



GOOD PRACTICE

Paris Region

Improving bulky waste sorting centre performances

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1. GENERAL INFORMATION ON THE GOOD PRACTICE (GP)

1.1 General information

Region	Île-de-France (the Paris Region)
Country	France
Short name of the good practice	Improving bulky waste sorting centres performances
Geographical level of implementation (country, region, municipality...)	Intercommunal group
Target group	-
Date of implementation/duration	
Waste stream (and subcategory)	Mixed bulky waste
Legal framework	-
Main local instruments involved	Bulky waste sorting centres
Scale (pilot/partially roll out/roll out)	Roll out
Initiator/coordinator	SYCTOM
Demography	
Population	5 690 000
Number of households	2 563 500
Area (km ²)	545
Population density (number of inhabitants/km ²)	10 450

General waste data (Not necessarily related to the GP but to give some background information. Data about the GP should be included under 3.1)	
Year of the following waste data	2012
Sum of all waste streams excl. residual & bulky waste (kg/inhabitant/year) (indicator 1 or 2 from the R4R Online Tool)	65.6
Residual waste (including sorting residues) (kg/inhabitant/year) (indicator 8 or 9 from the R4R Online Tool)	374.6
Total waste (sum of the previous two)	440.2
Sum of all waste streams excl. residual & bulky waste to DREC (kg/inhabitant/year) (indicator 3 of the R4R Online Tool)	65.3

1.2 Context

SYCTOM is an intermunicipal syndicate bringing together 84 municipalities and organising waste treatment for about 5.7 million inhabitants, which represents about half the population of the Paris Region. Its territory encompasses Paris and dense urban areas surrounding Paris, and is characterized by its very high population density.

This high density has several impacts on waste management: very little space is available for implementing collection units such as civic amenity sites, leading to a very little number of such units available on SYCTOM's territory. Moreover, many households do not have a personal vehicle. There is an average of 0.5 cars per household in Paris, and less than 1 car per household in the dense area surrounding Paris. These factors make civic amenity sites difficult to use in this area and limit their efficiency.

Therefore, bulky waste collection is mainly done through kerbside collection, either by request or using weekly or monthly collection schemes. To increase recycling and limit the quantities sent to disposal, bulky waste are sorted in specific sorting centres.

There is a high diversity of bulky waste sorting centres, and most of them sort out commercial waste as well. The heterogeneity of bulky waste makes sorting difficult. Even if no precise data are available, the average recovery rate of these centres in the Paris Region is assessed at 30%.

1.3 Short description

This good practice will present the different steps that were taken by the SYCTOM to increase the recovery rate of bulky waste over the past 10 years. It will especially focus on the modifications brought to the sorting processes, with the use of pre-sorting centres to remove part of the contamination.

1.4 Objective

The aim of this good practice is to increase the recycling of bulky waste collected as a mixed fraction on kerbside, and so to decrease the share of bulky waste sent to disposal.

1.5 Method used to identify the good practice

This good practice was identified through the analysis of the **evolution** of the recycling rate for bulky waste over the last ten years.

1.6 External factors

This good practice provides a solution to improve recycling of bulky waste in **dense areas** where the implementation of civic amenity sites is difficult and where the population has a limited access to them.

2. IMPLEMENTATION

2.1 Preparation phase

The starting point of this good practice was a voluntary commitment made by the SYCTOM and the elected representative of its 85 municipalities in 2004 to progressively reduce the quantities of waste sent to incineration and landfilling, with a target of -300 000 tonnes within 5 years. To do so, it was decided to focus on waste prevention, selective collection but also on the improvement of bulky waste sorting. The commitment has set a target of -35 000 tonnes of bulky waste to disposal.

To improve bulky waste recycling, several propositions were made:

- Improve the “quality” of bulky waste sent to sorting centres by reducing the share of residual waste (such as bags of residual waste, street bins...) mixed with bulky waste.
- The addition of recovery targets in the contracts made with private sorting centres with financial penalties, which should lead to the modernisation of sorting processes.
- The implementation of a two-stage sorting: a first sorting is done in SYCTOM’s transfer stations, and the pre-sorted waste are then sent to mechanical sorting centres operated by private companies.

2.2 Technical implementation

The first step consisted in setting recycling targets when renewing the contracts with the private sorting centres. In 2005, a minimum target of 45% was assigned to new contracts. To allow the improvement, a quality control of bulky waste was put in place in SYCTOM’s transfer stations to limit the presence of residual waste, green waste or hazardous waste. When entering the station, collection trucks undergo this quality check that can lead to the refusal of the truck. Its load can then be then considered as residual waste and sent to landfilling. The municipality is then informed of this decision toward a predefined procedure.

Local authorities were invited to avoid mixing up residual waste (such as residual waste bags or street bins, which could be collected with mixed bulky waste), green waste and hazardous waste along with bulky waste, and to send these fractions to suitable treatment units. Specific working groups bringing together waste technicians from the municipalities were organised to identify appropriate solutions.

