

Waste – Course 2

MOOC

*OPTIMISING WASTE SORTING AND
MOVING ON TO RECYCLING*



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ECHO-Tourism

An Erasmus+ Project



ECHO-Tourism

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INTRODUCTION

How to engage in a virtuous approach? Where to start? Optimizing waste management is the easiest act to start with. The first step in reducing the direct impact of waste on fauna and flora is to respect existing collection instructions to prevent it from being scattered unchecked in the wild. However, given the abundance of waste produced and the changes in our consumption patterns, this is certainly not a viable and sustainable solution in the long term. Before the society collapses under the weight of its waste, it is essential to act on the behavior. As a citizen of the world, whether at home, at work or on holiday abroad, it is important to think about recycling!

Tourism and waste management

Recycling makes possible to valorize material waste and avoid the waste of new resources. When we consider the current way of consuming, recycling seems to be the least restrictive and most easily tunable way of acting to our routines. However, it is not always easy to adapt one's habits and way of acting outside home. This is undoubtedly one of the most important brake that can be identified in the field of tourism. Taken out of the private context, without reference points, it can indeed be constraining for a tourist to reproduce good sorting practices, and this for the following reasons:

- **Lack of reference points:** the value-added sectors are different from one area to another. It is not always easy or motivating for a transient to adapt to these constraints over the duration of his or her stay, especially if it is relatively short. Individuals, on the contrary, seek to get rid of all constraints during their holidays. Waste management system must be therefore adapted accordingly.
- **Lack of information** on how to recover different types of waste. (e.g. poor signposting of sorting points, non-homogenized deposit labelling between territories...)
- **Poor adaptation of infrastructures to the needs of tourists.** The location, position and enhancement services are not always adapted to the target public. This has a major impact on the level of acceptability of users with regard to compliance with sorting instructions (e.g. the absence of sorting bins near the beaches does not encourage summer visitors to recycle their waste, etc.).

The influx of tourists is also synonymous of an increase of consumption and overproduction of waste at a given moment in time in a territory. This factor can be aggravating when waste management and waste management systems have not been dimensioned for this purpose. In such cases, the usual channels become overcrowded and, as a result, waste diversion occurs.

Finally, the most recalcitrant consumers will have to be convinced or the uninformed public will have to be made aware of the importance of engaging in virtuous practices. Sometimes cultural differences can also have an unsuspected influence.

It is therefore on the psychological profile of consumers, but also on the organization of the whole sorting chain that we must work to reduce the impact of our waste.

1. Lesson 1: Waste recycling and recovery channels

The recovery processes and sorting instructions are not the same from one area to another. As a tourist, have you ever wondered about the nature of the various plastic containers that can be thrown into a sorting bin without finally being able to provide an answer? Today, technologies offer us the opportunity to recycle a large number of objects and materials. For economic and sometimes even environmental reasons, the necessary investments are not always put in place or considered with regard to non-native populations. Thus, even today, we continue to produce and consume products that are still more virtuous and economical to throw away than to recycle.

In the face of the multitude of existing and sometimes contradictory sources of information, it is relevant, to look at the main families of materials that can be recycled. It is then easier to adopt the right gestures, even without specific knowledge of local practices.

THE MOST COMMON RECYCLING CHANNELS ... WHAT YOU NEED TO KNOW ABOUT SORTING.



PLASTIC

Plastic waste is a scourge for the environment. A large proportion of it ends up in the oceans and seas, whereas most of it can be recycled or recovered in the form of energy for example!

In 2018, 75.1% of the 29 million tons of plastic waste were collected in the European Union (a plastic bottle weigh 35 grams). Around 35% was recycled and the rest was recovered to produce energy. These overall figures conceal significant disparities: ten countries have achieved a recovery rate of over 95%, with the share of recycling averaging no more than 55%.

>> Only 50% of the plastic sorted in Europe is actually recycled.

Sorting and recycling of plastics takes place all over Europe, even if the treatment systems vary considerably from one country to another. In Germany, Italy, Portugal, Spain and the Scandinavian countries, for example, all types of packaging are recycled (except in the specific case of polystyrene 06:PS). In other countries, such as Austria, some localities collect all plastic packaging, while others concentrate on bottles and flasks. In Switzerland, Belgium and France, only bottles and flasks are collected (01: PET / 02: PE-HD).



