



**Ljubljana, Slovenia – Évora, Portugal Case Study**  
**TAIEX-EIR PEER-TO-PEER**  
**PROJECT**  
(2018-2019)

## **Introduction**

According to the EIR Portugal Report of 2017 and the Early Warning Report 2018, although Portugal had made improvements in waste management, reducing landfill and increasing recycling, to meet the new targets remains a challenge. The EIR report displays a slight increase in recycling and composting and a small shift away from incineration and landfilling. However, the latter remain above the EU average and Portugal is at risk of missing the 2020 targets.

Both documents mention deficiencies in the overall waste management which are preventing the country from achieving the EU targets. In particular, lack of incentives to follow the waste hierarchy such as landfill taxes, insufficient separate collection of waste, lack of coordination between the different administrative levels as well as the need to reinforce the extended producer responsibility system and a need for increasing communication with the citizens.

With this context, Évora, which is a historical and mainly rural area of the region of Alentejo (Portugal), is seeking methodologies to improve and upgrade its system and to identify necessary investments to ensure that their local waste management system is aiming for 10% landfilling or less and over 60% recycling.

Nowadays, waste collection in Évora is undertaken by two entities:

On the one hand, each of the 12 municipalities in Évora is individually responsible for the collection of the residual waste fraction and bulky waste in its municipality and has its own staff, vehicles, street sweeping equipment and garage with storage and parking space.

On the other hand, the public waste management company GESAMB (Gestão Ambiental e de Resíduos) serves all 12 municipalities and is responsible for the collection and treatment of the separately collected fractions as well as the treatment of residual waste delivered by the municipality and for the 7 eco-centres where both citizens and commerce can leave bulky waste for recycling.

In this case the TAIEX EIR PEER-TO-PEER is an interesting tool that can link municipalities with experienced experts. MWE matches municipalities from within its membership to enable this knowledge brokerage as well as assisting others.

## The project

### *1<sup>st</sup> phase (2018-2019): Identification, recommendations and first steps*

#### *Study visit (5-6<sup>th</sup> September 2018)*

On the launch of the project, the three municipal experts from Évora visited Ljubljana for 2 days. They learnt from the public waste management company SNAGA about how achieving high levels of selective collection and waste prevention and low levels of landfilling had been possible in this Slovenian municipality and its vicinity.



*Study visit to Ljubljana (Slovenia), 5-6<sup>th</sup> September 2018. On the left, demonstration of selective collection with underground unit. In the middle, SNAGA reuse and repair centre. On the right, separate collection of different types of hazardous waste in an eco-point.*



*Study visit to Ljubljana (Slovenia), 5-6<sup>th</sup> September 2018. On the left, R-CERO sorting plant. On the right, a SNAGA waste collection truck.*

During this visit the Portuguese delegation was able to witness the selective collection system established, the infrastructure used and the results achieved. And as a result, they could observe the following practices:

1. The **collection centres** had a high level of use because of an effective communication strategy and well-equipped facilities with excellent user access.
2. **Non-waste section** for bulky waste at the entrance to the collection centre.
3. High **waste prevention** thanks to participation.
4. **Repair and reuse** centre.
5. **Separate collection service** was planned taking into account factors such as number of bins per inhabitant or household, location, limited use of bins for residual waste, etc.
6. Implementation of **PAYT system** helped to increase quantity and quality of recyclables.
7. **Biowaste separate collection** system by using door-to-door collection.
8. **Hazardous waste collection** from households by using a mobile container system.

The Portuguese delegation identified good practices that may be implemented in Évora. In addition, they foresaw future assistance in the implementation of projects to tackle the upgrade of collection points and a separate collection system as well as support on investments.

#### ***Expert mission (17-21<sup>th</sup> September 2018)***

Shortly after, experts from SNAGA carried out a five-day expert mission in Évora to identify the barriers and opportunities in the implementation of improvements in the waste management system.

