



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



# Waste sorting in hotel rooms

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## What is the measure about?

### Description and scope of the measure

The following measure promotes the sorting of different waste fractions by guests in hotel rooms.

On average, hotels generate around 1 kg of waste per guest per night.<sup>1</sup> Any product that cannot be reused and becomes waste should be sorted into its component fractions so that, as much as possible, it can be recovered for recycling. It is estimated that at least 70% of waste generated at hotels can be recycled, provided that there is a functional and effective separation and collection system in-situ.<sup>2</sup> In order to achieve these results, it is essential to consider waste separation already in the hotel rooms and establish an appropriate sorting system.

Keeping in mind that comfort in rooms is a main objective in hotels, there are different environmental practices that can be implemented without reducing well-being of guests while generating environmental benefits. In most cases, hotel rooms only include a couple of waste bins, located in the bathroom and bedroom, where waste fractions are mixed. While bins located in the bathroom are intended for toilet waste, the one in the bedroom is used to collect all types of litter generated by guests (i.e. plastics, magazines, bio-waste, etc.). This is the bin that holds the largest potential to be adapted to a more sophisticated waste sorting and collection system.

For this purpose, individual small-sized bins adapted for separation of different fractions (i.e. paper, plastic, glass and food waste) are presented as a solution. An alternative could be the placement of several bins for different fractions in the room, although it would require more space and therefore it is less recommended.

The hotel will be responsible for waste sorting and management and will make sure that all waste fractions are properly separated in their respective container. Afterwards, an authorised waste manager can take care of the waste generated at the hotel and collect it periodically from the respective facilities.

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<sup>1</sup> *Environmental Management for Hotels (2008). The industry guide to sustainable operation. International Tourism Partnership* (<http://www.greenhotelier.org/wp-content/uploads/2014/09/4-Waste-for-web-1-1.pdf>)

<sup>2</sup> *Guía de hoteles más sostenibles (2010). Ajuntament de Barcelona – Agenda 21 – Publicacions – Guías de Educación Ambiental* ([http://w110.bcn.cat/MediAmbient/Continguts/Continguts\\_Transversals/Educacio\\_Ambiental/Documents/Fitxers/Guia\\_Hotels\\_Sostenibles\\_CAT.pdf](http://w110.bcn.cat/MediAmbient/Continguts/Continguts_Transversals/Educacio_Ambiental/Documents/Fitxers/Guia_Hotels_Sostenibles_CAT.pdf))

## Integration in a waste management plan

Hotels are usually certified against Environmental Management Systems (e.g. ISO 14001, EMAS, etc.) which must include waste management plans with different measures and actions implemented to increase waste separation and recycling rates.

For instance, the EU Ecolabel requires a waste management plan to facilitate waste separation by guests, to sort waste and to avoid disposable products and single-dose food packaging (except where required by law).

Furthermore, depending on the municipality, region or country, there exist specific regulations as to waste generation and recycling from businesses (including hotels) which oblige waste generators to use collection systems differentiating among fractions (e.g. paper/cardboard, glass, packaging and bio-waste, used cooking oil, bulky waste, etc).

The proposed measure for waste sorting in hotel rooms could be easily embedded in the existing EMS and other internal waste management plans to comply with waste collection and recycling regulations.

## How to implement this measure?

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

#### Costs

- Separate waste collection is normally financed via municipal waste fees (tariffs are determined in the municipal waste removal ordinances). Otherwise, the costs of collection will be determined by private authorized waste collectors.
- Hotels implementing this measure will incur in expenses related to the installation of sorting bins and bags, which will depend on the type and amount.

#### Costs savings

- As an illustrative example, the Hilton Tokyo Bay saved more than €365,900 between 1998 and 2006 after implementing their solid waste management recycling programme, despite an 8% rise in disposal costs over that period<sup>3</sup>.
- Improving the recycling rates at a room level will contribute to the reduction of mixed waste generated and thus, the costs of incineration or landfilling it. In this sense, the average costs of incineration and landfilling of residual waste in EU are<sup>4</sup>:
  - Incineration of residual waste: 64€/ton
  - Landfilling residual waste: 56€/ton

#### Funding options

- Hotels could make visible that they carry out this initiative with a sticker or in their website for the customers to see. With a green marketing strategy hotels could increase the number of incoming customers and such profit could be invested back into this or other initiatives.

