

27 November 2023

**Other environmental accounts: Waste accounts  
Year 2021**

**The Spanish economy generated 115.4 million tonnes of waste in 2021, 9.3% more than the previous year**

**In 2021, 49.4 million tonnes of waste were recycled, 4.5% more than in 2020**

**Generation of waste in the Spanish economy<sup>1</sup>**

The Spanish economy generated 115.4 million tonnes of waste in 2021, 9.3% more than the previous year. Of these, 3.7 million tonnes was hazardous waste (10.6% more than in 2020) and 111.8 million was non-hazardous waste (9.3% less).

**Waste generated by type of waste<sup>2</sup>. Year 2021**

Thousands of tonnes

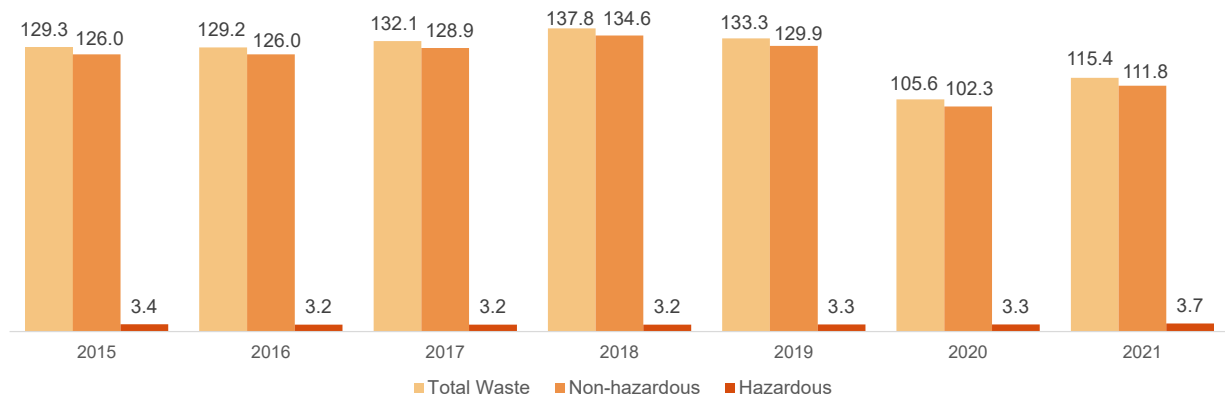
	Total	Variation rate (%)	Non-hazardous	Variation rate (%)	Hazardous	Variation rate (%)
<b>Waste generated</b>	<b>115,442.8</b>	<b>9.3</b>	<b>111,787.3</b>	<b>9.3</b>	<b>3,655.5</b>	<b>10.6</b>
Mineral	47,063.9	12.6	46,386.4	12.3	677.5	39.6
Mixed materials	39,988.4	10.3	39,895.0	10.3	93.4	4.5
Animal and vegetal	9,535.9	4.8	9,535.9	4.8	..	..
Metallics	6,043.1	5.5	6,043.1	5.5	..	..
Paper and cardboard	3,916.4	-8.7	3,916.4	-8.7	..	..
Chemical	2,549.3	1.3	1,027.5	0.0	1,521.9	2.2
Discarded equipment	1,673.8	13.3	338.4	23.2	1,335.4	11.1
Glass	1,281.3	4.5	1,281.3	4.5	0.0	0.1
Wood	1,061.8	6.8	1,061.0	6.8	0.8	-11.1
Plastic	953.8	8.8	953.8	8.8	..	..
Common sludges	883.6	0.6	883.6	0.6	..	..
Others	491.5	-1.0	464.9	1.3	26.5	-29.7

<sup>1</sup> The waste generated in the urban sphere can be viewed in greater detail in the press release of the Statistics on the Collection and Treatment of Waste published today by the INE.

<sup>2</sup> The symbol “..” indicates the categories of waste not covered by Regulation (EC) No 2150/2002.

