

Waste shipment statistics

Statistics Explained

Data extracted in July 2023

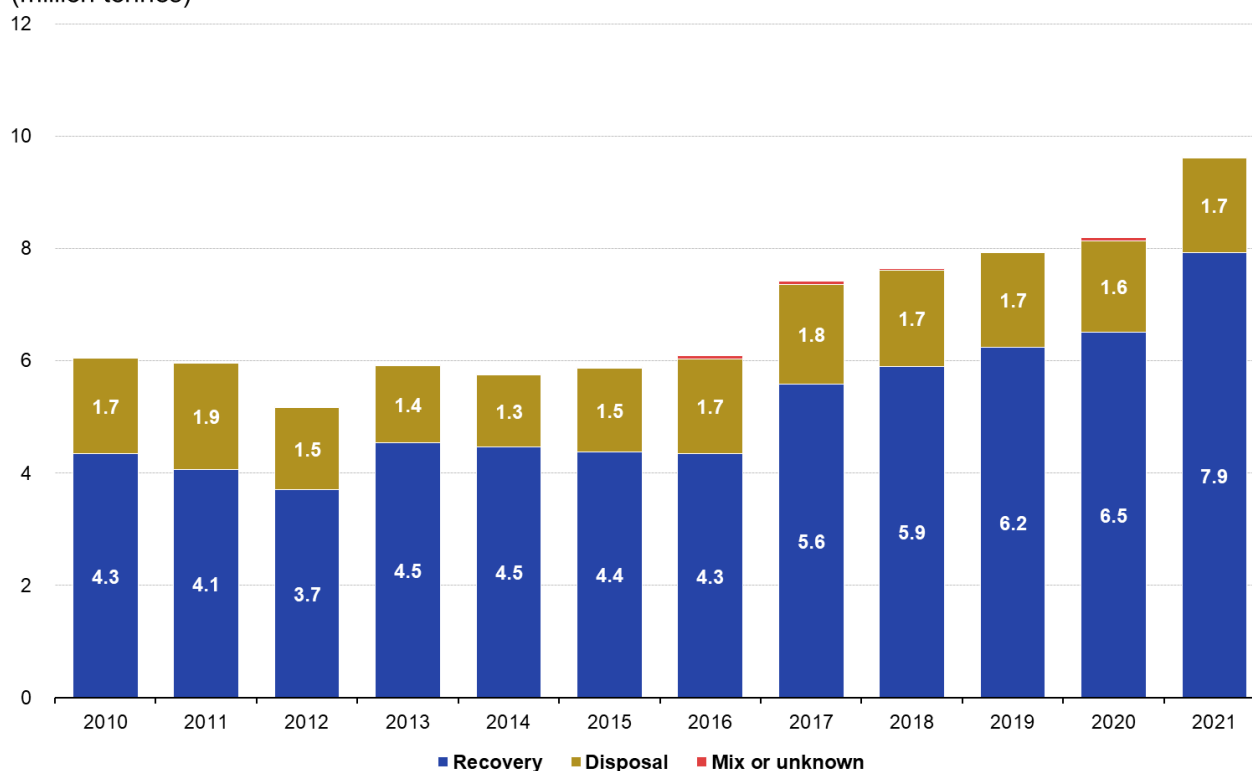
Planned article update: December 2024

" Between 2010 and 2021, exports of hazardous waste from EU Member States increased substantially, from 6.1 million tonnes to 9.6 million tonnes. "

" In 2021, 82.4 % of the hazardous waste exported by EU Member States was treated through recovery processes, 17.6 % by disposal. "

Treatment of hazardous waste exported by EU Member States, 2010-2021

(million tonnes)



Source: Eurostat (online data code: env_wasship)

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Treatment of hazardous waste exported by EU Member States, 2010-2021 (million tonnes) Source: Eurostat (env_wasship)

This article reports the hazardous and non-hazardous waste exported by [EU Member States](#) to other EU Member States and to countries outside the EU. The data are analysed by the type of waste, the main destinations, waste treatments in the destination, as well as the EU Member State with the highest exported quantity for each waste

category. There is also a special section analysing exports of [waste electrical and electronic equipment \(WEEE\)](#) (also known as 'e-waste').

- The largest share of hazardous waste exported by the EU Member States is waste stemming from construction, civil engineering and demolition activities.
- Exports of hazardous waste from EU Member States has increased steadily in recent years, reaching close to 9.6 million tonnes in 2021.
- [Landfilling](#) (D1) of hazardous waste exported by EU Member States peaked at 698 000 tonnes in 2017, before falling to 576 000 tonnes in 2021.
- *R4: [Recycling / reclamation](#) of metals and metal compounds* as well as *R5: [Recycling/reclamation](#) of other inorganic compounds* dominate the treatment of exported hazardous waste. In particular, *R5: [Recycling/reclamation](#) of other inorganic compounds* increased by 234 % over the period from 2010 to 2021, plateauing at 1.8 million tonnes in 2021.
- EU Member States primarily export their hazardous waste to other Member States; between 2014 and 2020, this share has fluctuated between 91 % and 89 %. Since 2010, practically no exports of hazardous waste to non-OECD countries have been registered.
- In 2021, the EU Member States exported 125 451 tonnes of 'Waste electrical and electronic equipment' (WEEE) containing hazardous substances, but only 7 208 tonnes of non-hazardous WEEE.

