology which is effective, relevant and implementable in the WES PCs.
- Interacted directly with the local policymakers, entrepreneurs, NGOs and the local community.

In general, the expected results were met to a satisfactory degree as the report will show in the following sections.

<sup>&</sup>lt;sup>1</sup> Med4Waste is a 2-year-long capitalisation project funded by the ENI CBC MED programme on the priority of waste management. The objective of the Med4Waste project is to facilitate new governance models for integrated and efficient urban waste management policies across the Mediterranean region, with particular emphasis on organic waste and circular economy through adapting waste management plans, policies and other management actions and regulatory drivers



This Project is funded by the European Union

## 4 KEY ELEMENTS OF THE STUDY VISIT & WORKSHOP IMPLEMENTATION

No. of presentations on examples/case studies (sharing of experiences, good practices, etc.)	6	Sardinian Regional Context and policies, DECOST project, REUSEMED project, CLIMA project, Med4Waste capitalized projects' know-how, MedCities, Mahdia Municipality
No. of international speakers from EU countries	20	Belgium, France, Greece, Italy, Spain
No. of international speakers from non-EU countries	2	Tunisia, Jordan
No. of training-oriented presentations (on concepts, methodologies, etc.)	7	7 presentations
No. of interactive/participatory activities (open discussions, brainstorming sessions)	3	3 guided visits to Arborea municipal waste treatment plant, Esposito Group's Ecocentro in Quartu Sant'Elena and to Visit of Ecocentro di Viale Sant'Elia
No. of in-person Trainees	36	Algeria, Egypt, Italy, Jordan, Lebanon, Morocco, Palestine, Spain, Tunisia
No. of remote participants	140	This regional WES activity was also a capitalisation event of Med4Waste. They widely circulated a link for other interested parties to follow the workshop sessions of day 1 and 2.

The program of the Study Visit was elaborated based on the discussions, consultations and outcomes of the P2P meeting and the results of the survey.

The aim of the Study Visit was to showcase the success story of the Sardinia region in (organic) waste management, the recent developments and innovative approaches while promoting experience exchange among PCs. The visit(s) demonstrated simple technological solutions already tested on the ground in the EU/Mediterranean region and suitable to be transferred in the MENA region.

The field visits were hosted by the Sardinia region, Italy, ACR+ member.

- 1. **The first day** was dedicated to a presentation of the Sardinian strategy and its implementation both by the Sardinian officials as well as by Mr. Marco Ricci. It was followed by the visit of the industrial composting plant of Arborea.
- 2. The second day was dedicated, in the morning, to the presentation of the Med4waste project results and best practices; the afternoon was dedicated to the visit of the Posidonia recycling plant managed by the Esposito group, followed by the visit of Sant Elia Ecocentro.





3. The third day consisted in a half-day interactive workshop on organic waste management where, after a wrap-up of the lessons learnt during the visits, the Peers had the chance to discuss barriers, constraints and possible solutions.

The complete agenda of the three days can be found in Annex.

The site/field visits that took place were as described below.

#### 24th October: Arborea municipal waste and treatment plant

#### Località Masangionis, Arborea





The Oristano Provincial Industrial Consortium (Cipor) has been operating since the 1960s and promotes the location and development of businesses in the Oristano industrial agglomeration. Cipor also oversees the management of the Arborea municipal solid waste sorting and treatment plant, built by the entity and operational since the beginning of 2012, in which all municipalities in the province of Oristano confer.

The Arborea Plant includes composting lines and an anaerobic digestion section, which also has an important impact on the environment, because in addition to higher quality compost, it also allows the production of enough biogas to ensure the production of electricity needed to power the entire Masangionis waste treatment plant.

ARBOREA COMPOST is distributed under the C.I.C. (Consorzio Italiano Compostatori) brand and is derived exclusively from the organic fraction of MSW from municipal door-to-door collections and green waste, going to constitute a concrete example of circular economy. Recently, the soil conditioner obtained from the composting process of the organic waste produced by the Industrial Consortium's Waste Treatment Plant has also obtained Organic Product Certification with the name of COMPOST ARBOREA BIO, registered in the Register of Fertilizers for Organic Use as it complies with the specifications dictated by Legislative Decree 75/2010.

This particular certification also allows the compost to meet the needs of the increasing number of farms that have chosen to operate according to the rules of organic farming.





