




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.

Copenhagen	Denmark
<p>SUMMARY: The city of Copenhagen relies heavily on door-to-door separate collection for all of the five fractions, except for bio-waste, where only garden waste is collected. The door-to-door system is complemented by bring (glass only) and civic amenity sites (all dry recyclables and garden waste). No co-mingled system is in place in Copenhagen. The city is performing particularly well in glass collection, while further improvements are needed for plastics and metals, as much of these fractions end up in mixed waste.</p>	
1 Capital general data (2013/2014)	
City population (inhabitants)	570 171 [1]
City area (km ²)	89.78 [1]
City density (persons/km ²)	6 351 [1]
City climate (mediterranean, continental, oceanic, nordic; relevant for bio-waste collection)	Continental/oceanic
2. Capital waste data (2014)	
Total (municipal) waste generation (t in indicated year)	233 805 (households) [2, 10 and 12]
Total (municipal) waste generation (kg/cap)	410.1 [2, 10 and 12]
Total separate collection (kg/cap) & (% of generation)	141.9 kg/cap & 34.6 % of generated [2, 10 and 12]
Percentage breakdown of total collection for separate collection by fraction [calculated based on 2, 10 and 12]	<ul style="list-style-type: none"> • 22.6% paper and cardboard • 14.9 % glass • 4.2 % plastic • 7.0 % metal • 26.2 % bio-waste • 25.1 % other (like bulky waste, impregnated wood, PVC, hazardous waste, batteries, etc. but excl. WEEE, tyres and)
3. Description of overall separate collection systems operating in capital	
<p>The municipality of Copenhagen is responsible for managing waste. Participation in the collection system is paid by property owners according to the container volume registered at the property. Moreover, a fee has to be paid by properties with more than one housing unit, per housing unit (other than institutions).</p> <p>In the municipality of Copenhagen, separate collection is organised for paper, cardboard, glass packaging, recyclable metal packaging, recyclable plastic packaging and garden waste. The regulation for waste collection of municipal waste in Copenhagen is described in this document: Regulativ for husholdningsaffald.</p> <p>Paper and cardboard: Paper is collected separately door-to-door from both apartment buildings (2 times per week) and private homes (bi-monthly). Cardboard is collected separately from apartment buildings (2times per week) whereas it is collected separately in connection to bulky waste from private homes (10 times per year).</p>	

<p>Glass: glass (bottles and jars) is collected separately from apartment buildings (bi-monthly). For private homes there is a bring-system for either bring points or civic amenity sites. For bottles under producer responsibility there is a take-back service at retailers.</p> <p>Plastic: Plastic is collected separately from apartment buildings and for private homes there is a bring-service at the civic amenity sites.</p> <p>Metal: Metal is collected separately from apartment buildings and for private homes there is a bring-service at the civic amenity sites.</p>	
<p>Annual Running Costs (2013):</p> <p>Residual waste: € 6.984.161 [3] ; 45 €/t material [calculated] ; 12 €/cap [calculated]</p> <p>Glass, paper and cardboard: € 13.167.383 [3] ; 64 €/cap [calculated]</p> <p>Bulky waste and garden waste: € 36.512.215 [3] ; 491 €/t material [calculated] ; 23 €/cap [calculated]</p>	
<p>Setup costs: Not available</p>	
<p>Coverage:</p> <ul style="list-style-type: none"> • 100 % of households with door-to-door separate collection ("very few" households are exempted from separate collection of glass, metal and hard plastic due to shortage of space) • 0 % households that are not attached to the separate collection system ("very few" households are exempted from separate collection of glass, metal and hard plastic due to shortage of space) 	
<p>4. Elements of the collection system</p>	
<p>MUNICIPALITIES OR THEIR CONTRACTORS</p>	
<p style="text-align: center;"> Door-to-door collection of source separated waste</p>	
Fractions collected	Paper, cardboard, glass packaging, hard plastic packaging, metal packaging, garden waste [4] Glass, hard plastic and metal is collected where there is enough space near the property
Collection frequency	Paper: bi-weekly from apartment buildings; bi-monthly from houses [4]
	Cardboard: bi-weekly from apartment buildings; 10/year from houses (together with bulky waste) [4]
	Glass: according to necessity (900 litre containers can be provided upon request, for apartment buildings only) [4]
	Metal: according to necessity, for apartment buildings only [4]
	Plastic: according to necessity, for apartment buildings only [4]
Garden waste: according to necessity from 1.March and 38 weeks after (from houses) [4]	
Coverage of collection	Paper: Not available
	Glass: Not available
	Metal: Not available
	Plastic: Not available
Annual collected quantities (2014)	Paper and cardboard: 16 044 t [2] & 28.14 kg/cap [calculated]
	Glass: collected together with glass from bring points and civic amenity sites
	Plastic: 700 t [2] & 1.23 kg/cap [calculated]
	Metal: 664 t [2] & 1.16 kg/cap [calculated]
	Garden waste: 8 432 t [2] & 14.79 kg/cap [calculated]
Setup costs	Not available
Running costs (2013)	Bulky and garden waste: 13 167 383 €/year [3] & €/t [calculated] ; 23 €/cap [calculated] Glass, paper and cardboard waste: 7 030 604 €/year [3] & 262 €/t [calculated] ; 12 €/cap [calculated]

