Waste shipment statistics based on the European list of waste codes

Statistics Explained

Data extracted in December 2020.
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Eurostat has published data and analysis on transboundary waste shipments in Statistics Explained since 2011. The data and analysis cover various aspects of waste shipments, generally on an aggregated level. The terms export and import are used for transboundary waste shipments both within the EU and to other OECD countries. This article describes the potential of using the European List of Waste (LoW) classification in addition to the Basel Convention classification to produce more detailed information about notified transboundary waste shipments.

General overview

Transboundary waste shipments are regulated by Regulation (EC) No 1013/2006 on waste shipments, commonly referred to as the Waste Shipment Regulation (WShipR). It implements the Basel Convention, which bans exports of hazardous waste from OECD to non-OECD countries. According to the regulation, all hazardous waste as well as some non-hazardous but problematic waste streams and other kinds of waste defined in the WShipR, must be notified to the authorities before being shipped across borders.

Article 51(1) of the WShipR states that, before the end of each calendar year, each Member State shall send the Commission a copy of the report for the previous calendar year which, in accordance with Article 13(3) of the Basel Convention, it has drawn up and submitted to the Convention Secretariat.

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 (790 code numbers are available, 384 of which concern hazardous waste).

Information about notified shipped waste can be greatly improved when the Member States also indicate the European LoW codes in their reporting. This information provides more detail about the type and characteristic of the shipped waste. It can also be used to complement the reported data. For example, when no data on LoW are present for country A, LoW import-data from all other Member States can be used to estimate the export-data for country A. Similarly, reported export data from other countries can be used to estimate country A's import data.

Germany imports a high quantity of hazardous waste and other notified waste and uses the European LoW code for this import. The German import data make it possible to calculate many of the missing export data for the other Member States that have not provided this information in their reporting.

Hazardous waste based on LoW

27 EU Member States exported a total of 7.8 million tonnes (env_wasship) of hazardous waste in 2018. In this context, the terms 'export' and 'import' are used for transboundary shipments of waste both within the EU and to other OECD countries. Hazardous-classification by LoW codes is often not the same as the official Y-codes used on the notifications. For example, a waste may be notified as hazardous under Y18, but no suitable hazardous LoW-code is available. In this case, the waste is included in the EU aggregate in the table env_wasship as hazardous, but appears as non-hazardous in the data based on LoW codes.

Figure 1 shows the top 10 Basel Y-codes by quantity of exported hazardous waste. These 10 codes cover 3.7 million tonnes of the total . Much of the shipped hazardous waste, approximately 1.3 million tonnes, falls under Y-18 – Residues arising from industrial waste disposal operations.

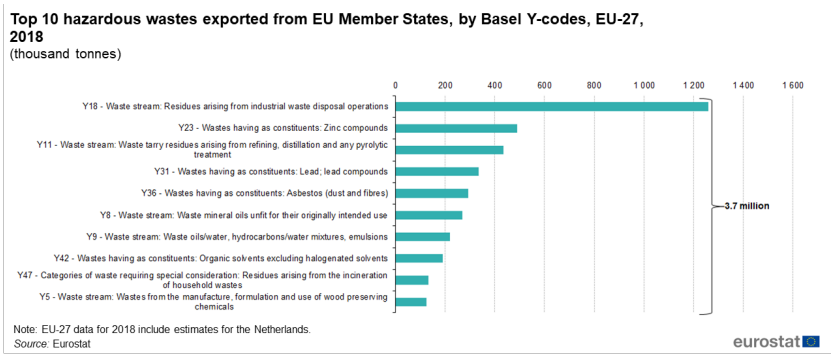

Figure 1: Top 10 hazardous wastes exported from EU Member States, by Basel Y-codes, EU-27, 2018 (thousand tonnes) Source: Eurostat

Turning to the LoW codes, the top 10 hazardous LoW codes cover 3.4 million tonnes and the top 20 cover 4.5 million tonnes (see Table 1). Comparing the quantities between the top Basel codes and top hazardous LoW codes, the top 13 LoW codes correspond to approximately the same quantity of exported hazardous waste as the top 10 Basel Y-codes. This clearly indicates that much additional information about the exported waste can be obtained by using the European LoW classification (consisting of 790 codes) compared with the Basel classification (120 codes).