**Waste generated by type of waste. Year 2021**

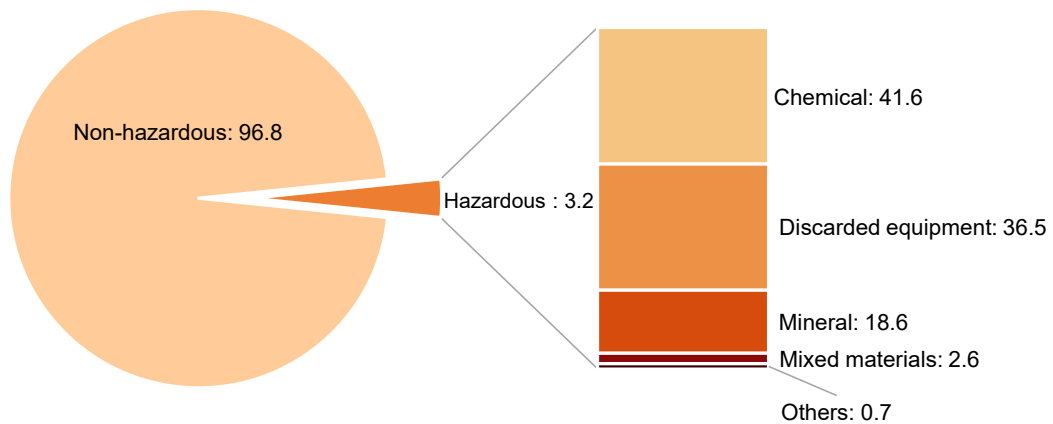
Million tons



The most significant categories of waste generated were *Mineral wastes* (47.1 million tonnes), *Mixed wastes* (40.0 million tonnes) and *Animal and plant wastes* (9.5 million tonnes).

In 2021, 96.8% of the waste generated was non-hazardous and 3.2% was hazardous. Of the total hazardous waste generated, 41.6% was *Chemical waste*, 36.5% was *Discarded equipment* and 18.6% was *Mineral wastes*.

**Waste generated in the Spanish economy (percentage). Year 2021**



**Types of wastes generated by activity sectors and households**

80.4% of waste generated in 2021 was produced by the *Activity Sectors* and 19.6% by *Households*.

The activity that saw the greatest growth was *Water supply, sanitation, waste management and decontamination* (21.6%). In contrast, waste generation fell in *Services* (-7.6%).

Meanwhile, *Households* as consumers generated 0.8% more waste.

### Waste generated by activity sectors and households. Year 2021

Thousands of tonnes

	Total	Variation rate (%)	Non-hazardous	Variation rate (%)	Hazardous	Variation rate (%)
<b>Total</b>	<b>115,442.8</b>	<b>9.3</b>	<b>111,787.3</b>	<b>9.3</b>	<b>3,655.5</b>	<b>10.6</b>
Construction	37,064.2	13.9	36,847.1	13.5	217.1	156.3
Water supply; sewerage, waste management and remediation activities	26,689.8	21.6	25,805.5	21.9	884.2	14.6
Industry (Including mining and energy production)	17,255.8	4.9	16,043.1	5.2	1,212.7	0.9
Agriculture, livestock breeding, forestry and fishing	6,344.4	0.2	6,316.4	0.2	28.1	-0.4
Services	5,406.1	-7.6	4,143.9	-11.8	1,262.2	9.5
Households	22,682.5	0.8	22,631.3	0.8	51.2	-23.5

By type of waste, the ones with the largest proportion in those generated by *Households* were *Mixed Waste* (79.3% of the total), *Paper and Cardboard* (6.6%), *Animal and Vegetable Waste* (6.3%) and *Glass* (3.9%).

On the other hand, the main wastes generated by the *Activity Sectors* were *Mineral wastes* (50.2% of the total) and *Mixed wastes* (23.7%).

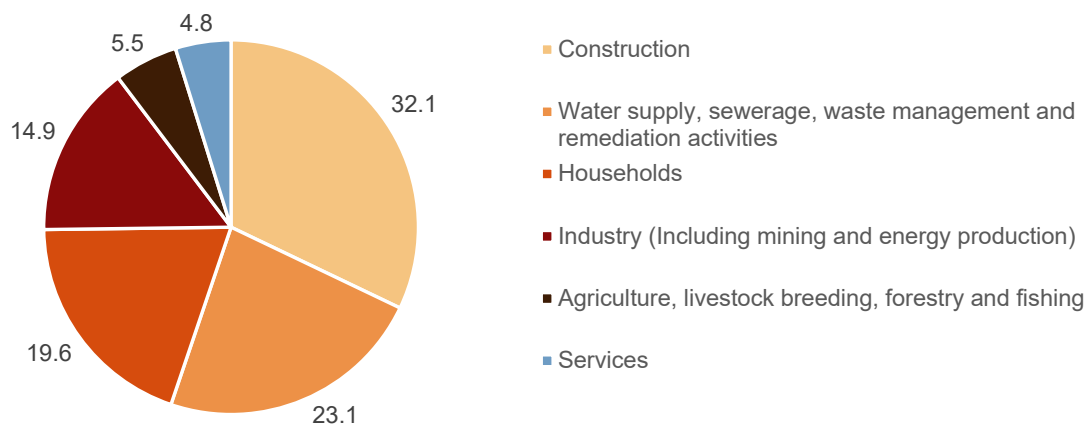
### Types of wastes generated by activity sectors and households. Year 2021

