



Municipality of Lousada, Portugal

REGIONAL ACTION PLAN

April 2022



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Part I – General information

Project: OptiWaMag - Optimization of waste management in urban spaces and in households

Partner organisation: Municipality of Lousada

Other partner organisations involved (if relevant): -

Country: Portugal

NUTS2 region: Norte

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Part II – Policy context

The Action Plan aims to impact:

<input type="checkbox"/>	Investment for Growth and Jobs programme
<input type="checkbox"/>	European Territorial Cooperation programme
<input checked="" type="checkbox"/>	Other regional development policy instrument

Name of the policy instrument addressed: PAPERSU Lousada

II.1 Policy instrument and context

The objective of the OptiWaMag project is to “... improve Structural Funds’ policies and implementation related to waste management and enhance regional and interregional ecosystems. OptiWaMag recognises that effective, policy shaping outcomes require enhanced cooperation between involved stakeholders. The policy project will thus incorporate interregional collaboration, involving a wide range of expert stakeholders, which comprises exchange of good practices, mutual learning, peer assessment, knowledge transfer, targeted coaching, and collective, co-designed policy development. It will deliver its results through interlinked project activities and outputs during 3 sequential steps: 1) Identification and Analysis; 2) Interregional Mutual Learning; 3) Knowledge Transfer and Action Planning.

Steps 1 and 3 also include assessments of policy enhancement and learning performance. Wide dissemination of good practices and lessons are the backbone of OptiWaMag.

The primary outputs include:

- The project self, peer and expert assessment tools and findings focused on regions’ strengths, weaknesses, policy priorities and policy enhancements;
- A Framework Strategy for developing evidence-based and co-designed policies, programmes, and implementation methods and for identifying the best method to improve policy instruments;
- 6 Regional Action Plans (enhanced by the Framework Strategy, pre and interim self-assessments and Advisory Board case study) to enhance the implementation of regional policy instruments across Europe.” (Project’s application form).

At the application stage, we identified the policy instrument to be addressed by the Municipality of Lousada as “**NORTE 2020** (2014-2020 North Portugal Regional Operational Programme)”, in particular its Investment Priority 6e - *Adoption of measures to improve the urban environment, to revitalize cities, to recover and decontaminate abandoned industrial areas, including reconversion areas, to reduce air pollution and to promote noise reduction measures*. However, during Phase 1 it became clear the Municipality could not achieve suitable results on impacting such a high-level document. NORTE 2020 is a sub-national document that presents goals and targets for all the Northern region of the country, and a small municipality as Lousada does not have the power or ability to impact policy at this central governance level.

The collaborative work — both among partners and with the stakeholders — demonstrated we needed to focus on more local and adjustable policies. Thus, the policy document that we will be impacting is, instead, **PAPERSU – Lousada’s municipal plan for waste management**. In Portugal, each municipality has a PAPERSU document, which obeys to goals and targets deriving from the wider **PERSU 2020** national document. The PERSU 2020 document is national and has tailored goals and targets for each Portuguese waste management region/systems. There are 23 Portuguese waste management region/systems, and the one where Lousada is inserted is managed by Ambisousa, who are one of our stakeholders in the local working group.

During Phase 1, we discussed with Ambisousa and other two municipalities also inserted in the Ambisousa system in order to analyse priority changes in our PAPERSU that are also realistic and feasible. During the diagnosis phase, education and waste valorization (final treatment/destination) were identified as priority needs, thus we have been discussing the best work directions to update Lousada’s PAPERSU goals and workplan to accommodate the project’s conclusions and suggested improvements in policy. With the presentation of solutions featuring the best practices (Portuguese and from the project’s foreign partners), the Municipality and the stakeholders have learned considerably on ways to improve the policy document, adapting solutions that were not been thought about yet (so the co-learning process was really effective).

Entering Phase 2, we will continue to engage these key stakeholders (especially Ambisousa and the municipality’s technicians in charge of the waste management departments) in the improvement of the policy and the goals/means presented in Lousada’s PAPERSU.

II.2 PAPERSU

Lousada's municipal waste management plan (PAPERSU) was published in 2015, and it needs to be updated and republished, accommodating changes in EU and national policies. The COVID-19 pandemic caused a delay in the updating process and we are still not sure about the exact deadline for the publication of the new version. However, as OptiWaMag partners, and in the scope of improving policy, new measures and targets arising from this project will feature the new document.

Please read 'Current situation on Policy Documents and Timings' section, in this document.