Top 20 hazardous wastes exported from EU Member States, according to the European List of Waste (LoW), EU-27, 2018

(tonnes)

LoW Code	Description	Total
17 05 03*	Soil and stones containing dangerous substances	725 562
17 03 01*	Bituminous mixtures containing coal tar	547 723
10 02 07*	Solid wastes from gas treatment containing dangerous substances	492 846
16 06 01*	Lead batteries	346 989
19 02 04*	Premixed wastes composed of at least one hazardous waste	289 332
19 12 11*	Other wastes (including mixtures of materials) from mechanical treatment of waste containing dangerous substances	265 878
19 01 13*	Fly ash containing dangerous substances	209 939
19 12 06*	Wood containing dangerous substances	204 852
17 02 04*	Glass, plastic and wood containing or contaminated with dangerous substances	150 381
16 01 04*	End-of-life vehicles	145 307
13 02 05*	Mineral-based non-chlorinated engine, gear and lubricating oils	144 187
19 01 07*	Solid wastes from gas treatment	130 692
10 03 08*	Salt slags from secondary production	129 933
19 02 08*	Liquid combustible wastes containing dangerous substances	122 645
17 05 07*	Track ballast containing dangerous substances	112 975
19 03 04*	Wastes marked as hazardous, partly stabilised	98 976
19 02 05*	Sludges from physico/chemical treatment containing dangerous substances	98 072
11 01 05*	Pickling acids	94 322
17 06 05*	Construction materials containing asbestos	76 371
19 02 07*	Oil and concentrates from separation	75 339

Note: EU-27 data for 2018 include estimates for the Netherlands.
Source: Eurostat

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Table 1: Top 20 hazardous wastes exported from EU Member States, according to the European List of Waste (LoW), EU-27, 2018, (tonnes) Source: Eurostat

Construction and demolition wastes at the top

Table 1 shows that a large part of the hazardous waste types exported come from construction and demolition activities (LoW codes starting with 17) such as polluted soil (17 05 03*), bituminous mixtures (17 03 01*), contaminated glass, plastic and wood (17 02 04*), track ballast (17 05 07*) and construction materials containing asbestos (17 06 05*).

Waste from waste treatment facilities (LoW codes starting with 19) is also exported in high quantities. This is consistent with the high quantity exported of code Y-18 waste (residues from waste treatment) according to the Basel classification. However, the LoW codes make it possible to identify the types of waste more precisely. For example, the data coded according to LoW make it possible to determine that a large part of the waste residues from waste treatment (Basel code Y-18) come 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 pre-mixed wastes composed of at least one hazardous substance (19 02 04*), liquid combustible wastes containing dangerous substances (19 02 08) and sludges containing dangerous substances (19 02 05*). Partly stabilised wastes marked as hazardous (19 03 04*) also featured among the top 20 hazardous waste shipments from the EU-27 Member States in 2018.

Wastes from waste incineration, such as fly ash containing hazardous substances (19 01 13*) and solid wastes from gas treatment (19 01 07*) also appeared in the top 20 list, as did solid wastes from gas treatment containing dangerous substances from the iron and steel industry (10 02 07*) and salt slags from secondary production from the aluminium industry (10 03 08*). Lead batteries (16 06 01*) are also exported in high quantities (fourth highest exported waste type).

Non-hazardous notified waste based on LoW

Approximately 14.2 million tonnes of non-hazardous waste were exported as notified waste from the EU Member States in 2018. The Basel system contains only two Y-codes for non-hazardous waste: Y-46 and Y-47. The European LoW classification, with hundreds of codes for non-hazardous waste, provides a much more detailed picture of the type of waste exported. Table 2 shows the top 20 non-hazardous waste types according to the European LoW. These make up 12.9 million tonnes of waste.

