

## Capital factsheet on separate collection

**Note:** This ‘Capital factsheet’ has been prepared within the EC study “**Assessment of separate collection schemes in the 28 capitals of the EU**”. The document represents the status-quo of the EU Member States capitals in May2015. The information included in this document has been elaborated for all 28 EU-capitals based on expert interviews with various stakeholders on capital level, e.g. capital administrations, waste management operators, associations etc. as well as further publically available reports, statistics and websites.

All information is cited in the factsheet and a complete list of information sources including the interviews held can be found at the end of this document.

Helsinki	Finland
<p><b>SUMMARY:</b> In Helsinki a door-to-door separate collection system covers all fractions, except plastics. Plastic is not targeted for recycling at all, but is instead incinerated together with other mixed waste. The door-to-door system is accompanied with bring systems (except for bio-waste) and civic amenity sites. No co-mingled system is in place in Helsinki. The city is among the top three best performers with respect to capture rate for metals, paper/cardboard and bio-waste. Further improvement is possible by increasing the effectiveness of glass collection and introducing separate collection for plastic wastes.</p>	
<b>1 Capital general data</b>	
City population (inhabitants)	1 090 616 (2014) [1]
City area (km <sup>2</sup> )	216.3 [1]
City density (persons/km <sup>2</sup> )	2 832 [1]
City climate (Mediterranean, continental, oceanic, Nordic; relevant for bio-waste collection)	Nordic continental/oceanic
<b>2. Capital waste data</b>	
Total (municipal) waste generation (t in indicated year)	310 795 [3, 13 and 15]
Total (municipal) waste generation (kg/cap)	284.1 [3, 13 and 15]
Total separate collection (kg/cap) & (% of generation)	129.2 kg/cap [3, 13 and 15] & 45.5 % [calculated]
Percentage breakdown of total collection for separate collection by fraction	<ul style="list-style-type: none"> <li>• 46.8 % paper and cardboard</li> <li>• 2.3 % glass</li> <li>• 3.1 % metal</li> <li>• 33 % bio-waste</li> <li>• 14.9 % other</li> </ul>
<b>3. Description of overall separate collection systems operating in capital</b>	
<p>Helsinki Region Environmental Services (HSY) is the company responsible for collection of bio-waste and residual waste both from households and public administration [4]. Recyclable waste collection is organised by private companies [5] – municipal waste management companies [6].</p> <p><b>Paper</b> is collected and handled by the producer responsibility scheme, whilst cardboard lies under the responsibility of the municipality. Paper and cardboard are collected separately door-to-door together with residual and <b>garden waste</b>. Separate collection of bio-waste and cardboard is obligatory for residential housing with at least 10 apartments. Properties with more than 20 apartments must also collect <b>metal and glass waste separately</b>. Smaller residential properties can obtain containers for all these fractions upon request [7]. Collection of waste from these collection points is maintained by producer communities and other collectors [5].</p> <p><b>Paper and cardboard, glass and metal</b> can also be collected at bring sites. Glass can also be collected in special HSY-owned bring <b>collection points</b> [5]. All recyclables and garden waste can be collected in civic amenity sites. Metal and other waste fractions can also be disposed of by touring collection vehicles between April and June [7].</p>	