Thousands of tonnes

	Total	% of the total	Activity sectors	% of the total	Households	% of the total
<b>Waste generated</b>	<b>115,442.8</b>	<b>100.0</b>	<b>92,760.3</b>	<b>100.0</b>	<b>22,682.5</b>	<b>100.0</b>
Mineral	47,063.9	40.8	46,526.6	50.2	537.3	2.4
Mixed materials	39,988.4	34.7	22,010.4	23.7	17,978.0	79.3
Animal and vegetal	9,535.9	8.3	8,102.0	8.7	1,434.0	6.3
Metallics	6,043.1	5.2	6,016.3	6.5	26.8	0.1
Paper and cardboard	3,916.4	3.4	2,425.2	2.6	1,491.2	6.6
Chemical	2,549.3	2.2	2,544.6	2.7	4.7	0.0
Discarded equipment	1,673.8	1.4	1,583.5	1.7	90.2	0.4
Glass	1,281.3	1.1	403.3	0.4	878.0	3.9
Wood	1,061.8	0.9	892.9	1.0	168.9	0.7
Plastic	953.8	0.8	932.9	1.0	20.9	0.1
Common sludges	883.6	0.8	883.6	1.0	..	..
Others	491.5	0.4	439.0	0.5	52.5	0.2

The activities that generated the greatest amount of waste in 2021 were *Construction* (32.1% of the total) and *Water supply, sanitation, waste management and decontamination* (23.1%).

## Waste generated by activity sectors and households (percentage). Year 2021



## Types of wastes generated by activity sectors. Year 2021

Thousands of tonnes

	Total Sectors	Construction	Water supply; sewerage, waste management ...	Industry (Including mining and energy production)	Agriculture, livestock breeding, forestry and fishing	Services
<b>Waste generated</b>	<b>92,760.3</b>	<b>37,064.2</b>	<b>26,689.8</b>	<b>17,255.8</b>	<b>6,344.4</b>	<b>5,406.0</b>
Mineral	46,526.6	36,733.8	938.4	8,766.2	13.1	75.1
Mixed materials	22,010.4	43.0	19,635.6	1,153.6	396.9	781.3
Animal and vegetal	8,102.0	32.4	56.5	1,479.0	5,792.3	741.7
Metallic	6,016.3	83.1	3,726.1	1,959.4	9.0	238.7
Chemical	2,544.6	9.0	671.0	1,656.6	32.6	175.4
Paper and cardboard	2,425.2	20.7	242.9	891.3	14.5	1,255.8
Discarded equipment	1,583.5	9.5	244.7	34.3	7.7	1,287.3
Plastic	932.9	21.9	342.0	273.4	39.6	256.0
Wood	892.9	99.6	77.4	537.1	22.0	156.8
Common sludges	883.6	6.3	580.5	285.6	5.1	6.0
Others	439.0	0.7	14.4	85.6	10.4	328.0
Glass	403.3	4.2	160.3	133.7	1.2	103.9

By sectors, *Mineral waste* was mainly caused by *Construction* (36.7 million tons, 14.0% more than in 2020) and *Industry* (8.8 million tons, 8.8% more). *Mixed Wastes* produced by *Water Supply, sewerage, waste management and remediation activities* (19.6 million, 26.3% more than the previous year).

Meanwhile, *Animal and Vegetable Waste* was generated for the most part by *Agriculture, livestock, forestry and fishing* (5.8 million tons, 0.2% more than in 2020).