Again, wastes from waste treatment (LoW codes starting with 19) top the list. In particular, construction and demolition activities (LoW codes starting with LoW 17) account for a large share of the notified shipments of non-hazardous waste, especially soil and stones (17 05 04) and dredging spoil (17 05 06). There are also exports of large quantities of waste from the mechanical treatment of waste (LoW subchapter 19 12), including wood (19 12 07), other wastes from mechanical treatment (19 12 12) and combustible waste (19 12 10). Considerable quantities of mixed municipal waste (LoW 20 03 01) were also shipped from the EU-27 in 2018.

Top 20 non-hazardous wastes exported from EU Member States, according to the European List of Waste (LoW), EU-27, 2018

(tonnes)

LoW codes	Description	Total
17 05 04	Soil and stones other than those mentioned in 17 05 03	4 001 442
19 12 07	Wood other than that mentioned in 19 12 06	1 989 640
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	1 587 190
19 12 10	Combustible waste (refuse derived fuel)	1 032 996
20 03 01	Mixed municipal waste	881 762
19 01 12	Bottom ash and slag other than those mentioned in 19 01 11	626 204
17 05 06	Dredging spoil other than those mentioned in 17 05 05	610 462
19 08 05	Sludges from treatment of urban waste water	414 292
17 01 07	Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	313 698
03 03 10	Fibre rejects, fibre-, filler- and coating sludges from mechanical separation	196 391
19 12 09	Minerals (e.g. sand, stones)	176 730
15 01 06	Mixed packaging	174 371
19 12 04	Plastic and rubber	172 077
19 10 06	Other fractions other than those mentioned in 19 10 05	165 944
16 11 04	Other linings and refractories from metallurgical processes other than those mentioned in 16 11 03	115 263
03 03 07	Mechanically separated rejects from pulping of waste paper and cardboard	99 683
16 01 03	End-of-life tyres	95 716
03 03 05	De-inking sludges from paper recycling	90 377
10 02 14	Sludges and filter cakes from gas treatment other than those mentioned in 10 02 13	72 534
17 09 04	Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	67 591

Note: EU-27 data for 2018 include estimates for the Netherlands.

Source: Eurostat

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Table 2: Top 20 non-hazardous wastes exported from EU Member States, according to the European List of Waste (LoW), EU-27,2018 (tonnes) Source: Eurostat

Waste of Electrical and Electronic Equipment (WEEE)

Exports 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. Table 3 shows the quantities of different types of hazardous and non-hazardous notified WEEE exported in 2018.

These waste types include transformers, capacitors and other discarded equipment containing polychlorinated biphenyl (PCB) (16 02 09* and 16 02 10*), discarded equipment containing chlorofluorocarbons (CFCs, HCFCs) (16 02 11* and 20 01 23*), discarded equipment containing free asbestos (16 02 12*) and other discarded electrical and electronic equipment containing hazardous components (16 02 13* and 20 01 35*), hazardous and non-hazardous components removed from discarded equipment (16 02 15* and 16 02 16), discarded equipment and discarded electrical and electronic equipment other than hazardous (16 02 14 and 20 01 36), fluorescent tubes and other mercury-containing waste (20 01 21*).

In 2018, the EU Member States exported 157 252 tonnes of WEEE containing hazardous substances and 14 549 tonnes of non-hazardous WEEE.