#### 25<sup>th</sup> October: Esposito Group's Ecocenter

#### S.S. 554 km 17,870, Quartu Sant'Elena





The Esposito Group's Ecocenter in Quartu Sant'Elena is a manifestation of innovation in organic waste management and coastal environmental care. This facility excels not only in treating traditional street sweeping residues but also focuses on waste collected at beaches, particularly in the recovery and treatment of organic waste, such as seaweed and posidonia. This initiative is a model of technological innovation and sustainability, deeply rooted in local policies for the protection of the marine environment. The plant, with a washing technology, processes beached waste (particularly posidonia) to recover every single grain of sand to be returned to the beach of origin and to recover the organic fraction present, making it suitable for re-use in agriculture or green building. It can process about 100 tons per day of waste, recovering more than 70 percent of high-quality, CE-certified raw materials that comply with European Union environmental and technical industry standards.

Beach litter consists mainly of an organic fraction (algae, aquatic plants, posidonia), a mineral fraction (sand, shells) and a fraction of anthropogenic waste (plastics, microplastics, etc.). In affected areas, quantities can be on the order of 600 tons per km of beach. The sand content is very high (up to more than 60 percent by weight): once separated and washed through the wet process at the plant, the sand can be returned to the beach of origin (free of organic matter and waste).

The advanced technology of Quartu Sant'Elena plant, the heart of which is the washing unit, enables the transfer of pollutants from the waste to the water. At the same time, the separation of organic and inorganic fractions takes place, which are sent to two separate reuse/recovery chains, and the removal of plastics and unwanted fractions:

- the washed sand obtained is of high quality, free of contaminants and unwanted fractions, making
  it particularly suitable to be returned to the beach of origin;
- the washed organic fraction, consisting mainly of posidonia, undergoes a dewatering treatment,
   which allows it to be reused in agriculture and/or for green building.





#### 25th October: Ecocentro Sant'Elia

#### Via Borgo Sant'Elia, Cagliari





The Municipal Collection Center (Italian Ecocenter) located in Via Sant'Elia in Cagliari is an excellence in terms of waste management and environmental sustainability, perfectly integrated into local policies aimed at increasing separate waste collection and promoting environmental awareness. This MCC is distinguished by several innovative aspects and special projects that help make Cagliari a city at the forefront in this area. First, the Ecocenter offers a wide range of services, as a tipping point for traditional recycling collection to more creative and inclusive solutions. The flea market housed within it is an example of circular economy, where items in good condition can be reused, thus reducing waste production. This project not only promotes community spirit, but also helps reduce the load on municipal solid waste.

Another distinctive aspect is the commitment to environmental sustainability. The Ecocenter promotes tree planting and the creation of green spaces, which not only improve the urban environment but also help mitigate the impact of carbon emissions. The Ecocenter has thus become a focal point for promoting environment-related initiatives, actively involving the local community in caring for the city's ecosystem.

In addition, the Ecocenter serves as a venue for environmental awareness activities, offering information on proper waste disposal and reducing resource consumption. This environmental education is key to ensuring long-term community involvement in promoting sustainability. In summary, the Ecocenter on Sant'Elia Street is more than just a waste collection center; it is a pillar of Cagliari's local policies for environmental sustainability and a place of innovation where recycling collection merges with active community participation, promoting the creation of a cleaner, more sustainable environment.



#### 5 PROFILE OF THE PARICIPANTS

In total, 36 participants attended the regional study visit and workshop coming from government agencies, ministries, NGOs, the private sector, academia and research institutes and even the media, dealing with organic waste management in their respective countries.

The graphs below indicate the representation of trainees per country and per institution.

