

ENVIRONMENTAL INDICATORS and SELECTED TIME SERIES

Municipal waste treatment at city level

last update: June 2007

Country	City	latest year available	Municipal waste collected	Municipal waste landfilled	Municipal waste incinerated	Municipal waste recycled	Municipal waste composted
			1000 tonnes	%	%	%	%
Armenia	Yerevan	2004	207	100.0	0.0	0.0	0.0
Armenia	Vanadzor	2004	5	100.0	0.0	0.0	0.0
Armenia	Gyumri	2004	2	100.0	0.0	0.0	0.0
Bangladesh	Dhaka	2005	1284	43.2	0.0	13.5	0.5
Belarus	Minsk	2004	827	100.0	...	...	...
Belize	Belize City	2000	30	100.0	...	...	...
Brazil	Porto Alegre	2000	405	94.6	...	5.4 ¹	...
Brazil	Rio de Janeiro	2000	3045	96.8	...	3.2 ¹	...
Brazil	São Paulo	2000	7612	77.3	0.5	22.2 ¹	...
Burkina Faso	Ouagadougou	2002	128	87.3	1.7	10.9 ¹	...
China	Hong Kong	2005	6013	56.9	...	43.1	...
China	Macao	2005	163 ²	39.7 ³	171.1 ⁴	...	...
Croatia	Zagreb	2004	289	100.0	...	...	...
Croatia	Split	2003	107	99.8	...	...	...
Croatia	Rijeka	2003	40	99.8	...	...	...
Cuba	Havana	2005	1877	100.0 ⁵	0.0	...	...
Cuba	Camagüey (provincia)	2005	253	100.0 ⁵	0.0	...	...
Dominica	Roseau	2002	23	100.0	...	...	...
Dominican Republic	Distrito Nacional (Capital de la República)	2005	532	100.0	0.0	...	0.0
Dominican Republic	Santo Domingo Este	2005	236	100.0	...	...	...
Egypt	Cairo	2002	3869 ⁶	...	...	...	47.8 ⁷
Gambia	Banjul	2002	6	100.0	...	...	...
Guinea	Conakry	2005	175	100.0	...	0.0 ⁸	...
Indonesia	Jakarta	2005	2397	96.5	0.4	...	...
Israel	Tel-aviv	2002	376	100.0	0.0	...	...
Madagascar	Antananarivo	2004	256	100.0	0.0	0.0	0.0
Madagascar	Fianarantsoa	2004	8	100.0	...	...	...
Madagascar	Mahajanga	2004	27	100.0	...	...	...
Madagascar	Toamasina	2004	18	100.0	...	...	...
Nigeria	Abuja	2001	22336	119.1 ⁹	...	...	...
Panama	Panama	2005	172	100.0	...	10.0 ¹⁰	...
Syrian Arab Republic	Damascus	2002	438	...	...	...	41.7
Zimbabwe	Gweru	2005	64	98.0	...	1.9	...
Zimbabwe	Harare	2005	75	77.6	20.0	2.4	0.0

Sources:

UNSD/UNEP 2001, 2004 and 2006 questionnaires on Environment statistics, Waste section

Footnotes:

- 1 Data refer to recycling and composting together.
- 2 Data only refer to waste collected from households and sea by a licensed company.
- 3 Data refer to by-products produced from incineration and untreated waste transported to landfill.
- 4 All wastes transported to the incineration plant, including those collected from households, sea and commercial and industrial activities.
- 5 All wastes are taken to landfills, where the wastes are classified and then sent to different destinations, like the recycling and composting plants.
- 6 Converted by UNSD from 10600 tons per day to 1000t per year $[(10600 \text{ tons per day} \times 365 \text{ days per year}) / 1000]$.
- 7 Converted by UNSD from 5068 tons per day to 1000t per year $[(5068 \text{ tons per day} \times 365 \text{ days per year}) / 1000]$ to sewage stations.
- 8 In reality, the amount discharged is equal to the amount collected minus the 2 tonnes recycled per year, which is almost insignificant.
- 9 The value for "landfill" is larger than the value for "Municipal waste collected" since some of the waste collected in the previous year is assumed to have been left over for landfill in 2001.
- 10 Of the amount of waste that are deposited in the sanitary landfill, it is estimated that 10% is recycled by our workers and garbage collectors.

Definitions & Technical notes:

Municipal waste includes household waste and similar waste. The definition also includes bulky waste (e.g. white goods, old furniture, mattresses) and yard waste, leaves, grass clippings, street sweepings, the content of litter containers, and market cleansing waste, if managed as waste. It includes waste originating from: households, commerce and trade, small businesses, office buildings and institutions (schools, hospitals, government buildings). It also includes waste from selected municipal services, e.g. waste from park and garden maintenance, waste from street cleaning services (street sweepings, the content of litter containers, market cleansing waste), if managed as waste. The definition excludes waste from municipal sewage network and treatment, municipal construction and demolition waste.

Municipal waste collected refers to waste collected by or on behalf of municipalities, as well as municipal waste collected by the private sector. It includes mixed household waste, and fractions collected separately for recovery operations (through door-to-door collection and/or through voluntary deposits). In the absence of data for municipal waste collected, data for municipal waste generated is given, if available.

Landfill is the final placement of waste into or onto the land in a controlled or uncontrolled way.

Municipal waste landfilled includes all amounts going to landfill, either directly, or after sorting and/or treatment, as well as residues from recovery and disposal operations going to landfill. The definition covers both landfill in internal sites (i.e. where a generator of waste is carrying out its own waste disposal at the place of generation) and in external sites.

Incineration is the controlled combustion of waste with or without energy recovery.

Recycling is defined as any reintroduction of waste material in a production process that diverts it from the waste stream, except reuse as a fuel. Both reprocessing as the same type of product and for different purposes are included. Recycling within industrial plants i.e. at the place where the waste is generated, is excluded.

Composting is a biological process that submits biodegradable waste to anaerobic or aerobic decomposition, and that results in a product that is recovered.

The sum of the different types of waste disposal may be greater than the total amount of municipal waste collected, as these facilities may be used for other types of waste, or because of double counting due to the landfilling of the residues of incineration, or to the incineration of residues from composting.