

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.

VIENNA	AUSTRIA
<p>SUMMARY: Vienna has full coverage with differentiated separate collection schemes, no co-mingled collection of waste streams is in place. The separate collection system is effective however, there is considerable potential to increase the collection rate especially for plastic.</p>	
<p>1 Capital general data [1]</p>	
City population (inhabitants)	1 741 246
City area (km ²)	414.87
City density (persons/km ²)	4 197
City climate (mediterranean, continental, oceanic, nordic; relevant for bio-waste collection)	Temperate (continental)
<p>2. Capital waste data [2]</p>	
Total (municipal) waste generation (t in indicated year) ¹	<p>Waste amount collected from households and small businesses by MA 48 in 2013: (Including inert waste: 1 036 879 t)</p> <p>Excluding inert waste: 969 269 t</p> <ul style="list-style-type: none"> • Residual waste 627 657 t (residual waste bin: 508 695 t) • Used material 228 212 t (“Altstoffe”) • Organic waste 107 237 t • Problematic/hazardous waste 6 164 t • (Inert waste 67 610 t)
Total (municipal) waste generation (kg/cap)	<p>(Including inert waste: 595.45 kg/cap)</p> <p>Excluding inert waste: 564.49 kg/cap</p>
Total separate collection (kg/cap) & (% of generation)	<p>(Including inert waste: 409 222 t (39.5 %))</p> <p>Excluding inert waste: 341 612 t (35 %) & 196.1 kg/cap</p>
Percentage breakdown of total collection for separate collection by fraction [2] (calculation of share: total separate collection excluding inert waste)	<ul style="list-style-type: none"> • 37 % paper and cardboard (127 062 t) • 8.3 % glass (28 213 t) • 2.9 % plastic (9 934 t) • 3.6 % metal (12 360 t) • 31.4 % bio-waste (107 237 t, share bin with brown lid (collection of garden waste, tree cut, uncooked vegetables and food): 65 312 t, share kitchen bin: 7 417 t, other green





¹ Note: according to the Waste Management Act of Vienna, the term “municipal waste” refers to residual waste from households and similar establishments only

	<p>and kitchen waste 34 508 t -> share christmas trees 647 t, not included in overall bio-waste amount in the tables below)</p> <ul style="list-style-type: none"> • 16.8 % other (56 806 t)
3. Description of overall separate collection systems operating in capital	
<p>The responsible organisation for the collection of municipal waste accumulated in the City of Vienna is the Municipal Department “MA 48 - Waste Management, Street Cleaning and Vehicle Fleet” of the City of Vienna (https://www.wien.gv.at/umwelt/ma48). The Waste Management Act for Vienna stipulates the compulsory collection of residual waste and recyclables for the entire municipal territory. Vienna introduced separate waste collection already in the early 1980s, by 1991 this system covered all of Vienna. For the separate collection of waste the following systems are established: collection of recyclables via bins/containers (in total ~ 200 000; for paper, glass, metal, plastic bottles, and bio-waste; for commercial enterprises, additional containers for plastic foils and kitchen scraps are available as well), bulky waste removal, skip service (for bulky waste, recyclables, tree cuttings), civic amenity sites (18), and mobile and stationary collection points for hazardous waste (112). [2] [3] [5]</p> <p>Paper and cardboard: Separate collection system for newspapers, magazines, catalogues, brochures, writing paper, letters, etc.; door-to-door collection via bins/containers (with red lid and label), if possible, close to the front door of a building; bring system: civic amenity sites (especially for large cardboard boxes), bring collection points (in decentralised locations, e.g. at street corners), markets. [4] [6]</p> <p>Glass: Separate collection of clear and coloured glass in either two separate containers (for pouring and lifting) or in one two-chamber container (for lifting); door-to-door collection partially for large apartment complexes, however mainly bring system: bring collection points in public locations, in addition collection at civic amenity sites. [4] [6]</p> <p>Plastic (bottles only): separate collection includes all hollow plastic items, containers with yellow lid and label; door-to-door collection partially for large apartment complexes, since 2013 the City of Vienna also offers door-to-door collection of plastic bottles in one-family house areas by means of “yellow bags”; commercial enterprises are provided with containers with flat lids and without locks for collecting plastic foils; however, collection mainly via bring system: containers for plastic bottles at bring collection points in public locations, in addition collection at civic amenity sites; [4] [6]</p> <p>Metal: Scrap metal collected includes beverage cans, other metal packaging and small metal objects; door-to-door collection partially for large apartment complexes, however mainly bring system: containers with blue lid and label at bring collection points in public locations, in addition collection at civic amenity sites. [4] [6]</p> <p>Bio-waste: Door-to-door collection of plant matter in less densely inhabited zones with numerous gardens via bins/containers with brown lid and label (waste of animal origin from households disposed of as residual waste, for catering industry specially designated kitchen waste bins); bring-system: in condensed urban areas, public bins for garden waste, tree cut, uncooked vegetables and food waste are installed on sidewalks and in parking lanes, in addition: civic amenity sites to dispose of green waste. [4] [6]</p>	
<p>Annual Running Costs: Not available</p>	
<p>Setup costs: Not available</p>	
<p>Coverage [7]:</p> <ul style="list-style-type: none"> • 100 % of households with door-to-door separate collection • no co-mingled collection of recyclables in Vienna <p><u>Please note:</u> In general, all properties over Vienna are included in the public waste collection system. An exception from the public waste collection system is possible, if a property is used for commercial/business purposes only. Then, instead of MA 48, also a private disposal company can be chosen.</p>	