PAPER AND CARTON

The paper is made of biodegradable and non-toxic cellulose fibers produced from wood and can be recycled under the condition that it is not recycled itself:

- be mixed or associated with products of different natures or not recyclable gift-wrap paper, posters or vinyl wallpaper.
- have undergone a chemical treatment during production (e.g. carbon paper, tracing paper, photo paper, etc.).
- have been soiled by dietary or other fats or by dangerous products. (handkerchiefs, paper towels, nappies...) You get a poor-quality paper if the mixture is soiled.
- be packaged in plastic film for postal dispatch or in a transparent shell glued " blister " .

GLASS

Glass is "THE MATERIAL" that can be recycled par excellence because it can be recycled indefinitely. After collection, the glass undergoes several stages of automatic sorting to separate it from impurities and/or other materials (labels, capsules, etc.) before being crushed to form cullet. This cullet is the main raw material used by glassmakers and can make up to 80% of the new glass packaging produced.



However, please note that not all "glass" waste is recyclable! It excluded:

- Objects made of porcelain, ceramics, terracotta. These materials are produced from infusible materials, i.e. materials that are difficult to melt, such as clay.
- Glass from windows and crockery (drinking glasses, etc.) is also undesirable in collection bins because its composition is different from that of conventional packaging glass (bottles, jars, etc.).

The materials used can potentially contain lead, which settles to the bottom of the furnaces and attacks the refractory bricks. The ingestion or inhalation of lead is highly toxic to humans. It is therefore best to avoid incorporating it into new products for which its use would not be controlled.



SCRAP METAL AND METALS

A large proportion of the metals are recyclable. Recycling them saves between 50 and 98% of the energy that would have been consumed in extracting them from a native environment. The aluminum in cans, for example, is 100% recyclable and saves an average of 97% energy when reused. This avoids high environmental impacts during extraction. The metals can be disposed of at a scrap yard or sold directly to scrap dealers in large volumes.

ORGANIC WASTE

Some local authorities or private companies can offer to collect your organic waste and recycle it in the form of fertilizer, biogas or food for animal feed. Local authorities also offer waste collection areas where you can deposit your waste. If you don't have the opportunity or time to look after a garden or a chicken coop, you can always ask your neighbors about community or civic initiatives near you: shared gardens, urban farms, urban composting at the bottom of a building, etc.



ELECTRONIC AND SPECIFIC WASTE

Some products require further processing beforehand to separate all materials from the components. This is the case for electronic appliances, household appliances or textiles. A famous example is a mobile phone made of more than 70 different materials, which cannot be treated in the same way as conventional packaging. We also think of batteries, light bulbs and all other products containing substances that will have to be recovered at the risk of causing pollution. Electronic equipment can be taken to the distributor, who is obliged to take back used equipment when buying a new device.

2. Lesson 2 - Ways to facilitate sorting in your establishment



The aim of this lesson is to present ways of encouraging tourists to adopt the eco-gestures and good sorting practices presented in the "Waste" guide. As mentioned above, it is important for a tourist establishment to adapt to the needs of its customers in order to offer a service that can both meet their expectations and respond to other concerns and management constraints. Here are some actions and solutions to adopt to facilitate sorting and mitigate these risks.

IMPORTANCE OF INFORMING CUSTOMERS

- Information material on existing sorting and recycling instructions can be posted at the location of collection and sorting points. It is advisable to contact the relevant authorities such as town halls, waste management associations, etc. to find out about the specificities of local collection.
- Use appropriate signage to display the collection and sorting facilities available to them. For hotels, for example, welcome cards with sorting instructions adapted to the use of the premises could be offered.
- Tourists must be informed of the steps taken by the establishment. The objective will be to encourage tourists to respect this approach by participating in it.

ADAPT ITS WASTE MANAGEMENT SYSTEM TO HELP TOURISTS PRACTICE ECO-GESTURES

For this purpose, suitable containers must be used or left at the disposal of the tourists. These containers must be provided in sufficient quantities and placed in strategic locations near the places where the waste is produced. Their volumes must be adapted. They must also be sufficiently resistant so that they do not break in case of bad weather.

You will be able to adapt these few solutions once you have first identified the sorting problems specific to your establishment. It is therefore relevant to identify the specificities of your establishment's internal functioning before taking action.