#### **Study Visit & Workshop Demographics**

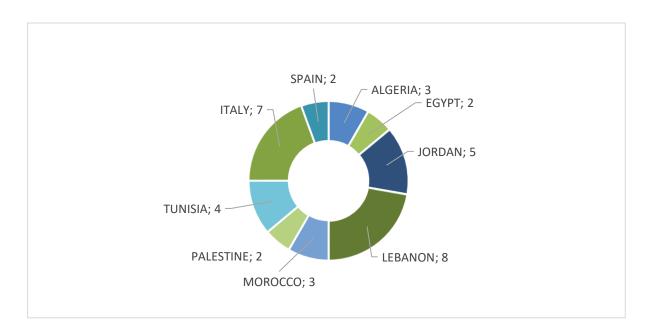


FIGURE 5-1: REPRESENTATION OF TRAINEES PER COUNTRY

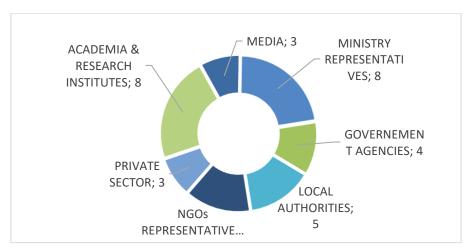


FIGURE 5-2: REPRESENTATION OF TRAINEES PER TYPE OF INSTITUTION



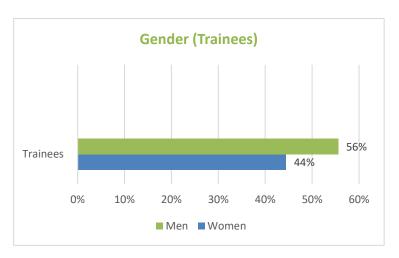


The participants of this 3 days study visit were composed of a mix of stakeholders, including local, regional and national authorities, private companies, academics and international experts.

All attendees participated in a very lively and engaged way.

#### **6 STATISTICS GENDER AND YOUTH**

In terms of gender balance, the study visit & workshop was within the WES overall high target of 50% +/-10% (56% of the participants were men and 44% were women, and 59% of the trainers were men and 41% were women), while 17% of the peers were between the age group 18-30.



Gender (Experts/Speakers/WES Team/Interpreters/Technicians)

59%

41%

0% 10% 20% 30% 40% 50% 60% 70%

Men Women

FIGURE 6-1: GENDER (TRAINEES)

FIGURE 6-2: GENDER (EXPERTS/SPEAKERS/WES TEAM/INTERPRETERS)

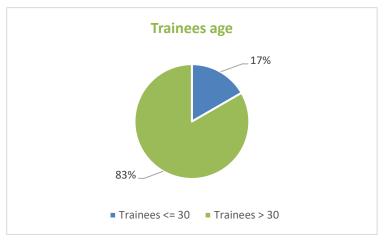




FIGURE 6-3: TRAINEES – AGE

FIGURE 6-4: YOUNG TRAINEES (18-30) - GENDER





#### 7 EVALUATION OF THE STUDY VISIT & WORKSHOP

#### 7.1 RESULTS OF THE EVALUATION QUESTIONNAIRE

#### A. Organisational, administrative and planning issues before and during the event

The evaluation form was requested to be filled only by the WES participants (not the Med4Waste participants). 18 out of 20 WES participants filled out the evaluation questionnaire. The overall rating of the study visit & workshop was 3.5 out of 4, a very good satisfaction rating.

The following figures and tables summarise the feedback from the WES trainees.



FIGURE 7-1: APPROPRIATE HANDLING OF INVITATIONS, VISA SUPPORT, INFO SHARING AND SMOOTHING OBSTACLES (A.1)



FIGURE 7-3: PROVISION OF SUPPORT (IF REQUESTED) FOR PARTICIPANTS'
PREPARATION FOR THE EVENT (A.3)



FIGURE 7-2: EFFICIENT LOGISTICS: ACCOMMODATION, TRANSPORTATION, LOCATION OF VENUE AND INTERPRETATION (A.2)

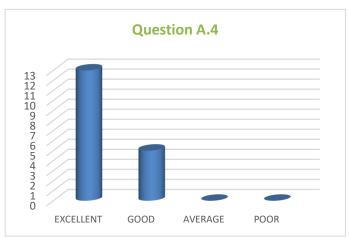


FIGURE 7-4: EFFICIENT AND EFFECTIVE FOLLOW-UP OF PREPARATIONS AND PROGRESS TOWARDS THE EVENT (A.4)





FIGURE 7-5: FLOW OF PROGRAMME, HANDLING OF EMERGING NEEDS (A.5)



FIGURE 7-6: EVALUTION OF PRESENTATIONS (A.6)



FIGURE 7-7: CLARITY, COVERAGE AND SUFFICIENCY OF CONCEPTS, OBJECTIVES, ANTICIPATED OUTPUTS (A.7)



FIGURE 7-8: USEFULNESS OF THE DISTRIBUTED MATERIAL (A.8)