<p>For consumers, starting from 1 January 2016, PYR Ltd will provide a network of bring collection points for consumer packaging waste for the collection of packaging and for the recycling of glass packaging [16].</p> <p><b>Paper and cardboard:</b> These fractions are collected either door-to-door, in bring sites or in civic amenity sites. Housing estates have their own paper containers. Cardboard is collected from properties with at least 10 apartments or where at least 50 kg of cardboard is generated weekly. Establishing a collection point from smaller properties is voluntary.</p> <p><b>Glass:</b> Glass is collected from properties with at least 20 flats or where at least 50 kg of glass waste per week is generated. Establishing a collection point from smaller properties is voluntary. It can also be delivered in bring sites or in civic amenity sites.</p> <p><b>Plastic:</b> Plastic is not collected for recycling, but instead for energy recovery with other non-recyclable waste fractions or with the residual fraction.</p> <p><b>Metal:</b> Metal is collected from properties with at least 20 flats or where at least 50 kg of metal waste is generated per week. Establishing a collection point from smaller properties is voluntary. Metals can be brought to the bring sites or civic amenity sites, or to the HSY collection vehicles in the springtime.</p> <p><b>Bio-waste:</b> Bio-waste is collected from properties with at least 10 apartments or where at least 50 kg of bio-waste is generated weekly. Collection can be also arranged in smaller estates.</p>	
<b>Annual Running Costs: Not available</b>	
<b>Setup costs: Not available</b>	
<b>Coverage:</b> In principle 100 % of households with door-to-door separate collection [14]	
<b>4. Elements of the collection system</b>	
<b>MUNICIPALITIES OR THEIR CONTRACTORS</b>	
 <p>Door-to-door collection of source separated waste</p>	
<b>Fractions collected</b>	Paper and cardboard, glass, metal, bio-waste
<b>Collection frequency</b>	<b>Paper:</b> depending on need [15]
	<b>Glass:</b> every fourth or eighth week [13]
	<b>Metal:</b> every fourth or eighth week [13]
	<b>Bio-waste:</b> once or several times per week depending on the case [13]
<b>Coverage of collection</b>	In principle 100 % of households with door-to-door separate collection [14]
<b>Annual collected quantities</b>	<b>Paper:</b> 63 800 t & 58.5 kg/cap [calculated]. Data are calculated based on population data, since only national data exist. Data covers both door-to-door collection and bring-collection points, since detailed data does not exist [15]
	<b>Glass:</b> 2 104 t [13] & 2.0 kg/cap [calculated]
	<b>Metal:</b> 871 t [13] & 0.8 kg/cap [calculated]
	<b>Bio-waste:</b> 38 949 t [13] & 36.8 kg/cap [calculated]
<b>Setup costs</b>	<b>Not available</b>
<b>Running costs</b>	<p><b>Municipal collection system:</b> 50.6 Million € [13] *; 46.4 €/cap [calculated]</p> <p>* The amount is related to all waste fractions other than paper and cardboard. With regard to sorted waste, other than bio-waste (glass and metal), only transport costs are included as producer are responsible for the costs of handling.</p> <p><b>Paper collection under producer responsibility:</b> Rough figures of collection cost in Helsinki area is around € 45/tonne, i.e. 2.9 Million €, as it is densely populated area. This cost covers only collection costs from collection point to depot [15].</p>

<b>Source of funding</b>	Door-to-door collection is covered by municipal waste management fee depending on the type of waste, container size and emptying frequency. Paper collection is covered by the producer responsibility scheme, although the costs for the household bins/containers are covered by households [15].
<b>Cost to consumer (annual)</b>	The waste fees of customer properties consist of the waste-container emptying fee and the container's rental fee if the property does not own a waste container [8].
 <b>Bring Collection Points</b>	
<b>Fractions collected</b>	Paper, Cardboard, Glass (both clear and coloured), Metals (small – maximum 20 cm), in some cases also other waste streams (e.g. textiles)
<b>Number of collection points</b>	130 (total) 12 (per 100 000 inhabitants)
<b>Collected quantities</b>	<b>Paper:</b> See total numbers above
	<b>Cardboard:</b> 1 800 t [13] & 1.7 kg/cap [calculated]
	<b>Glass:</b> 1 096 t [13] & 1,0 kg/cap [calculated]
	<b>Metal:</b> 287 t [13] & 0.3 kg/cap [calculated]
<b>Setup costs</b>	<b>Not available</b>
<b>Running costs</b>	1.2 Million € [13], 9 231 €/collection point [calculated]; 1.1 €/cap [calculated]
<b>Source of funding</b>	Waste fee, compensation related to producer responsibility [13]
<b>Cost to consumer</b>	Free of charge
 <b>Bring-in Civic Amenity sites (Sortti stations)</b>	
<b>Fractions collected</b>	Cardboard, Glass, Metal, Garden and wood waste, mixed and other waste fractions (textiles, hazardous and bulky waste, plastics as a part of mixed waste etc.)
<b>Number of sites</b>	5 in Helsinki region [7] (2.1 per 100 000 inhabitants)
<b>Collected quantities</b>	<b>Cardboard:</b> 401.6 t [13] & 0.4 kg/cap [calculated]
	<b>Glass:</b> small amounts are collected. Data is not available [14]
	<b>Metal:</b> 3 204 t [13] & 3,0 kg/cap [calculated]
	<b>Bio-waste</b> (garden waste incl. branches): 7 500 t [13] & 7.1 kg/cap [calculated]
<b>Setup costs</b>	<b>Not available</b>
<b>Running costs</b>	4.3 Million € [13], 387.2 €/t [calculated]; 860 000 €/bring point; 3.94 €/inhabitant
<b>Source of funding</b>	Charged per use. See below.
<b>Cost to consumer</b>	Paper and cardboard, glass, metal and limited amounts of wood are collected free of charge. Garden waste, mixed waste and other types are charged. Price €5 / load, if the load only includes garden waste, brushwood or apples. The prices include 24% of value added tax and the waste tax [9].