### Annual variation rates of waste generated by activity sectors. Year 2021

Percentage

	Total Sectors	Construction	Water supply; sewerage, waste management ...	Industry (Including mining and energy production)	Agriculture, livestock breeding, forestry and fishing	Services
<b>Waste generated</b>	<b>11.6</b>	<b>13.9</b>	<b>21.6</b>	<b>4.9</b>	<b>0.2</b>	<b>-7.6</b>
Mineral	12.5	14.0	-6.7	8.8	0.0	-2.1
Mixed materials	22.7	-4.2	26.3	1.5	-0.2	-4.9
Animal and vegetal	3.2	10.6	56.9	3.1	0.2	30.0
Metallic	5.9	-4.2	17.8	-1.7	0.0	-44.5
Chemical	1.3	-5.3	3.3	-0.2	-0.6	8.5
Paper and cardboard	-17.8	-54.9	1.4	1.9	0.0	-29.2
Discarded equipment	15.4	-25.2	17.8	23.8	0.0	15.3
Plastic	8.1	-3.9	27.5	1.9	-0.8	-2.7
Wood	5.7	51.4	23.8	4.0	8.4	-12.7
Common sludges	0.6	120.7	-1.1	2.9	-1.9	3.4
Others	-3.9	-65.0	24.1	3.4	0.0	-6.2
Glass	1.4	-25.0	-3.0	6.5	0.0	3.8

### Final treatment of waste in the Spanish economy

Of the 115.4 million tonnes of waste generated in 2021, final waste treatment companies<sup>3</sup> handled 99 million tonnes, which was 14.6% more than in the previous year.

### Final waste treatment. Year 2021

Thousands of tonnes

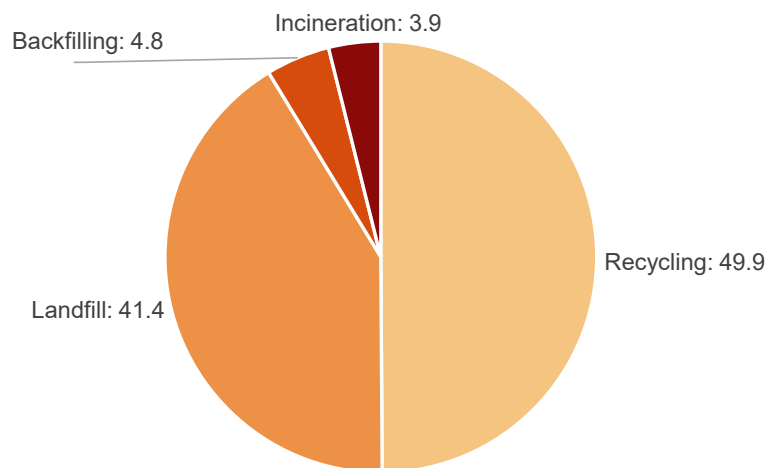
Waste treatment (by type of treatment)	Quantity	Variation rate (%)
<b>Total waste treatment</b>	<b>99,016.6</b>	<b>14.6</b>
Non-hazardous	96,642.4	14.7
Hazardous	2,374.2	8.9
<b>Recycling</b>	<b>49,402.1</b>	<b>4.5</b>
Non-hazardous	47,729.1	4.4
Hazardous	1,673.0	7.5
<b>Landfill</b>	<b>41,030.3</b>	<b>31.7</b>
Non-hazardous	40,516.8	32.2
Hazardous	513.5	4.7
<b>Incineration</b>	<b>3,806.8</b>	<b>7.3</b>
Non-hazardous	3,619.0	6.0
Hazardous	187.8	39.5
<b>Backfilling</b>	<b>4,777.4</b>	<b>7.6</b>
Non-hazardous	4,777.4	7.6
Hazardous	..	..

<sup>3</sup> Only final treatments are included. The primary differences between the waste generated and that treated, as published in the Waste Account, are due, among other reasons, to exclusively accounting for final treatments, foreign trade in waste (imports and exports) and the differences in volume between the time when waste is generated and when it is finally treated.

Specifically, they treated 96.6 million tonnes of non-hazardous waste (14.7% more than in 2020) and 2.4 million tonnes of hazardous waste (8.9% more).

Of the total of treated waste, 41.4% were disposed of in landfill sites, 49.9% was recycled, 4.8% was reused in landfill operations and 3.9% was incinerated.

**Final waste treatment (percentage). Year 2021**



**Recycled waste**

The percentage of recycled waste out of total waste treated increased 11.6 points between 2015 and 2021, from 38.3% to 49.9%.

