

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.

Prague	Czech Republic
<p>SUMMARY: Prague separate collection system is solely based on bring systems including bring points for the collection of paper, glass, plastic and civic amenities for same waste streams and additionally metals and bio-waste. Both bring schemes are free of costs for the inhabitants and are financed by the waste budget. Recycling rates are high however, the collection rates should be raised, 28.5 % of municipal waste generation are separately collected.</p>	
1 Capital general data [3]	
City population (inhabitants)	1 243 201 persons
City area (km ²)	496.15 km ²
City density (persons/km ²)	2 505 persons/km ²
City climate (mediterranean, continental, oceanic, nordic; relevant for bio-waste collection)	Continental
2. Capital waste data	
Total (municipal) waste generation (t in indicated year)	400 900 t (2013) [2]
Total (municipal) waste generation (kg/cap)	322.5 kg/cap [2]
Total separate collection (kg/cap) & (% of generation)	115 000 t, 92.5 kg/cap; 28.5 % of generated [2] [4]
Percentage breakdown of total collection for separate collection by fraction	<ul style="list-style-type: none"> • 20% paper and cardboard • 14% glass • 10.6% plastic • 0.7% metal • 4% biowaste • 50.7 % other (mainly construction waste, bulky waste and wood waste) [2] [4]
3. Description of overall separate collection systems operating in capital	
<p>Sorted waste on the territory [2] of Prague is collected using the system of bring points, the door-to-door system and the combined system.</p> <p>The citizens particularly use the system of bring points – about 99% households. In 2013, the number of collection places in the system of bring points reached about 3,300. Collection receptacles are placed in the system of bring points so that 1 collection place serves for about 375 inhabitants on average.</p> <p>The door-to-door collection system is provided in the combination with the system of bring points on the territory of the Prague Urban Reserve (about 1% households). In this system plastic collection receptacles of 120 and 240 litres in volume are placed directly in residential buildings. In 2013 collection receptacles were installed in about 1,080 buildings.</p>	

In addition to the wide-spread sorting of glass, paper, plastic and beverage cartons, a network of civic amenity sites is established in the Capital of Prague, which enable (100% households) selected types of wastes to be deposited in a larger quantity and in a wide selection of commodities. These are bulky waste, construction waste, waste from greenery, wood, metals, used tyres, paper, glass, plastic, beverage cartons and hazardous components of municipal waste. Within civic amenity sites of the Capital of Prague, places of take-back of discarded electrical and electronic equipment from households are established, too. Natural persons with their permanent residence on the territory of Prague have the service of waste deposition free of charge; legal persons and natural persons authorised to carry on business must pay for this service. [2]

Within the system of collection of municipal waste on the territory of the Capital of Prague, take-back of electrical and electronic equipment and products defined in Section 38 of Act No. 185/2001 Coll. on wastes, as amended, is also provided in cooperation with the Capital of Prague and the collective systems Elektrowin, Asekol, Ekolamp and Ecobat.

The citizens have an option to deposit the individual components of municipal waste (MW) using the system of bring points or the door-to-door system in the following ways: [2] [4]

Paper and cardboard, glass, plastic, and, if the case may be, **beverage cartons** – into collection receptacles designed for these components of MW, directly on streets or in houses (on the territory of the Prague Urban Reserve) and in civic amenity sites of the City;

Hazardous waste – in mobile collection, in stable collecting points, including civic amenity sites of the City, in pharmacies (unused or expired medicines, and mercury thermometers, if any);

Ferrous and non-ferrous metals – in civic amenity sites of the City, mobile civic amenity sites and in grey containers on streets within a pilot project (only metallic packages);

Bio-waste – into large-volume containers placed on streets in selected City Districts of the Capital of Prague, in civic amenity sites of the City, mobile civic amenity sites and in the stable civic amenity site for collection of bio-waste in Prague 10 – Malesice;

Annual Running Costs: In 2013

Total 14 158 000 € and 11.4 €/cap [2]

Setup costs: [not available]

Coverage:

The citizens particularly use the system of bring points – about 99% households. The door-to-door collection system is provided in the combination with the system of bring points on the territory of the Prague Urban Reserve (about 1% households). [2]