3. Lesson 3 - Monitoring waste flows in your establishment

Identification of waste flows provides an overall view of the operation of the establishment, and in particular makes it possible to:



- Identify potential reduction levers;
- Identify the processes and activities at the origin of waste production;
- Characterize the role of each of the users/actors in the production and management of waste;
- Provide a factual basis for decision-making and exchanges;
- Serve as a comparison tool for the evaluation of results after the implementation of reduction actions;
- Adapt a prevention strategy to the operation of the establishment.

STEP N°1 / IDENTIFYING THE NATURE OF WASTES

It is important to dwell on the study of the regulatory sorting obligations in force. This is more important for waste considered as "hazardous". It is essential to be aware of the barriers and constraints that may hinder the development of your projects.

Question n°1: Is the recovery of certain waste produced in the context of the establishment's activity regulated?

Question n° 2: Is this waste subject to obligations / criteria for sorting at source? (e.g. cardboard packaging, paper, glass, etc.).

Question n° 3: Have difficulties and/or questions already been raised, formally or informally, concerning the recovery of certain activity waste?

STEP N°2 / IDENTIFYING THE DIFFERENT SOURCES OF PRODUCTION

It is then necessary to identify the origin of the waste produced. For each typology of waste listed, the following questions will be asked:

- Where is it produced? Where does the waste come from?
- The type of activity from which it was generated? Nature of the processes?
- Its storage place(s);
- The nature of the production and waste management stations concerned.

This investigative work will make it possible to clarify the establishment's current operating conditions and to assess the future interest in making or not making changes.



STEP N°3 / QUANTIFYING WASTE FLOWS

After having identified the possible levers of change to act on the reduction of waste production, it will then be time to collect additional figures in terms of analysis. This data collection work can be a source of motivation for those involved in the project. The data offers a practical vision of the evolutions induced by the change in behavior.

The format, nature and type of information that can be collected must be defined beforehand. This information can be stored in material or dematerialised form (e.g. list of purchase supplies, account book, activity balance sheets, monitoring spreadsheets and/or stock inventories, waste removal invoices, etc.).

The objective is to regularly monitor the quantities of waste emitted (PMC, paper/cardboard, all-purpose paper, glass) in order to assess the impact of the actions implemented. Quantifiable data can be recorded in different units: volumes (m³), weight (kg), by percentage (% volume or % weight (- %m³ or %/kg)). The weighing method is more precise but more difficult to implement.

Tip: If the % by volume method is adopted, it is recommended that the container be scaled to make it easier to take up the weight.

STEP N°4 / LET'S TAKE ACTION! ORGANIZE THE COLLECTION OF INFORMATION

Is waste monitoring already in place?

If yes,

- For what purpose?
- Is the data recovered usable in the context of my project, my approach? How is data collection currently carried out? (units of measurement, conditions for carrying out the measurements, means of collection)
- Is this monitoring up to date?
- Is the current organisation efficient and effective?

If not,

- Why is there no follow-up?
- What type of document should be used to start analysing the establishment's consumption trends?

STEP N°5 / IDENTIFYING RESOURCE PERSONS

In the framework of their activities, certain collaborators or partners will be better able to transmit useful information and also to help organise and exploit it. They need to be identified from the outset so that they can be integrated into the action as early as possible. They will be a source of proposals to guide the choices towards the most appropriate solutions. Here are a few criteria to keep in mind once confronted with this problem:

Precaution n°1: Consider the sensitivities of each person. It is easier and better perceived to let staff members position themselves on the tasks to be carried out during group discussions.

Precaution n°2: Inform employees in advance about the nature of the tasks they are likely to be confronted with.

Precaution n°3: Train them, as soon as possible, in the use of monitoring tools.



Precaution n°4: Guide the choices with regard to each person's skills and functions. A consumer relief worker can be assigned to a specific workstation. In contract catering, for example, it is the kitchen staff who will be responsible for monitoring food waste.

STEP N°6 / DISTRIBUTE THE TASKS AND PREPARE THE COLLECTION ACTIONS

The assignment of missions will be more accepted if it is carried out in a concerted manner. Do not hesitate to include the teams/collaborators in this decision-making process. Delegating missions makes it possible to include as many people as possible in the action. The achievement of convincing results will depend on the general level of involvement.

STEP N°7/ POOLING FLOWS

If the volumes produced are not large enough to set up a specific selective collection system, it may be possible to consider pooling flows with neighboring businesses. Any collection involves a cost in which transport has a major impact. Sometimes this cost can be offset by the value of the materials collected, above a certain volume.