Waste of electrical and electronic equipment (WEEE) exported from EU Member States, according to the European List of Waste (LoW), EU-27, 2018

(tonnes)

WEEE classified as hazardous waste	LoW code	Tonnes
Transformers and capacitors containing PCBs	16 02 09*	685
Discarded equipment containing or contaminated by PCBs other than those mentioned in 16 02 09	16 02 10*	3
Discarded equipment containing chlorofluorocarbons, HCFC, HFC	16 02 11*	2 070
Discarded equipment containing free asbestos	16 02 12*	42
Discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12 (1)	16 02 13*	56 595
Hazardous components removed from discarded equipment	16 02 15*	17 850
Fluorescent tubes and other mercury-containing waste	20 01 21*	17 762
Discarded equipment containing chlorofluorocarbons	20 01 23*	28 185
Discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	20 01 35*	34 060
Total hazardous WEEE		**157 252**
WEEE classified as non-hazardous waste		
Discarded equipment other than hazardous	16 02 14	2 816
Non-hazardous components removed from discarded equipment	16 02 16	6 788
Other discarded WEEE	20 01 36	4 944
Total non-hazardous WEEE		**14 549**
Total notified WEEE		**171 801**

Note: EU-27 data for 2018 include estimates for the Netherlands.

(1) Hazardous components from electrical and electronic equipment may include accumulators and batteries mentioned in 16 06 XX and marked as hazardous; mercury switches, glass from cathode ray tubes and other activated glass, etc.

Source: Eurostat

eurostat

Table 3: Waste of electrical and electronic equipment (WEEE) exported from EU Member States, according to the European List of Waste (LoW), EU-27, 2018 (tonnes) Source: Eurostat

WEEE exported from EU Member States are mostly recovered. R4 operations (Recycling/reclamation of metals and metal compounds) and R1 operations (Recycling/reclamation of other inorganic materials) are the primary recovery operations.

Hazardous waste – most common treatments and main exporting and importing countries

It is possible to link wastes identified by a European LoW code to the most common treatment that the waste is exported for and to identify the largest export and import countries for those waste types.

Table 4 shows the quantities of the top 10 hazardous waste types exported from EU Member States, classified according to the European LoW. It also shows the top 3 treatments for those wastes and the top 3 exporting and importing countries for the respective waste types.

The total of the three most common treatment types does normally not add up to the total amount of the exports of the waste type in question. For example, soil and stones containing dangerous substances (LoW code 17 05 03*) are shipped for different types of recovery and disposal operations. In 2018, 725 562 tonnes are identified as exports from the EU Member States, of which 206 170 tonnes are exported for D1 (deposit into or onto land, e.g. landfill), 168 459 tonnes for mixed treatment and 120 507 tonnes for D9 (other physico/chemical treatment, e.g. from evaporation, drying, calcination, neutralization, precipitation, etc.), adding up to 495 135 tonnes. The remaining 230 427 tonnes undergo other types of waste treatment. 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. The recovery (R) and disposal (D) codes refer to the operations included in Annex IA of the WShipR and Annexes I and II of the Waste Framework Directive 2008/98/EC .

Table 4 also shows the extent to which the shipped wastes undergo mostly homogenous treatment. In 2018, around 28 % of the exported soil and stones containing dangerous substances (LoW 17 05 03*) were land-filled (D1), 23 % underwent a mix of treatments and 17 % were treated by other physico/chemical treatments (D9).

Of the soil and stones containing dangerous substances, France with 186 833 tonnes and Luxembourg with 180 522 tonnes together stood for one half (26 % and 25 % respectively) of the total quantity of this waste shipped from the EU Member States in 2018. For imports, the Netherlands and Germany were the recipients for nearly all (87 %) of these exports, with the Netherlands being the destination for more than half of the total alone.

Solid wastes from gas treatment containing dangerous substances (LoW 10 02 07*) refers primarily to the treatment of bottom ash from the iron and steel industry. This is almost exclusively (95 %) treated in recycling operations for the recovery of metals and metal compounds (R4) found in this ash. The three biggest exporters in 2018 were Austria, Greece, and Belgium, who accounted for 19 %, 15 % and 11 % of the total shipped quantity from the EU Member States respectively. The waste was primarily sent to Germany, which treats one third (33 %) of the total exported quantity.