#### ***Day 1: Monday, 17<sup>th</sup> September 2018***

*Venue: GESAMB offices, Évora*

Professionals from GESAMB showed the Slovenian experts the separate waste collection system implemented at that time, as well as its results and challenges. In particular, they explained the system based on containers located on roads, collection on demand and projects to promote packaging collection. They also discussed the separate communication plan GESAMB and the municipality of Évora were carrying out. The Slovenian experts also visited the sorting and MBT facilities of GESAMB.



*Expert mission in Évora (Portugal), 17-21<sup>st</sup> September 2018. On the left, demonstration of the separate collection system. On the right, a waste collection centre for bulky waste.*

Day 2: Tuesday, 18<sup>th</sup> September 2018

*Venue: Municipalities of Reguengos de Monsaraz and Mourão*

The team travelled to the two most distant municipalities from Évora: Reguengos de Monsaraz and Mourão, both very small and with ancient town centres. The team visited the waste collection systems of both. Elements discussed were the waste collection system and details related to staff, operational model, communication to users and challenges such as the expected increase of separate collection rates and the implementation of biowaste collection.

On the way to the first destination, a regional collection point was visited. It was noted that signage was poor so citizens would have difficulty noticing it. Numbers of citizens visiting with bulky waste were very low, also possibly because of the great distance from each town. It was around 20km away from Évora. The experts advised improving the signage, increasing communication on the availability of the site with a possible event to bring citizens there. Also advised was creating more collection centres closer to each town.

As both municipalities were small, a distance of around 100km from Évora and in wine country, several sites were viewed with the purpose of identifying whether they would be suitable for local composting. This would avoid long distance travel of separately collected biowaste and reduce landfilling in Évora by that same quantity of biowaste.

They also visited the transfer stations and the ecocentre placed on Reguengos de Monsaraz.

Days 3, 4: 19<sup>th</sup> and 20<sup>th</sup> September 2018

*Venue: GESAMB offices, Évora*

Following the site visits, the Slovenian and Portuguese experts worked on developing an adapted waste management plan to overcome the barriers identified to achieving higher recycling rates and lower landfilling



rates. These two days included side meetings between the communications experts of Ljubljana, GESAMB and the municipality of Évora with the aim of drafting an outline programme for a future communications strategy to accompany the new local waste management strategy. The resulting decisions were transferred into a presentation for delivery at the workshop the following day.

The key adaptations identified were the need to create a denser network of bins along the entire road network in the residential areas, bringing them closer to each residence and therefore increasing the probability that correct sorting would take place. All twelve inner cities have beautiful, narrow, cobbled streets. Although wonderful to live in and visit, this represents a challenge for waste management in terms of bins and vehicles. The bins existing in Évora were underground however more were needed and the municipality would not give permits, either because of taking space from other amenities or as shopkeepers would use these collection points to discard their bulky waste, mostly cardboard. A solution proposed was to implement a dedicated service for shopkeepers who would be asked to put their bulky waste out after closing time perhaps twice a week and the collection trucks would collect this stream separately. Glass collection bins (bottle banks) were also missing in the centre which was also raised and included in the new strategy for local waste management.

GESAMB was very interested in rolling out separate collection of biowaste in the twelve municipalities under their responsibility. This was discussed at length with the Ljubljana experts and it was proposed that the smaller municipalities visited during the project could begin to collect biowaste separately and compost what they collected locally. This would require some investment to be in line with permit obligations but was possible as these municipalities owned the necessary land area to install a composting unit. These municipalities are also surrounded by agricultural land and vineyards giving them a local market for the compost. In terms of effective and efficient management of biowaste this is a more desirable method to transporting it as part or separate from the residual waste, 100km to the waste treatment plant and landfill. It was calculated that by collecting and treating biowaste separately, Évora had the possibility of reducing the quantity of its residual waste by between 40 and 60% according to the season.

