



DATA COMPARISON

Main findings – Synthesis
February 2014



R4R: COMPARING DATA TO IMPROVE RECYCLING

Regions for Recycling (R4R) aims at **identifying effective local instruments and good practices** that could help local and regional authorities to optimize municipal waste recycling. One of the first topics that were tackled by the partnership was to draft a common method to present their data, so that unbiased comparisons could be established.

To do so the partners of the R4R project formed **4 peer review groups** and compared their own data for several waste fractions (paper and cardboard, bio-waste, metals, glass, WEEE (Waste Electrical and Electronic Equipment), textiles, wood). These groups changed depending on the waste streams so that every partner could discuss its data with others.

The discussions were meant to identify **reasons explaining the differences in recycling performances** and find **solutions to make data more comparable**, so that a more consistent methodology could be drafted.

COMPARING LOCAL STATISTICS

The discussions led by the different working groups have highlighted several factors that can explain differences of recycling performances between territories. While the effectiveness of local instruments and recycling strategies seems to play an important role, other reasons can explain differences.

Municipal solid waste: what does it cover?

The local data that were used for comparisons are all supposed to be about municipal waste (e.g. household waste, similar waste and waste generated by local authorities), yet some elements might lead to significant differences in the scope used for the statistics.

Statistics may be distorted due to the fact that a **part of the municipal waste is collected by private companies through private collection schemes** and the collection data are not included in the statistics. **Import and export of waste streams between regions** make comparison and data statistic more difficult.

Beside private collection schemes, waste streams with a positive market value can **be collected by scavengers**. Data are generally not available about these waste streams, while these quantities are supposed to be substantial. This is particularly the case for paper and cardboard and metal scrap. WEEE is sometimes collected by scavengers to be dismantled (metals) and to extract elements with a high market values (e.g. critical metals). These quantities are not listed in the waste statistics.

Waste collected by charity organisation, such as textiles, might also be excluded from municipal statistics

Municipal waste data generally include a share of commercial waste collected with household waste. However, this share might greatly differ from one region to another, especially for papers that are possibly generated by offices. When commercial paper and cardboard, bio-waste from restaurants are included the total quantity collected is definitely higher. In some cases data from EPR system include quantities of commercial waste.

Finally, some waste fractions such as wood waste, non-packaging metals and glass, parts of WEEE, big textile waste as carpets, non-plastic packaging waste as rigid waste are often collected together with the bulky waste. Less data are available for these streams.

External factors impacting recycling performances

Partners have identified several external factors that could limit the relevancy of comparison and explain part of the differences.

Consumption patterns influence the quantities of waste produced. This is specially the case for packaging waste and bio-waste.

Reusable glass and plastic bottles collected through deposit systems, as well as pallets and wooden packaging are sometimes re-used many times. These types of waste can have their own collection schemes and are not reported in the waste statistics.

Moreover, the extent of home composting can significantly decrease the quantities of bio-waste collected by local authorities.

Local instruments

Each territory has set its own local strategy resorting to different local instruments (e.g. landfill and incineration bans, landfill and incineration taxes, EPR, mandatory separate collection schemes, deposit/return scheme, PAYT, etc.) which have a significant impact on the separate collection of recyclable materials and the collection rate.

Selective collection is yet not well established in all regions. During pre-treatment some streams may be sorted out from the residual waste in those regions.

Unlike the collection of plastic packaging waste that falls under the responsibility of the EPR scheme, the separate collection of the non-plastic packaging waste vary widely and less data are available.

Communication and awareness campaigns to inform citizens about a correct way of sorting of recyclable waste streams are regarded as crucial by many partners with high recycling performances.

While it is difficult to assess now the efficiency of these instruments, the upcoming online tool developed by the R4R project will allow to establish links between performances and local strategies.

CONCLUSION: HOW CAN WE MAKE DATA COMPARABLE?

To make data more comparable the following suggestions are formulated by the partners:

- Partners have noted the importance of developing the **same scope for municipal solid waste**. Beside, further efforts are needed to guarantee that all the recyclable waste are reported to the local authorities even when the waste is collected by private service providers. The establishment of a well-functioning data reporting system is crucial for the comparability of the data between regions/cities/countries.
- To be able to compare figures/results between region's/cities, **common definitions for the different waste streams** are essential, e.g. for bio-waste.
- Developing **a common method** focused on separating waste streams really going to recycling plants is essential. The data used for the comparisons were not always exhaustive and representative of the real quantities sent to recycling. Therefore, the output of sorting centres (either for packaging waste or bulky waste) have to be identified and taken into account, while the contamination linked to mechanical sorting of mixed fractions must be excluded from the recycling rate calculations.

Other conclusions could be also drawn by the partners:

- **External factors** (such as the rate of home composting) can have an important impact on waste generation and waste collection rates. Comparing two territories not sharing the same local context might entails difficulties to draw conclusions.
- There is a **need for a common format for the composition analysis**. To assess the efficiency of the system, knowing the share of recyclable materials still present in residual waste is important. A composition analysis of the residual waste gives an insight in the percentages of potential recyclable materials that still can be collected separately and be recycled in the future. This is the case for all potential recyclable materials in the residual waste.

These conclusions were taken into account while drafting the R4R methodology regarding the scope, terminology and indicators used to compare recycling performances.

R4R is an 3-year Interreg IVC project project (January 2012-December 2014), bringing together the following partners: ORDIF, ACR+, OVAM, Odense Waste Management, Lisbon City Council, Exfini Poli, Limerick/Clare/Kerry Region, Federal State Government of Styria, Tallinn City, Waste Agency of Catalonia (ARC), Municipality of Sofia, City of Zagreb, Ilfov County Council. The main objectives are to optimise data collection and benchmark recycling performances as well as to combine them with legal, technical, economical and communicative waste management tools.



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