Exports of hazardous waste – total quantities and per capita

Hazardous waste is waste which is harmful to humans or to the environment. Annex III of the Waste Framework Directive ([Directive 2008/98/EC](#) on waste) provides a list of properties which renders waste hazardous. This list includes properties such as the waste being explosive, oxidizing, flammable, irritant, harmful, toxic or releasing toxic gases when in contact with water, air or an acid, corrosive, infectious, as well as waste which is capable of causing a hypersensitization reaction or may induce cancer, congenital malformations or hereditary genetic defects. It also includes waste that may present risks for one or more sectors of the environment.

Between 2010 and 2021, the amount of hazardous waste exported from EU Member States increased substantially, from 6.1 million tonnes in 2010 to 9.6 million tonnes in 2021. There was a sharp upturn in exports from 2016 to 2017, increasing by more than one fifth from 6.1 to 7.4 million tonnes (+22 %). In 2021, the EU Member States accounting for the highest quantities of exported hazardous waste were France (2.8 million tonnes), Italy (1.3 million tonnes, Germany and the Netherlands (both 1.1 million tonnes).

Exports of hazardous waste, 2010-2021

(thousand tonnes)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
EU	6 050	5 963	5 177	5 911	5 750	5 867	6 096	7 424	7 637	7 946	8 188	9 612
Belgium	689	836	631	679	637	686	707	712	666	609	721	672
Bulgaria	9	5	6	3	5	11	12	7	9	9	5	3
Czechia	15	11	18	31	34	37	32	29	25	20	33	30
Denmark	102	64	274	222	150	300	272	259	291	309	365	346
Germany	309	317	334	496	620	546	783	980	951	874	925	1 120
Estonia	1	2	3	10	13	13	12	1	13	9	9	12
Ireland	199	211	193	246	232	256	275	272	283	286	273	291
Greece	39	44	22	49	180	44	82	140	193	194	118	195
Spain	52	104	59	74	43	78	55	58	68	80	53	65
France	1 400	1 223	985	1 526	1 143	926	722	1 644	1 920	2 090	2 055	2 843
Croatia	:	:	21	19	22	20	19	21	23	22	19	24
Italy	1 459	1 354	977	852	825	824	842	937	1 032	1 105	1 083	1 324
Cyprus	5	8	5	4	4	5	6	5	5	6	5	5
Latvia	17	14	12	14	18	21	8	8	8	9	8	11
Lithuania	18	24	21	24	21	29	27	28	27	30	38	20
Luxembourg	89	81	89	92	85	268	374	423	444	445	466	580
Hungary	49	29	19	26	29	30	31	27	35	34	26	26
Malta	18	17	14	11	19	17	110	16	20	10	21	:
Netherlands	738	813	788	777	778	875	812	880	744	856	1 075	1 053
Austria	295	300	270	320	278	262	273	281	228	249	216	243
Poland	20	14	14	13	24	36	46	43	58	54	54	111
Portugal	54	63	17	70	55	53	49	49	47	57	53	55
Romania	4	2	7	14	25	27	24	31	21	21	21	26
Slovenia	35	45	47	47	57	61	59	67	66	74	73	72
Slovakia	4	4	5	7	12	11	13	13	14	17	18	:
Finland	120	92	95	106	117	123	105	124	121	109	140	142
Sweden	310	284	250	180	324	307	345	369	326	369	318	307
Iceland	:	:	:	:	:	:	:	:	:	29	21	22
Liechtenstein	:	:	1	4	4	4	1	2	0	0	0	0
Norway	:	:	507	1 039	1 042	:	:	456	447	490	445	405

(:) not available.

Source: Eurostat (online data code: env_wasship)

eurostat 

Table 1: Exports of hazardous waste, 2010-2021 (thousand tonnes) Source: Eurostat (env_wasship)

Overall, the EU exported 21.5 kg of hazardous waste per inhabitant in 2021, up from 18.3 kg per capita recorded in 2020. Luxembourg exported 913.1 kg of hazardous waste per inhabitant, of which 75 % (689 kg) were mineral mass wastes. This mineral waste mostly originated from construction and demolition activities. Relative to the number of inhabitants, such activities appeared to be more extensive in Luxembourg than in other Member States. Furthermore, the share of mineral wastes in total exports of hazardous waste was much higher than the European average of 23 %. Other EU Member States with notable exports of hazardous waste were Netherlands (60.2 kg), Denmark (59.3 kg), Ireland (58.2 kg) and Belgium (58.1 kg) (see Table 2). In 2021, 12 of the EU Member States exported less than 10 kg of hazardous waste per inhabitant.