4. Elements of the collection system

MUNICIPALITIES OR THEIR CONTRACTORS



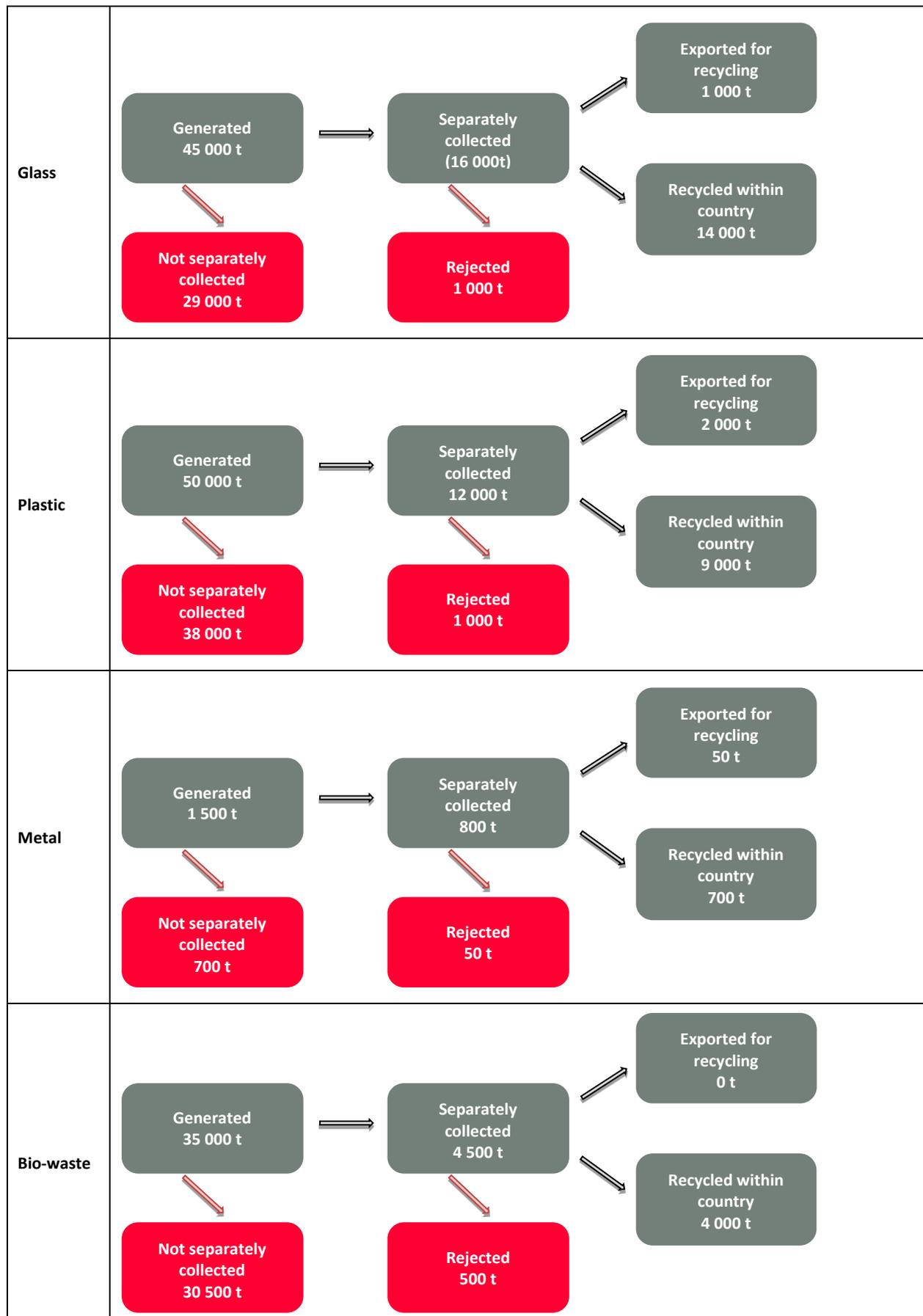
Bring Collection Points

Fractions collected	Paper, glass, plastic, cardboard
Number of collection points	3 300
Collected quantities	Paper: 22 299 t Glass: 15 941 t Plastic: 12 042 t Cardboard: 870 t [2] [4]
Setup costs	Not available , only the total costs for waste management available [2]
Running costs	Not available , only the total costs for waste management available [2]
Source of funding	Waste budget
Cost to consumer	Free of costs