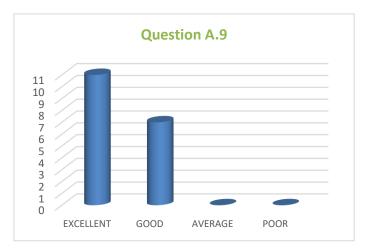


FIGURE 7-9: EFFICIENCY AND EFFECTIVENESS OF THE FACILITATION (A.9)





#### B. Feedback by participants:

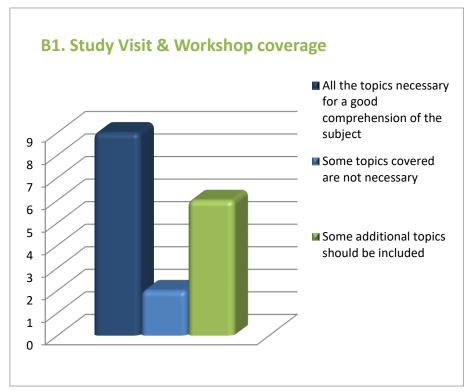


FIGURE 7-11: STUDY VISIT & WORKSHOP COVERAGE

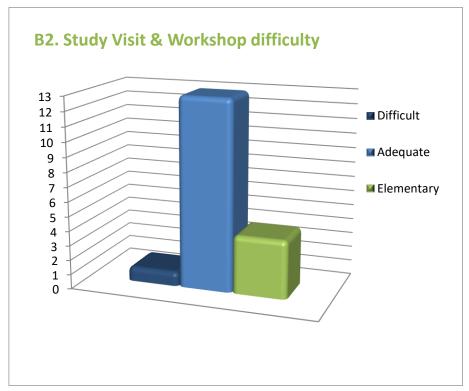


FIGURE 7-12: STUDY VISIT & WORKSHOP DIFFICULTY





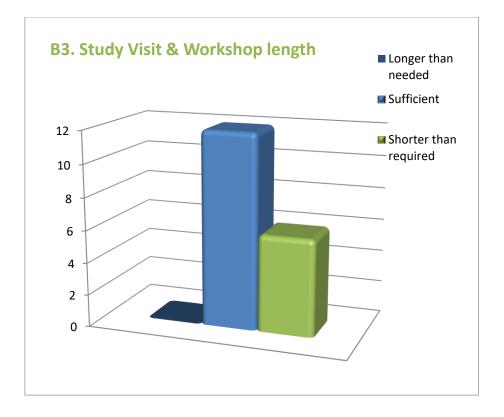


FIGURE 7-13: STUDY VISIT & WORKSHOP LENGTH

Statements made by the participants		
B4	What is the most valuable thing you learned during the study visit & workshop (knowledge or skills)?	
	4. The experience of the Posidonia recycling plant and the usage of Posidonia in beach clean-up	
	5. The obligation to start sorting at source and composting organic waste	
	6. The conditions for a good compost	
	7. The management model, composting and sand washing techniques	
	8. The management and law enforcement are the basis for success in implementing any policy or	
	strategy	
	9. The importance of rational, sustainable management of organic waste and the experience of the	
	city of Sardinia	
	10. Composting has to potential to fight desertification and compensate low quality of soil.	
	11. It is better to concentrate on small scale anaerobic digesters and to engage farmer in composting	
	projects.	
	12. Door-door collection is essential to collect biowaste besides giving incentives	



Statemen	ts made by the participants		
B5	How do you think that the current event will assist you in your future work on the subject?		
	Install composting lines in the communes where our NGO operates		
	2. Duplicate this experience in Algeria		
	3. Building on experience gained and cooperate with experts and fellow participants		
	4. Establish pilot project with my society		
	5. Transferring what we have seen here in Sardinia to our country with some modifications to suit our needs		
	6. I feel more informed to plan similar projects		
	7. Improving the existing organic waste facilities		
	8. Emphasize on improving compost quality for better marketing		
	9. Encourage private and municipalities to invest in organic waste		
	10. Support my commune in improving its selective sorting and composting system		
В6	Please indicate whether (and how) you could transfer part of the experience gained from the event to your colleagues in your country?		
	1. Yes, to the Waste control authorities		
	2. Sharing the gained knowledge in meetings or in a formal report		
	3. Sharing the literature of the event and brainstorming on how to apply the knowledge in our country.		
	<b>4.</b> The eco-center is a good practice that I can implement in my Municipality and convey recommendations.		
В7	What did you like most about this event?		
	1. The experience sharing between participants and sharing the results of different projects		
	2. The field visits		
	3. The moderation and the exchange		
	4. The reception facility for citizens		
	5. The location and the material shared		
	6. The ambiance		
B8	What needs to be improved?		
	Show a more advanced model for waste treatment and recycling		
	2. To increase the period of the event, it was too loaded		
	3. Include funding sources such as carbon credits to help decision-makers invest in the waste sector		
	4. Plan for more field visits		
	5. Present more on the experiences of the South countries		