Based on the goals established by the PERSU 2020 national document, the municipal contribution of Lousada (as presented in the PAPERSU) to achieving the national goals are organized in 5 main axis and 10 areas of intervention:

Axis I - Prevention of waste production and hazards

1. Extension of home composting

Axis II - Increase in multi-material selective collection

2. Densification of the ecopoints network
3. Implementation of residential door-to-door selective collection
4. Implementation of non-residential door-to-door selective collection
5. Requalification of the ecocenter and expansion of the ecocenter network

Axis III - Increase in the selective collection of urban biowaste

6. Expansion of the selective collection network for organic waste in large producers
7. Increase in the selective collection of green waste

Axis IV - Increase in other selective collections

8. Implementation of the network for selective collection of used cooking oil
9. Extension of selective collection to other special waste streams

Axis V - Communication and awareness

10. Promotion of awareness-raising actions

For each of the 10 areas of intervention, the PAPERSU establishes very practical and clear measures and goals to be achieved in a 5 years period, as well as the investment required and a prediction of results to be achieved.

The OptiWaMag's regional action plan will allow to improve policy and present concrete new targets and intervention means/initiatives, directly impacting at least areas 4 and 10, and indirectly several others.

As an example of the document's goals, PAPERSU's **area of intervention 4** (Implementation of non-residential door-to-door selective collection) established the following targets for the number of non-domestic establishments (such as restaurants, shops, etc) adhering to the door-to-door collection of recyclable waste, per year:

2014	2015	2016	2017	2018	2019	2020
42	42	63	85	110	120	130

Another example: PAPERSU's **area of intervention 10** (Promotion of awareness-raising actions) has the following information:

Background / Description:

For the success of the aforementioned actions, it is imperative to inform and clarify citizens about the functioning of the entire urban waste system and in particular about the new services provided, in order to motivate and raise awareness of the importance of separating materials and the consequences of that act.

For this purpose, it is essential to carry out systematic awareness campaigns, in which the need to separate and subsequently recycle and the advantages of this procedure are explained.

These actions must be directed to all strata of the population, being fundamental to invest in schools, where the receptivity of the target audience will be greater.

The implementation of the planned actions, namely with regard to the implementation of door-to-door selective collection, selective collection of organic waste and selective collection of green waste, will imply the need for specific awareness before and during the implementation of the projects.

The action includes:

- Design of awareness campaigns
- Production of media
- Implementation of awareness-raising actions.

Expected result:

Greater and better adherence by citizens and other waste producers to the prevention and separation of waste at source, which will be visible in the degree of compliance with the remaining actions.

As for each area of intervention, the measures suggested and the targets are very practical and well-defined, we are sure that the recommendations and learnings coming from OptiWaMag's regional Action Plan will be included in the PAPERSU policy document, improving the general waste policy management in Lousada.

II.2 Current situation on Policy Documents and Timings

The national Policy Document on household waste management (PERSU 2020) is being revised, according to the new EU legislation on the matter, published in 2021. Thus, the Portuguese Environmental Agency is due to review the Policy Document and publish a new version – **PERSU 2030**. This new document was published as a [draft version](#) and is currently under formal [Public Consultation](#) with expert stakeholders from the whole country. Deadline for contributions is May 5th, 2022.

After that deadline, the Portuguese Environmental Agency will analyse and incorporate relevant contributions and publish 1) updated legislation regarding waste management and 2) the new PERSU 2030 Policy Document.

As the outdated PERSU 2020, the new PERSU 2030 will contain goals and targets adjusted and tailored for each of the 23 Portuguese waste management region/systems. With these new goals and targets per waste management region/systems, each municipality will publish their new PAPERESU document.

In short, only after the publication of the new legislation and the new national PERSU 2030 document, AMBISOUSA will establish goals for the region, and Lousada will establish their new goals and targets, which will be published in the new local PAPERESU.

In all, it is estimated the new PAPERESU will be published within one year (second trimester of 2023), thus the contributions from the OptiWaMag project will be timely imbedded.

Note: A first analysis to the draft PERSU 2030 document shows that its main focus is on the prevention and reduction of waste, with special attention being given to increasing recycling rates through not only an increase in the number of recycling bins and door-to-door collection, but also the increase in recycling centers (like Lousada's EcoCenter) to foster proximity between these facilities and the population, and to allow the development and implementation of more projects similar to Lousada's best practice '[Lixo Sustentável](#)'.

II.4 Waste management context – Municipality of Lousada

The Municipality of Lousada integrates an ensemble of six municipalities represented by the Association of Municipalities of the Sousa River valley ([VALSOUSA](#)). In these six municipalities, the intermunicipal company [AMBISOUSA](#) is responsible for the waste management, including the Waste Sorting Plant and Landfill located in Lustosa, Lousada.

Waste is collected and transported from street containers and delivery points to the final destination by a private service provider, currently, the company [SUMA](#).

General waste

General waste is collected from containers located in the streets, where households dispose waste in plastic bags any time they want. Lousada has a total of 1740 containers, with a total capacity of 1501 m³. On average, each container serves 27 inhabitants. Containers are emptied 4x / week in high density areas (town and surroundings) and 2 or 3x / week in lower density areas (rural areas). Containers are washed every other month.

After the collection from the containers, waste is directly transported to the landfill, with no other sorting or valorization process.

In 2020, a total of 19244 ton of general waste was produced in Lousada (which has about 48.000 inhabitants).

