



**URBAN
WASTE**
URBAN STRATEGIES FOR
WASTE MANAGEMENT
IN TOURIST CITIES



Sorting bins in public and touristic places





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What is the measure about?

Description and scope of the measure

As highlighted by the surveys conducted within URBAN-WASTE project¹, tourists mention a lack of adequate information and scarce information rather than a lack of motivation when it comes to waste sorting on holiday. Indeed, depending on the type of accommodation sorting bins, in particular in sightseeing areas. Several cities have now developed waste sorting bins in public areas to encourage both tourists and residents to sort their waste also when they are not at home. Usually, these projects have started with pilot projects to verify the effectiveness of the chosen model.

Thus, implementing bins in the most frequented public and touristic areas (city centers, historical districts, tourist offices, beaches, train stations, airports, harbours, museums and parks) seems like a relevant way to increase the amount of waste sorted and recycled coming from the tourists and the residents.

Several key elements must be taken into account. The sorting bins must be well localised, visible and close to the bins for unsorted material (residual waste). Besides, the design of the bins is very important. In terms of capacity, several options are possible depending on the urban context (regular street bin, aerial column, half-buried or buried containers, vacuum collection). In terms of shape, the opening of the lid is a key aspect to control the quality of sorted waste (e.g. for paper bins, a very narrow opening to let only paper waste in). Finally, the signage is essential for influencing individual's behaviour and for the quality of the waste sorting (clear instructions).

The sorting bins, whether implemented in public areas collected by a public authority or in private touristic areas collected by private companies, must correspond to the waste collection system in place within the local municipality. Sorting waste fractions that couldn't be adequately treated and recycled afterwards because of a lack of infrastructure or logistical impediments would leave to counterproductive effects.

¹ Deliverable 3.2 "Situation and behavioural analysis of consume and waste behaviour and patterns"

Integration in a waste management plan

Waste sorting bins located in public areas should be integrated to the global waste management system in place in the area of implementation. The existing waste collection service should be adapted to the new scheme.

If located in private areas managed by private establishments, the waste sorting bins should be adapted to the public waste collection system if they are collected by the public authority, or to a feasible waste collection scheme operated by private companies. However, it is highly recommended to use the same colours as the ones used by the local municipal waste collection service in order to facilitate tourists' sorting gesture. Besides, this measure could be embedded in the environmental policy established in such private establishments.

How to implement this measure?

Economic aspects to consider and potential solutions for the financing of the measure

Costs

- Many factors have to be considered when implementing a system for sorting bins, in relation to the costs. For instance, the municipality or authority in charge will have to consider the cost of collection, number of bins/containers/bags, cost of each bin/container/bag, the amount of waste produced by person, among others, to calculate the total cost of the system.

Costs savings

- The cost of not recycling must also be considered in order to evaluate whether implementing the system is economically viable. In this sense, landfilling or incineration of the residual waste are assumed to be the alternative, where the average costs in EU are²:
 - Incineration of residual waste: 64€/ton
 - Landfilling residual waste: 56€/ton
- By reusing or recycling materials, there are cost savings in relation to the raw materials that are no longer needed to be extracted/processed for the production of new goods. For example, in September 2017, the cost of virgin plastic ranged between 1.125 € and 2.070 €/ton in EU, depending on the type of polymer³.

Revenues

- Sorting different fractions of waste will allow to give value to the different fractions of waste, since these could be sold as resources. Therefore, the market value of the different fractions to be recycled must be considered as well. As an illustrative example, the market price for recycled plastics in EU as of 2016, was 301 €/ton, where for glass the market value reached levels of 49-53 €/ton in 2014⁴.

Type of stakeholders to involve

To implement this measure, whether initiated by public structures or private structures, the types of stakeholders to involve are:

- Municipal government.
- Urban planning department of local authorities.

² Source : IPCC (https://www.ipcc.ch/publications_and_data/ar4/wg3/en/ch10s10-4-7.html)

³ Source : <http://www.plasticsnewseurope.com/article/20171211/PNE/171219995/european-petrochemical-feedstock-contract-prices>

⁴ Source : EUROSTAT : *Recycling – secondary material price indicator*. (http://ec.europa.eu/eurostat/statistics-explained/index.php/Recycling_%E2%80%93_secondary_material_price_indicator#Plastic)

- Waste management department of local authorities.
- Waste management company/public authority in charge of municipal waste collection (including private areas).
- Managers of touristic places (e.g. beaches, museums, parks, train stations, airports, harbours, tourist offices, etc.).
- Suppliers of bins or containers adapted for waste separation.

Description of the operational steps to follow

Before implementing this measure at a big scale, these steps should be followed:

- Assessing the possible waste fractions to collect separately based on the current local waste collection scheme and the existing waste infrastructures for treatment and recycling.
- Identifying the most relevant areas for the implementation of the sorting bins, and the most relevant waste fractions to collect.
- Identifying the logical constraints for the implementation of the sorting bins.
- Defining the design of the bins based on the objectives previously identified.
- Defining the signaletic accompanying the sorting bins.

Implementation phase:

- Implementing a pilot test in relevant areas.
- Launching an initial communication campaign to raise awareness on waste sorting and to inform on the new system being implemented. Regularly, the waste management department of the local authority could organise awareness campaigns directly on the streets with specific waste advisors distributing leaflets, giving advice, showing the sorting bins, etc.
- Creating a map compiling all the sorting bins located on a touristic area and providing the tourist offices/touristic establishments with it.