#### C. Remarks by the trainers

A set of 9 criteria; B1-B9 (See table below) are assessed by the trainer(s). Please use either the qualitative descriptions used in Section A or open text, as appropriate.

B1	Efficient and effective performance and interaction by participants	
	<ul> <li>Very good interaction between participants, nearly all very interested and engaged in the discussion and exchanges.</li> </ul>	
B2	Efficient and effective cooperation and team spirit	
	<ul> <li>Team spirit and cooperation were present, among peers and trainers. Very good collaboration between WES experts/trainers and Med4Waste experts.</li> </ul>	
В3	Level of achievement of planned objectives	
	<ul> <li>Were introduced to an integrated approach to sustainable management of organic waste at local level (decentralized) based on EU standards and applicable best practices. Achieved</li> </ul>	
	<ul> <li>Were informed of the successful and efficient waste management practices identified by Med4Waste and developed by 5 other ENI CBC MED projects. Achieved</li> </ul>	
	<ul> <li>Visited organic waste management facilities using technology which is effective, relevant and implementable in the WES PCs. Achieved</li> </ul>	
	<ul> <li>Interacted directly with the local policymakers, entrepreneurs, NGOs and the local community. Achieved</li> </ul>	
B4	Did the event contribute to helping participants practice skills or gain knowledge related to course concepts?  Experts are convinced that events in presence and site visits are of added value as it allows participants to meet with peers on site (waste management plant manager, local civil servants (in our case from Cagliari municipality and Sardinia Region)) and discuss concrete solutions/problems with them.	
B5	What worked well during the event  Everything: all site visits and the workshop of the third day.	
В6	What didn't work well and why Nothing.	
В7	What components/concepts did participants seem to understand well	
	Participants had a good knowledge of all technical aspects of waste management in general.	
В8	Were there any components/concepts that participants appeared to not understand	
	Participants still have difficulties to understand what are the true obstacles (i.e. no true fiscal competence of local authorities and lack of governance /too top-down governance).	
В9	What aspects of the event could be improved and what to be kept	
	Aspects to keep: stakeholder groups represented.	
	Aspects to improve: even more strict criteria for the selection of some trainees.	





#### 8 OUTCOMES OF THE WORKSHOP ON DAY THREE

As already experienced in previous "in person" study visits, this one, which has a particularly rich agenda, was also an intense experience: getting to know the peers; engage all of them; encourage the exchange of views and expertise; openly discuss challenges and barriers to implementation; and learn from concrete experiences (the site visits).

The workshop held on the third day was divided in two sessions and a summary of the discussions is provided below.

#### The first one was dedicated to governance, financing and barriers.

All participants agreed that without the right governance at local level, only low level of achievement will be possible. The lack of municipal financial autonomy leads to a system where municipalities receive money through a distribution decided at national level, regardless of their performance. The absence or very low level of landfill taxes was identified as the first barrier to achieve sustainable waste management. Contracts with private operators favour disposal: it is more interesting for them to just landfill, while in many cases, operators are also the owners of the landfills. In addition to that, in many countries, using open dumps (illegal landfill) is rarely, if ever punished. Another barrier is the fact that the 'polluter pays principle' is not really implemented; waste producers (citizens and enterprises) are usually not obliged to pay for the management of what they produced or at least, if they are obliged, there is no efficient tax collection, which means that at the end of the journey there is no cost recovery for municipalities. It was also said that citizens have lost trust in public authorities: after many years of promising a sustainable management of waste, it ends up in landfills at the end. Another common problem of trust concerns the quality of compost (organic stream).

The Sardinian case showed clearly that by putting the right elements in place and by phasing correctly the steps to be followed, it is possible to achieve good results in a relatively short period of time (10/15 years in the case of Sardinia).