Top 10 hazardous wastes shipped from EU Member States, according to the European List of Waste (LoW), by main treatments, exporting and importing countries, EU-27, 2018

(tonnes)

LoW description	LoW code	Recovery or disposal code	Quantity in tonnes	Exporting country	Quantity in tonnes	Importing country	Quantity in tonnes
Soil and stones containing dangerous substances	17 05 03*	D1	206 170	France	186 833	Netherlands	403 328
		Mix	168 459	Luxembourg	180 522	Germany	226 845
		D9	120 507	Germany	116 276	Belgium	49 922
	Total of 17 05 03*		**725 562**		**725 562**		**725 562**
Bituminous mixtures containing coal tar	17 03 01*	R5	435 413	Germany	384 877	Netherlands	486 010
		D10	65 326	Belgium	102 624	Germany	54 694
		D1	35 824	Luxembourg	49 095	France	7 017
	Total of 17 03 01*		**547 723**		**547 723**		**547 723**
Solid wastes from gas treatment containing dangerous substances	100207*	R4	466 640	Austria	94 455	Germany	160 909
		D1	6 062	Greece	75 463	France	83 243
		R5	3 112	Belgium	52 671	Poland	76 569
	Total of 10 02 07*		**492 846**		**492 846**		**492 846**
Lead batteries	16 06 01*	R4	246 699	France	65 954	Spain	68 612
		Mix	18 314	Germany	40 283	Czechia	27 134
		R13	2 881	Italy	27 051	Slovenia	25 956
	Total of 16 06 01*		**346 989**		**346 989**		**346 989**
Premixed wastes composed of at least one hazardous waste	19 02 04*	D10	182 735	Italy	252 491	France	106 430
		R1	46 308	Germany	10 319	Germany	51 735
		D9	24 573	France	4 713	Portugal	26 819
	Total of 19 02 04*		**289 332**		**289 332**		**289 332**
Other wastes (including mixtures of materials) from mechanical treatment of waste containing dangerous substances	19 12 11*	R4	115 931	France	111 524	Germany	93 783
		R1	50 976	Italy	67 976	Netherlands	45 444
		D10	31 660	Germany	34 717	Switzerland	27 654
	Total of 19 12 11*		**265 878**		**265 878**		**265 878**
Fly ash containing dangerous substances	19 01 13*	R5	113 280	Sweden	64 441	Norway	98 205
		Mix	34 900	Denmark	39 083	Germany	74 315
		R11	16 132	France	33 104	Finland	2 105
	Total of 19 01 13*		**209 939**		**209 939**		**209 939**
Wood containing dangerous substances	19 12 06*	R1	79 879	Denmark	34 308	Germany	80 407
		R12	1 772	Finland	33 676	Netherlands	1 772
		R3	528	Luxembourg	8 325	-	-
	Total of 19 12 06*		**204 852**		**204 852**		**204 852**
Glass, plastic and wood containing or contaminated with dangerous substances	17 02 04*	R1	59 383	France	44 136	Germany	75 105
		Mix	56 400	Italy	38 272	Belgium	39 154
		R3	4 736	Austria	23 441	United Kingdom	8 589
	Total of 17 02 04*		**150 381**		**150 381**		**150 381**
End-of-life vehicles	16 01 04*	Mix	103 918	Greece	95 278	Turkey	100 633
		R12	13 443	Belgium	13 443	France	13 316
		R4	9 262	France	8 640	Belgium	10 054
	Total of 16 01 04*		**145 307**		**145 307**		**145 307**

Note: EU-27 totals for 2018 include estimates for the Netherlands.
Source: Eurostat

eurostat

Table 4: Top 10 hazardous wastes shipped from EU Member States, according to the European List of Waste (LoW), by main treatments, exporting and importing countries, EU-27, 2018 (tonnes) Source: Eurostat

In this context, it should be noted that only notified waste shipped from EU Member States are covered in the exports, while other OECD countries may be among the importing countries for these wastes (e.g. Switzerland, Norway, United Kingdom, Turkey, . . .). The information on importing countries is derived from the export notifications from the EU Member States.