Sorted waste

Inhabitants are encouraged to sort their waste, so it can be valorized by treatment and transformation into raw materials. Lousada has a network of 332 triple containers (2522 m³) named “ecopoints”. Each ecopoint has three separated containers for paper/cardboard, plastics and metal packaging, and glass. 44% of households have access to an ecopoint within a 100m distance (200m in rural areas), which represents a density of 141 inhabitants/ecopoint. There are additional containers in specific (few) places for batteries, used kitchen oil, coffee capsules, home appliances, cell phones, and other valuable waste.

Sorted waste is collected from ecopoints as containers get full.

People can also directly deliver all kinds of waste at the EcoCentre, located 2 km away from the town center. Large waste items, such as mattresses or furniture, can be delivered at the EcoCenter or collected door-to-door by request. This service is free of charge for inhabitants; a fixed service fee of 700€ is monthly paid by the Municipality to the collecting company.

All waste delivered at the EcoCenter are transported to the Waste Sorting Plant, where they are dismantled, sorted by type, compacted for shipping, and fully valorized.

In 2018, only 1535 ton (8%) of waste were sorted/recycled. However, this represents a 67% increase in sorting rates for the previous 2 years. In 2020, 1972 ton were sorted/recycled (about 10% of all waste).

Currently, a rate of 39 kg of sorted waste per inhabit and per year is recorded. The official 2020 policy goal in the PAPERSU is 32 kg/inhabit/year. Lousada presents the best sorting rate in its intermunicipal reality, but still falls short regarding to national and EU targets.

II.5 Main findings and conclusions of the OptiWaMag research work

From the very outset of the project, a group of stakeholders relevant to the field of waste management was invited to advise, inform and follow the implementation of the project. The group was thought as being multidisciplinary, accounting for different perspectives from the waste management sector, and thus includes 10 entities, as described in Table 1.

Table 1. Organizations represent in Lousada’s local group of stakeholders.

Type of organization	Name	Notes
Public authorities	Portuguese Agency for the Environment	National organisms responsible for the Policy
	Municipality of Lousada	
	Municipality of Paredes	Neighbouring municipality
	Municipality of Paços de Ferreira	Neighbouring municipality
Academia	University of Aveiro	Experts from the Department of Environment
Business	Lipor	Waste management service for Metropolitan Porto
	AmbiSousa	Waste management service for Vale do Sousa
	SUMA	Company of urban waste collection and transportation operating in Lousada
Civil society	ASPEA – Portuguese Association for Environmental Education	National NGO
	Association BioLiving – Nature and Education for All	Local NGO

Self-assessment

On January 13th, 2020, the first OptiWaMag stakeholder’s meeting took place in Lousada, with 13 elements being present. Firstly, a joint diagnosis debate was organized, and the main conclusions were the following:

- It is fundamental to **train politicians** and decision-makers on environmental issues.
- **Terminology** (e.g. waste types) is sometimes confusing and should be standardized (both among lay people and professionals).
- **Communication strategies should be standardized and fiscalized** by a public authority, since isolated/independent campaigns sometimes spread misinformation.
- **Know as you throw** is important to engage/motivate people.
- A greater **waste prevention** policy is urgent.

- Current waste policies are focused on the 3 main waste types (paper/cardboard; plastic+metal; glass), and **bio-waste** is overlooked.
- Number of and **accessibility to sorted waste containers** should be the same as for general waste, otherwise sorting is discouraged.
- Waste collection strategies should be adjusted to rural/urban areas, as the types of waste produced are different. **One policy does not fit all!**
- Waste management should be billed as an **independent public service**, such as water or electricity provision. (Currently, in Portugal, the service is “attached” to water treatment services and billing.)
- A greater **articulation** between all involved actors is imperative.
- Available **funding** is not adequate to adapt to new EU targets.

After the initial debate, we proceeded applying the OptiWaMag diagnosis survey. The main conclusions from the survey were the following:

- In general, stakeholders are satisfied or very satisfied with the waste management system in place in the region, however 50% mentioned that solutions for bio-waste are urgently needed and that there is room for other improvements as well, to better valorise urban waste.
- To the majority of respondents, the top three strengths of the waste management system in the region are the efficacy of the collection system, the practicability of domestic waste sorting and the adequacy of the waste disposal system.
- On the other hand, the main weaknesses are the waste final treatment and the amount of waste ending in landfill. Other responses mentioned people’s collaboration in sorting waste, which was also pointed out as an aspect to improve.
- As measures to improve the waste management system, respondents mostly highlighted solutions for bio-waste, enhanced education/awareness, and waste prevention.
- In the respondents’ opinion, the responsibility on the current waste management system falls on local governments, companies related to the sector and the general public. Stakeholders to be consulted for improving the systems are mostly local governments, followed by waste engineers/experts, academics and waste-related companies.
- Respondents who claimed to be familiar with the national policy claimed the document to be moderately efficient. No respondents considered the policy as being highly efficient nor not efficient at all.
- When asked about what should be improved in the Policy Document, respondents mentioned:
 - Waste prevention plan;
 - Waste collection system;
 - Valorization of general waste (energy and recycling);
 - Financial sanctions to people not sorting;
 - Better coordination among agents of the sector;
 - Cooperation with other sectors (e.g. cement industry);
 - Standardized targets across regions;
 - Allow for municipal empowerment and action;
 - Funding.