#### - The second session was dedicated to the possible opportunities.

The following were recorded:

For sure, municipalities can always rely on voluntary participation. An interesting experience/business model is working quite well in Lebanon with drop-off centers linked to a kind of PAYT system.

It could also be interesting to use the community drivers: religion / politics / key influencers / feeling proud of its community, competition among communes. A better coordination between local players and organising operators in bigger structures could also help.

A better control of residual waste disposal and a clarification on how much it costs (currently, it is by ton but also by number of inhabitants) is certainly a good start. A drop-off center that keeps track of quantities/volumes and controls the billing would be a solution. Moreover, it is necessary to facilitate PPP or private initiatives by reducing the administrative burdens.

After the Study Visit, the P2P process is continuing since Peers will be invited to another virtual meeting at the beginning of 2024 and possibly to draft a common declaration of needs and constraints

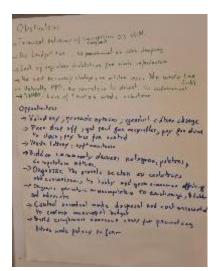




regarding organic waste management in South Mediterranean countries, to be useful for decision-makers and international donors.











#### 9 CONCLUDING REMARKS & OVERALL ASSEMENT

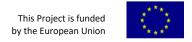
The three intense days of visits, presentations and discussions were fruitful in sharing already well-established practices in Europe, in exchanging on recurrent challenges in the WES PCs and possible replicability of solutions. Overall, this regional activity met its objectives successfully and was rated well by the participants. Resources permitting, the design and implementation of such regional activities is encouraged.

In terms of content (decentralised management of organic waste), the main take-home messages that can function as conclusions are as follows:

- The most important thing is to have a good governance and legal framework on municipal waste management.
- In order to have efficient and sustainable local solutions, local authorities must be given fiscal competences and control over their budgets.
- Sorting is the first step to be done as it allows to quickly get a better quality of waste fractions.
- In order to make sorting a must, local authorities have to implement economic incentives towards waste producers.
- Door-to-door and selective collection schemes have to be thought considering the local context.
- Quality control and certification of compost are key in order to gain the trust of end users (farmers).

Raising public awareness on the need to manage the organic fraction of waste is an important piece of the puzzle; campaigns need to be holistic, closing the loop of organic matter by connecting organic waste management with loss of biodiversity and land desertification increase in the MENA region (and not only!).





#### **10 ANNEXES**

#### 10.1 AGENDA

# "Decentralized management of municipal organic waste in the Mediterranean"

Cagliari (Sardinia), Italy, 24-26 October 2023

Tuesday 24 <sup>th</sup> October 2023			
Registration/sign-in starts at 08.30			
09.00-09.40	▶ Welcome addresses & opening remarks	<ul> <li>Marco Porcu, Assessore della Difesa dell'Ambiente, Sardinia Region</li> <li>Alessandra Sensi, Head of Sector, Environment and Blue Economy, Union for the Mediterranean (UfM)</li> <li>Silvia Zedda, Head of the Authorizing Unit, Managing Authority of ENI CBC Med Programme, Autonomous Region of Sardinia</li> <li>Anis Ismail, Key Environment Expert, WES</li> <li>Mercè Boy Roura, Coordinator of the Governance for Sustainability Group, BETA Technological Center (UVic-UCC) and Anastasia Roniotes, Head Officer, MIO-ECSDE</li> </ul>	
09.40-10.00	<ul> <li>Overview of the 3-day event:         <ul> <li>About the WES Study Visit and P2P process in a nutshell</li> <li>The Med4Waste capitalization actions to promote a Mediterranean dialogue for sustainable waste management governance: an overview</li> </ul> </li> </ul>	<ul> <li>Francoise Bonnet, Technical Coordinator – Senior Material Resource Management Expert - WES Project</li> <li>Mercè Boy Roura, Med4Waste Coordinator, BETA Technological Center (UVic-UCC)</li> </ul>	
10.00-10.30	► EU and Mediterranean policy context on waste management and circular economy Q&A	▶ <b>Jean-Benoit Bel,</b> Solid Waste Management Expert- WES Project	
10.30-11.00	Coffee break		
11.00-11.45	Sardinian Regional Context and policies (including regional waste management plan, fiscal incentives, infrastructure development, green public procurement)  Presentations and Q&A throughout the session	<ul> <li>Gianluca Cocco, Director of the Environmental Sustainability, Strategic Assessment and Information Systems Service, Sardinia Region</li> <li>Salvatore Pinna, Environmental Protection Department, General Directorate for the environment</li> </ul>	
11.45-12.15	Sneak preview of the Med4Waste Mediterranean policy recommendations for better waste management governance in the Mediterranean  Presentations and Q&A throughout the session	<ul> <li>Haris Paliogiannis, MIO-ECSDE</li> <li>Teresa Guerrero, Head of the Selective Collection Promotion Department, Catalan Waste Agency (ARC)</li> </ul>	
12.15-12.30	► Wrap up of the working session	Francoise Bonnet, Jean Benoit Bel, WES Project	