 Bring-in Civic Amenity sites (Municipality or Contractor)						
Fractions collected	Paper, glass, plastic, metal, cardboard, bio-waste, etc.					
Number of sites	16 (0.77 per 100 000 inhabitants) [2]					
Collected quantities	Paper: 571 t Cardboard: 0.4 t Glass: 319 t Plastic: 59 t Metal: 818 t Bio-waste (garden waste): 4 520 t [2] [4]					
Setup costs	Not available , only the total costs for waste management available					
Running costs	Not available , only the total costs for waste management available [2] [4]					
Source of funding	Waste budget					
Cost to consumer	Free of costs					
PRODUCERS OR THEIR AGENTS						
 Deposit return system						
Bottle bringback scheme						
Products covered	Glass drink 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	0.1 €/bottle [2]					
BARRIERS TO IMPLEMENT SEPARATE COLLECTION						
<ul style="list-style-type: none"> Waste management in Prague is devolved to a large number of local authorities, which makes coordinated action and negotiation more complicated and less effective. Socio-economic conditions seem to play an important role in the level of recyclables collected – low income areas produce significantly less recyclables for collection. 						
5. Materials, Quantities and Costs						
SUMMARY OF COLLECTION SYSTEMS IN PLACE						
Collected waste (t)	Paper	Glass	Plastic	Metal	Bio-waste	City Coverage
Bring points	22 299	15 941	12 042			3 300 (1 per 375 inhabitants)
Civic amenities	571	319	59	818	4 520	16 (0.77 per 100 000 inhabitants)
Producer / Retailer take-back						
Total	22 870	16 260	12 101	818	4 520	

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 (€)		
Bring points	Not available	11 940 000 €	Municipal tax	Free		
Civic amenities	Not available	2 218 000€	Municipal tax	Free		
Producer / Retailer take-back	Not available	Not available	Not available	€0.1		
Total	Not available	158 000€	Municipal tax	€111* / per household [2]		
* Share of municipal tax spent on all municipal waste management activities.						
6. Recycling and losses						
RECYCLING OF THE COLLECTED WASTE [4]¹						
Recycled (t)	Paper	Glass	Plastic	Metal	Bio-waste	Total
Generated [2]	ca 55 000 – 60 000	ca 45 000 – 50 000	ca 50 000 – 55 000	ca 1500 – 2 000	ca 35 000-40 000	186 500 – 207 000
Collected [2]	22 919	16 260	12 287	818	4 520	56 804
Recycled nationally [4]	20 000	14 000	9 000	700	4 000	47 700
Exported for recycling [4]	1 000	1 000	2 000	50	0	4 050
Rejected [4]	2 000	1 000	1 000	50	500	4 550
7. Material flows						
MATERIAL FLOWS FOR EACH COLLECTED FRACTION						
Paper	<pre> graph LR A[Generated 55 000 t] --> B[Separately collected 23 000 t] A --> C[Not separately collected 22 000 t] B --> D[Exported for recycling 1 000 t] B --> E[Recycled within country 20 000 t] B --> F[Rejected 2 000 t] </pre>					

¹ 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. Municipal waste composition: Paper 15%, Glass 12%, Plastic 14%, Metal 0.5%, Bio-waste (garden waste) 10%



References

- [1] Waste management plan 2012 – 2015: city of Prague
[http://envis.praha-mesto.cz/\(5gnytp45lwynhn45woq4lfb4\)/zdroj.aspx?typ=2&id=71672&sh=313018514](http://envis.praha-mesto.cz/(5gnytp45lwynhn45woq4lfb4)/zdroj.aspx?typ=2&id=71672&sh=313018514)
- [2] Prague environment 2013: Yearbook – report on the state of the environment: waste
http://portalzp.praha.eu/jnp/cz/ekologicka_vychova_ma21/informacni_system_o_zp/publikace_aplikace/index.html
- [3] Czech Statistical Office: Public Database
http://vdb.czso.cz/vdbvo/tabdetail.jsp?kapitola_id=5&potvrdd=Dokon%C4%8Dit+%C3%BApravy&pro_1_154=554782&cislotab=MOS+ZV01&str=tabdetail.jsp
- [4] Municipality of Prague (Waste Department)
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