Based on the numerical answers obtained in the survey and after applying the self-assessment tool developed within OptiWaMag, these were the main needs identified for the waste management sector in the region:

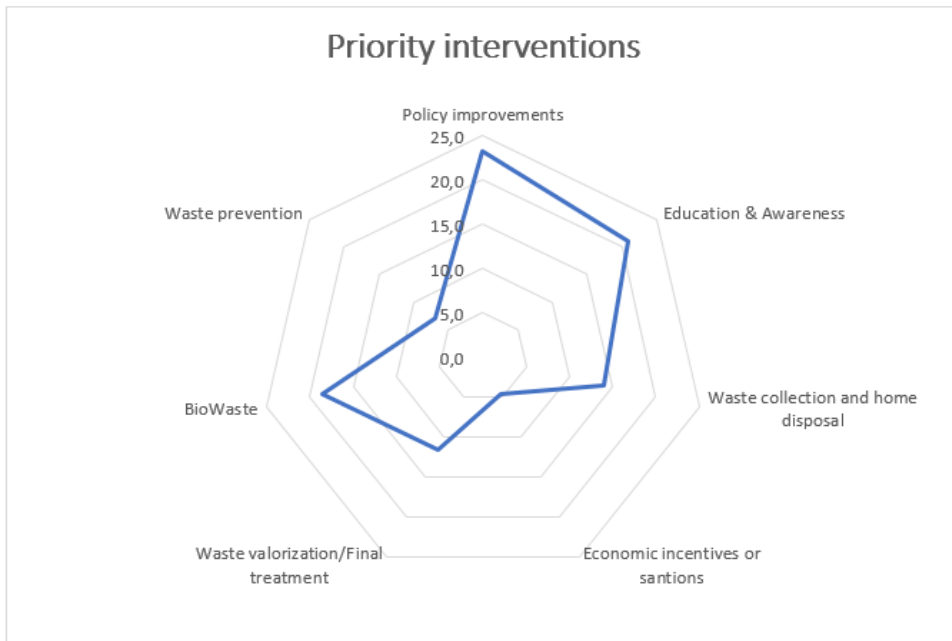


Fig. 1. Priority interventions (needs) identified by the stakeholders for Lousada’s waste management system.

On the other hand, the main strengths identified were the following:

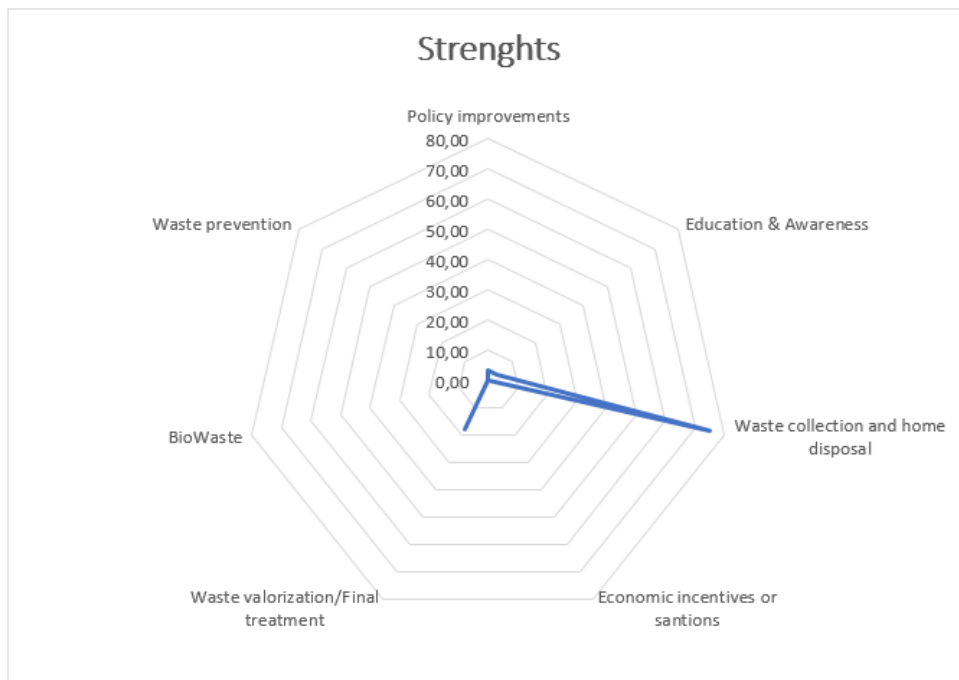


Fig. 2. Strenghts identified by the stakeholders in Lousada’s waste management system.