Exports of hazardous waste, 2010-2021

(kilogrammes per capita)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
EU	13.7	13.6	11.8	13.4	13.0	13.2	13.7	16.7	17.1	17.8	18.3	21.5
Belgium	63.5	76.0	57.0	61.0	56.9	61.1	62.5	62.7	58.5	53.1	62.5	58.1
Bulgaria	1.3	0.7	0.8	0.4	0.7	1.6	1.7	1.0	1.3	1.4	0.8	0.5
Czechia	1.5	1.1	1.7	3.0	3.2	3.5	3.0	2.8	2.3	1.8	3.0	2.8
Denmark	18.4	11.6	49.1	39.6	26.6	53.1	47.7	45.0	50.3	53.2	62.6	59.3
Germany	3.8	4.0	4.2	6.2	7.7	6.7	9.5	11.9	11.5	10.5	11.1	13.5
Estonia	0.7	1.2	2.6	7.2	10.0	10.2	9.1	1.0	9.7	6.9	7.1	8.8
Ireland	43.8	46.2	42.1	53.3	50.0	54.8	58.3	56.9	58.5	58.4	55.0	58.2
Greece	3.5	4.0	2.0	4.5	16.5	4.0	7.6	13.0	18.0	18.1	11.0	18.3
Spain	1.1	2.2	1.3	1.6	0.9	1.7	1.2	1.3	1.5	1.7	1.1	1.4
France	21.7	18.8	15.1	23.3	17.3	13.9	10.8	24.6	28.6	31.1	30.5	42.0
Croatia	:	:	4.9	4.5	5.1	4.7	4.5	5.2	5.6	5.4	4.6	5.9
Italy	24.6	22.8	16.4	14.3	13.6	13.6	13.9	15.5	17.1	18.5	18.2	22.3
Cyprus	5.7	9.4	6.3	4.3	4.7	6.1	6.6	6.3	5.8	7.0	5.4	5.7
Latvia	8.2	7.0	5.8	6.9	9.1	10.8	4.2	4.0	4.1	4.6	4.2	5.6
Lithuania	5.7	7.8	7.1	7.9	7.2	9.9	9.5	9.9	9.7	10.9	13.6	7.3
Luxembourg	176.7	157.7	168.9	172.0	154.2	475.2	648.6	716.3	737.5	724.1	744.1	913.1
Hungary	4.9	2.9	1.9	2.6	2.9	3.1	3.2	2.7	3.6	3.4	2.7	2.7
Malta	43.1	40.6	34.3	25.2	45.2	39.0	244.2	34.5	41.1	19.9	40.3	:
Netherlands	44.5	48.8	47.1	46.3	46.2	51.8	47.8	51.5	43.3	49.5	61.7	60.2
Austria	35.3	35.8	32.1	37.8	32.7	30.5	31.4	32.0	25.8	28.1	24.2	27.3
Poland	0.5	0.4	0.4	0.4	0.6	0.9	1.2	1.1	1.5	1.4	1.4	2.9
Portugal	5.1	5.9	1.6	6.7	5.3	5.1	4.7	4.7	4.6	5.5	5.2	5.3
Romania	0.2	0.1	0.3	0.7	1.3	1.4	1.2	1.6	1.1	1.1	1.1	1.4
Slovenia	17.1	22.2	22.7	22.6	27.7	29.6	28.8	32.2	31.9	35.5	34.7	34.0
Slovakia	0.8	0.8	0.9	1.3	2.2	2.1	2.5	2.4	2.6	3.1	3.4	:
Finland	22.3	17.1	17.6	19.6	21.5	22.6	19.1	22.5	21.9	19.8	25.3	25.6
Sweden	33.2	30.2	26.3	18.8	33.6	31.4	35.1	36.9	32.2	36.1	30.8	29.5
Iceland	:	:	:	:	:	:	:	:	:	81.8	56.8	60.4
Liechtenstein	:	:	15.3	106.7	103.3	109.1	25.1	53.2	11.4	0.0	0.0	0.0
Norway	:	:	101.6	205.7	204.1	:	:	86.8	84.5	91.9	83.0	75.1

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Source: Eurostat (online data code: env_wasship)

eurostat 

Table 2: Exports of hazardous waste, 2010-2021 (kilogrammes per capita) Source: Eurostat (env_wasship)

Exports of hazardous waste between EU Members States and out of the EU

In 2021, 8.8 million tonnes of hazardous waste were exported from one EU Member State to another (see Table 3), corresponding to approximately 91 % of the exports of hazardous waste.

Destinations of hazardous waste exported by EU Member States, 2010-2021

(thousand tonnes)

Year	Other EU Member States	EFTA countries	OECD (non-EFTA) countries	Total
2010	5 571	340	139	6 050
2011	5 537	258	167	5 963
2012	4 797	252	127	5 177
2013	5 589	143	179	5 911
2014	5 200	244	305	5 750
2015	5 241	377	249	5 867
2016	5 501	331	265	6 096
2017	6 676	549	198	7 424
2018	6 922	461	254	7 637
2019	7 064	568	314	7 946
2020	7 312	526	350	8 188
2021	8 762	450	399	9 612

(:) not available.

Source: Eurostat (online data code: env_wasship)

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Table 3: Destinations of hazardous waste exported by EU Member States, 2010-2021 (thousand tonnes)
Source: Eurostat (env_wasship)

The exports of hazardous waste from the EU Member States to [EFTA](#) countries, chiefly Switzerland and Norway, fell to 450 000 tonnes in 2021. This corresponded to 4.7 % of the total export of such waste. The exports to other [OECD](#) countries, outside the EU and EFTA, amounted to 399 000 tonnes in 2021. This made up 4 % of the total. The main destinations among these countries were the United Kingdom and Türkiye.

Treatment of exported hazardous waste

The amount of hazardous waste exported from the EU Member States for disposal in the destination country was 1.7 million tonnes in 2021, same amount as in 2010 after a decreasing between 2011 and 2016. Over the same period, the amount exported for recovery increased from 4.3 million to 7.9 million tonnes.

Figure 1 shows the shares of the hazardous waste exported by the Member States for recovery or disposal in the destination countries. As a percentage of the total shipments, the share for recovery increased from 71.8 % in 2010 to a peak of 82.4 % in 2021. Correspondingly, the share for disposal decreased from 28.1 % to 17.6 % over the same period. The shares of shipments treated through recovery or disposal fluctuated throughout this period, with between 68.2 % and 82.4 % being recovered and between 17.6 % and 31.8 % being disposed. The treatment is unknown or a mix of recovery and disposal for only a marginal share of the exported hazardous waste, with a share

well below 1 % in most years and exceeding it only in 2016 (1.2 %).

