

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.

Amsterdam	The Netherlands
<p>SUMMARY: Amsterdam has no separate door-to-door collection system established except for bio-waste in one district. The main separate collection scheme are bring points. Paper/cardboard, glass and plastic packaging are collected in this way while metal is only collected at civic amenities. The separate collection rate on total municipal waste generation in Amsterdam is 14% which is very low and well below average of the performance in the country. All waste management services are covered by municipal service tax that has to be paid by every household.</p>	
1 Capital general data	
City population (inhabitants)	799 345 (yr. 2013) [15]
City area (km ²)	219 (164 land, 53 water) [1]
City density (persons/km ²)	4 923 (per km ² land) [1]
City climate (mediterranean, continental, oceanic, nordic; relevant for bio-waste collection)	Continental
2. Capital waste data	
Total (municipal) waste generation (t in indicated year)	324 302 t (2013) [15]
Total (municipal) waste generation (kg/cap)	406 kg/cap (2013) [15]
Total separate collection (kg/cap) & (% of generation)	56 kg/cap & 14% of generated (2013) [15] Not included in this amount are mixed residual household waste (276 kg/cap) and bulky household waste (73 kg/cap) [15]
Percentage breakdown of total collection for separate collection by fraction	Separately collected in 2013 [15]: <ul style="list-style-type: none"> • 44 % paper and cardboard • 35 % glass • 2 % plastic • 0 % metal • 1 % bio-waste • 18 % other fractions collected separately (e.g. WEEE, hazardous household waste etc.)
3. Description of overall separate collection systems operating in capital	
<p>Amsterdam has eight districts, of which one district is an industry district and seven are residential area districts. These seven districts all arrange their separate collection of household wastes by themselves, and the collection services are public (from each district of the municipality). That all districts arrange their own separate collection, upholds a threshold for the collection of data on costs since these figures are normally not collected centrally. On the other hand, data on waste flows tonnages are collected by the national authorities with regards to national monitoring and EU legislation requirements, and therefore more easily available.</p>	

Most of the municipalities work with bring points (containers) in the streets for separated waste fractions like **paper and cardboard, glass, plastics, textiles and shoes**. The main fraction of the household waste, the residual waste fraction, is collected by means of door-to-door household containers or by means of trash bags in front of the house (both kerbside/door-to-door collection system). Amsterdam has 6 civic amenities ('Afvalpunten') where the inhabitants can bring larger household wastes, but also the abovementioned small waste fractions, electrical appliances, and construction and demolition wastes. Small chemical wastes can be brought to the stores/shops/supermarkets, or returned to the shop where the product was bought. Bio-waste is only collected in a very few areas separately, otherwise disposed of via the 'residual waste' fraction. Metal is not separated but collected with the residual waste (like cans), and scrap metal mostly via the civic amenities.

Paper and cardboard: There are 3000 containers/bring points, to be found in the streets in all districts. In the Amsterdam Centrum only in some streets, paper and carton can be put in the streets and will be separately collected by a company. Paper and cardboard can be also brought to civic amenities

Glass: There are 3000 containers/bring points for glass, spread out over all districts. Glass can be also brought to civic amenities.

Plastic: There are 226 containers/bring points for plastic spread out over all districts. These are much less than paper and glass containers, since the authorities have only started collecting plastic waste only since 2010 with pilot projects [20] with further unfoldment of the installation of plastic containers in the latest months of 2013 [21]. Plastics can be also brought to civic amenities.

Metal: There is principally no separate collection for small household metal. The waste stream sheet metal does not have to be separated at the source, since it will be separated before incineration from the rest waste stream of after incineration from the ashes at the incineration installations, for the sake of recycling (local/municipal initiatives however which facilitate the separation of sheet metal are allowed) [17]. The small metal in households in Amsterdam (e.g. cans) is mixed with the residual waste (largest fraction of the household waste). Larger pieces of metal (scrap metal) however can be brought to civic amenities. Some scrap metal is collected door-to-door.

Bio-waste: Bio-waste is not separately collected in most of the areas of Amsterdam, since it is stated not to be 'economically practicable' [16]. There is only one district (Nieuw-West) with a **separate container for bio-waste** per household which works with door-to-door collection. In all other districts **bio-waste** is disposed of via the **residual waste** fraction. One district (West) offers special **bread containers** in the streets for **old bread**. **Bulky garden waste** can be either brought to **civic amenities** or when solid offered in the street at certain times per month as being **bulky household waste**. **Cooking oil** wastes are brought to the civic amenities or to a special point for small chemical household wastes.