Source of funding	There is a fixed fee for separate collection [5]: Paper: € 12.4/year per household Cardboard: € 10.7/year per household Glass: € 7.9/year per household Plastic: € 3.2/year per household Metal: € 3.2/year per household Garden waste: € 13.8/year per household For residual waste a fixed fee is combined with PAYT fee [5]
 Bring Collection Points	
Fractions collected	Glass (glass is collected from collection containers placed at public places, at larger apartment buildings as well as civic amenity sites)
Number of collection points	2 309 [15]
Collected quantities	8 270 t & 14.5 kg/cap [2]
Setup costs	Not available
Running costs	1 031 715 € [16], 124.76 €/t [calculated], 447 €/collection point [calculated], 1.81 €/inhabitant [calculated]
Source of funding	Waste fee
Cost to consumer	7.89 €/inhabitant [5]
 Bring-in Civic Amenity sites	
Fractions collected	All fractions except residual waste are accepted
Number of sites	17 civic amenity sites (close to 3 per 100 000 people) Some are civic amenity sites whereas some are so-called “close- civic amenity sites” which receive less fractions than the ordinary civic amenity sites ¹
Collected quantities	Paper and cardboard: 2 274 t [10] & 3.99 kg/cap [calculated]
	Glass: collected together with glass from bring points and larger apartment buildings
	Plastic: 802 t [10] & 1.4 kg/cap [calculated]
	Iron and Metal: 3 797 t [10] & 6.7 kg/cap [calculated]
	Bio-waste (garden waste): 12 758 t [10] & 22.4 kg/cap [calculated]
Setup costs	Not available
Running costs	€ 9 633 289 [3], € 17/inhabitant [calculated]
Source of funding	The civic amenity sites are financed via the municipal waste fee. The fee specifically for the civic amenity sites is € 46.5/year per household [5].
Cost to consumer	The civic amenity sites are free of charge for citizens. Businesses pay an obligatory administration fee of € 101 per year plus VAT. In addition they pay a fee for each visit to the civic amenity site depending on the size of the vehicle (€13-43) or alternatively an annual pass (€282-859) [14]

¹ The citizens of Copenhagen are also allowed to make use of the 24 recycling centers located in 19 surrounding municipalities.

