

## HAZARDOUS WASTE STATISTICS FOR IRELAND

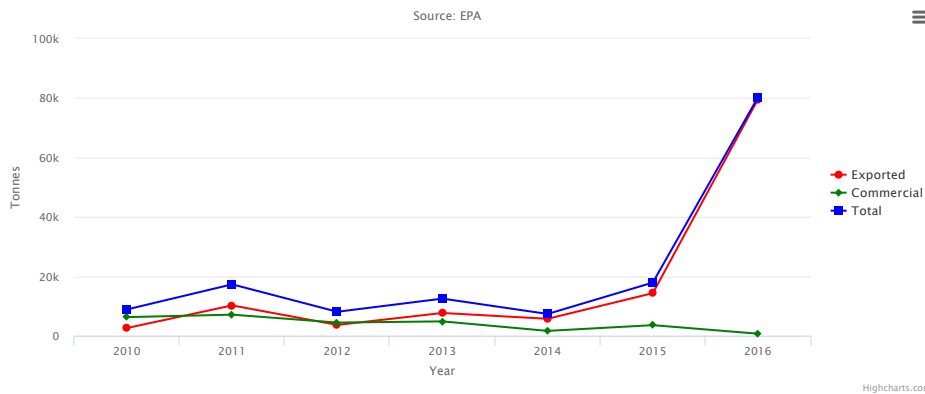
EPA Waste Data Release, 20 December 2017

Latest Reference Year 2016

The amount of hazardous waste managed increased by 18% from 345 ktonnes in 2015 to 409 ktonnes in 2016 due to a significant increase in contaminated soils, most of which was exported for treatment. There has been a steady increase in the export of hazardous waste for treatment since 2014. The amount treated at commercial hazardous waste treatment facilities has remained steady, while there has been a reduction of hazardous waste treated on-site of generation at industrial installations.



Quantity of contaminated soil treated, 2010 - 2016

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## EXPORTS AND TREATED ON-SITE OF GENERATION

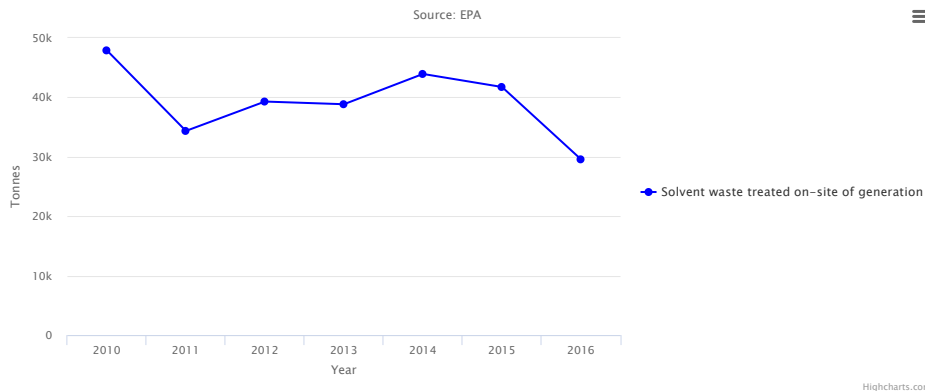
### Exports (excluding contaminated soil)

- ▶ 186 ktonnes of hazardous waste was exported in 2016 compared to 166 ktonnes in 2015 (11% increase). Combustion waste exports increased from 1 ktonne to 15 ktonnes (mainly cement kiln dust) and unused medicines increased from 3.5 ktonnes to 10 ktonnes.
- ▶ 64 ktonnes of exported waste went for disposal (34%) while 122 ktonnes went for recovery (66%).
- ▶ 90% of the exported waste went to UK, Germany or Belgium; a similar trend to previous years.
- ▶ Solvents accounted for 23% of exports, followed by waste electrical and electronic equipment (17%) and combustion waste (8%).

### Treated on-site of generation

- ▶ 52 ktonnes of hazardous waste was treated on-site of generation compared to 65 ktonnes in 2015. The decrease was largely due to a 25% reduction in solvent waste treated on-site. There is a movement away from solvent-based chemistry to water-based chemistry in the pharmaceutical industry. A change in production process has also led to reduction in solvent use.
- ▶ 28 ktonnes was disposed (compared to 34 ktonnes in 2015) and 24 ktonnes was recovered (compared to 31 ktonnes in 2015). The decrease in recovery is due to the decrease in solvent waste recovery.
- ▶ Solvent waste and waste of naturally-occurring minerals make up 93% of the hazardous wastes treated on-site.