4. Elements of the collection system	
MUNICIPALITIES OR THEIR CONTRACTORS ²	
 Door-to-door collection of source separated waste	
Fractions collected	Paper, glass (clear and coloured glass), plastic (bottles only), metal, bio-waste (+ kitchen and canteen waste from catering industry)
Collection frequency [4][6][7]	<p>Paper: Collection frequency: at least once a week, 44 collection routes; Bins/containers: ~ 92 160 containers (in total: 96 000 bins/containers for separate collection of paper in Vienna, 96 % provided for door-to-door collection, 4 % provided for bring collection points (~ 3 840); bins/container types: 120 (rarely)/240/770/1 100 l)</p> <p>Glass: Collection frequency: at least every four weeks, 2 collection routes; Bins/containers: ~ 3 819 (in total: 6 700 bins/containers for separate collection of glass in Vienna, 57 % provided for door-to-door collection, 43 % provided for bring collection points (~ 2 881); bins/container types: 120 (rarely)/240/770 l; 750, 2.000/3.000l lifting containers)</p> <p>Metal: Collection frequency: at least fortnightly, 4 collection routes; Bins/containers: ~ 3 720 (in total: 6 200 bins/containers for separate collection of metal in Vienna, 60 % provided for door-to-door collection, 40 % provided for bring collection points (~ 2 480); bins/container types: 240/770 /1 100 l</p> <p>Plastic (bottles only): Collection frequency: at least fortnightly, 11 collection routes; bins/containers: ~ 7 800 (in total: 13 000 bins/containers for separate collection of plastic bottles in Vienna, 60 % provided for door-to-door collection, 40 % provided for bring collection points (~ 5 200); Bins/container types: 240/770/1 100 l Please note: since 2013 the City of Vienna also offers door-to-door collection of plastic bottles in one-family house areas by means of “yellow bags”</p> <p>Bio-waste: Collection frequency: in the winter months: 2-weekly, during vegetation phase (usually from 6 April, depending on weather situation): weekly; 32 collection routes Bins/containers: ~ 83 300 (in total: 85 000 bins/containers for separate collection of bio-waste in Vienna, 98 % provided for door-to-door collection, 2 % provided for bring collection points (~ 1 700); bins/container types: 120 (rarely)/240/770 l;</p> <p>Kitchen and canteen waste from catering industry: Collection frequency: at least once a week, 4 collection routes Bins/containers: 2 500 (door-to-door collection only) Bins/container types: 120/240 l</p>
Coverage of collection [7]	<p>Paper: households 100%, businesses 100% (since 1970s)</p> <p>Glass: households 100%, businesses 100% (since 1977)</p>

² [6] The containers for separate collection of recyclables are emptied by vehicles and personnel of MA 48; private hauling companies are also employed for waste glass collection.