After more moments of debate in the subsequent meetings and workshops, and in short, the main urgent needs identified by the stakeholders for our region were related to:

- Finding solutions for bio-waste;
- Improving waste management policies, for instance with goals and targets tailored at a more fine-scale and empowering municipalities;
- Education and awareness, which includes strategies for waste prevention;
- Improving the regional performance on waste valorisation, with a significant reduction of waste ending up in landfill;
- Better cooperation among the sector's entities;
- Funding.

As for the strengths, stakeholders agreed the current domestic systems are functional and that citizens are willing to collaborate and do more, especially regarding bio-waste.

Comparison with partners

Our self-assessment was completed after the presentation of the partners' evaluation reports. We could understand better the challenges and needs from other European regions and establish comparisons regarding the intervention priorities. Despite the cultural, financial and geographical differences among the regions, many similarities were found, as presented in short, below. These learnings allowed us to pay special attention to how partners solved or will address issues similar to the ones we face here, and how best practice and action plans could be developed as a result of co-learning.

Sweden

- Shortcomings regarding waste minimization.
- Current system is therefore very dependent on the individual's knowledge and good will
- There is no system for re-use or preparation for re-use, the municipality relies entirely on business or civil society to solve the issue.
- Lack of financial incentives to prevent and reuse.
- Stakeholders also do not consider the municipality to be a role model.
- Waste management is still seen as a sectoral issue for the municipal waste company or the responsible committee to resolve (not as a joint responsibility for the entire municipality).
- Waste prevention as a priority.
- A major obstacle was the cross-administrative cooperation in the municipalities.

Greece

- Lack of innovative methods in waste collection and home disposal including biowaste.
- There are not applied recycling systems for all types of waste.
- Need for education & awareness of citizens and organizations.
- The National Waste Management Plan (ESDA) and Regional Waste Management Plan (PESDA) are not fully applied.

- Lack in infrastructure and equipment
- Low level of waste valorization & final treatment.
- The energy production from waste is at a very early stage.
- Lack of alternative methods of waste management instead of landfills.
- Need for a fairer pricing system should be introduced.
- Regional Waste Management Plan is going to be revised in 2021.

Hungary

- Rewarding system for selective waste collection, educational campaign to public, changing policies for biggest waste producers (e.g. Food industry).
- Awareness programs, rewarding program.
- Education.
- Number of types of solid separate wastes that is collected from households, waste to energy ratio of total waste, bio waste tonnage collected.
- Biological waste collection should be separated.
- Payment of empty of collection bin should be defined based on weight, not flat price.
- More motivation towards selective collection.

Latvia

- The total amount of municipal waste recycling in 2018 reached only 25.3%, the target for 2020 is 50%.
- The reduction of the amount of disposed biodegradable waste was significantly delayed –in 2015, 57.1% of this type of waste was disposed (target for 2013 was 50%, target for 2020 –35%).
- Due to insufficient recycling capacity, there is a risk that Latvia may not achieve the recycling targets set for 2020, as well as for 2025–2035 for several waste streams, as well as ensure the amount of municipal waste disposed in landfills in the amount of no more than 10%.
- Very similar SWOT analysis.

Italy

- Instruments for the prevention of waste production
- Waste prevention
- Awareness and sensitization of the population
- Tariff systems and the usefulness of implementing rewarding systems for virtuous citizens and penalties for citizens who violate the rules of proper waste management.

II.6 Exchange of experience and good practices

In OptiWaMag, the co-learning process takes place both regionally, through discussions with the local group of stakeholders, and internationally, by the exchange of experiences done with the project partners.

Locally, the group of stakeholders have engaged in a very interesting cooperation among different sectors of the waste management. For instance, the two NGOs contribute to improving our municipal plan for environmental education implemented in schools, which is now related to this Action Plan as well; the two neighbouring municipalities discussed common issues and joint ventures on solving them; the private sector shared insights from their operations, improving the comprehension and liaison to the municipal's interventions; the University provided technical expertise on waste management, among other cooperation.

The stakeholders also profusely analysed and discussed a selection of best practice from Portugal and Europe, and their feedback was important to decide on the final projects to submit to Interreg. Similarly, the perspectives shared among the local group was crucial to reach the final decisions on the actions to be implemented under this regional Action Plan.

At the project's international level, the exchange of experiences, challenges and of good practices was highly enriching and important. Since the self-assessment phase, it was very important to have all partners presenting their own situation, so that we could gain enlarged perspectives and better analyse our own. From the exercise of comparing realities it was clear to us we could mostly learn from Sweden (and some aspects of Italy and Latvia), and discuss similar ways of improving with Greece, Hungary, and also Italy. The physical visit to Sweden in 2019 was very important to observe different, more efficient ways of dealing with management, and thus setting goals and alternative procedures for our own system. This visit also helped us identify, in Portugal, good practices that were already ongoing, sometimes in similar ways to those implemented in Sweden, allowing us to contact with the Portuguese institutions in charge of those processes and improve the co-learning here in Portugal too. From all the benefits that arose from the visit to Sweden, we sense the learning process was, to some extent, negatively impacted by the COVID-19 pandemic, which prevented the partners to visit each other in person. Although many online presentations were done, we believe face-to-face events would have allowed more in-depth sharing and learning.