Please note that these trends do not represent the trends of hazardous waste recovery and disposal within the EU, as the amounts exported for treatment outside the EU are less than 10 % of the hazardous waste treated in each Member State (compare with Statistics explained article [Waste statistics](#) , Figure 7).

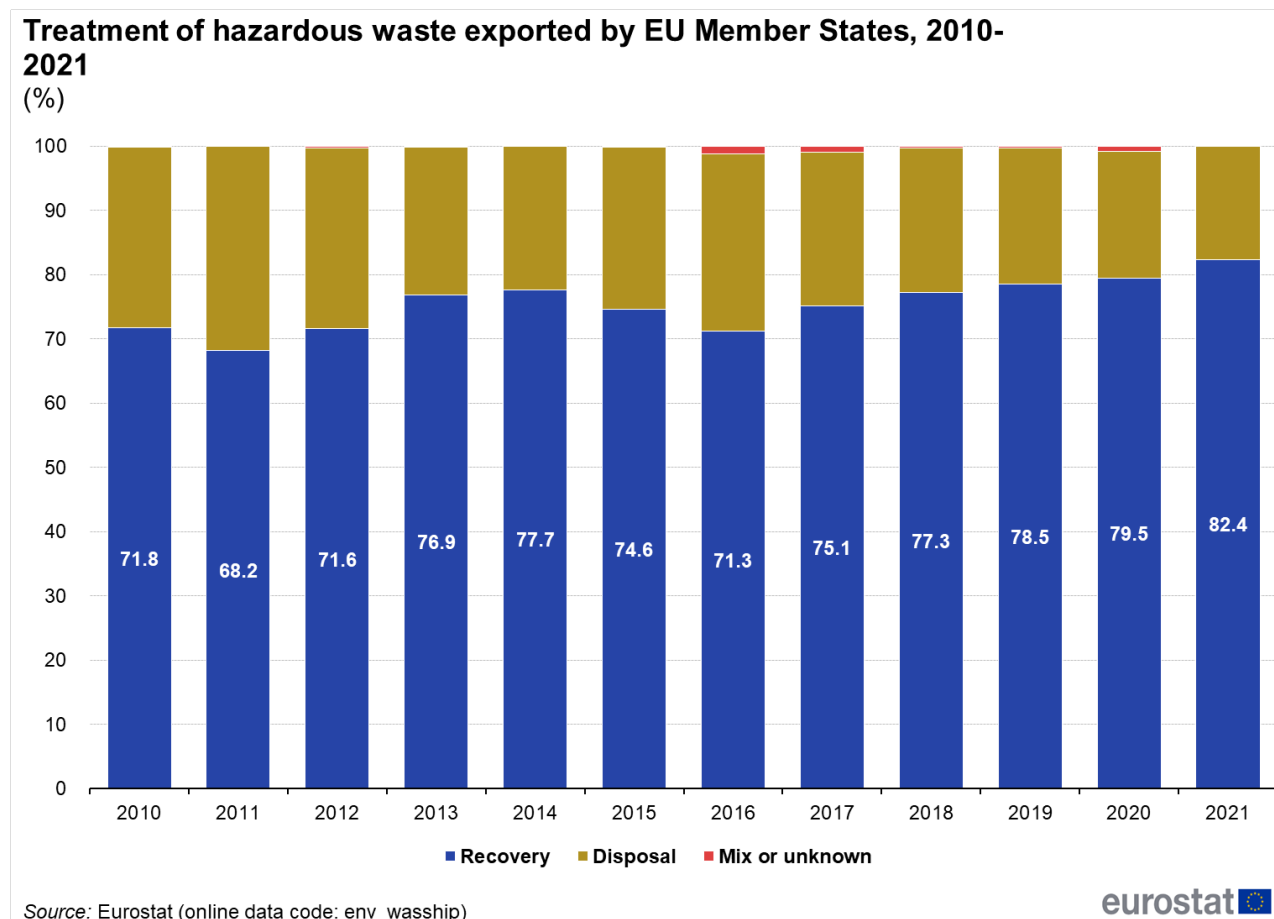
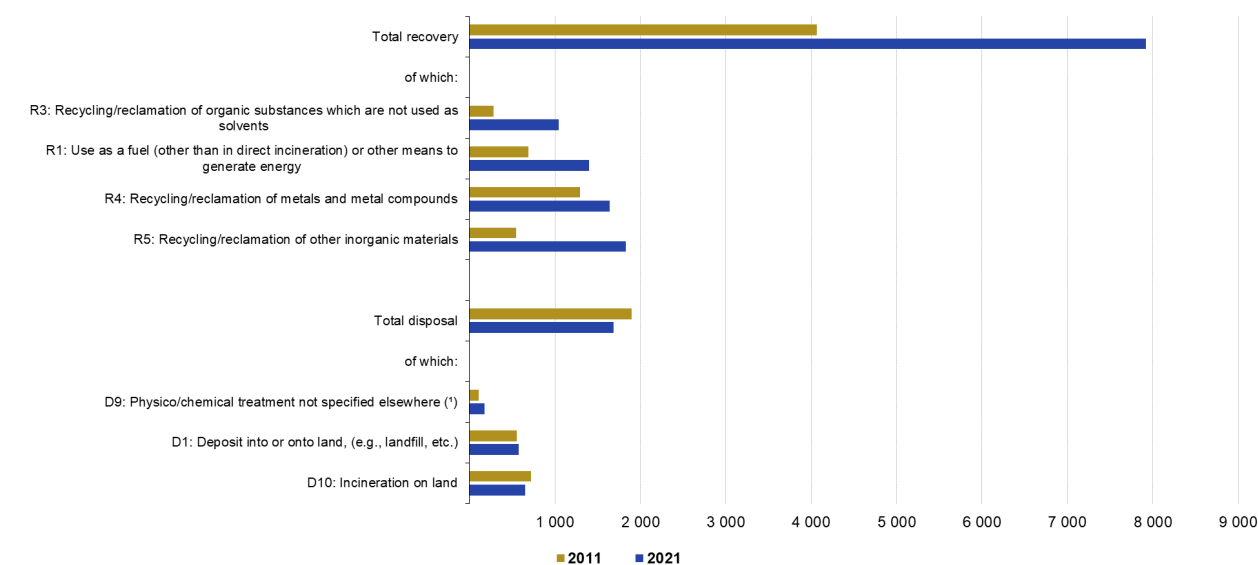