Solvent waste treated on-site of generation, 2010 to 2016

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## TREATMENT AT COMMERCIAL FACILITIES

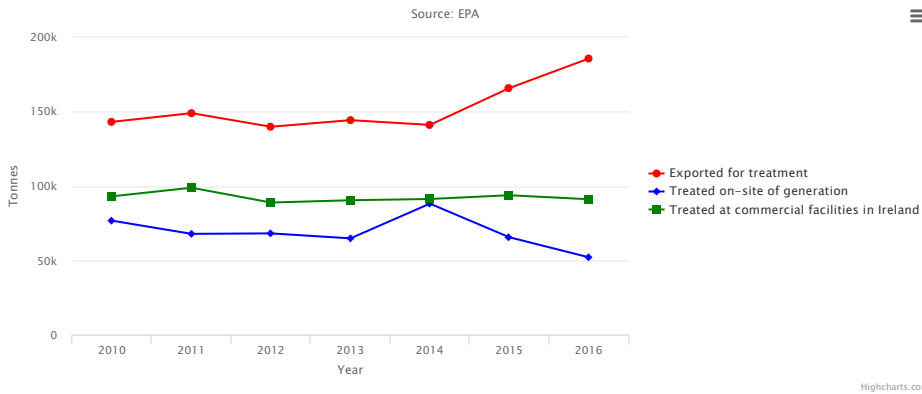
### Treated at commercial waste treatment facilities (excluding contaminated soil)

- ▶ 91 ktonnes of hazardous waste was treated at commercial waste treatment facilities in 2016 which is similar to 2015.
- ▶ The main hazardous waste types treated were solvents (16%), oils/water emulsion/sludges (19%), used motor oils (18%), human infectious health care wastes (11%) and waste electrical and electronic equipment (10%).
- ▶ 10 ktonnes of human infectious healthcare wastes was treated and most was sent for incineration.

Treatment of contaminated soils

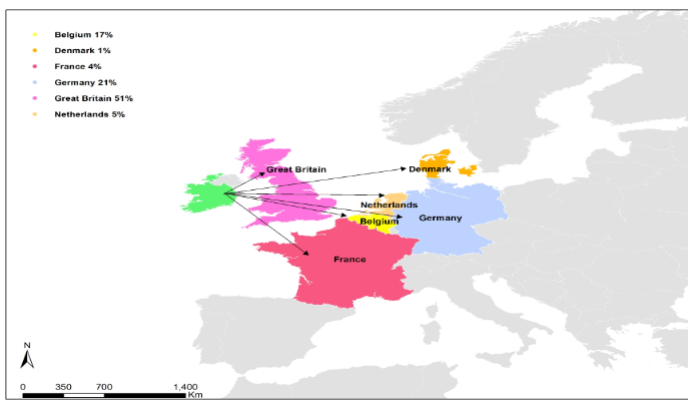
- ▶ The quantity of contaminated soil managed rose from 20 ktonnes in 2015 to 81 ktonnes in 2016. 1 ktonne was treated in Ireland and the rest was exported. Over 90% was exported to Belgium and Germany.

Hazardous waste treatment routes, 2010 - 2016



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HAZARDOUS WASTE EXPORTS



Show Table 1 Treatment of contaminated soil, 2009-2016

Contaminated soil:	2009	2010	2011	2012	2013	2014	2015	2016
Exported for treatment	476	2,590	10,203	3,638	7,659	5,701	14,329	79,591
Treated in Ireland	12,428	6,260	7,094	4,426	4,830	1,630	5,938	628
<b>Total (tonnes)</b>	<b>12,904</b>	<b>8,850</b>	<b>17,297</b>	<b>8,064</b>	<b>12,489</b>	<b>7,331</b>	<b>20,267</b>	<b>80,219</b>

Open in Excel: [Table 1 Treatment of contaminated soil 2009 - 2016 \(XLS 10KB\)](#)

