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Waste Statistics, 2020

Within the scope of waste statistics, Turkish Statistical Institute compiles data from all municipalities, manufacturing industry establishments having 50 or more employees, from all active thermal power plants having an installed capacity of 100 MW or more, from all organized industrial zone directorates having completed their infrastructures, from mining establishments, submitted production data for the reference year to General Directorate of Mining and Petroleum Affairs, from all waste disposal and recovery facilities having a licence or a temporary licence, and, regardless of licence, to controlled landfill sites, incineration plants and composting plants operated by or on behalf of municipalities.

Medical waste data of health institutions, included in the Annex-1 of the Regulation on the Control of Medical Waste, covers universities, general purpose and maternity hospitals and clinics that generate large amounts of waste, and was obtained from the administrative records of the Ministry of Environment, Urbanization and Climate Change.

The amount of waste generated was calculated as 104.8 million tonnes⁽¹⁾

Within the scope of the research, a total of 104.8 million tonnes of waste, of which 30.9 million tonnes was hazardous, was generated in manufacturing industry establishments, mining establishments, thermal power plants, organized industrial zones (OIZ), health institutions and households, in 2020. The total amount of waste increased by 10.5% compared to 2018.

	Waste generation, 2018, 2020 (Tonnes)					
	Amount of total waste		Amount of hazardous waste		Amount of non-hazardous waste	
	2018	2020	2018	2020	2018	2020
Total	94 870 818	104 848 864	15 078 573	30 876 658	79 792 245	73 972 206
Manufacturing industry establishments	22 881 144	23 867 866	3 677 320	4 597 274	19 203 824	19 270 593
Thermal power plants	26 127 134	24 375 356	13 805	10 012	26 113 329	24 365 343
Mining establishments ⁽¹⁾	17 387 029	27 581 875	11 176 581	26 044 730	6 210 448	1 537 144
Organized industrial zones	286 843	279 067	111 733	116 720	175 110	162 347
Health institutions	89 454	109 683	86 916	106 570	2 538	3 113
Households ⁽²⁾	28 099 214	28 635 018	12 218	1 352	28 086 996	28 633 665

Figures in table may not add up to totals due to rounding.

(1) Amount of waste excluding overburden.

(2) The amount of waste originated from households has been estimated by using the Municipal Waste Statistics Survey results.

Manufacturing industry establishments generated 23.9 million tonnes of total waste, of which 4.6 million tonnes was hazardous. Out of total waste, 56.3% was sold or sent to licensed waste treatment facilities, 24.2% was sent to landfill sites, 7.1% was stored within the establishment site, 7% was recovered within the facility, 3.2% was collected by municipalities or organized industrial zone's managements, 1.7% was sent to co-incineration or incineration plants, 0.4% was used as filling material or for reclamation and 0.1% was disposed of by other methods.

Sub-sectors waste statistics of manufacturing industry by NACE Rev. 2 divisions, 2020



Figures in graph may not add up to the total due to rounding.

Mining establishments generated 27.6 million tonnes of waste, excluding overburden. 99.995% of the total waste of 896.4 million tonnes including overburden was mineral waste. Out of the total amount of waste, 71.3% was disposed of in heaps for overburden, tailing dam or controlled landfill sites, 26.4% was used for backfilling and 2.3% was recovered or disposed of by other methods.

24.4 million tonnes of waste, of which 10 thousand tonnes was hazardous, was generated in thermal power plants. Out of the non-hazardous waste, 79.5% was ash and slag waste and 20.5% was metal, paper, plastic waste, wastewater treatment sludges and household and similar waste. Regarding the treatment of waste, 85.9% was disposed of in ash disposal area/ash dam or controlled landfill sites, 13.2% was sent to licensed waste treatment facilities and used for backfilling of mines and quarries whereas 0.9% was disposed of by other methods.