Figure 1: Treatment of hazardous waste exported by EU Member States, 2010-2021 (%) Source: Eurostat (env_wasship)

In 2021, the main treatment categories for exported hazardous waste were *R5: recycling/reclamation of other inorganic materials* (1.8 million tonnes) and *R4: recycling/reclamation of metals and metal compounds* (1.6 million tonnes) (see Figure 2).

Main treatments of hazardous waste exported by EU Member States, 2011 and 2021 (thousand tonnes)



(*) D9: Physico/chemical treatment not specified elsewhere which results in final compounds or mixtures which are discarded by means of any of the operations (e.g. evaporation, drying, calcination, neutralization, precipitation, etc.)

Source: Eurostat (detailed Excel data file available on Eurostat's dedicated section on waste)

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Figure 2: Main treatments of hazardous waste exported by EU Member States, 2010 and 2021 (thousand tonnes) Source: Eurostat (detailed Excel data file available on Eurostat's dedicated section on waste)

In 2021, about 1.4 million tonnes of exported hazardous waste were *incinerated* with energy recovery (*R1: Use as fuel*) and 652 000 tonnes without energy recovery (*D10: Incineration on land*), together accounting for more than one fifth (21.3 %) of the total treatment of exported hazardous waste.

Among the disposal activities, *D1: Deposit into or onto land (landfilling)* of exported hazardous waste fell from 469 000 tonnes in 2010 to 576 000 tonnes in 2021. However, the amount fluctuated substantially within this period. From 2013 to 2017, landfilling grew continuously, peaking at 698 000 tonnes in 2017, before falling in 2019 and 2020 and increasing again in 2021.

Exports of hazardous waste for *R4: Recycling/reclamation of metals* and *R5: Recycling/reclamation of other inorganic materials* also increased since 2010. *R4: Recycling and reclamation of metals* increased from 1.3 million tonnes in 2010 to 1.6 million tonnes in 2021. The amount of *R5: recycling/reclamation of other inorganic materials* was 0.6 million tonnes in 2010, peaking at 1.8 million tonnes in 2021.

Waste shipment based on the European List of Waste (LoW) codes

A more detailed understanding of exports ('transboundary waste shipments') is possible by supplementing the information based on reporting under the Basel Convention presented above with the codes of the [European List of Waste \(LoW\)](#) classification about the types of waste crossing the borders.

It is possible to link waste identified by a European LoW code to the most common treatment for the waste exported, to identify the main EU Member States exporting the different waste categories and the main destination countries for these exports.

Hazardous waste — main treatment, exporting EU Member State and destination

Top 10 hazardous wastes exported, by European List of Waste (LoW) code, main treatments, exporting EU Member States and destination countries, 2021
(tonnes)

Waste category	LoW code	Total quantity exported	Main recovery / disposal code	Quantity exported	Main exporting Member State	Quantity exported	Main destination country	Quantity exported
Bituminous mixtures containing coal tar	17 03 01*	821 153	R5	717 901	Germany	568 813	Netherlands	701 232
Soil and stones containing dangerous substances	17 05 03*	592 754	R5	229 514	Luxembourg	296 669	Germany	185 032
Lead batteries	16 06 01*	482 842	R4	405 024	France	110 037	Spain	118 898
Solid wastes from gas treatment containing dangerous substances	10 02 07*	473 427	R4	429 992	Austria	82 940	Germany	149 733
Other wastes (including mixtures of materials) from mechanical treatment of waste containing dangerous substances	19 12 11*	407 058	R4	162 457	France	140 409	Germany	133 739
Premixed wastes composed of at least one hazardous waste	19 02 04*	324 309	D10	239 614	Italy	275 370	France	136 823
Wood containing dangerous substances	19 12 06*	283 059	R1	272 793	Netherlands	141 845	Germany	269 548
Fly ash containing dangerous substances	19 01 13*	255 381	R5	144 148	Sweden	73 241	Germany	147 258
Salt slags from secondary production	10 03 08*	158 612	R5	125 268	Austria	41 276	Germany	99 820
Glass, plastic and wood containing or contaminated with dangerous substances	17 02 04*	156 802	R1	82 320	Poland	44 207	Germany	97 129

