QUANTITATIVE TARGETS FOR WASTE RECYCLING AND PREVENTION

AN OVERVIEW OF FINDINGS FROM ACR+ STUDIES

In the framework of the review of the Waste Framework Directive, recycling and prevention targets for municipal waste are being envisaged. This has raised controversy on the achievability of the proposed targets.

Recent ACR+ studies and outputs from ACR+ working groups provide useful information to foster debate on this topic. This document gives an overview of the ACR+ findings, both for recycling and for prevention.

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I. ABOUT RECYCLING

Selective Collection Rates

In a report analysing some of the best performing cities and regions in Europe (ref [1]), ACR+ has thoroughly studied 23 European municipal waste management scenarios. The graph below shows the amounts of municipal waste in those cities, with the share between selectively collected waste and residual waste.

The graph demonstrates that, **when considering all recyclable fractions managed by municipalities, global recycling rates of 50 to 80% are frequently reached.** This makes it possible to reduce residual waste production to levels varying between 100 and 300 kg/inh/year, depending on the city's production of municipal waste.

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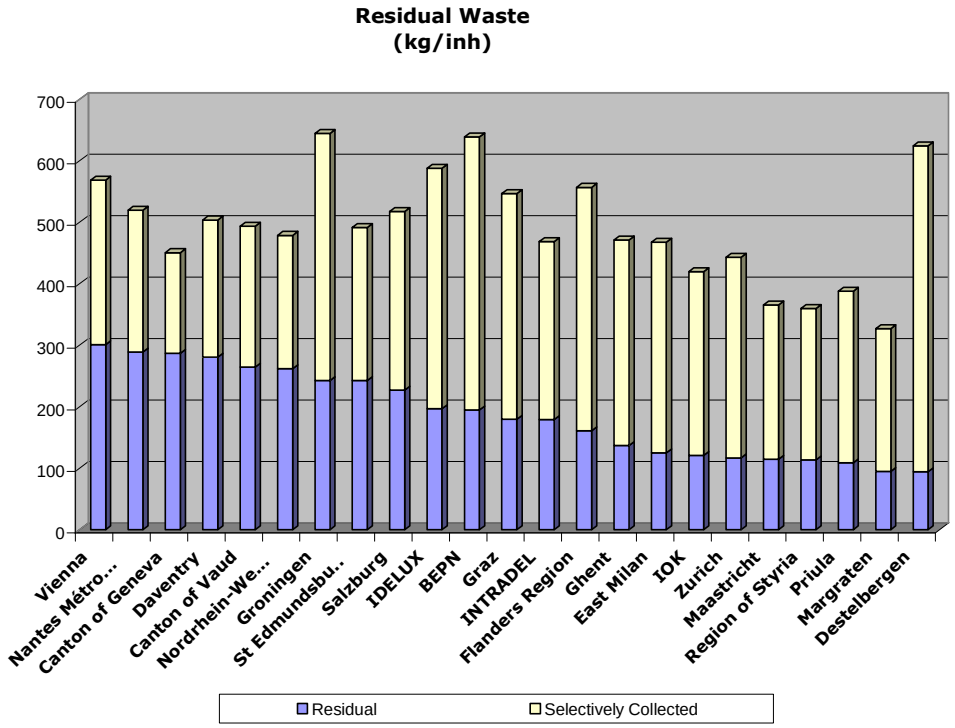

Municipal Recycling Results per Waste Stream

The below table is based on the performances of the cities analysed in the above-mentioned ACR+ study (ref [1]). The table shows the quantities of waste produced and the quantities of waste selectively collected, per waste stream.

	Municipal waste quantities (in kg/inh)	Selective collection results (in kg/inh)
Organics	170-250	100-200
Paper/card	120-250	70-100
Glass	20-40	20-35
Beverage cartons	0-5	20-35
Metals	20-40	
Plastics	40-70	
Textiles	5-10	3-5
WEEE	10-20	4-8
Other recyclables	80-200	50-100
	450 – 850	**270 - 480**

It must be emphasised however that these may not be considered as "the best" actual performances nor as the "highest" recycling results achievable. We are convinced that there remains considerable room for improvement in the field of municipal waste recycling.

