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 May 2015. 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.

<table>
<thead>
<tr>
<th>Bratislava</th>
<th>Slovakia</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SUMMARY</strong>: In Bratislava separate collection takes place solely by bring systems including paper/cardboard, glass, and plastic. Metal bio-waste is collected at civic amenities. The separate collection rate on total municipal waste generation is not very high (21%). In total, 16% of the municipal waste generated is recycled.</td>
<td></td>
</tr>
</tbody>
</table>

1 Capital general data [3]

- City population (inhabitants): 415,589
- City area (km²): 367.6 km²
- City density (persons/km²): 1,130 persons/km²
- City climate (mediterranean, continental, oceanic, nordic; relevant for bio-waste collection): Continental

2. Capital waste data [2]

- Total (municipal) waste generation (t in indicated year): 140,594 t (2013)
- Total (municipal) waste generation (kg/cap): 338.3 kg/cap
- Total separate collection (kg/cap) & (% of generation): 29,978 t, 72.1 kg/cap (21.3% of generated)

Percentage breakdown of total collection for separate collection by fraction
- 26% paper and cardboard
- 21% glass
- 13% plastic
- 6% bio-waste
- 0.6% metal
- 33.4% other

3. Description of overall separate collection systems operating in capital [2]

Regarding the collection system in Bratislava the company Odvoz a likvidácia odpadu a.s. Bratislava is the responsible subject. On the territory of Bratislava, separated collection of sorted municipal waste is implemented in the following form:

1. **Collection at bring points**: carried out through collecting vessels of different colours for paper and cardboard, glass, plastic (including Tetra Pak containers and beverage cans).
   - **At the bring points the following types of vessels are used**: l containers; 120 l, or 240 l vessels; 1,200 l, or 1,800 l bell-shaped collection bins (only for glass)
   - Vessels for separated collection are emptied **twice a week**, bell-shaped collection bin for glass at least once a month.
• Metals: separate collecting vessels for this component of municipal waste are not placed on the territory of Bratislava. The inhabitants can deposit metal packages from beverages into collecting vessels designed for collection of plastic. Metals can be handed in civic amenity sites (see below).

2. Collection at Civic amenity sites:
• The fractions collected are paper, glass, plastic, metal, bio-waste (garden waste).
• Other fractions collected are bulky waste, construction waste, waste from greenery, wood, used tyres, liquid packaging board and hazardous components of municipal waste.
• Within civic amenity sites, there are also places established for the take-back of discarded electrical and electronic equipment from households.
• Natural persons with permanent residence on the territory of Bratislava have the service of waste deposition free of charge.
• Bio-waste from gardens and parks: At least 13 civic amenity sites will still be provided for the inhabitants on the territory of the City, in which large-capacity containers will be placed for collection of waste from greenery and in which the inhabitants can hand this waste under supervisory persons during operating hours.

Annual Running Costs: €23 Million (including the costs of collection of mixed municipal waste)
The proportion of separated collection amounts to about 26%, i.e. €6 Million or €14.4/cap

Coverage: [2]
Separate collection in the city of Bratislava is mainly organised through a bring-point system and by a minor part by civic amenity sites.

The citizens particularly use the bring-point system – about 99% of households. In 2013, the number of collection bring points in Bratislava reached about 1 100 with in total 14 563 vessels. Collecting vessels in the bring-point system are placed in a manner that one bring point serves for about 430 inhabitants on average.

The overview below provides the number of vessels for separate collection:

<table>
<thead>
<tr>
<th>Year</th>
<th>Type of vessel/commodity</th>
<th>Paper</th>
<th>Glass</th>
<th>Plastic</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>Container for 1,100 l</td>
<td>3 503</td>
<td>295</td>
<td>3 147</td>
<td>6 945</td>
</tr>
<tr>
<td></td>
<td>Vessel for 120 l/240 l</td>
<td>2 092</td>
<td>1 388</td>
<td>2 332</td>
<td>5 812</td>
</tr>
<tr>
<td></td>
<td>Bell-shaped bin for 1,200 l/1,800 l</td>
<td>0</td>
<td>1 806</td>
<td>0</td>
<td>1 806</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>5 595</td>
<td>3 849</td>
<td>5 479</td>
<td>14 563</td>
</tr>
</tbody>
</table>

In addition to the nationwide mandatory sorting of glass, paper and plastic (including Tetra Pak containers – liquid packaging board and beverage cans) by bring points, a network of civic amenity sites for the Capital of Bratislava is established, enabling (100% of households) to separate the selected types of wastes to be deposited in a larger amount of commodities.