Note: The Recovery and Disposal codes refer to the operations included in Annex IA of the Waste Shipments Regulation (WShipR) and Annexes I and II of the Waste Framework Directive.
The treatment code 'Mix' means that, for the stated quantity, more than one treatment code has been allocated to the waste type in the reporting.
Source: Eurostat (detailed Excel data file available on Eurostat's dedicated section on waste)

eurostat

Table 4: Top 10 hazardous wastes exported, by European List of Waste (LoW) code, main treatments, exporting EU Member States and destination countries, 2021 (tonnes) Source: Eurostat (detailed Excel data file available on Eurostat's dedicated section on waste)

Table 4 shows that a large part of the exported hazardous waste comes from construction and demolition activities (LoW chapter 17) such as *Bituminous mixtures containing coal tar* (17 03 01*) and *Soil and stones containing dangerous substances* (17 05 03*).

Bituminous mixtures containing coal tar (17 03 01*) covers construction and demolition wastes, more specifically excavated roads, parking spaces and other tarred surfaces, etc. This is mainly treated through *R5: Recycling/reclamation of other inorganic materials* (87 % of the total exports of this waste category). The main source for export of this waste among the EU Member States was Germany, which accounted for 69 % of the total exported amount from the EU Member States in 2021. The waste was primarily transported to the Netherlands, which treated 85 % of the exported total.

In 2021, almost 39 % of the exported *Soil and stones containing dangerous substances* (17 05 03*) were treated by *R5: Recycling/reclamation of other inorganic materials*. Luxembourg, with 296 669 tonnes (50 % of the total), was the main exporting EU Member State. Germany was the main destination, receiving 185 032 tonnes of the exports from EU Member States (31 % of the total).

Waste from waste management facilities (LoW codes starting with 19) is also exported in high quantities. A large part of the waste residues from waste treatment (Basel code Y-18) comes from mechanical waste treatment (sorting, crushing etc.), including waste from LoW subchapter 19 12 which includes *Wastes from mechanical treatment of waste containing dangerous substances* (19 12 11*) and *Wood containing dangerous substances* (19 12 06*). Other important waste types from waste treatment facilities include *Wastes from physico/chemical treatments* (LoW subchapter 19 02), including *Premixed wastes composed of at least one hazardous substance* (19 02 04*) in the top 10 of hazardous wastes exported from the EU Member States in 2021, as well as *Sludges from physico/chemical treatment containing dangerous substances* (19 02 05*), *Liquid combustible wastes containing dangerous substances* (19 02 08*) and *Oil and concentrates from separation* (19 02 07*).

Solid wastes from gas treatment containing dangerous substances (10 02 07*) also appeared in the top 10 list in 2021. It refers primarily to the treatment of bottom ash from the iron and steel industry. This is almost exclusively treated in recycling operations for the *R4: Recycling/reclamation of metals and metal compounds* (91 % of the total exports of this waste category) found in this ash. The main source in the EU for this waste was Austria, accounting for 18 % of the total exported amount. The waste was primarily sent to Germany, which treated 32 % of the total.

Lead batteries (16 06 01*) are also exported in high quantities (third highest exported waste type).

Non-hazardous waste – main treatment, exporting EU Member State and destination

Top 10 non-hazardous wastes exported, by European List of Waste (LoW) code, main treatments, exporting EU Member States and destination countries, 2021 (tonnes)

Waste category	LoW code	Total quantity exported	Main recovery / disposal code	Quantity exported	Main exporting Member State	Quantity exported	Main destination country	Quantity exported
Soil and stones other than those containing hazardous substances	17 05 04	4 036 105	R5	3 650 881	Luxembourg	1 926 472	France	2 207 937
Wood other than that those containing hazardous substances	19 12 07	3 214 413	R3	1 829 059	France	1 070 723	Germany	569 386
Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those containing hazardous substances	19 12 12	2 546 721	R1	1 806 482	Italy	629 845	Netherlands	533 195
Combustible waste (refuse derived fuel)	19 12 10	1 279 650	R1	1 184 926	Italy	339 268	Sweden	167 185
Dredging spoil other than those containing hazardous substances	17 05 06	821 731	R5	632 576	Belgium	349 320	Belgium	434 446
Bottom ash and slag other than those containing hazardous substances	19 01 12	592 275	R12	288 934	Belgium	225 346	Netherlands	476 941
Mixed municipal waste	20 03 01	535 848	R1	519 790	Netherlands	185 076	Switzerland	214 877
Sludges from treatment of urban waste water	19 08 05	365 086	D10	124 326	Netherlands	155 083	Germany	130 811
Mixtures of concrete, bricks, tiles and ceramics other than those containing hazardous substances	17 01 07	299 752	R5	299 705	Germany	196 882	France	218 307
Plastic and rubber	19 12 04	241 535	R3	167 862	Netherlands	114 455	Germany	91 999

Note: The Recovery and Disposal codes refer to the operations included in Annex IA of the Waste Shipments Regulation (WshipR) and Annexes I and II of the Waste Framework Directive. The treatment code 'Mix' means that, for the stated quantity, more than one treatment code has been allocated to the waste type in the reporting.

Source: Eurostat (detailed Excel data file available on Eurostat's dedicated section on waste)

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Table 5: Top 10 non-hazardous wastes exported, by European List of Waste (LoW) code, main treatments, exporting EU Member States and destination countries, 2021 (tonnes) Source: Eurostat (detailed Excel data file available on Eurostat's dedicated section on waste)

The EU Member States exported close to 15.0 million tonnes of non-hazardous wastes in 2021. Table 5 shows the top 10 non-hazardous waste types according to the European LoW. These 10 most exported waste categories added up to 13.9 million tonnes, corresponding to 84 % of the total exports of non-hazardous waste from EU Member States in 2021.