Non-hazardous waste – most common treatments and main exporting and importing countries

Table 5 shows the top 3 types of treatment and the top 3 export and import countries for the top 10 notified non-hazardous wastes in 2018. Belgium exported almost 2.1 million tonnes of soil and stones other than those containing hazardous substances (LoW code 17 05 04), generated as construction and demolition wastes (including excavated soil from contaminated sites). This waste was primarily exported for recycling and reclamation of inorganic materials (R5), with a share of 84 % of the total quantity of the shipments of this waste type.

Exports of soil and stones from Belgium represented more than one half (52 % of the total exports of this waste type, with Luxembourg providing close to one quarter (23 %). The Netherlands imported even more soil and stones than the quantity exported by Belgium, with almost 2.3 million tonnes (57 % of the total). The other key importing country for this waste type was France.

France and Germany are the main export countries for wood not containing hazardous substances (LoW 19 12 07). More than one half of this waste type are exported for recycling/reclamation of organic substances (R3). In 2018, the main importing countries for this waste type were Italy, Austria and Czechia.

Top 10 non-hazardous wastes shipped from EU Member States, according to the European European List of Waste (LoW), by main treatments, exporting and importing countries, EU-27, 2018

(tonnes)

LoW description	LoW code	Recovery or disposal code	Quantity in tonnes	Exporting country	Quantity in tonnes	Importing country	Quantity in tonnes
Soil and stones (other than those containing hazardous substances)	17 05 04	R5	3 360 008	Belgium	2 096 800	Netherlands	2 290 630
		R13	201 239	Luxembourg	917 955	France	1 028 947
		D5	142 629	Germany	547 487	Norway	144 373
	Total of 17 05 04		**4 001 442**		**4 001 442**		**4 001 442**
Wood (other than that containing hazardous substances)	19 12 07	R3	1 047 943	France	592 280	Italy	291 389
		R1	254 613	Germany	414 442	Austria	233 217
		Mix	39 268	Belgium	149 748	Czechia	218 215
	Total of 19 12 07		**1 989 640**		**1 989 640**		**1 989 640**
Other wastes (including mixtures of materials) from mechanical treatment of wastes (other than those containing hazardous substances)	19 12 12	R1	821 759	Germany	322 919	Netherlands	213 356
		Mix	222 083	Italy	284 420	Slovakia	212 875
		R12	152 267	Austria	206 160	Switzerland	161 082
	Total of 19 12 12		**1 587 190**		**1 587 190**		**1 587 190**
Combustible waste (refuse derived fuel)	19 12 10	R1	697 261	Germany	268 565	Czechia	106 037
		Mix	42 031	Italy	249 429	Hungary	103 545
		R5	19 998	Belgium	82 272	Denmark	98 231
	Total of 19 12 10		**1 032 996**		**1 032 996**		**1 032 996**
Mixed municipal waste	20 03 01	R1	483 267	Germany	167 336	Switzerland	209 887
		D10	46 500	Ireland	124 887	Sweden	99 021
		R3	6 311	Finland	106 263	Germany	90 430
	Total of 20 03 01		**881 762**		**881 762**		**881 762**
Bottom ash and slag (other than those containing hazardous substances)	19 01 12	R5	402 220	Germany	340 049	Netherlands	468 617
		R12	203 402	Belgium	197 114	Germany	49 587
		Mix	18 654	France	33 784	France	49 462
	Total of 19 01 12		**626 204**		**626 204**		**626 204**
Dredging spoil (other than those containing hazardous substances)	17 05 06	R5	541 886	Belgium	497 160	Netherlands	609 465
		Mix	68 576	France	97 079	Belgium	997
		-	-	Germany	16 223	-	-
	Total of 17 05 06		**610 462**		**610 462**		**610 462**
Sludges from treatment of urban waste water	19 08 05	R3	110 989	Slovenia	73 016	Hungary	167 641
		R10	82 764	Germany	57 624	Germany	58 564
		D10	64 221	Croatia	52 089	France	44 878
	Total of 19 08 05		**414 292**		**414 292**		**414 292**
Mixtures of concrete, bricks, tiles and ceramics (other than those containing hazardous substances)	17 01 07	R5	310 117	Germany	211 956	France	176 900
		R11	3 492	Denmark	73 741	Norway	73 741
		D1	74	Luxembourg	27 379	Netherlands	57 708
	Total of 17 01 07		**313 698**		**313 698**		**313 698**
Fibre rejects, fibre-, filler- and coating sludges from mechanical separation	03 03 10	R5	113 816	Germany	132 544	Czechia	49 676
		R3	41 087	Austria	30 175	Belgium	47 621
		R12	7 399	Italy	1 352	Netherlands	41 419
	Total of 03 03 10		**196 391**		**196 391**		**196 391**