PRODUCERS OR THEIR AGENTS	
 Deposit return system (Dansk Retursystem) - Bring back system for beverage containers	
Products covered	Plastic bottles, glass bottles, beverage cans
Quantity covered by system (in t)	Not available
Quantity collected by system (in t)	Aluminium: 1.183.872 kg Glass: 3.781.999 kg PET: 1.916.907 kg All data are for (2014) [12]
Funding mechanism	Deposit on beverage packaging at point of sale
Consumer cost	0.2 €/plastic packaging less than 99 cl [8] 0.4 €/refillable glass packaging larger than 50 cl [8] 0.13 €/other packaging less than 99 cl [8] 0.4 €/packaging larger than 99 cl [8]
 Bring-back system for producers - Voluntary bring-back system for recyclable wastes and packaging material	
Products covered	Producers have since 2014 been allowed to take back their products and/or packaging after ended use. As of April 2015 one producer has signed up for the agreement. Since September 2014 Nespresso has been allowed to take back their aluminium coffee capsules. At the time of launching Nespresso offered 31 drop-off points, but the plan is to make the system nationwide during 2015 [11].
Quantity covered by system (in t)	Data is confidential
Quantity collected by system (in t)	Data is confidential
Funding mechanism	Funded by producers
Consumer cost	Will most likely be incorporated in product price
BARRIERS TO IMPLEMENT SEPARATE COLLECTION <p>Separate collection of waste can be challenged in Copenhagen and in Denmark in general, since the tradition and infrastructure around incineration is quite close-knit. Many municipalities including Copenhagen has invested substantially new incineration plants with large capacities. Further, bad experiences in the past has led many Danes to think that separated waste is mixed together and incinerated which has resulted in a tendency to oppose to waste separation.</p> <p>On the positive note however, the municipality of Copenhagen is working towards becoming a zero waste city in 2050. This includes reducing waste for incineration by 20% and increasing waste for recycling by 45% in 2018 [13].</p>	

5. Materials, Quantities and costs						
SUMMARY OF COLLECTION SYSTEMS IN PLACE						
Collected waste (t)	Paper and cardboard	Glass	Plastic	Metal	Bio-waste (garden)	City Coverage
Door-to-door	16 044		700	664	8 432	Households / 100 % of total (as above)
Co-mingled						
Bring points		8 270				2 309 + 405 per 100 000 inhabitants (as above)
Civic amenities	2 274		802	3 797	12 758	17 + 3 per 100 000 inhabitants (as above)
Producer / Retailer take-back		3 782	1 917	1 184		
Total	18 318	12 052	3 419	5 645	21 190	
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	7 030 604 (paper, cardboard and glass)	Fixed fee for all citizens for separate collection		Paper: € 12.4/year per household Cardboard: € 10.7/year per household Glass: € 7.9/year per household Plastic: € 3.2/year per household Metal: € 3.2/year per household Garden waste: € 13.8/year per household	
Co-mingled	-	-	-	-	-	
Bring points	Not available	Not available	Fixed waste fee		Free when visiting	
Civic amenities	NA	9 633 289	Fixed waste fee		Free of charge for citizens. Businesses pay an obligatory administration fee of € 101 per year plus VAT. In addition they pay a fee for each visit to the civic amenity site depending on the size of the vehicle (€13-43) or alternatively an annual pass (€282-859).	
Producer / Retailer take-back	Not available	Not available	Not available		Not available	
Total	Not available	Not available	Not available		Not available	

6. Recycling and losses						
RECYCLING OF THE COLLECTED WASTE						
Recycled (t)	Paper and cardboard	Glass	Plastic	Metal	Bio-waste	Total
Generated	Not available	Not available	Not available	Not available	Not available	Not available
Collected	18 318	12 052	2 699	5 645	21 190	
Recycled nationally	0	26.6% (2 200 t) of all municipal glass is washed and sold for reuse. The rest (6 070 t) is recycled nationally [16]. WRT the glass collected via Dansk Retursystem, around 15 % is recycled nationally [12].	0	0	Not available	Not available
Exported for recycling	Not available	WRT the glass collected via Dansk Retursystem, around 85 % is exported for recycling [12].	In a preliminary test-study the plastic is sent for three different plants in Germany [9]	Not available	Not available	Not available
Rejected	Not available	Not available	The results vary: total recycling varies from 42% to 66%. Residual sent directly for incineration varies from 28% to 52% [9].	Not available	Not available	Not available

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