All information is aggregated from the different districts in Amsterdam via [2], [3], [4], [5], [6], [7], [8], [10],

Annual Running Costs: not available

Setup costs: not available

Coverage:

- < 18 % of households with door-to-door separate collection of **bio-waste**¹

4. Elements of the collection system



MUNICIPALITIES OR THEIR CONTRACTORS



Door-to-door collection of source separated waste


Fractions collected	<ul style="list-style-type: none"> • Bio-waste (organic kitchen and garden waste) (only in some neighbourhoods in district Nieuw-West) • Bulky garden waste • Scrap metal • Paper (pilot in Amsterdam Centrum)
Collection frequency	<ul style="list-style-type: none"> • Organic, kitchen and garden waste: weekly • Bulky garden waste: - (normally shall be brought to civic amenities)

¹ From [1] page 31 it can be deduced that Nieuw West has 144 002 inhabitants. Since a smaller part of Nieuw-West has door-to-door containers the % coverage will be smaller: < (144 002/811 185) x 100%

	<ul style="list-style-type: none"> Scrap metal: - (scrap metal shall be brought to the civic amenities normally) Paper (pilot): 2 times per month²
Coverage of collection	<ul style="list-style-type: none"> Bio-waste: < 18% households³ [1] Paper (pilot): 10 large streets (Grachtengordel en De 9 Straatjes) in the city centre
Annual collected quantities	<p>Bio-waste:</p> <ul style="list-style-type: none"> 506 t organic, kitchen and garden waste (2013) [15] 13 t bulky garden waste (2013) [15] <p>Scrap metals: 10 t (yr. 2013 [15])</p>
Setup costs	Not available
Running costs	Not available
Source of funding	Municipal service tax
Cost to consumer (annual)	240€ (1-person household) / 320€ (>1 person household) [9] for all waste services in the municipality
 Bring Collection Points	
Fractions collected	<ul style="list-style-type: none"> Paper and cardboard, Glass, Plastic packaging, Textiles and shoes, Bread (some areas)
Number of collection points	<ul style="list-style-type: none"> Paper and cardboard 3000 (total) [12] 375.3 (per 100 000 inhabitants) Glass 3000 (total) [11] 375.3 (per 100 000 inhabitants) Plastic packaging 226 (total) [13] 28.2 (per 100 000 inhabitants)
Collected quantities per year	<p>Collected in 2013:</p> <ul style="list-style-type: none"> Paper and carton: 19 752 t Glass: 15 827 t Plastic packaging: 723 t <p>Amounts listed are for total bring/drop-off collection, thus including civic amenities (see below)</p>
Setup costs	Not available
Running costs	Not available
Source of funding	Municipal service tax
Cost to consumer	240€ (1-person household) / 320€ (>1 person household) [9] for all waste services in the municipality
 Bring-in Civic Amenity sites	

² <http://www.centrum.amsterdam.nl/wonen-en/afval-reiniging/overig/papier-karton-apart-0/>

³ From [1] page 31 it can be deduced that Nieuw West has 144 002 inhabitants. Since a smaller part of Nieuw-West has door-to-door containers the % coverage will be smaller: < (144 002/811 185) x 100%

Fractions collected	Paper and cardboard, glass, plastic, metal (maximum length and width 2 meter), asbestos, tires, construction and demolition wastes, bitumen, pressure bottles, waste electrical and electronic equipment, cooking oil and fat, plaster, large household waste, earth, sand and clay (max. 1 500 kg), wood, household waste (not more than 5 trash bags), small chemical waste (maximum 50 kg), recyclables, mattresses, styrofoam (maximum 1 m ³), garden waste (weight of branches maximum 150 kg), textiles, wipe sand
Number of sites	6 (total) [10] 0.7 (per 100 000 inhabitants)
Collected quantities	Collected in 2013: <ul style="list-style-type: none"> • Paper and carton: 19 752 t • Glass: 15 827 t • Plastic packaging: 723 t • Scrap metals: 94 t • Bio-waste <ul style="list-style-type: none"> ○ (Organic, kitchen and garden: 0 t) ○ Bulky garden waste: 1 456 t ○ Wood waste: 1 805 t <p>Amounts for paper and cardboard, glass and plastic are for total bring/drop-off collection, including bring points collection (see above)</p>
Setup costs	Not available
Running costs	Not available
Source of funding	Municipal service tax
Cost to consumer	240€ (1-person household) / 320€ (>1 person household) [9] for all waste services in the municipality
PRODUCERS OR THEIR AGENTS	
 Deposit Return Systems for plastic bottles	
Products covered	Plastic bottles
Quantity covered by system (in t)	Not available
Quantity collected by system (in t)	Not available
Funding mechanism	Deposit on beverage packaging at point of sale.
Consumer cost	Plastic bottle: 0.25 €. Beer bottles: 0.10 €. Beer crates: 0.75 € / 1.50 € for halve / entire crates.
BARRIERS TO IMPLEMENT SEPARATE COLLECTION:	
An argument for a barrier for separate collection may be the available space in the narrow city centre houses for separate collection of too many waste fractions	
ADDITIONAL FINDINGS:	
In a few streets in the city centre districts of Amsterdam there is a pilot ongoing with the separate door-to-door collection of paper and cardboard. Citizens can put their waste paper and cardboard in the streets on a certain time and date and is then collected by the municipality waste collection services	