Note: The recovery and disposal codes refer to the operations included in Annex IA of the WshipR and Annexes I and II of the Waste Framework Directive. EU-27 totals for 2018 include estimates for the Netherlands.

Source: Eurostat

eurostat

Table 5: Top 10 non-hazardous wastes shipped from EU Member States, according to the European List of Waste (LoW), by main treatments, exporting and importing countries, EU-27, 2018 (tonnes) Source: Eurostat

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Conclusions

Using the codes of the European List of Waste (LoW) in addition to the Basel codes provides a much better understanding of transboundary waste shipments in Europe. 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 information based on the European LoW clearly shows that much of the waste shipped across borders is the result of better waste management and the reduction of landfilling. Mechanical sorting of mixed waste, recycling, composting, anaerobic digestion and incineration with energy recovery not only generate recyclable materials and energy, but also generate new waste types.

Source data for tables and graphs

- Waste shipment statistics according to the European List of Waste (LoW) – figures and tables (December 2020)

Context

The generation of new waste types can be seen as a consequence of both EU and national measures introduced over the last decades. These stipulate certain minimum recycling and recovery requirements for different waste types. The EU has introduced minimum recycling and recovery requirements for household and construction and

demolition waste in the Waste Framework Directive (2008/98/EC) , for packaging waste in the Packaging and Packaging Waste Directive (94/62/EC) and for electrical and electronic waste in the Directive 2012/19/EU .

It has also introduced ambitious emission requirements for industrial and waste treatment plants. The Industrial Emissions Directive (2010/75/EU) requires people involved in carrying out industrial and agricultural activities - including incineration of waste - with a high pollution risk to obtain a permit. This permit can only be issued if certain environmental conditions are met. The Urban Waste Water Treatment Directive is also an important piece of EU legislation in this regard. However, more ambitious requirements often generate more flue-gas cleaning wastes or sewage sludge. These wastes must also be properly treated.

See also

- Waste shipment statistics
- Waste statistics
- Municipal waste statistics
- Packaging waste statistics
- Waste statistics - electrical and electronic equipment
- Recycling – secondary material price indicator

Main tables

- Waste statistics (t_env)

Database

- Waste shipment - detailed data

Dedicated section

- Eurostat´s dedicated website on Waste

Publications

- Energy, transport and environment statistics — 2020 edition
- Manual on waste statistics

Legislation

- Waste Framework Directive 2008/1998
- Summaries of EU legislation: EU waste management law
- Waste Shipment Regulation
- Summaries of EU legislation: Safe waste shipments within the EU and with non-EU countries

External links

- **European Commission - DG Environment**
  - Commission report of 22 November 2018 on the implementation of Regulation (EC) No 1013/2006 of 14 June 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 of 22 November 2018

  - European Commission - DG Environment - Repository of Commission reports on waste shipments

- **European Environment Agency**
  - Movements of waste across the EU's internal and external borders (EEA Report 7/2012)
  - State of the environment report 5/10
  - Waste and material resources
  - Waste without borders in the EU (EEA Report 1/2009)