<b>PRODUCERS OR THEIR AGENTS</b>				
 <b>Deposit-Refund system (Palpa)</b>				
<b>Products covered</b>	Palpa administers recyclable glass bottles, plastic bottles and beverage cans Ekopullo Ry administers refillable glass bottles			
<b>Quantity covered by system (in t)</b>	The system is operated via 5 815 retail trade recycling points, 343 shared recycling points, 8 758 HoReCa recycling points, ca. 4 000 vending machines (country-wide) [10] See below.			
<b>Quantity collected by system (in t)</b>	Data are not collected for individual municipalities. In 2014 the return rate was 97 % for deposit based beverage cans, 92 % for plastic bottles and 89 % for recyclable glass bottles [10]. This equals the following quantities [11]:			
		<b>One-way glass</b>	<b>PET beverage bottles</b>	<b>Aluminium cans</b>
	<b>Released to market</b>	50.933,890 t	12.621,840 t	16.562,110 t
	<b>Collected from market</b>	49.731,430 t	11.896,830 t	16.652,560 t
	<b>Recycled as material</b>	49.748,430 t	12.531,510 t	17.199,280 t
	The return rate for refillable glass bottles administered by Ekopullo Ry was 97 % [10].			
<b>Funding mechanism</b>	Deposit on beverage packaging for consumers at point of sale. Members of the deposit-refund system (importers, breweries) pay a membership fee (one-off or yearly), product registration, deposit fees and recycling fees to Palpa.			
<b>Consumer cost</b>	<b>One-way bottles and cans [10]</b>	<b>Refillable bottles [12]</b>		<b>Crates</b>
	€0.15 per can (regardless of the size)	Glass 0.33 l 0.10 €	Plastic 0.5 l 0.20 €	24 x 0,33 l 2,20 €
	€ 0.10, € 0.20 or € 0.40 for a plastic bottle (depending on the size)	Glass 0.35 l 0.10 €	Plastic 1.0 l 0.40 €	
	€ 0.10 for one-way glass bottles (regardless of the size)	Glass 0.5 l 0.10 €	Plastic 1.5 l 0.40 €	
		Glass 1.0 l 0.40 €		
<b>BARRIERS TO IMPLEMENT SEPARATE COLLECTION</b>				
Weather conditions present a potential barrier to maintaining the emptying frequency of containers, especially snow and ice during winter time. Moreover, bio-waste containers can potentially freeze in the winter if improperly maintained [7]. The establishment of new collection points is difficult due to the increasing value of land, especially in the inner city area [7].				
<b>ADDITIONAL FINDINGS</b>				
The separate collection of plastic fractions of waste is not obligatory, although at some localities plastic is collected separately from residual waste, in a stream of energy waste. This is because the demand of the plastic industry in Finland for recycling plastic waste as a raw material is not significant. From March 2016, the collection of energy waste will cease and this type of waste will instead become a part of residual waste, suitable for energy recovery [7].				