Show Table 2 Treatment on-site of generation 2015 and 2016

Facility	Register Number	Principal class of activity	Waste type generated and treated on-site	Recovery or Disposal Code	Quantity treated 2015 (tonnes)	Quantity treated 2016 (tonnes)
Arran Chemicals	P0110-02	Chemicals	Solvents	R2	1,002	1,263
Astellas Ireland Co. Ltd	P0007-03	Chemicals	Solvents	D10	129	163
			Aqueous washing liquids and mother liquors (07__01*)	D10	387	275
Aughinish Alumina Ltd	P0035-04	Chemicals	Salts and salt cake	D1	19,201	18,304
BASF Ireland Ltd	P0052-02	Chemicals	Other industrial hazardous waste	R1	3,040	3,577
Eli Lilly	P0009-03	Chemicals	Solvents	D10	5,494	3,161
Guerbet Ireland Unlimited Company	P0050-02	Chemicals	Solvents	R2	8,482	6,727
			Solvents	D8	542	817
			Solvents (halogenated where specified)	D9	143	153
MSD International GmbH	P0011-04	Chemicals	Solvents	D8	749	816
				R2	1,411	1,320
MSD International GmbH trading as MSD Ireland	P0015-05	Chemicals	Solvents	R1	1,044	643
Merck Millipore Ltd	P0571-02	Surface coatings	Solvents	R2	1,968	2,294
Novartis Ringaskiddy Ltd	P0006-03	Chemicals	Absorbents, wiping cloths	D10	20	17
			Packaging (contaminated or containing residues)	D10	13	12
			Laboratory and general chemical waste	D10	13	16
			Solvents	D8	246	274
				R1	1,703	1,347
				R2	1,799	1,129

			Aqueous washing liquids and mother liquors (07__01*)	D10	246	148
Pfizer Ireland Pharmaceuticals	P0013-04	Chemicals	Solvents	R2	2,308	2,455
Roche Ireland Ltd	P0012-04	Chemicals	Solvents	R1	3,787	2,510
Smithkline Beecham (Cork) Ltd	P0004-03	Chemicals	Solvents	D10	3,571	3,699
Swords Laboratories	P0014-04	Chemicals	Solvents	R2	925	234
			Solvents	D10	3,417	228
			Solvents	D8	27	0
Temmier Ireland Ltd	P0813-02	Surface Coatings	Solvents	R2	3,685	337
			Solid wastes from MFSU of pharmaceuticals (07 05 13*)	R3	0	94
Irish Industrial Explosives Ltd	P0055-02	Chemicals	Waste explosives	D10	2	2
Zenith Energy Bantry Bay	P0419-01	Fossil fuels	Oils	R9	135	0
<b>Total</b>					<b>65,489</b>	<b>52,014</b>

Source: Pollutant Release and Transfer Registers and Annual Environmental Reports

Open in Excel: [Table 2 - Treatment on-site of generation 2015 and 2016 \(XLS 13KB\)](#)

Show [Table 3 Commercial facilities surveyed, 2016](#)

Facility name	Authorisation number	Description of activities
SRCL Ltd.	W0054-02	Physico-chemical treatment (sterilisation of clinical/veterinary waste)
Envva Ireland Ltd. t/a MacAnulty (Dublin)	W0196-01	Physico-chemical treatment (various oil and aqueous hazardous waste streams)
		Physico-chemical treatment (neutralisation of various hazardous wastes and precipitation of reactions which produce a non-hazardous sludge)
Envva Ireland Ltd. t/a Envva (Portlaoise)	W0184-01	Bioremediation of wastes containing heavy metals & bioremediation and trommelling of soils & stones
		Used oil refining
Envva Ireland Ltd. (Shannon)	W0041-01	Physico-chemical treatment (neutralisation of various hazardous wastes and precipitation of reactions which produce a non-hazardous sludge)
		Bioremediation of wastes containing heavy metals & bioremediation and trommelling of soils & stones
Indaver Ireland Ltd. (Dublin Port)	W0036-02	Solvent reclamation/regeneration (blending)
Irish Lamp Recycling Co. Ltd.	WFP-KE-14-0072-01	Dismantling waste electrical and electronic equipment into constituents
KMK Metals Recycling Ltd.	W0113-04	Dismantling waste electrical and electronic equipment into constituents and its storage prior to transfer for recovery
Rilta Environmental Ltd.	W0192-03	Physico-chemical treatment
		Used oil refining
		Drum reconditioning
Rilta Environmental Ltd.	W0185-01	Treatment of transformers
Soltec (Ireland) Ltd.	W0115-01	Solvent reclamation/regeneration (used in the production of thinners)
SRCL Ltd.	W0055-02	Recycling/reclamation of organic substances which are not used as solvents (healthcare risk waste is shredded and disinfected using steam)
The Recycling Village Ltd.	WFP-MH-11-0005-01	Dismantling waste electrical and electronic equipment into constituents
Veolia Environmental Services (Fermoy)	W0050-02	Solvent reclamation/regeneration (fuel blending)
		Treatment of contaminated metal packaging prior to recovery