Despite the travel limitations, partners were effective in sharing their situations and their good practices. The 5th Interregional Project Partner Meeting, held online on the 7th of April 2021, and the Interregional project partner extra meeting- Seminar Good Practice, held online on the 27th May 2021, which webinars open to all partners, guest experts and stakeholders, were especially interesting, enriching and inspirational.

Lousada presented to Good Practices, that received positive critiques and comments:

- [Lixo Sustentável](#) / Sustainable Waste (Municipality of Lousada)
- [Tabuaço JUNTAr: circular composting and recycling](#) (Municipality of Tabuaço)

Among the partners' chosen Good Practices, the most relevant to our reality, and from where we could extract practical information that can help us in Lousada, were the following:

- [Food waste recycling through collection with the Green Bag](#) (Linköping, Sweden)
- [Park of nature and education URDA](#) (Latvia)
- [Pesticide Packaging Recycling Programme](#) (Greece)
- [Homecomposting, Composhare](#) (Italy)
- [Collection of vegetable oils](#) (Italy)

Additionally, we resorted to the Interreg Policy Learning Platform, in order to find further Good Practices from where we could transfer knowledge. Regarding the optimization of waste management we found the Good practices from projects [WINPOL](#) and [INTHERWASTE](#) inspirational and useful, in particular the following:

- [PAYT \(Pay As You Throw\) to reach 80% recycling](#)
- [Treatment of biodegradable waste in Mehedinti County](#)
- [Adaptation of waste glass containers for the commercial and restoration glass](#)
- [Specific collection of commercial paperboard](#)
- [Food waste reduction in restaurants in Porto and Ibiza](#)
- [Promotion of separation in the organic fraction](#)

Taking all the learnings deriving from the exchange of experiences into account (including the resources needed by other partners to solve similar issues), and bearing the needs and priorities identified during the self-assessment in mind (Fig. 3.), we decided to propose two main actions in our Action Plan. These two actions will considerably tackle environmental education and the recycling rates of all waste types in schools and of glass in the HORECA network of the municipality ([H](#)OTels, [R](#)Estaurants and [C](#)afes). The proposed actions are predicted to prevent about 100 ton of waste (per annum) of being deposited in landfill, being valorized and recycled instead.

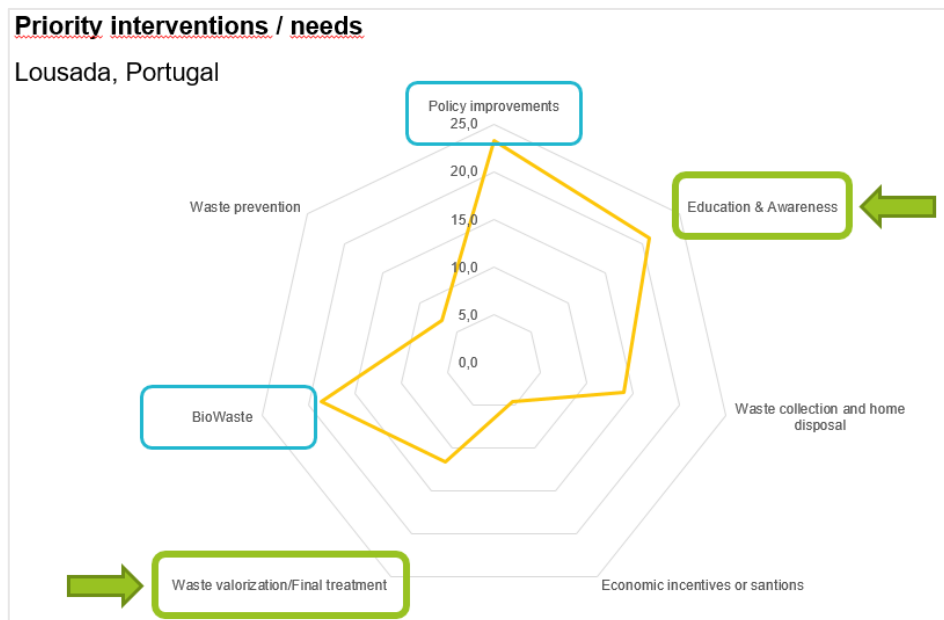


Fig. 3. Priority interventions / needs identified during the self-assessment phase, with highlights in the needs that will be tackled by the actions proposed in the Regional Action Plan.

Part III – Details of the actions envisaged

ACTION 1 – Glass collection and recycling among the HORECA network

1. **The background** (please describe the lessons learnt from the project that constitute the basis for the development of the present Action Plan)

During the diagnose phase of the project, we identified waste valorization (deviation from landfill) and environmental education/awareness as topics needing improvement in Lousada.