5. Materials, Quantities and costs						
SUMMARY OF COLLECTION SYSTEMS IN PLACE						
Collected waste (t)	Paper and cardboard	Glass	Plastic	Metal	Bio-waste	City Coverage
Door-to-door	63 800	2 104		871	38 949	In principle 100 % of households
Bring points	1 800	1 096		287		130 + 12 per 100 000 inhabitants
Civic amenities	402			3 204	7 500	5 + 2 per 100 000 inhabitants
Producer / Retailer take-back		Not available	Not available	Not available		
<b>Total</b>	<b>66 002</b>	<b>3 200</b>	Not available	<b>4 362</b>	<b>46 449</b>	
SUMMARY OF COSTS FOR SEPARATE COLLECTION SYSTEMS IN PLACE (setup costs should be total, running costs annual)						
Costs (€)	Authorities / waste management companies		Consumer costs			
	Setup (€)	Running (€/year)	Funding type	Amount (€)		
Door-to-door	Not available	50.6 Million 2,9 M (paper)	Waste fee. Paper is collected and funded via producer responsibility. Households pay for their own bin/container.	Depends on size of container and frequency of emptying		
Bring points	Not available	1.2 Million	Waste fee. Paper is collected and funded via producer responsibility.	Free of charge		
Civic amenities	Not available	4.3 Million	Charged per use	Paper and cardboard, glass, metal and limited amounts of wood are collected free of charge. Garden waste, mixed waste and other types are charged. Price €5 / load, if the load only includes garden waste, brushwood or apples.		
Producer / Retailer take-back	Not available		Deposit on beverage packaging for consumers at point of sale.	One-way bottles and cans [10]	Refillable bottles [12]	Crates
				€0.15 per can (regardless of the size)	Glass 0.33 l 0.10 € Plastic 0.5 l 0.20 €	24 x 0,33 l 2,20 €
				€ 0.10, € 0.20 or € 0.40 for a plastic bottle (depending on the size)	Glass 0.35 l 0.10 € Plastic 1.0 l 0.40 €	
				€ 0.10 for one-way glass bottles (regardless of the size)	Glass 0.5 l 0.10 € Plastic 1.5 l 0.40 €	
					Glass 1.0 l 0.40 €	
<b>Total</b>	Not available	<b>56.1 Million</b>				

<b>6. Recycling and losses</b>						
<b>RECYCLING OF THE COLLECTED WASTE</b>						
<b>Recycled (t)</b>	<b>Paper and cardboard</b>	<b>Glass</b>	<b>Plastic</b>	<b>Metal</b>	<b>Bio-waste</b>	<b>Total</b>
<b>Generated</b>	Not available	Not available	Not available	Not available	Not available	Not available
<b>Collected</b>	66 002	3 200	Not available	4 362	46 449	120 013
<b>Recycled nationally*</b>	49 553**	3 200***	Not available	3 482	44 684	100 919
<b>Exported for recycling*</b>	11 995	0	Not available	Degree of export unknown, but expected to be small	0	Not available
<b>Rejected*</b>	Not available	Not available	Not available	No data	1 765	Not available
<b>ADDITIONAL FINDINGS</b>						
Any additional findings about the recycling for the separately collected waste that cannot be easily described in the above template should be included here.						
* Data based on descriptive reporting from [14]						
** Data are based on reporting of national data from [15]. No regional data exist.						
*** As from May 1 <sup>st</sup> 2015 glass will mostly be exported to England for recycling, due to the coming producer responsibility on consumer packaging [14].						

## References

- [1] Helsingin tilastollinen vuosikirja 2014  
[http://www.hel.fi/hel2/tietokeskus/julkaisut/pdf/14\\_11\\_25\\_Tilastollinen\\_vuosikirja\\_2014.pdf](http://www.hel.fi/hel2/tietokeskus/julkaisut/pdf/14_11_25_Tilastollinen_vuosikirja_2014.pdf)
- [2] Helsingin ymparistotilasto <http://www.helsinginymparistotilasto.fi/>
- [3] HSY Pääkaupunkiseudun jätevirrat, Jätetilastot <http://www.pksjatevirrat.fi/?mo=stats>
- [4] HSY, about HSY <https://www.hsy.fi/en/abouthsy/Pages/default.aspx>
- [5] Helsinki capital webpage: <http://www.hel.fi/www/helsinki/en/>
- [6] <http://www.kierratys.info/>
- [7] HSY residents, waste sorting and recycling:  
<https://www.hsy.fi/en/residents/pages/default.aspx>
- [8] Waste management's prices  
<https://www.hsy.fi/en/residents/customerservice/pricesandinvoicing/Pages/Waste-management's-prices.aspx>
- [9] HSY Sortti stations <https://www.hsy.fi/en/residents/sorting/sorttistations/Pages/default.aspx>
- [10] PALPA webpage: <http://www.palpa.fi/retail-trade/recycling-systems>
- [11] Personal communication with Marjo Olkkonen, Palpa
- [12] Deposit for bottles and crates <http://www.ekopullo.fi/defaulte177.html?docId=12496>
- [13] Personal communication with Kimmo Koivunen, Helsinki Region Environmental Services Authority (HSY)
- [14] Personal communication with Ira Hanf, Helsinki Region Environmental Services Authority (HSY)
- [15] Personal communication with Merja Helander, Lassila & Tikanoja Plc
- [16] The environmental register of packaging, PYR ltd, website <http://www.pyr.fi/eng/index.html>