Gender aspects to consider

Attention has to be paid to whether bins are easily accessible to all (height, weight, location).

As waste management tends to be male dominated in most case studies, ensure women are specifically involved to achieve gender balance.

Communication campaign needs to be gender sensitive to avoid favouring one sex or another: all people are to be involved in sorting waste.

Examples of good practices

- To facilitate the recycling of packaging materials (such as plastic bottles and cans) that are included in the Danish deposit-refund system, the City of Copenhagen, together with Dansk Return System (organisation in charge of the Danish deposit-refund system) and NGOs, has designed a new model of street bins. This design allows to discard plastic bottles and cans on the outside of the bin on “deposit-shelf”, so that people in need can collect them and earn some money through the deposit-refund system. This new system had the purpose to dignify the collection of refundable packaging by avoiding that people need to go through the waste to find the refundable packaging. Such bins have been implemented in different part of the city of Copenhagen.⁵
- In cities such as the URBAN-WASTE pilot cases Lisbon and Florence, the waste is collected through a bring banks system in the historical center. Thus, sorting containers are available for everyone in public areas of the city, enabling not only citizens but also tourists to sort their waste.
- Some initiatives for waste sorting in major tourist areas have also been developed in several countries. For example, the French National Railway Corporation (SNCF) has implemented waste sorting bins in several train stations⁶. Also, in some airports, there are bins for waste sorting, and even for the specific collection of plastic bottles before the security control points, such as in Paris Orly airport. At Copenhagen airport, specific bins for plastic bottles were placed to give money to charities thanks to the Danish deposit-refund system.
- The French initiative “Gestes propres”, previously called “Vacances propres” (“Clean holidays”) aims at reducing litter and improving waste sorting during holiday since 1971. To do so, a comprehensive scheme based on a national anti-littering campaign, actions to raise awareness among citizens and tourists, and the provision of sorting bags to voluntary municipalities is organised each year. “Gestes propres” has its own brand and distinctive garbage bags that can be found in many French municipalities, on beaches, in the mountains and other tourist areas, but also in big events such as the cycling event “Tour de France”. In 2016, more than 2.2 million bags were used and 20,000 tons of waste collected.⁷

⁵ Copenhagen gives bottle collectors 'dignity' - The Local

(<https://www.thelocal.dk/20150611/new-copenhagen-project-gives-bottle-collectors-dignity>)

⁶ SNCF 2016 CSR report, p.77 (http://medias.sncf.com/sncfcom/rse/bilanrse/Rapport_RSE.pdf)

⁷ Vacances propres becomes Gestes propres - (<http://www.ecoemballages.fr/actualite/vacances-propres-devient-gestes-propres>)

Guidance for setting up monitoring indicators

Data to be collected:

Monitoring of actions, items, stakeholders and people involved etc.		total
Sorting bins installed in public spaces (multiple: paper+plastic+unsorted)	[number]	
Sorting bins installed in public spaces (single: paper)	[number]	
Sorting bins installed in public spaces (single: plastic)	[number]	
Sorting bins installed in public spaces (other: specify)	[number]	
Sorting bins installed in private freely accessible spaces like bars.... (multiple: paper+plastic+unsorted)	[number]	
Sorting bins installed in private freely accessible spaces like bars....(single: paper)	[number]	
Sorting bins installed in private freely accessible spaces like bars.... (single: plastic)	[number]	
Sorting bins installed in private freely accessible spaces like bars.... (other: specify)	[number]	
Area of the city covered by the sorting bins installed	[m ²]	
Average number of daily emptying	[number]	
Brochures distributed to tourists	[number]	
Communication events organized	[number]	
Evaluation of people potentially reached by communication initiatives	[number]	
Other: please, specify.....		

A second group o data aims at monitoring waste collected thanks to the bins and the performance of the measure:

- Quantity of plastic waste collected **[kg]**
- Quantity of paper waste collected **[kg]**

Time frame

It is recommended to start the monitoring at least one week before implementation phase to assess the effect of the measure on waste production.

Gender considerations:

- Are bins accessible for women and men equally? **[yes-no]**
- Gender sensitivity of publicity / communication? **[yes-no]**
- Gender balanced consultation regarding placing of recycling facilities? **[yes-no]**

Lessons learnt from the implementation phase and fine tuning



Pilots implementing sorting bins in public and touristic places measure within URBAN-WASTE

In **Kavalá**, **25 new bins** for waste sorting collection of metal, plastic, paper and glass (blue bin) were installed in the port area of Kavalá (2,5 ha), supported by a massive communication campaign about waste separated collection and waste involving 19 important media and 85 stakeholders.

During the monitoring phase, data showed an increase of the sorted fractions (plastic, glass, metal, and paper) of about 27%, managing to reduce the unsorted waste by 32%.

In **Syracuse**, **26 new bins** for waste sorting collection (paper+plastic+unsorted, single paper, single glass and plastic+cans) were installed in 5 touristic points of interest. The measure was supported by a massive communication campaign about waste separated collection and waste reduction. Waste sorting instructions translated in English (measure n°14) gave also clear advices to help tourists to sort waste properly.

Keypoints

- **Communication is crucial in particular the dissemination of clear instructions in different languages**