This Action aims at tackling both topics among the local network of HORECA businesses – HOTels, REstaurants and CAfes. Many of these businesses are located in rural settings where the environmental awareness is still low but have considerable impact as they have large numbers of costumers consuming food and beverages. During the diagnose phase of our project, we recognized many HORECA businesses were still not separating waste for recycling. This Action aims at 1) promote environmental and waste awareness among the HORECA network of Lousada, and 2) improve waste separation levels, starting with the glass materials, mainly bottles, jars and flasks, which will be easier to implement on the outset.

From the interregional learning we understood that a bespoke and door-to-door intervention would be the best approach for attaining the desired goals, providing tailored guiding to the HORECA owners/managers. This pilot action was then planned as a first approach in directly working with this network, especially in rural areas.

Inspiration from the Project

This Action was inspired by discussions with partners, but also by the specific Good Practices (GP) described below.

- **Recycling programme of pesticide packaging** ([link](#)), from Greece. In this GP, a specific type of waste (pesticide packaging) produced in a specific economic activity (agriculture) wasn't correctly disposed. By the implementation of these targeted programme, farmers were trained, informed and started correctly separating this waste item. Similarly, with this action we intend to train and inform the HORECA business-owners and costumers to correctly dispose glass waste.

- **Improvements of selective waste management in Vas county** ([link](#)), from Hungary. Although this GP project is of a large scale, it shows that improvements in recycling rates are obviously achieved by creating separate streams for collecting recyclable waste, diverting it from the general waste that ends up in landfills. Our Action intends to create a separate and targeted collection of recyclable glass, diverting it from the general waste stream and deposition in landfill.

2. **Action** (please list and describe the actions to be implemented)

This Action is targeted at the HORECA network (HOTels, REstaurants and CAFes) from the Municipality of Lousada, especially (but not limited to) in rural areas.

The Action aims at improving waste awareness/education and recycling rates in HORECA businesses, using glass recycling as the first waste type to pilot this door-to-door waste collection programme.

We aim to engage about 1000 HORECA business and additional 1000 costumers.

Predicted results are of the collection and valorization of about 8 to 10 tonnes of glass each month.

The Action consists on the following:

- Development and dissemination of the campaign to general public and target audience;
- Awareness sessions and meetings with HORECA owners/managers;
- Distribution of 140 L glass recycling bins to each adhering HORECA business;
- Provide waste awareness/recycling training to HORECA staff;
- Fortnightly visits to each adhering business, to monitor glass separation and to provide continuous guidance and support to HORECA staff;
- Collection of separated glass in each business 2 times a week;
- Transportation of the glass and delivery for glass valorization/transformation;
- Monitoring and reporting.

Policy improvement

This action will directly impact Lousada's PAPERSU, at least in Axis II (area of implementation 4 - Implementation of non-residential door-to-door selective collection) and Axis V (area of implementation 10 - Promotion of awareness-raising actions).

After the implementation of the Pilot, and according to the lessons learned and results achieved, we will prepare new measures and targets to be included in the Policy document, improving what concerns the waste recycling rates within the HORECA network.

3. **Players involved** (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role)

Municipality of Lousada – Coordinators. Responsible for:

- Providing human resources;
- Campaign dissemination and information;
- Training of HORECA owners/managers;
- Distribution of glass recycling bins among the HORECA network,
- Glass collection, transport and delivery for recycling/valorization,
- Monitoring and reporting.

HORECA network - HOTels, REStaurants and CAfes. Responsible for:

- Receiving adequate training for waste separation (especially glass);
- Providing physical space in their premises for the glass recycling bins;
- Properly separate glass waste items;
- Provide access to the recycling bins for emptying, glass collection and monitoring;
- Collaboration in monitoring;
- Collaboration in promoting customer's awareness.

4. Timeframe

8 Months:

M1: Campaign launch and dissemination

M1 – M3: Meetings with HORECA owners/managers and distribution of equipment

M4 – M8: Monitoring of glass separation; collection of glass for recycling; reinforcement of the campaign in the HORECA network

M8 – Data analysis and reporting

Predicted date of conclusion of the pilot: November 2022. Monitoring and implementation will continue during the Project's Phase 2.

5. **Costs** (if relevant)

50.000€ for pilot action (8 months): equipment, dissemination/information, transports and human resources.

6. **Funding sources** (if relevant):

We applied to a funding from *Sociedade Ponto Verde* and approved a grant of about 40.000 € to implement this action. The remaining 10.000 € will be supported by the Municipality of Lousada.

[Sociedade Ponto Verde](#) is a private not-for-profit body that promotes the selective collection, take-back and recycling of packaging waste in Portugal. It was established by a group of companies that place packaged products on the market (packers and fillers). Since 1996 it has been at the forefront of packaging recycling, has generated a virtually infinite sustainability loop and has helped to increase the useful life of materials and protect the environment. Their mission is to organize and manage the take-back and recovery of packaging through the Integrated Packaging Waste Management System (SIGRE) - the Green Dot system.