5. Materials, Quantities and costs						
SUMMARY OF COLLECTION SYSTEMS IN PLACE						
Collected waste (t)	Paper	Glass	Plastic	Scrap metal	Bio-waste	City Coverage
Door-to-door				10 t	519 t	< 18 %
Co-mingled						
Bring points	19 752 t	15 827 t	723 t			Paper: 3000 points (370 per 100 000 inhabitants) Glass: 3000 points (370 per 100 000 inhabitants) Plastic: 226 points (28 per 100 000 inhabitants)
Civic amenities				94 t	3 261 t	6 amenities (0.7 per 100 000 inhabitants)
Producer / Retailer take-back						
Total	19 752 t	15 827 t	723 t	104 t	3 780 t	
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 (€)		
Co-mingled						
Door-to-door	Not available	Not available	Municipal service tax	240€ (1-person household)		
Bring points	Not available	Not available		320€ (>1 person household)		
Civic amenities	Not available	Not available				
Producer / Retailer take-back	Not available	Not available	Not available	Plastic bottle: 0.25 €. Beer bottles: 0.10 €. Beer crates: 0.75 € / 1.50 € for halve / entire crates.		
Total	Not available	Not available				
<p>Note: It was indicated during the interview [15] that from the citizen's tax for wastes, the real amount spent on the waste management in Amsterdam is about 80-90%. The following rough estimation then can be made:</p> <p>Amsterdam contains 436 825 households in 2013, of which 240 699 1-person households and 196 126 more-person households [18]. The total income roughly used for the total waste management in Amsterdam is then:</p> <ul style="list-style-type: none"> 1-person households: $85\% \times 240\,699 \times 240\,€ = €\,49\,102\,596$ >1 person households: $85\% \times 196\,126 \times 320\,€ = €\,53\,346\,272$ <p>which is roughly 100 Million Euro (this is thus for the <u>total waste management</u> and not for only separate waste collection). This total amount is confirmed via financial data obtained via communication with the municipality of Amsterdam [22]. It was also indicated that no breakdown of financial data is centrally available on each individual separate collection system and waste flow [22].</p>						
6. Recycling and losses						
RECYCLING OF THE COLLECTED WASTE ⁴						
Recycled (t)	Paper	Glass	Plastic	Metal	Bio-waste	Total

⁴ Data of **waste generation** per waste stream have been calculated on the basis of residual waste sorting analysis, if data was not directly available. Based on the composition of residual waste (% of each waste fraction) and its total weight amounts per waste fraction can be calculated. [19]. Residual waste (2013) 220 894 t [15]. Composition: Paper and carton: 17%, Glass: 5.1 %, Plastics: 13 %, Metal: 3.3 %, Bio-waste: 41 %.

Generated*	57 304	27 093	29 439	7394	94 347	215 577
Collected	19 752	15 827	723	104	3 780	40 186
Recycled nationally^{5**}	Not available					
Exported for recycling⁶						
Rejected						
ADDITIONAL FINDINGS						
The institute for Research, Information and Statistics does not have information on quantities and costs of the different collection systems, since each of the 8 districts arranges the separate collection themselves [14].						

⁵ It was mentioned during the interview with the national authorities [15] that most of the separately collected waste flows will be recycled, and that all the mixed household waste is incinerated.

⁶ It was mentioned during the interview with the national authorities [15] that certain 'green list wastes' (as plastics, paper, and metal) may be treated abroad, but that there is no overview on this

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