To improve the sorting of bulky waste, a two-stage sorting process was put in place. Bulky waste entering transfer stations is pre-sorted to remove fractions that cannot be sorted in bulky waste sorting centres: carpets and carpeting, sofas, composite furniture..., which are then sent to landfilling. This pre-sorting is achieved by grapples. The remaining fractions are then sent to mechanical sorting where several fractions (plastics, ferrous metal, inert, wood and cardboard) are sorted via mechanical sorting lines. These sorted fractions are then sent to dedicated recycling units.

When renewing contracts, SYCTOM set increasingly ambitious quantitative targets for the different material fractions. Moreover, the disposal of unsorted waste has to be paid by the contractor. This has led to the improvement of sorting rates through the modernisation and automatisisation of sorting lines, with the use of rotary trammels and air classifiers.

2.3 Communicative implementation

Beside the involvement of municipalities in order to improve the “quality” of mixed bulky waste collected on the kerbside, no communication activities were conducted.

2.4 Organisations involved

Several organisations were involved to make this good practice possible:

- Contractors: private companies operating the bulky waste sorting centres were incited to improve sorting rates through the setting of sorting targets for each material fraction and by the fact that the disposal of unsorted fractions is borne by them.
- Municipalities: members of the SYCTOM in charge of bulky waste collection were involved in the good practice in order to improve the quality of bulky waste received at the transfer stations. To do so, working groups were formed in order to present solutions. Moreover, quality controls and refusal of bulky waste collection trucks presenting too much contamination were used as an incentive to limit the presence of residual waste or hazardous in bulky waste.

2.5 Key success factors

The use of increasingly constraining recycling targets in the contracts for bulky waste sorting seems to be the main factor behind the success of this good practice. Setting financial penalties along with the fact that the disposal of unsorted rate is borne by the contractor have incited private companies to bring technical improvements to their sorting centres, e.g. by automating sorting lines.

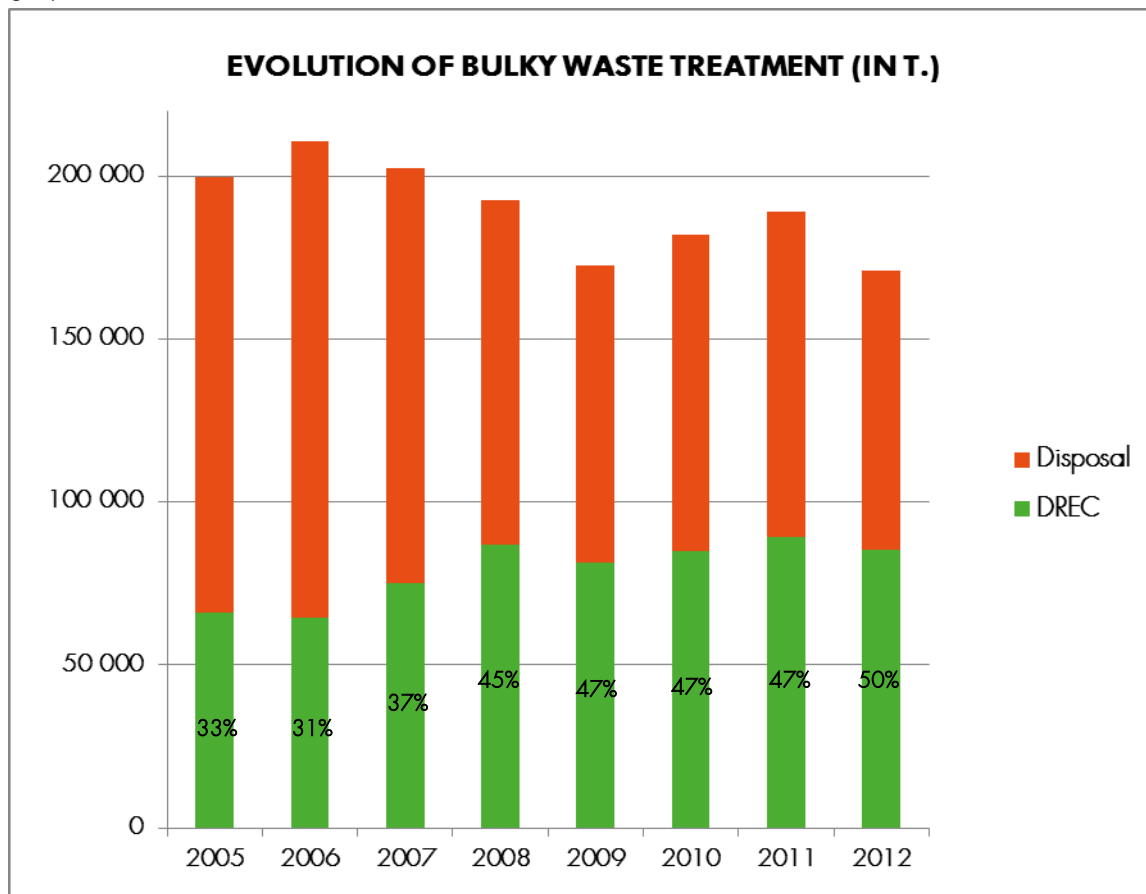
2.6 Resources

This good practice had little impact on cost, when considering the cost per tonne for the SYCTOM. Investments were borne by the contractors operation the bulky waste sorting centres, with no visible impact on the treatment cost reported by the SYCTOM. Between 2006 and 2012, the cost for the treatment of bulky waste (including the disposal of unsorted fractions) fluctuates between 98 and 107 €/t. These fluctuations do not seem to be caused by the implementation of this good practice.