Sociedade Ponto Verde is licensed as a waste-packaging management body by the Ministries of governmental areas of Economy and the Environment.

ACTION 2 – BIOSCHOOL 360

- **The background** (please describe the lessons learnt from the project that constitute the basis for the development of the present Action Plan)

Environmental education/waste awareness and waste valorization were identified as priority topics during the diagnose phase in the region of Lousada. Additionally, financial incentives were discussed as possible contributions to raise the levels of waste separation and recycling.

During the diagnose phase, we recognized schools have a large potential for contributing to the recycling rates, both through education of the school community and the actual separation and recycling of school waste. We realized that although teachers and students separated waste throughout the school areas, the school attendants (supporting cleaning and maintenance staff) were not aware of separation practices and ended up depositing the school waste altogether in the general waste containers outside the schools. This Action will thus provide adequate training to school attendants and other school staff.

Additionally, we will incentivize waste recycling in schools by paying separated waste, in a Win As You Through initiative similar to the one already implemented with households under the project *Lixo Sustentável* (check best practice here: <https://www.interregeurope.eu/good-practices/lixo-sustentavel-sustainable-waste>).

Inspiration from the Project

This Action derived from the OptiWaMag project learnings: self-assessment and priority needs in Lousada, which clearly stated the involvement of schools would be crucial to improve recycling rates; discussions with partners and stakeholders in the local group; and partners' Good Practices (GP), as described below.

- **Park of Nature and Technology URDA** ([link](#)), from Latvia. The URDA was established to ensure awareness rising and dissemination of information on waste management and sorting issues for different target groups: stakeholders, schools and inhabitants. In this work, it became obvious for the promoters the importance that school communities have in more informed and effective waste sorting practices. Since in the self-assessment phase we also identified schools as important targets for improving the recycling rates in Lousada, this BP was important for us to better plan this Action.

- **Environmental SOS** ([link](#)), from Latvia. This practice addresses environmental pollution problems and helps to deal with the offence against nature through a special free of charge mobile application. In Lousada we have a similar [mobile application](#) but we lack opportunities to reach out to the school communities and encourage them to use it more frequently. The inspiration of the Latvian GP led us to address the use of our app or other technological resources in educational programmes and training schemes we will be able to implement in schools within this Action (namely the training of the school attendants).

- **Action** (please list and describe the actions to be implemented)

The Action will consist of several parts:

- Development and dissemination of the Action to general public and target audiences;
- Awareness sessions with school directors and administrative staff;
- Training of school attendants of all 35 public schools (organized in 4 major Groups of Schools) of the municipality;
- Encouragement of waste separation by the whole school community;
- Regular monitoring and weighing of all waste separated in each school;
- Collection of separated waste, transportation and delivery for valorization/transformation;
- Financially reward schools by the waste separated (0,10€ / kg for paper and cardboard; 0,15€ / kg for plastics and metal; 0,05€ / kg for glass);

- Monitoring and reporting.

Policy improvement

This action will directly impact Lousada's PAPERSU, at least in Axis II (area of implementation 4 - Implementation of non-residential door-to-door selective collection) and Axis V (area of implementation 10 - Promotion of awareness-raising actions).

After the implementation of the Pilot, and according to the lessons learned and results achieved, we will prepare new measures and targets to be included in the Policy document, improving what concerns the waste recycling rates within the schools networks, and update targets concerning environmental education/training events on waste-related topics, in school communities.

- **Players involved** (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role)

Municipality of Lousada – Coordinators. Responsible for:

- Providing human resources;
- Campaign dissemination and information;
- Training of school attendants and other staff;
- Waste collection, transport and delivery for recycling/valorization;
- Waste weighing and reward;
- Monitoring and reporting.

Schools from the municipality. Responsible for:

- Encouraging school attendants and relevant staff to attend training;
- Encouraging the whole school community in properly separating waste;
- Providing physical space in their premises for the recycling bins;
- Providing access to the recycling bins for emptying, waste collection and monitoring;
- Collaborating in monitoring and weighing;
- Collaborating in communicating rewards and results.

- **Timeframe**

The pilot Action will take place in one school year (2021/2022):

October and November: Meetings with school directors and boards;

November: Campaign launch and dissemination;

December (Christmas break): first period of staff training;

March-April (Easter break): first period of staff training;

December-July: Monitoring of waste separation; waste weighing; collection and delivery for recycling;

August: Data analysis, reward payments and reporting.

The pilot action will be finished by the end of the school year, around August 2022. A second school year may be added so that more results are available during Phase 2 of the Project.

- **Costs** (if relevant)

Pilot year:

- 5.000 € for dissemination, transport and human resources;
- Estimate of 20.000 € for waste rewarding to 35 schools (saved from landfill occupation taxes).

- **Funding sources** (if relevant):

This action will be financed by the Municipality's own budget.

Date: April 30, 2022

Signature: Manuel Nunes (Vice-Mayor of the council of Lousada)

Stamp of the organisation (if available):