Selective Collection Strategies

Selective collection is most commonly organized for the main streams of recyclables, i.e.:

- **Organic waste**: collection scenarios are often separately organised for garden waste and for kitchen waste. Garden waste is mostly collected in civic amenity sites while kitchen waste collection is more often performed through frequent kerbside collections. Whereas kitchen waste production remains rather constant between cities and seasons, garden waste production may present great variations according to the characteristics of cities and times of the year.
- **Paper**: with an average of nearly 80 kg/inh selective collection, paper forms a considerable fraction of collected dry recyclables.
- **Glass**: a long-established material for selective collections via neighbourhood banks. Collection results show little differences and typically range between 20 and 35 kg/inh. Colour separation at source is clearly on the rise.
- **Light packaging**: usually referred to as PMC (Plastic, Metals, and Beverage cartons), kerbside collection scenarios show a great diversity of combinations.
- **Textiles**: also a long established collection material. Collection performances appear rather constant.
- **WEEE**: not yet widespread, results show that the European target of 4 kg/inh can be achieved and exceeded after a few years practice.

Besides the "traditional" recyclable waste, many other waste fractions may represent rather important quantities. Some municipalities have developed selective collection schemes, mainly through container parks or collection on demand.

Separate collection of these fractions in civic amenity sites makes it possible to direct them towards recycling. Available quantities vary significantly according to the actual local acceptance policy of civic amenity sites (for instance as regards access for craftsmen, SME's, shops,….) and according to the number of waste streams considered.

The most important fractions in terms of weight appear to be **wood, inert waste, and other bully waste such as furniture**. While the average weight/inh for these waste fractions is 80 kg in the municipalities considered in the ACR+ study, some municipalities collect more than 200 kg/inh.

When civic amenity sites exist, it is quite easy to broaden the range of materials collected in order to encompass a greater diversity of waste fractions produced in rather small quantities, e.g. tyres, food and mineral oil, plastic films, flat glass, batteries, toner cartridges, solvents, etc. In some cases, civic amenity sites collect up to 40 different waste fractions for recycling or other specific treatments.

II. ABOUT PREVENTION

When it comes to reducing waste, it is obvious that prevention at source brings significant potential. As a matter of fact, waste prevention strategies are developing rapidly at municipal and regional level. This results from a growing awareness that current consumption patterns and resource use in European countries are clearly unsustainable, and also from the fact that waste prevention and recycling go hand in hand and that awareness campaigns to promote prevention have an impact on recycling. Similarly, instruments that foster recycling, such as taxes or pay-as-you-throw systems, also support waste prevention.

Four categories of waste can be found in relatively large quantities in the municipal waste flow, thereby deserving the highest attention for waste prevention:
1. Organic waste
2. Paper waste
3. Packaging
4. Bulky waste and other waste.

Municipal Waste Prevention Potential

More and more Local and Regional Authorities are engaged in one form or another of waste prevention initiatives targeting one or several specific waste streams. No one encompasses the global spectrum of waste prevention initiatives yet. However, in the framework of its European Campaign for Waste Reduction (ref [2] and [3]), ACR+ has collected data which made it possible to estimate that **there is a potential for waste reduction at source of ~15%.**; this represents ~100 kg/inh/year based on an average waste production of 600 kg/inh/year.

Of course, the amount and composition of municipal waste is different in each city. However, taking as a reference the average quantities of municipal waste at European level, one may estimate that the following set of actions may achieve the following results:

	Average amount of waste (kg/inh/y)	**Potential waste reduction (kg/inh/y)**
1. Organic waste :	**220**	**40**
• Promote composting at source (at home, local, in green spaces…)	180	30
• Fight against food waste	30	8
• Promote reusable nappies	10	2
2. Paper waste :	**100**	**15**
• Fight against unwanted flyers or newspapers	20	5
• Encourage dematerialisation (schools and offices)	80	10

3. Packaging :	**150**	**25**
• Choose products whose packaging can be returned to place of purchase	35	12
• Promote tap water	6	2
• Develop reusable bags	2	1
• Fight against over-packaging	107	10
4. Bulky or other waste :	**130**	**20**
• Promote reuse of clothes	8	4
• Promote reuse of furniture, EEE, toys, other bulky waste	110	13
• Fight against excess buying	12	3
TOTAL	**600**	**100**

Sources: ACR+ internal working groups (2006) and clusters (2007-2008)

References and Further Information

[1] Analysis of Municipal Waste Management Practices in Europe. An Image of some of the best performing cities and regions, ACR+ report commissioned by ISR, June 2008 (free for ACR+ Members, may be purchased from the ACR+ Secretariat)

[2] 100 kg less waste per inhabitant, ACR+ European Campaign for Waste Reduction, brochure, 2007 (downloadable from http://www.acrplus.org/upload/documents/document366.pdf)

[3] Reports of the Biowaste and Packaging clusters, European Campaign for Waste Reduction, ACR+, 2008 (available to the participants of the European Campaign for Waste Reduction)