	<p>Metal: households 100%, businesses 100% (since 1985)</p> <p>Plastic: households 100%, businesses 100% (since 1980s)</p> <p>Bio-waste: households 100%, businesses 100% (since 1991)</p>
Annual collected quantities	<p>Paper: 122 062 t & 73 kg/cap (paper: 122 117 t, cardboard: 4 945 t)</p> <ul style="list-style-type: none"> Total annual quantities collected by MA 48 (door-to-door collection <u>and</u> bring collection points and civic amenity sites) In terms of annual collected quantities, a distinction between door-to-door collection and bring collection points cannot be drawn since bins/containers from door-to-door collection and bins/containers from bring collection points are emptied by one collection car > no separate weighing of waste amounts collected; more detailed information regarding the share of collected quantities via civic amenity sites are also not available) -> applies for all relevant waste streams)
	<p>Glass: 28 213 t & 16.2 kg/cap (glass packaging: 28 155 t, flat/multilayer glass: 58 t)</p> <ul style="list-style-type: none"> Total annual quantities collected by MA 48 (door-to-door collection <u>and</u> bring collection points <u>and</u> civic amenity sites)
	<p>Plastic: 9 934 t & 5.7 kg/cap</p> <ul style="list-style-type: none"> Total annual quantities collected by MA 48 (door-to-door collection <u>and</u> bring collection points <u>and</u> civic amenity sites)
	<p>Metal: 12 360 t & 7.1 kg/cap</p> <ul style="list-style-type: none"> Total annual quantities collected by MA 48 (door-to-door collection <u>and</u> bring collection points <u>and</u> civic amenity sites)
	<p>Bio-waste: 106 590 t & 61.2 kg/cap</p> <ul style="list-style-type: none"> Total annual quantities collected by MA 48 (door-to-door collection <u>and</u> bring collection points <u>and</u> civic amenity sites)
Setup costs	Not available
Running costs	Not available
Source of funding	<p>The financing of the collection and treatment of all municipal waste is based on the residual waste fraction in order to create an incentive for separate waste collection. Thus property owners are charged a quarterly waste management fee calculated from the volume of the residual waste containers installed on their properties and the frequency of bin emptying. This residual waste management fee finances the collection and treatment (e.g. including operation of civic amenity sites etc.) of all municipal waste in Vienna with the exception of packaging material (and used electrical appliances, batteries). The more material is collected separately, the smaller the container volume that needs to be installed, and the lower the cost. [2] Additional PAYT charge: e.g. civic amenity sites offer waste locks for residual waste, however they charge € 2 per 150 l of residual waste to be disposed of. [6]</p> <p>The collection and treatment of packaging material is financed via manufacturers and importers according to the principle of producer's responsibility. [3] Fees from collection and recovery systems (e.g. ARA-System, "Altstoff Recycling Austria") and revenues from marketing of recyclables contribute as source of funding. Thereby, costs for collection and sorting of licensed packaging waste can be completely covered. [6]</p>
Cost to consumer (annual)	In 2014, the annual waste management fee for a standard single family house (average waste arising) on average was € 229.32. [7]

 Bring Collection Points (containers publicly installed in parking lanes or on sidewalks)	
Fractions collected	Paper, glass, plastic (bottles only), metal, bio-waste
Number of collection points [7]	4 300 (total) and 246.9 per 100 000 inhabitants - 1 850 bring collection points with collection of 3 or more recyclable fractions (called "Altstoffsammelinseln") - 2 450 bring collection points with collection of 1 or 2 recyclable fractions (called "dezentraler Standplatz")
Collected quantities	Please see description above for door-to-door collection
Setup costs	Not available
Running costs	Not available
Source of funding	Please see description above for door-to-door collection
Cost to consumer	Free of charge
 Bring-in Civic Amenity sites	
Fractions collected [6]	Paper, glass, plastic (bottles) , metal including beverage cans, green waste (in addition: bulky waste, electrical appliances, used tyres, problematic household waste as well as objects that are still in working order and thus need not yet be scrapped)
Number of sites	18 (total) and 1.03 per 100 000 inhabitants [7]
Collected quantities	Please see description above for door-to-door collection
Setup costs	Not available
Running costs	Not available
Source of funding	Please see description above for door-to-door collection
Cost to consumer	Free of charge
PRODUCERS OR THEIR AGENTS	
 Extended Producer Responsibility scheme (EPR scheme) for packaging waste in Austria	
Products covered	Packaging material: paper and cardboard, glass, metal, plastic, beverage cartons, biodegradable packaging (other composite materials, wood etc.)
Funding mechanism	In Austria, the revised Ordinance on the Prevention and Recovery of Packaging Waste and Specific Waste Products (Packaging Ordinance of 2014) that entered into force on 1 January 2015 [AT VVO 2014] requires all manufacturers, distributors and importers that place packaging or packaged goods on the Austrian market to take these packaging materials back free of charge and ensure their recovery or reuse. The revised Packaging Ordinance brings some major changes regarding overall packaging waste obligations and the collection and recovery of packaging (i.e. now several collection and recovery systems offering compliance services for household packaging, area-wide).
Consumer cost	Consumer pays for collection and treatment of packaging waste in advance when buying a product (fee included in sales price of a product)
 Deposit scheme for refillable plastic beverage containers in Austria	
Products covered	Refillable plastic beverage containers