**Recycled waste. 2015-2021 Series**

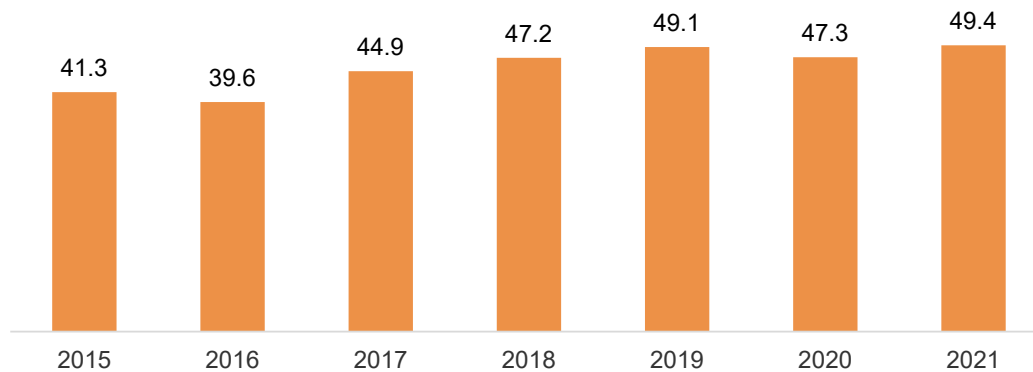
Thousands of tonnes

	Quantity	% of total waste treated	Variation rate (%)
2015	41,279.9	38.3	
2016	39,581.4	37.1	-4.1
2017	44,921.8	38.9	13.5
2018	47,245.1	38.7	5.2
2019	49,109.8	42.4	3.9
2020	47,277.1	54.7	-3.7
2021	49,402.1	49.9	4.5

In 2021, 49.4 million tonnes of waste was recycled, 4.5% more than in 2020. Of this figure, 46.9% was *Mineral wastes*, 21.3% *Metallic wastes*, and 9.1% *Paper and cardboard*.

### Recycled waste. 2015-2021 Series

Million tons



The recycled wastes with the highest growth rates were: *Common Sludge* (28.1%), *Metallic Waste* (22.1%) and *Glass* (18.8%). For its part, *Discarded Equipment* decreased by 6.3% compared to 2020.

### Recycling by waste category. Year 2021

Thousands of tonnes

Recycled waste (by type)	Recycling	% of the total	Interannual variation rate (%)
<b>TOTAL</b>	<b>49,402.1</b>	<b>100.0</b>	<b>4.5</b>
Mineral	47,729.1	96.6	4.4
Metallic	1,672.9	3.4	7.5
Paper and cardboard	23,167.8	46.9	-2.7
Mixed materials	10,518.8	21.3	22.1
Animal and vegetal	4,495.6	9.1	6.0
Chemical	3,934.4	8.0	-6.3
Glass	2,077.5	4.2	4.5
Discarded equipment	1,280.3	2.6	15.7
Common sludges	1,260.8	2.5	18.8
Plastic	741.6	1.5	18.0
Wood	728.4	1.5	31.6
Others	642.2	1.3	12.9

### Data reviews and updates

The data published today is provisional and will be revised when next year's data is released. All results are available on INEBase.

## Methodological note

The objective of the Environmental Accounts (EA) is to integrate environmental information into the central system of National Accounts in a coherent way. They include a set of satellite accounts, which are transmitted annually, compiled using the accounting formats applicable to the different sectoral and territorial areas, with a strong use of physical data.

The Waste Account is useful for organising information on waste generation and the management of its flows to recycling facilities, landfill operations, incineration and controlled landfills. Important indicators can be obtained from it to measure the pressure that the economy exerts on the environment. They also make it possible to monitor the objectives of waste reduction policies and evaluate improvements in management for material recovery.

The study of waste includes the generation and treatment of waste in accordance with the guidelines established in Regulation (EC) 2150/2002 of the European Parliament and of the Council of 25 November on waste statistics, as amended by Regulation (EU) 849/2010.

The INE annually compiles the Statistics on the Generation, Collection and Treatment of Waste with the aim of quantifying the origin and treatment of waste. This information, together with information from other bodies, mainly that provided by the Ministry for Ecological Transition, forms the basis for the preparation of the Waste Account.

For more information you can access the standardised methodological report at:

<https://ine.es/dynt3/metadatos/es/RespuestaDatos.html?oe=30095>

INE statistics are produced in accordance with the Code of Good Practice for European Statistics, which is the basis for the institution's quality policy and strategy. For more information, see the section on [Quality at INE and the Code of Best Practices](#) on the INE website.

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