Originating from the activities of organized industrial zones' (OIZ) directorates such as infrastructure services, wastewater treatment etc., 279 thousand tonnes of waste, of which 117 thousand tonnes was hazardous, was generated. Out of the total waste, 6 thousand tonnes was recovered or temporarily stored within the OIZ, 208 thousand tonnes was recovered outside of the OIZ, and 66 thousand tonnes was disposed of within or outside of the OIZ. Out of the amount disposed of, 59.4% was disposed of in controlled landfill sites and 40.6% was sent to municipal/OIZ dumping sites.

110 thousand tonnes of medical waste was collected from health institutions. 23.7% of the total medical waste was collected in Istanbul, 7.8% in Ankara and 5.8% in İzmir, thus 37.3% of the total medical waste was collected from the health institutions located in these three metropolitan cities. 90.6% of the medical waste collected was disposed of in landfill sites after sterilization, and 9.4% was sent to incineration plants.

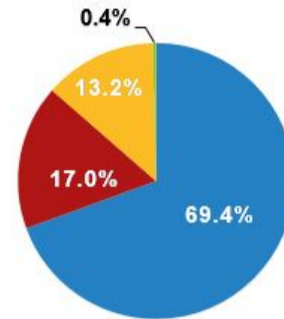
32.3 million tonnes of municipal waste was collected

1 387 municipalities out of 1 389 provided waste services. It is determined that municipalities, which provided waste services, collected 32.3 million tonnes of waste. Out of the total waste, 69.4% was sent to controlled landfill sites, 17% to municipal dumping sites, 13.2% to waste recovery facilities and 0.4% was disposed of by other methods such as burning in an open area, burying and dumping into river/onto land. The average amount of municipal waste per capita per day is calculated as 1.13 kg.

Distribution of collected municipal waste by disposal and recovery methods, 2018



Distribution of collected municipal waste by disposal and recovery methods, 2020



Figures in graph may not add up to the total due to rounding.

After wastewater treatment processes operated by municipalities, 314 thousand tonnes of wastewater treatment sludge (in dry matter) was generated.

127.4 million tonnes of waste was treated in waste treatment facilities⁽²⁾

Out of the 127.4 million tonnes of waste treated in waste disposal and recovery facilities, 78.3 million tonnes were disposed of and 49.1 million tonnes was recovered. Total amount of waste treated increased by 22% compared to 2018.

The total capacity of the controlled landfill sites was determined as 1.2 billion m³. 77.8 million tonnes of waste, of which 31.9 million tonnes was hazardous, was disposed of in a total of 174 controlled landfill sites.

In co-incineration plants having waste recovery licences, 1.3 million tonnes of waste was incinerated with energy recovery. A total of 47.6 million tonnes of metal, plastic, paper, mineral, etc. were recovered in other licensed waste recovery facilities, excluding compost and co-incineration plants.

Waste disposal and recovery facilities indicators, 2018, 2020

	2018		2020	
	Number of facilities	Total amount of waste treated (Tonnes)	Number of facilities	Total amount of waste treated (Tonnes)
Waste disposal and recovery facilities	2 223	104 452 603	2 752	127 401 232
Waste disposal facilities	166	56 372 769	184	78 333 403
Controlled landfill sites	159	55 878 883	174	77 762 423
Incineration plants	7	493 885	10	570 980
Waste recovery facilities	2 057	48 079 834	2 568	49 067 829
Composting plants	8	138 054	9	127 046
Co-incineration plants	40	1 069 360	50	1 298 579
Other recovery facilities ⁽¹⁾	2 009	46 872 420	2 509	47 642 204

Figures in tables may not add up to totals due to rounding.

(1) It includes the facilities which recover waste metal, plastic, paper, mineral etc.

The publication date of the next press release on these subjects is in December, 2023.

EXPLANATIONS

(1) The amount of overburden is excluded for the mining industry.

(2) As it is aimed to obtain final waste disposal and recovery data within the scope of the Waste Disposal and Recovery Facilities Survey; pre-treatment facilities such as waste collection, sorting, and intermediate storage are excluded. Imported waste are also treated in the facilities.