Funding mechanism	The Ordinance on Taking Back and Deposit Payments for Refillable Plastic Beverage Containers (Federal Law Gazette No 513/1990 as amended by Federal Law Gazette II No 440/2001) that entered into force on 1 January 2002 establishes a compulsory deposit of € 0.29 for refillable plastic beverage containers at national level.
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Consumer cost	Deposit of € 0.29 for refillable plastic beverage containers.
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5. Materials, Quantities and costs

SUMMARY OF COLLECTION SYSTEMS IN PLACE

Collected waste (t)	Paper	Glass	Plastic	Metal	Bio-waste	City Coverage
Door-to-door	Not available	Not available	Not available	Not available	Not available	100 % (households and businesses)
Co-mingled	Not available	Not available	Not available	Not available	Not available	0 % (households and businesses)
Bring points	Not available	Not available	Not available	Not available	Not available	4 300, 246.9 per 100 000 inhabitants
Civic amenities	Not available	Not available	Not available	Not available	Not available	18, 1.03 per 100 000 inhabitants
Producer / Retailer take-back	Not available	Not available	Not available	Not available	Not available	
Total	127 062	28 213	9 934	12 360	106 590	

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			
Co-mingled				
Bring points				
Civic amenities				
Producer / Retailer take-back				
Total				

6. Recycling and losses

RECYCLING OF THE COLLECTED WASTE³

Recycled (t)	Paper	Glass	Plastic	Metal	Bio-waste	Total
Generated	215 575	54 665	59 786	30 164	309 559	669 749
Collected	127 062	28 213	9 934	12 360	106 590	284 159
Recycled nationally	Not available (large number of different waste management companies, MA 48 has no statistical data on disposal routes of waste amounts collected)					
Exported for recycling						
Rejected						

³ 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.

ADDITIONAL FINDINGS

Rough estimate of total waste amounts generated based on a) sorting analysis 2009 [3] and b) total amount of 508 695 t collected via the residual waste bin in 2013:

- share of paper in residual waste: 17.4 %
- share of glass in residual waste: 5.2 % (glass packaging only)
- share of plastic in residual waste: 9.8 %
- share of metal in residual waste: 3.5 %
- share of bio-waste in residual waste: 39.9 %

References

- [1] ACR +, Vienna Factsheet v3, September 2014, unpublished.
- [2] Stadt Wien - MA 48 - Abfallwirtschaft, Straßenreinigung und Fuhrpark, Leistungsbericht 2013/ City of Vienna - MA 48 - Waste Management, Street Cleaning and Vehicle Fleet, Performance report 2013, March 2014, <https://www.wien.gv.at/umwelt/ma48/service/publikationen/pdf/leistungsbericht-ma48-2013.pdf>, accessed 10 March 2015.
- [3] Stadt Wien - MA 48 - Abfallwirtschaft, Straßenreinigung und Fuhrpark, Wiener Abfallwirtschaftsplan und Wiener Abfallvermeidungsprogramm (Planungsperiode 2013-2018), Ist-Zustand der Wiener Abfallwirtschaft 2011 (Anhang I) /City of Vienna - MA 48 - Waste Management, Street Cleaning and Vehicle Fleet, Viennese waste management plan and Viennese waste prevention programme (period 2013-2018), Status of the Viennese waste management 2011 (Annex I), May 2012, <http://www.wien.gv.at/umwelt/ma48/service/pdf/anhang1-istzustand-wr-abfallwirtschaft-2011.pdf>, accessed 10 March 2015.
- [4] <https://www.wien.gv.at/umwelt/ma48>, accessed 11 March 2015.
- [5] City of Vienna - MA 48 - Waste Management, Street Cleaning and Vehicle Fleet, Waste Management in Vienna, August 2013, <https://www.wien.gv.at/umwelt/ma48/service/publikationen/pdf/abfallwirtschaft-en.pdf>, accessed 10 March 2015.
- [6] City of Vienna - MA 48 - Waste Management, Street Cleaning and Vehicle Fleet, Collection of Residual Waste, Recyclables & Hazardous Waste from Households, August 2013, <https://www.wien.gv.at/umwelt/ma48/service/publikationen/pdf/sammlung-abfaelle-altstoffe-en.pdf>, accessed 10 March 2015.
- [7] Information provided by Email from Ms Weinmar, City of Vienna - MA 48 - Waste Management, Street Cleaning and Vehicle Fleet, 21 April 2015.