Construction and demolition activities (LoW chapter 17) accounted for a large share of the exports of non-hazardous waste (approximately 5.2 million tonnes, or 34 % of the total), with *Soil and stones other than those containing hazardous substances* (17 05 04) as the largest category in the list. This waste was primarily exported for *R5: Recycling and reclamation of other inorganic materials*, with a share of 90 % of the total exported quantity of this category. Luxembourg accounted for nearly one half (48 %) of the total exports of this waste category in 2021. France was the main destination, with 2.2 million tonnes (55 %).

Waste from waste treatment (LoW chapter 19) made up three of the four most exported waste categories at the top of the list in 2021. Of the 2.5 million tonnes of waste of *Wood not containing hazardous substances* (19 12 07), 57 % was for *R3: Recycling or reclamation of organic substances*. France was the main exporting Member State of this category (33 % of the total). The main destination for these exports of wood waste was Germany (18 % of the total).

More than 2.5 million tonnes of *Other wastes (including mixtures of materials) from mechanical treatment of wastes, other than those containing hazardous substances* (19 12 12) were exported from EU Member States in 2021. The main exporting Member State was Italy (25 % of the total), while the main destination was the Netherlands (21 % of the total). The main treatment, covering almost 71 % of the exported quantity, was *R1: Use as fuel or to generate energy*.

Waste of electrical and electronic equipment (WEEE)

In 2021, the EU Member States exported 118 243 tonnes of *Waste of electrical and electronic equipment (WEEE)* containing hazardous substances and 7 208 tonnes of non-hazardous WEEE. Table 6 shows the quantities of different types of hazardous and non-hazardous notified waste of electrical and electronic equipment exported in 2021.

Waste of electrical and electronic equipment (WEEE) exported, by European List of Waste (LoW) codes, EU, 2021

(tonnes)

LoW code	WEEE classified as hazardous waste	Tonnes
20 01 23*	Discarded equipment containing chlorofluorocarbons	37 265
20 01 35*	Discarded EEE other than fluorescent tubes and other mercury-containing waste and equipment containing chlorofluorocarbons	33 983
16 02 13*	Discarded equipment containing hazardous components other than PCBs, chlorofluorocarbons, HCFC, HFC and free asbestos ⁽¹⁾	19 686
16 02 15*	Hazardous components removed from discarded equipment	17 280
20 01 21*	Fluorescent tubes and other mercury-containing waste	5 165
16 02 09*	Transformers and capacitors containing PCBs	2 796
16 02 11*	Discarded equipment containing chlorofluorocarbons, HCFC, HFC	1 978
16 02 10*	Discarded equipment containing or contaminated by PCBs other than transformers and capacitors	90
Total hazardous WEEE		118 243
WEEE classified as non-hazardous waste		
16 02 14	Discarded equipment other than hazardous	3 468
16 02 16	Non-hazardous components removed from discarded equipment	3 402
20 01 36	Other discarded WEEE	338
Total non-hazardous WEEE		7 208
Total notified WEEE		125 451

⁽¹⁾ Hazardous components from electrical and electronic equipment may include lead batteries, Ni-Cd batteries, mercury-containing batteries and other batteries and accumulators marked as hazardous; mercury switches, glass from cathode ray tubes and other activated glass, etc.

Source: Eurostat (detailed Excel data file available on Eurostat's dedicated section on waste)

eurostat 

Table 6: Waste of electrical and electronic equipment (WEEE) exported, by European List of Waste (LoW) codes, EU, 2021 (tonnes) Source: Eurostat (detailed Excel data file available on Eurostat's dedicated section on waste)

WEEE exported from EU Member States are mostly recovered. *R4: Recycling/reclamation of metals and metal compounds* and *R5: Recycling/reclamation of other inorganic materials* are the primary recovery operations.

Source data for tables and graphs

- [Waste shipment statistics – reference year 2021](#)

Detailed data from 2001 to the most recent reference year available can be found on [Eurostat's dedicated section on waste](#)

Data sources

The main source for this article is the data reported by EU Member States according to the **Waste Shipment Regulation**. In the EU, exports of waste are regulated by [Regulation \(EC\) No 1013/2006](#) on shipments of waste, commonly referred to as the Waste Shipment Regulation (WShipR). It implements the [Basel Convention](#), which bans exports of hazardous waste from [OECD](#) countries to non-OECD countries. According to the WShipR, all hazardous waste as well as some problematic waste streams and other wastes defined in the WShipR, must be notified to the authorities before being shipped across borders.

The Member States must report the precise treatment of the hazardous waste. The treatment of waste is broken down by recovery and disposal operations, as listed in Annexes I and II to the Waste Framework Directive ([Directive 2008/98/EC](#) on waste).

Information about notified shipped waste can be greatly enhanced when Member States also indicate the [European List of Waste \(LoW\)](#) in addition to the Basel codes. The main extra information relates to:

- the type of waste shipped across borders;
- the processes behind the generation of the wastes;
- special hazardousness or hazardous substances contained in the waste;
- possibilities for assessing required waste treatment capacities.