### Type of stakeholders to involve

For the effective introduction, implementation and continuous operation of the proposed measure a number of key stakeholders should be involved. These include:

- Hotel manager
- Maintenance and housekeeping department at the hotel (i.e. responsible person, cleaning staff, etc.)
- Customers
- Waste management company/public authority in charge of waste collection
- Supplier of bins adapted for waste separation

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<sup>3</sup> Source : <https://waste-management-world.com/a/a-welcome-sign-hotels-adopt-reuse-and-recycling>

<sup>4</sup> Source : IPCC ([https://www.ipcc.ch/publications\\_and\\_data/ar4/wg3/en/ch10s10-4-7.html](https://www.ipcc.ch/publications_and_data/ar4/wg3/en/ch10s10-4-7.html))

Other possible stakeholders to involve that could promote the implementation of the action at territorial level:

- Waste management department of local authorities
- Hoteliers associations

## **Description of the operational steps to follow**

### **At municipal level**

- Mapping of hotels within the municipal boundaries, identifying the ones that are already involved in such a policy.
- Organization of informative meetings with hotels and hoteliers associations to promote the implementation of waste sorting in hotel rooms. Hotels that have already implemented such a system could be invited to explain their policy and share their experience.
- Realization of communication campaigns to engage more participants.
- Regulative support to encourage hotels to sort their waste (for instance, by applying reductions in the waste fee, or establishing a territorial label promoting hotels with such measures implemented).

### **At hotel level**

Baseline study (waste review):

- The very first step should be the identification and quantification of waste generated and recycled at the hotel. Every waste fraction should be considered separately. By knowing how much waste is being generated before implementing the measure as well as which fractions end up as waste, it will be possible to link other measures such as the replacement of specific disposable products in hotel rooms. This step will not be necessary in case the information is already available.

Introduction and implementation phase:

- Awareness raising and training for the hotel cleaning staff as they must be involved so as to adopt the new working practices.
- Distribution in every room of individual small-sized bins adapted to separate different fractions.
- “Welcome kit” in hotel rooms should provide leaflets with guidance and instructions to guests regarding waste sorting in the room and the environmental commitments adopted by the hotel policy.
- An empty letter could be included in the “welcome kit” where guests could suggest other environmental practices to improve the overall performance of the hotel (e.g. food waste at buffets, substitution of disposable products, partnership between hotels/charities, etc).

- Use of different plastic bags with different colours, according to the waste collection system of the respective city (e.g. green-glass, blue-paper, brown-bio waste, etc.). An alternative could be the use of transparent plastic bags for every fraction so that the content of the bags can be checked avoiding mixing of fractions, most of all for the cleaning staff once they are collecting waste from the rooms to their bigger waste trolleys.

Operation phase:

- Collection and separate storing of the different fractions by cleaning staff until it is taken to higher capacity containers, becoming part of the waste management system of the hotel (with different containers per fraction including waste from other areas of the hotel such as kitchen, reception, etc.).
- Housekeeping/cleaning trolleys used by cleaning staff should be similarly divided to facilitate the work for cleaners and to speed up the process. It is particularly important to keep the same colours.
- Incessant encouragement for feedback from employees with suggestions and observations as a means of continuing to improve the new implemented measure.
- Constant training of the cleaning staff, with reminders. It could be relevant to define a referent on that measure within the cleaning staff so that they could refer to him/her for any doubt they have regarding this measure.

### **Gender aspects to consider**

Who will do the additional work required, and will this increase the work load? Who will be the 'authorised waste manager'?

Who will train staff? As mostly women, they may well be waste managers at home. Should beware situations where 'expert professional men' are training women seen as not waste professionals.

Attention has to be paid also to gender balance of those developing the idea. (e.g. make particular use of those already cleaning the rooms – who are likely to be women). Where women cleaners are involved in setting up the scheme, could be empowering.

In addition, information to guests may need to be gender sensitive to maximise waste sorting by both men and women.