Open in Excel: [Table 3 Commercial facilities surveyed and description of activities, 2016 \(XLS 11KB\)](#)

Show [Table 4 Destination of exports, 2016](#)

Destination country	Tonnes exported 2015	Tonnes exported 2016
Belgium	30,945	31,879
Denmark	168	1,157
France	6,865	7,988
Germany	42,682	38,685
Great Britain	74,630	87,034
Israel	149	44

Netherlands	6,969	9,155
Northern Ireland	464	8,850
Poland	632	772
Spain	2,303	132
Sweden	13	34
United States	106	72
<b>Total</b>	<b>165,926</b>	<b>185,802</b>

Open in Excel: [Table 4 - Hazardous Waste Exports 2016 \(XLS 13KB\)](#)

Show [Table 6 Hazardous waste treatment routes 2009 - 2016](#)

Year	Treated on-site of generation (tonnes)	Treated at commercial facilities (tonnes)	Exported for treatment (tonnes)
2009	74,668	89,992	150,395
2010	76,655	93,049	143,180
2011	67,772	99,513	149,037
2012	68,100	89,135	144,241
2013	64,752	87,690	151,980
2014	88,000	91,000	141,000
2015	66,500	94,000	166,000
2016	52,013	91,083	185,801

Open in Excel: [Table 6 Hazardous Waste Treatment Routes \(XLS 11KB\)](#)

Show [Table 5 Hazardous waste treatment categories and routes 2015 and 2016](#)

Waste Categories as per EWC-Stat Rev 4 (see separate Table for info)		Treated at commercial facilities in Ireland (tonnes) 2015	Treated on-site of generation (tonnes) 2015	Exported for treatment (tonnes) 2015	Treated at commercial facilities in Ireland (tonnes) 2016	Treated on-site of generation (tonnes) 2016	Exported for treatment (tonnes) 2016
1.1	Spent solvents	16,535	41,749	61,852	14,814	29,572	41,900
1.2	Acid, alkaline or saline wastes	4,068		8,050	5,205		8,603
1.31	Used oils	19,756		1,557	16,261		1,671
1.4	Spent chemical catalysts			147			115
2.1	Off-specification chemical wastes		2	13		110	
2.12	Unused medicines		683	3,480			9,909
2.13	Paints, varnish, ink and adhesive waste	1,840		4,350	1,652		3,800
2.14	Other chemical preparation waste			698	174		442
2.33	Packaging polluted by hazardous substances	585			3,726		
2.3	Mixed chemical wastes	634	26	2,475	928		7,757
3.12	Oils/water emulsions sludges	18,574	135	424	17,521		197
3.13	Chemical reaction residues	8,394	3,672	15,601	2,598	4,016	14,920
3.14	Spent filtration and absorbent material	82	20	2,205	592		1,730
3.21	Industrial effluent sludges	4,393		1,425	6,691	10	1,185
3.22	Sludges containing hydrocarbons	845			674		
3.31	Sludges from wastewater			966			5,624
5.11	Human infectious health care wastes	8,279		717	9,717		763
5.12	Animal infectious health care wastes	20			39		
7.7	Waste containing PCB			49			
8.1	Discarded vehicles			686			
8.2	Discarded electrical and electronic equipment	8,900		22,076	9,150		30,686
8.4	Batteries and accumulators			15,615			12,260
8.43	Other discarded machines and equipment components	413			831		2,423
10.2	Mixed and undifferentiated materials	445		1,200	510		1,201
10.3	Sorting residues			5,477			8,250
12	Construction and demolition waste			1,399			928
12.2	Asbestos waste			216			2,489
12.31	Wastes of naturally occurring minerals	13	19,201			18,304	
12.4	Combustion waste			1,016			14,959
12.5	Various mineral waste			964			795
12.8	Waste from waste treatment			12,522			11,097
13.11	Solidified or stabilised waste			740			2,096
<b>Total</b>		<b>93,776</b>	<b>65,488</b>	<b>165,920</b>	<b>91,083</b>	<b>52,012</b>	<b>185,800</b>

Open in Excel: [Table 5 Hazardous Waste Treatment Routes and Categories 2015 and 2016 \(XLS 12KB\)](#)