The shipment notification application form used in the EU is included as Annex VII of the WShipR. It asks for information on:

- Basel Y-codes according to Annexes I and II of the Basel Convention (47 different code numbers are available, 45 of which concern hazardous waste);
- detailed Basel codes according to Annexes VIII and IX of the Convention (120 code numbers are available, 60 of which concern hazardous waste);
- OECD codes (150 different code numbers are available, 60 of which concern hazardous waste);
- European List of Waste codes (842 code numbers are available, 408 of which concern hazardous waste).

The submitted data regarding transboundary shipments of waste covers both waste shipped out of and into the EU Member States.

Definitions

The term 'exports' is used for transboundary waste movements ('shipments') both within the EU and in particular for movements of waste to other OECD countries. Detailed information on exports of waste based on the [European List of Waste \(LoW\)](#) classification is also provided.

The recovery (R) and disposal (D) codes refer to the operations included in Annex IA of the [Waste Shipment Regulation \(WShipR\) \(Regulation \(EC\) No 1013/2006\)](#) and Annexes I and II of the [Waste Framework Directive \(WFD\) \(Directive 2008/98/EC\)](#).

Hazardous waste is waste which is harmful to humans or to the environment. Annex III of the Waste Framework Directive ([Directive 2008/98/EC](#) on waste) provides a list of properties which renders waste hazardous.

Waste from electrical and electronic equipment (WEEE) includes a large range of devices such as computers, fridges and mobile phones at the end of their life. This type of waste contains a complex mixture of materials, some of which are hazardous. These can cause major environmental and health problems if the discarded devices are not managed properly. In addition, modern electronics contain rare and expensive resources, which can be recycled and re-used if the waste is effectively managed. Shipments of WEEE cannot be identified under the Basel Y-codes, but different types of WEEE can be distinguished using the LoW codes, including hazardous WEEE and

non-hazardous notified WEEE exports.

Context

According to the [Waste Shipment Regulation \(WShipR\) \(Regulation \(EC\) No 1013/2006\)](#) , all hazardous waste as well as some problematic waste streams and other wastes defined by the WShipR, must be notified to the authorities before it is allowed to be shipped across national borders. Article 51(1) of the WShipR states that, before the end of each calendar year, each Member State shall send to the [European Commission](#) a copy of the report for the previous calendar year on the quantities of notified transboundary shipped waste and the quantity of hazardous waste generated which, in accordance with Article 13(3) of the Basel Convention, it has drawn up and submitted to the Convention Secretariat.

In November 2021, the European Commission presented a [Proposal for a new Regulation on Shipments of Waste](#) . In January 2023, the European Parliament adopted [amendments on the Commission's proposal](#) .

In line with the objectives set out in the European Green Deal, the Circular Economy Action Plan and the review clauses in the Waste Framework Directive (WFD), in February 2022 launched an [open consultation for revision of the Waste Framework Directive \(WFD\)](#) . The aim was to gather evidence to improve the overall environmental outcome of waste management in line with the waste hierarchy and the implementation of the polluter pays principle.

[Eurostat](#) publishes data and analysis on transboundary [waste](#) shipments in the [European Union \(EU\)](#) since 2011. The data and analysis cover various aspects of waste shipments, generally on an aggregated level.

The quantity of [waste electrical and electronic equipment](#) (widely known as WEEE or e-waste) generated every year in the EU is increasing rapidly. It is now one of the fastest growing waste streams. The EU has introduced the [Waste Electrical and Electronic Equipment Directive \(WEEE Directive\)](#) and the [Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment Directive \(RoHS Directive\)](#) to tackle the issue of the growing amount of WEEE.

Other articles

- [Waste statistics](#)
- [Municipal waste statistics](#)
- [Packaging waste statistics](#)
- [End-of-life vehicle statistics](#)
- [Waste statistics - electrical and electronic equipment](#)
- [Recycling – secondary material price indicator](#)

Main tables

- [Waste \(env_was\)](#)

Database

- [Waste \(env_was\)](#) , see:

Waste streams (env_wasst)

Transboundary shipments of notified waste by partner, hazardousness and waste management operations (env_wasship)

Dedicated section

- [Eurostat's dedicated website on Waste](#)

Publications

- [Energy, transport and environment indicators – 2020 edition](#)
- [Manual on waste statistics](#)

Legislation

- [Directive 2008/98/EC Waste Framework Directive \(WFD\)](#)
- [Summaries of EU legislation: EU waste management law](#)
- [Regulation \(EC\) No 1013/2006 Waste Shipment Regulation \(WShipR\)](#)
- [Summaries of EU legislation: Safe waste shipments within the EU and with non-EU countries](#)

External links

- European Commission - DG Environment – [Report from the Commission on the implementation of Regulation \(EC\) No 1013/2006 on shipments of waste: Generation, treatment and transboundary shipment of hazardous waste and other waste in the Member States of the European Union, 2013-2015 \(COM\(2018\) 762 final\)](#)

Annex to this report: [Part 1](#) and [Part 2](#) of Commission staff working document [SWD\(2018\) 468 final](#) (22 November 2018)

- European Commission - DG Environment – [Proposal for a new Regulation on Waste Shipments](#) (17 November 2021)
- European Commission - DG Environment - Repository of [Commission reports on waste shipments](#)
- European Environment Agency

Resource efficiency and waste

[Movements of waste across the EU's internal and external borders](#) (EEA Report No 7/2012)

[Material resources and waste](#) (State of the environment report No 5/2010)

[Waste without borders in the EU?](#) (EEA Report No 1/2009)