3. RESULTS

3.1 Monitoring of the progress of the GP

The evolution of bulky waste treatment over the last years is presented in the following graph:



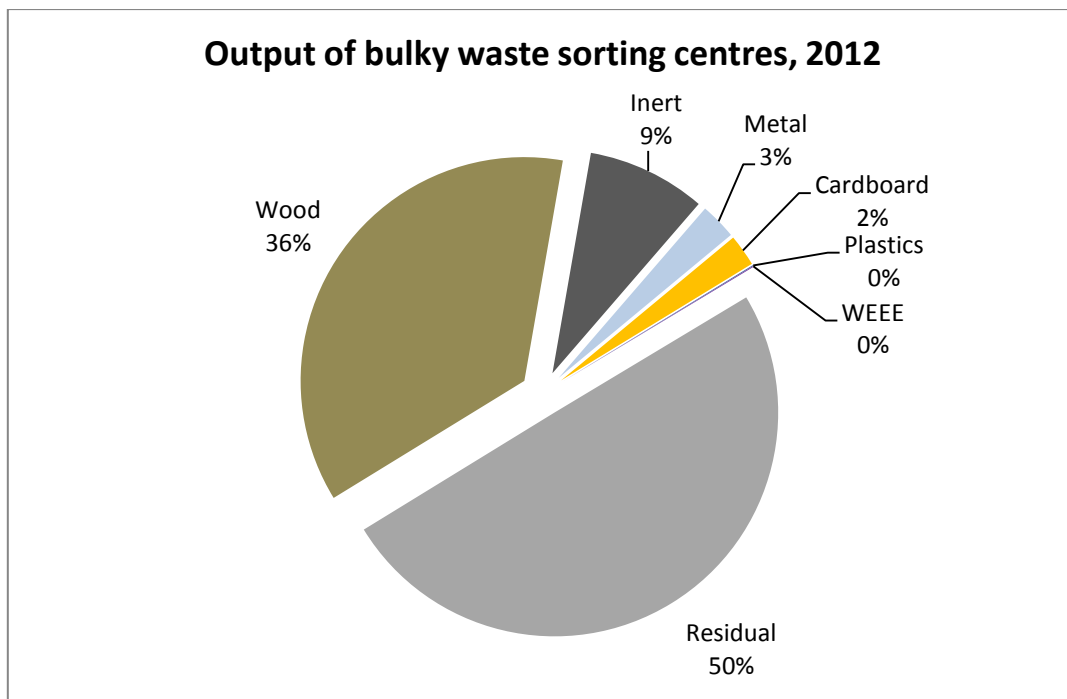
The graph shows a positive evolution of the DREC rate over time. The overall evolution can be explained by the implementation of a pre-sorting occurring in transfer stations, where part of the contamination is removed. Bulky waste are then sent to private sorting centres where a finer sorting is done. Several different steps can also explain the evolution:

- In 2007, an important progress is made, the DREC rate going from 31 to 37%. This is mainly due to the implementation of a control on the input of bulky waste sorting centres made in concertation with the local authorities. By reducing the presence of contaminated fractions (residual waste, gardening waste, hazardous waste or street bins), it was possible to reduce the quantities brought to sorting centres and also to increase its recovery.

- In 2008, the DREC rate goes from 37 to 45%, and up to 47% in 2009. This evolution is due to the SYCTOM's policy towards private sorting centres. When renewing its contracts, it orders its contractors to implement a mechanical sorting line and sets constraining targets for the recovery rate, with financial penalties.

These different implementations have allowed the improvement of the recycling rate of mixed bulky waste from 33% in 2006 to 50% in 2012. This has notably entailed a decrease of 60 000 t for bulky waste sent in landfill sites. The average recovery rate of bulky waste sorting centres in Île-de-France is estimated to about 30%, which is considerably lower.

The main categories of waste sorted in bulky waste sorting centres are shown in the following graph:



4. LESSONS LEARNT

4.1 Negative effects

The good practice did not entail major negative effects.

4.2 Challenges

While this good practice has shown interesting results, the room for improvement for the recycling of mixed bulky waste via sorting centres is not known, yet it seems difficult to reach the same performances than civic amenity sites (both in terms of recycled quantities and number of sorted fractions).

However, the new EPR scheme for furniture might allow improvements to the recycling rate, since about 30% of bulky waste produced on SYCTOM's territory consists of pieces of furniture. Subsidies for furniture collected with the mixed bulky waste fraction will be provided and could lead to improvements. Moreover, a pilot project focusing on mattresses was conducted in 2013 with a new company working on mattress recycling. Other experimentations focusing on rigid plastics in 2013 (about 5% of mixed bulky waste) were made possible by the automatization of sorting centres.

5. FURTHER INFORMATION

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REGIONS FOR RECYCLING