Day 5: Friday, 21<sup>th</sup> September 2018: WORKSHOP

*Venue: CIMAC (Comunicadade Intermunicipal do Alentejo Central), Évora*

The final step in the knowledge brokerage project was the workshop to appraise all relevant municipal and regional waste management staff of the process undergone in the project and the plans for improvement. The event was very well attended, with the local person responsible for waste management from each of the twelve municipalities as well as several members from the regional waste management authority CIMAK, including their President.

The day started by underlining the importance of the Peer to Peer project for the region, the new challenges in the revised European waste management policy as well as a general picture of municipal waste management in Portugal, its evolution and main challenges.

Two Portuguese colleagues who had participated in the project, one from GESAMB and the other from the municipality of Évora, presented the analysis and findings of the project. They included their learnings from the visit to Ljubljana, their expert guide, and presented the adapted local waste management plan for Évora which was the result of the project. These proposals were discussed with the audience.

The colleagues from Ljubljana closed off the workshop with presentations of their local waste management system which follows a zero waste philosophy using Pay As You Throw (PAYT), the difficulties they faced and how they overcame them, local innovations in communications and how tying waste management and reuse to local culture was extremely effective in increasing quality and quantity of separate collection. The three Portuguese experts who had visited Ljubljana had already seen these presentations and in this way, the workshop enabled the information to be shared with all waste management staff in the region of Évora.

Following the end of the visit, the Slovenian peers reported on their findings and proposals for the best approach towards more sustainable waste management in Évora:

AREAS		STRENGTHENS/OPPORTUNITIES	WEAKNESSES
<b>Legislation</b>		National legislation is aligned with EU guidelines.	Municipal legislation is mainly focused on residual waste collection.
<b>Recycling services:</b>	<b>On streets</b>	Recycling collection system already established.	Lack of collection bins for separate collection of recyclables on the streets.
	<b>Collection centres and curbside bulky waste collection</b>	Collection centres and a curbside bulky waste collection system already established.	Not sufficiently equipped. Poor communication on use. Generally located far from users. Citizen's use very low.
<b>Economic instruments</b>		Well established for packaging waste with the EPR system	No transparent pricing scheme established for waste collection and treatment (the price is included in the water bill and is proportionate to water consumption).

<b>Will and motivation for improvements</b>	<p>Highly motivated policy and decision-makers.</p> <p>Highly motivated project managers and team members.</p> <p>High degree of willingness to adopt and implement changes.</p>	
---	--	--

*Strengthens and weaknesses of Évora region. Observations reflected on the expert mission report performed in September 2018.*

### First results

As a consequence, the experts from both countries identified essential modifications to the local waste management strategy to be implemented in the short and long-term. It was noted that investment in communication was as necessary as for the collection and treatment systems.

The conclusion of this TAIEX EIR PEER 2 PEER project was an initial plan with short and long-term goals to upgrade the waste management system covering all 12 municipalities under the responsibility of Évora and GESAMB. The plan for 2018/19 is outlined below:

AREA	EXPERT MISSION RECOMMENDATIONS	ACTIONS (2018-2019)
<b>Coordinational efforts</b>	<ul style="list-style-type: none"> <li>Improvements as regards cooperation between municipalities and GESAMB, more focused on waste hierarchy and joint strategic plan.</li> </ul>	<p>GESAMB and municipalities started new coordinated measures. The empowerment of municipalities increased with new vehicles and collection equipment for separate collection, of which management is a responsibility of the municipalities. Besides, coordinated measures in separate collection, recycling, composting centres, task force visits to schools and a communication campaign were set up.</p>
<b>Communication efforts</b>	<ul style="list-style-type: none"> <li>Undertake a communication strategy to build up citizen's behaviour based on waste prevention, reuse, recycling mind-sets.</li> <li>Make regular behavioural panel surveys.</li> <li>Establish an efficient customer service system based on providing user support to answer questions and a public enquiries and complaints handling system.</li> </ul>	<p>2018 - <b>"RE-Planta" Campaign</b> in order to boost waste prevention and domestic composting. (<a href="https://www.re-planta.pt/projeto/">https://www.re-planta.pt/projeto/</a>, in Portuguese)</p> <p>2019 - <b>Door-to-door communication in the non-domestic sector</b> (900 establishments visited)</p>