## Examples of good practices

- The Neya Hotel in Lisbon has successfully implemented a waste sorting system in the 76 rooms of the hotel. Every room includes a bin for separation of residual waste, glass, paper and packaging (plastic and metal) fractions. This measure was implemented immediately after the hotel opened in 2011.<sup>5</sup>
- The “Orchard Garden Hotel” (San Francisco, United States), which is one of the “Top 10 Best Eco-Friendly Hotels in The U.S.” has implemented waste sorting and separate collection in every hotel room, including in-room recycling bins that separate glass and paper for thorough recycling.<sup>6</sup>
- At a smaller scale, a 14-room hotel and restaurant in the UK, the “Strattons Hotel”, recycles or reuses 98% of waste and, in addition to the environmental and social benefits, it saves the business more than 1,000 € each year in waste disposal costs.<sup>7</sup>
- The Hilton Slussen in Stockholm (Sweden) has implemented sorting bins in every room so that guests can sort their waste under three different categories and contribute to the recycling process:
  - Red box: hard plastics (e.g. shampoo bottles) and metal (e.g. bottle caps)
  - Green box: organic waste (e.g. apple cores)
  - Black box: paper (e.g. newspapers and magazines)

Since the introduction of the sorting and recycling scheme in 1997, more than 125 tons per month being sent to the landfill were reduced by 76%, reducing the total waste generated per guest-night up to 0.3 kg<sup>8</sup>.

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<sup>5</sup> Neya Hotel, Lisbon (<http://www.neyahotels.com/en/hotel-overviewhtml-hotel-overviewhtml>)

<sup>6</sup> The Orchard Garden Hotel (Green Initiatives) (<http://www.theorchardgardenhotel.com/hotel/green-initiatives>)

<sup>7</sup> Eco-Management and Audit Scheme (European Commission) (<http://ec.europa.eu/environment/emas/takeagreenstep/06-article.html>)

<sup>8</sup> Environmental Statement 2011 (Hilton Stockholm Slussen) (<https://www.esomar.org/uploads/public/events-and-awards/events/2014/digital-dimensions/documents/Hilton-Stockholm-Slussen-ENVIRONMENTAL-STATEMENT.pdf>)

## Guidance for setting up monitoring indicators

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Two groups of indicators are to be set:

1. The first group aims at monitoring involved stakeholders:

- Hotels involved **[number]** & total number of hotels in the pilot area **[number]**

These two previous data will enable to compute the following indicator:

- Percentage of hotels involved:  $\text{hotels involved} / \text{Total number of hotels in the pilot area} [\%]$

The pilot area can be the whole city or a part of it: down town, old town, port area...

- Mapping of hotels that implement the measure **[Name and address]**
- Hotels promoting sorted collection of waste in rooms and common areas **[number]**

- Rooms in the hotels that correctly use bins for the separated collection **[number]**
- Total number of rooms in the hotels involved **[number]**

These two previous data will enable to compute the following indicator:

- Percentage of rooms that correctly use bins for the separated collection **[%]**

- Total number of recycling bins placed in hotels **[number]**
- Positive feedbacks about the initiative collected from clients **[%]**

2. The second group aims at monitoring waste production in involved hotels and the performance of the measure:

- Quantity of plastic waste produced **[kg]** or **[number of bins or garbage bags] in rooms and in common areas**: the number of bins or garbage bags can be chosen as a unit of measurement if it is not possible to weight waste produced, the average weight of a fulfilled bin or bag will have to be estimated beforehand for further calculation
- Quantity of paper waste produced **[kg]** or **[number of bins or garbage bags] in rooms and in common areas**
- Quantity of mixed waste produced **[kg]** or **[number of bins or garbage bags] in rooms and in common areas**
- Number of customers **[number]**
- Occupancy rate (n. of rooms occupied / total of rooms) **[%]**

### Time frame

It is recommended to start the monitoring at least one week before Waste sorting in hotel rooms is implemented to assess the effect of the measure on waste production.

Quantity of waste produced and number of customers can be registered **continuously** (every day every week) or **randomly** (one day per week or every day one week per month).

Gender considerations:

- Who makes ultimate decisions in establishment? [male-female]
- Which staff does this? (Room cleaners? General cleaners?) [please note...]
- What proportion of these staff are male and female? [% female]
- Approximate gender distribution of extra work involved? [% female]

## Lessons learnt from the implementation phase and fine tuning



### Pilot implementing waste sorting in hotel rooms measure within URBAN-WASTE

In **Lisbon**, 3 hotels encompassing in total **305 rooms** applied selective collection. Waste generated in these hotels was reduced by 12% and the volume of recycled waste in the hotel increased immediately to 72% while the occupancy rate was about only 46%.

It should be noted that additional work due to waste sorting fell to women because they compose more than 80% of staff.

#### Key points

- **The staff has to be strongly motivated by raising their ecological awareness.**
- **Use new containers and colours bags in all locations to facilitate recycling and the adaptation of staff.**
- **Put strong efforts in the mobilization of hotels to increase their participation.**