4. Elements of the collection system

MUNICIPALITIES OR THEIR CONTRACTORS

Bring Collection Points [2]

Fractions collected
Paper, glass, plastic

Number of collection points
1 100 in total that provide the following amounts of vessels:
Paper: 5 595 vessels/containers, 1 346 (per 100 000 inhabitants)
Glass: 3 849 vessels/containers, 926 (per 100 000 inhabitants)
Plastic: 5 479 vessels/containers, 1 318 (per 100 000 inhabitants)
European Commission

Capital factsheet – Bratislava/Slovakia
Assessment of separate collection schemes in the 28 capitals of the EU

5. Materials, quantities and costs

<table>
<thead>
<tr>
<th>Collected quantities</th>
<th>Paper: 7 470 t</th>
<th>Glass: 6 183 t</th>
<th>Plastic: 3 789 t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setup costs</td>
<td>Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Running costs</td>
<td>Not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source of funding</td>
<td>Waste budget</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost to consumer</td>
<td>Free of charges</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fractions collected**

- Paper, glass, plastic, metal, cardboard, bio-waste, etc.

**Number of sites**

- 13 in total (0.3 per 100,000 inhabitants)

**Collected quantities**

- Paper: 231 t
- Glass: 192 t
- Plastic: 118 t
- Metal: 170 t
- Bio-waste (garden waste): 1 795 t

**Setup costs**

- Not available

**Running costs**

- Not available

**Source of funding**

- Waste budget

**Cost to consumer**

- Free of charge to consumer

**PRODUCERS OR THEIR AGENTS**

**Deposit return system - Bottle bring-back scheme [2]**

**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

**BARRIERS TO IMPLEMENT SEPARATE COLLECTION [1]**

- Waste management in Bratislava is devolved by 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.
### Summary of Costs for Separate Collection Systems in Place (setup costs should be total, running costs annual) [2]

<table>
<thead>
<tr>
<th>Costs (€)</th>
<th>Authorities / waste management companies</th>
<th>Consumer costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Setup (€)</td>
<td>Running (€/year)</td>
</tr>
<tr>
<td>Bring points</td>
<td>[not available]</td>
<td>€5 100 000</td>
</tr>
<tr>
<td>Civic amenity sites</td>
<td>[not available]</td>
<td>€900 000</td>
</tr>
<tr>
<td>Producer / Retailer take-back</td>
<td>[not available]</td>
<td>[not available]</td>
</tr>
<tr>
<td>Total</td>
<td>[not available]</td>
<td>€6 000 000</td>
</tr>
</tbody>
</table>

* Share of municipal tax spent on all municipal waste management activities.

### Recycling and Losses

#### Recycling of the Collected Waste [2]

<table>
<thead>
<tr>
<th>Recycled (t)</th>
<th>Paper</th>
<th>Glass</th>
<th>Plastic</th>
<th>Metal</th>
<th>Bio-waste</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generated</td>
<td>18 000 – 20 000</td>
<td>11 000 – 12 000</td>
<td>9 000 – 10 000</td>
<td>4 000 – 5 000</td>
<td>53 000 – 55 000</td>
<td>95 000 – 102 000</td>
</tr>
<tr>
<td>Collected</td>
<td>7 701 (41%)</td>
<td>6 375 (55%)</td>
<td>3 907 (41%)</td>
<td>170t (4%)</td>
<td>1 795 (3%)</td>
<td>19 948</td>
</tr>
<tr>
<td>Recycled nationally</td>
<td>6 000</td>
<td>5 000</td>
<td>1 000</td>
<td>170</td>
<td>1 495</td>
<td>13 665</td>
</tr>
<tr>
<td>Exported for recycling</td>
<td>950</td>
<td>350</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
<td>1 300</td>
</tr>
<tr>
<td>Rejected</td>
<td>750</td>
<td>1 025</td>
<td>2 900</td>
<td>Not available</td>
<td>300</td>
<td>4 975</td>
</tr>
</tbody>
</table>

### Material Flows for Each Collected Fraction

<table>
<thead>
<tr>
<th>Paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generated 18 000 t</td>
</tr>
<tr>
<td>Separately collected 7 700 t</td>
</tr>
<tr>
<td>Not separately collected 10 300 t</td>
</tr>
<tr>
<td>Rejected 750 t</td>
</tr>
<tr>
<td>Exported for recycling 950 t</td>
</tr>
<tr>
<td>Recycled within country 6 000 t</td>
</tr>
</tbody>
</table>

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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. Composition was: Paper 13%, Glass 8%, Plastic 7%, Metal 3%, Bio-waste 38%
### Glass

- Generated: 11,000 t
- Separately collected: 6,375 t
- Exported for recycling: 350 t
- Recycled within country: 5,000 t
- Not separately collected: 4,625 t
- Rejected: 1,025 t

### Plastic

- Generated: 9,000 t
- Separately collected: 3,900 t
- Exported for recycling: [not available]
- Recycled within country: 1,000 t
- Not separately collected: 5,100 t
- Rejected: 2,900 t

### Metal

- Generated: 4,000 t
- Separately collected: 170 t
- Exported for recycling: [not available]
- Recycled within country: 170 t
- Not separately collected: 3,830 t
- Rejected: [not available]

### Bio-waste

- Generated: 53,000 t
- Separately collected: 1,795 t
- Exported for recycling: [not available]
- Recycled within country: 1,495 t
- Not separately collected: 51,205 t
- Rejected: 300 t
References