<p><b>Separate collection system (included biowaste)</b></p>	<ul style="list-style-type: none"> <li>● Addition of recycling bins and reorganization of bins on streets.</li> <li>● Boost door-to-door collection.</li> <li>● Coordination of emptying residual and recyclable fractions to reduce the frequency of emptying of residual waste bins. It was suggested to maintain the number of residual waste bins at the beginning and monitor fill level on emptying to decide after 6 months whether it would be possible to reduce the number of residual waste bins.</li> <li>● Introduction of biowaste collection.</li> </ul>	<p>2019 - <b>Analysis of separate collection bins and routes:</b> It was necessary to purchase more bins for recyclables and to relocate them to ensure greater proximity to citizens. Regarding organic bins, they were expected to be purchased and installed in 2020-2021.</p> <p>2019 - <b>Door-to-door separate collection of packaging waste from commerce and services of the historical centres</b> of Borba, Estremoz, Mourão, Redondo e Vendas Novas.</p> <p>2019 - <b>Green selective collection from pruning and cleaning of parks and gardens</b> in the municipalities of Alandroal, Mora, Mourão, Reguengos de Monsaraz and Vendas Novas.</p> <p>2019 - <b>Implementation of biowaste collection from large producers</b> in the Évora Municipality.</p>
<p><b>Collection centres</b></p>	<ul style="list-style-type: none"> <li>● High communication efforts in order to increase the use of collection centres.</li> <li>● Increase the number of centres.</li> <li>● Reduction of distance to bring them closer to residents.</li> <li>● Implementation of a reuse and repair section in each centre.</li> </ul>	<p>No actions yet.</p>
<p><b>Biowaste treatment system</b></p>	<ul style="list-style-type: none"> <li>● Implementation of appropriate technology for treatment.</li> </ul>	<p>2019 - Implementation of <b>green waste composting</b> (photos on next page).</p> <p>2019 - Purchase and installation of a <b>biogas recovery unit</b> (250kw).</p>



<b>MSW treatment</b>	No recommendations	2019 – Installation of a <b>new cabin for manual screening of bulky waste</b> at the MBT plant
<b>Economic instruments</b>	<ul style="list-style-type: none"> <li>● Introduction of a suitable pricing scheme for waste management addressed to all the municipalities in Évora.</li> </ul>	No actions yet.



*Green waste treatment system implemented in Évora. On the top left, storage of green waste from pruning and cleaning of parks and gardens. On the bottom left, a green waste shredding machine. On the right, shredded green waste.*

## **2<sup>nd</sup> phase: Follow-up**

### ***New expert mission***

A three day expert mission was organised with TAIEX EIR PEER 2 PEER in September of 2019 as a follow-up to the initial project and to provide on-going support to Évora during their implementation phase. The follow-up focused on the key measures outlined in the results of the first project as having the potential to improve recycling target achievement and reduction of landfilling. These included separate collection of biowaste and treatment, the implementation of PAYT and communication strategies.



Day 1: Monday, 23<sup>rd</sup> September 2019

*Venue: GESAMB and Municipality of Évora (Aterro Sanitário de Évora, Estrada das Alcáçovas, Évora)*

The start of the event began with the presentation of the evolution of the GESAMB waste management system (collection system, collection centres, treatment facilities and communication strategy).

Representatives from GESAMB and Évora presented their plan to implement the food waste collection with an analysis of key factors such as the area, number of inhabitants, and type of accommodation. Door to door separate collection had been established in three localities of Évora. Additionally, a pilot project was running in the municipality of Évora to collect food from large producers (schools, office canteens) and also from catering establishments. The Slovenian experts observed the system implemented in the field.