12.30-13.30	Lunch Break at the hotel for all participants		
14.00-16.30		13.30-19.00	
Med4Waste Participants (closing meeting):		WES Participants:	
Final project meeting with participation of <b>Laura Pinna</b> , Senior Officer JTS		Guided visit of Arborea municipal waste treatment plant Discussion with key local stakeholders:  - Davide Rullo, Vice Mayor of Arborea (welcome + collection system in Arborea)  - Gianluigi Carta, President of Oristano Province Industrial Consortium  - Pietro Giordano, LAORE use of compost	

Wednesday 25 <sup>th</sup> October 2023			
Registration/sig	gn-in starts at 08.30		
9.00-9.15	► Introduction to the 2 <sup>nd</sup> day agenda	Marco Ricci, Consorzio Italiano Compostatori	
9.1510.30	From policies to implementation: bottlenecks, challenges, opportunities  Interactive discussion	<ul> <li>Marco Ricci, Consorzio Italiano Compostatori</li> <li>Alessandro Guarracino, Councillor for technological innovation, environment and sea policies, Cagliari Municipality</li> </ul>	
10.30-11.00	Coffee break		
11.00-12.30	Mediterranean good practices and case studies for replication on decentralised organic waste management  Presentations and Q&A throughout the session	<ul> <li>Joan Colón Jordà, DECOST project</li> <li>Farah Dawoud, REUSEMED project</li> <li>Valerio Baldissara, CLIMA project</li> <li>Med4Waste capitalized projects' know-how: Lara Panzani, COSPE</li> <li>Mentoring and twinning experiences from the region:</li> <li>Noe Viedma Alonso, MedCities</li> <li>Zouhaier Baklouti, Mahdia Municipality, Tunisia</li> </ul>	
12.30-13.00	Wrap up of the working session and a few words about the afternoon visit(s)	<ul> <li>Francoise Bonnet, Jean Benoit Bel, WES Project</li> <li>Ezio Esposito, CEO Gruppo Esposito Ecocentro</li> </ul>	
13.00-14.00	Lunch Break at the hotel for all participants		
14.00-17.30	<ul> <li>WES and Med4Waste participants:         <ul> <li>Visit of Esposito Group's Ecocentro in Quartu Sant'Elena - treatment of organic waste extracted from street and beach sweeping; followed by</li> <li>Visit of Ecocentro di Viale Sant'Elia in Cagliari</li> </ul> </li> </ul>		







Thursday 26th October 2023 WES closing workshop (Med4Waste participants are welcome)			
Registration/sig	Registration/sign-in starts at 09.00		
09.30-11.00	- Reflections from the two previous days - Presentation of good practices or lessons to share by WES Peers		
	- What will Peers do once back home? (applicability of Study Visit experience - Commitments)		
11.00-11.30	Coffee break		
11.30-13.00	- What are the next steps/focus of the P2P process? - Evaluation of the Study Visit and Certificates Award		
	- Wrap up and Closing		
13.00-14.00	Lunch Break at the hotel for all participants		

#### **10.2 LIST OF PARTICIPANTS**

The list of participants is available upon request.

#### **10.3 STUDY VISIT & WORKSHOP MATERIAL**

The presentations and other material of the study visit & workshop can be downloaded from the project web page:

**ENG:** https://www.wes-med.eu/activities\_type/re-6-reg-st-p2p-decentralized-management-of-organic-waste/

**FR:** https://www.wes-med.eu/fr/activities\_type/re-6-reg-st-p2p-gestion-decentralisee-des-dechets-organiques/