The experts discussed the details of the food waste collection system, the challenges, possible improvements and solutions to tackle the difficulties encountered and the costs of necessary changes.

Day 2: Tuesday, 24<sup>th</sup> September 2019

*Venue: Municipality of Alandroal*

On day 2, the presentations and discussions covered the green waste collection and treatment. Representatives from the municipality of Alandroal and GESAMB presented the details of the collection and treatment system for this waste stream implemented in their municipality. This was followed by an site visit of the collection in progress and the installation. The experts then discussed investment in a more permanent treatment facility taking into account the most suitable technique, distance, cost and customers for the resulting compost.

Day 3: Wednesday, 25<sup>th</sup> September 2019

*Venue: GESAMB and Municipality of Évora (Aterro Sanitário de Évora, Estrada das Alcáçovas, Évora)*

On day 3 GESAMB presented the separate waste collection system implemented and ongoing projects to increase packaging collection rates and to decrease the landfilling. Focus was also on solutions for non-recyclables and rejects from the sorting process.

The Slovenian experts addressed the details of the biowaste collection and treatment strategy (collection, treatment, equipment, facilities, costs) as well as the key points that must be considered so as to implement an effective communication campaign to ensure citizen participation in the separate collection of this waste stream.



*Expert mission in Évora, September 2019*

### **Next steps**

Évora will focus mainly on the implementation of separate collection and treatment of biowaste in the next couple of years as this will be mandatory by the end of 2023. The specific issues and challenges discussed during this expert mission were:

- **The introduction of separate food waste collection in the historical centre of Évora and its surrounding area.**
- **Strategy to perform an efficient food waste collection and transport system for domestic and large producers** (types of bins, collection frequency, use of plastic bags or not, maintenance, etc.).
- **Upgrade to tackle a suitable coordination between the municipal food waste collection and its reception and treatment**, taking into account that the existing GESAMB waste treatment site had been designed to manage only the sorting of recyclable packaging.
- **Communication strategies to encourage biowaste separation** in households and commerce **despite the fact that there was no PAYT scheme established yet.**

Ultimately, it was decided **to start with collecting food waste in urban areas and green waste in rural areas.**

After this follow-up expert mission, the following actions were agreed:

- **Biowaste collection from large producers** (it has already been established and evaluated).
- **Pilot project for separate collection of biowaste from households** in Évora.
- **Separate collection of biowaste from restaurants** in Évora's historical centre.

- Installation of a **green waste collection area** in collection centres and in rural municipalities for shredding of wood and branches with the recovery of woodchips.
- Installation of **composting facilities**.

As these new steps would be implemented, an increase of the separate biowaste waste collection would be expected. This would change the functionality of the existing sorting and MBT plant which would require and upgrade. Further advice was requested in this area.

## Conclusion

This case study is a good example of how TAIEX-EIR PEER 2 PEER projects can generate real transformation in local waste management practices and act as an inspiration to other municipalities. It has been shown that this instrument is able to boost local initiatives, replicate good practice, and strengthen cooperation between European regions and municipalities. It demonstrates that improvements in waste management are truly achievable and are not as complicated as sometimes perceived. This tool most certainly contributes to turning EU targets into concrete actions.

This project has resulted in transfer of knowledge to local decision-makers and though **its implementation has not been completed, the adapted local waste management plan sets out new improvements for the current legislative period**. Nevertheless it should not be forgotten that new actions will still be subject to financing and political decisions.

In 2020 Évora and GESAMB expect to implement three key changes:

- To set up **spaces for reuse** in order to improve the collection centres.
- To upgrade **the Mechanical Biological Treatment Optical Separation Systems** (to reach higher quality screening and higher specifications).
- To implement the **separate collection of hazardous waste**.

In 2021 the following is planned:

- **Implement PAYT schemes**.
- **Adapt the MBT facilities for the reception and treatment of organic waste**.